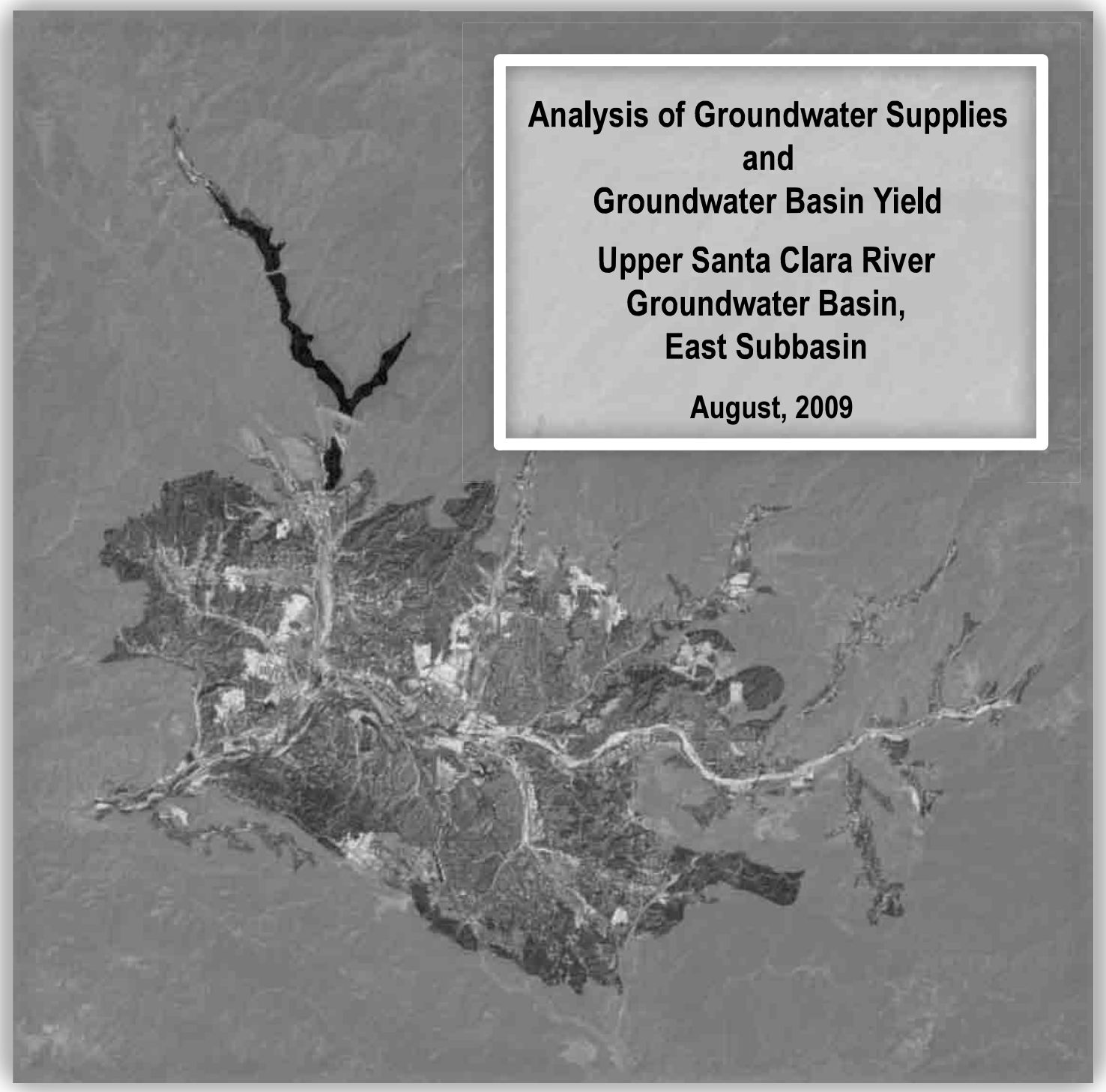

Analysis of Groundwater Supplies and Groundwater Basin Yield

Upper Santa Clara River Groundwater Basin, East Subbasin

August, 2009

prepared for

Santa Clarita Valley Municipal Water Purveyors

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LUHDORFF & SCALMANINI CONSULTING ENGINEERS

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Acronyms and Abbreviations

afy	acre-feet per year
AWRM	Alternative Water Resources Management program
CCCC	California Climate Change Center
CLWA	Castaic Lake Water Agency
CMIP3	Climate Model Intercomparison Project 3
DPH	California Department of Health Services
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
ET	evapotranspiration
GCM	global climate model
GFDL	Geophysical Fluid Dynamics Laboratory
gpm	gallons per minute
in/yr	inches per year
IPCC	Intergovernmental Panel on Climate Change
LACFCD	Los Angeles County Flood Control District
LACSD	Los Angeles County Sanitation District
LARWQCB	Los Angeles Regional Water Quality Control Board
LLNL	Lawrence Livermore National Laboratory
LSCE	Luhdorff & Scalmanini Consulting Engineers
mg/L	milligrams per liter
mgd	million gallons per day
MOU	Memorandum of Understanding
NCAR	National Center for Atmospheric Research
NCWD	Newhall County Water District
NLF	Newhall Land & Farming Company
PCM1	Parallel Climate Model
Purveyors	Upper Basin Water Purveyors
RCS	Richard C. Slade and Associates, LLC
SCVSD	Santa Clarita Valley Sanitation District of Los Angeles County

SCWD	Santa Clarita Water Division of CLWA
SRES	Special Report on Emissions Scenarios
SWP	State Water Project
SWRM	Surface Water Routing Model
TMDL	Total Maximum Daily Loads
UWMP	Urban Water Management Plan
VWC	Valencia Water Company
WCRP	World Climate Research Programme
WHR	Wayside Honor Rancho
WRP	water reclamation plant
UCAR	University Corporation for Atmospheric Research
WRP	water reclamation plant

I. Introduction

In 2003, the retail water Purveyors in the Santa Clarita Valley (herein the Purveyors[1]) commissioned efforts to develop, calibrate and utilize a numerical groundwater model for purposes of analyzing the sustainability of local groundwater as a component of overall water supply in the Valley. At that time, the question of groundwater sustainability was complemented by a question about whether part of overall groundwater pumping could be employed to achieve containment and removal of perchlorate contamination in the deeper aquifer, the Saugus Formation, beneath the Valley. The results of those modeling efforts concluded that a certain groundwater operating plan (rates and distributions of groundwater pumping under varying local hydrologic conditions) would be expected to produce long-term sustainable groundwater conditions, and that a certain focused part of overall pumping would be expected to both extract perchlorate-contaminated groundwater (for use after treatment) and contain the migration of perchlorate-impacted groundwater. The development and calibration of the numerical groundwater flow model is described in *Regional Groundwater Flow Model for the Santa Clarita Valley, Model Development and Calibration* (CH2M Hill, April 2004). Application of the model for extraction and containment of perchlorate-impacted groundwater is described in *Analysis of Perchlorate Containment in Groundwater Near the Whittaker-Bermite Property* (CH2M Hill, December 2004). And application of the model for analysis of basin yield, including sustainability of groundwater pumping consistent with that employed in the perchlorate containment analysis, is documented in *Analysis of Groundwater Basin Yield, Upper Santa Clara River Groundwater Basin, East Subbasin, Los Angeles County, California* (CH2M Hill and LSCE, August 2005).

The groundwater system in the Santa Clarita Valley, located in northwestern Los Angeles County, is identified by the California Department of Water Resources (DWR) as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin No. 4-4.07) and lies within the DWR-designated Upper Santa Clara River Hydrologic Area [Figure 1-1]. Groundwater in the basin is pumped from a shallow Alluvial Aquifer and from deeper groundwater resources that are present in an older, underlying unit called the Saugus Formation. Most groundwater pumping is by the Purveyors for municipal uses (in the range of approximately 23,000 to 33,000 acre-feet per year (afy) in recent years), with some continuing pumping by private landowners, primarily for irrigation uses (approximately 13,000 to 17,000 afy in recent years). The Purveyors also have access to other sources of water to supplement groundwater for municipal supply, including imported State Water Project (SWP) water, groundwater banking outside the basin, recycled water, short-term water exchanges, and dry-year water purchase programs. Those sources are described in the Purveyors' current *2005 Urban Water Management Plan* (Black & Veatch, et al., November 2005) and in a series of annual *Santa Clarita Valley Water Reports*, most recently for 2007 (LSCE, April 2008).

The water supply and water resource management practices of the Purveyors call for maximizing the use of Alluvial Aquifer and imported water during years of normal or above-normal

[1] The Santa Clarita Valley Purveyors are comprised of Los Angeles County Waterworks District 36, Newhall County Water District, Santa Clarita Water Division of the Castaic Lake Water Agency (formerly Santa Clarita Water Company, acquired by CLWA in 1999), and Valencia Water Company.

availability of these supplies, and limiting the use of the Saugus Formation during these periods, then temporarily increasing Saugus Formation pumping during years when supplemental imported water supplies are significantly reduced because of drought conditions. These local management practices have been called the local groundwater operating plan; that term has been adopted in this report to identify the previously analyzed operating plan (the 2004 Operating Plan) and subsequent iterations analyzed herein (the 2008 Operating Plan, the 2008 Operating Plan with Pumping Redistribution, and a Potential Operating Plan).

1.1 Background

The numerical groundwater model was originally developed as part of the work scope contained in an August 2001 Memorandum of Understanding (MOU) that was adopted by the Purveyors and the United Water Conservation District, located downstream in Ventura County. That MOU was a commitment by the Purveyors to expand on previous analyses of groundwater conditions such that the adequacy of the local groundwater supply could be better understood and questions about surface water and groundwater resources could be more readily addressed. The MOU initiated a collaborative and integrated approach to data collection; database management; evaluating groundwater conditions and the sustainability of the Purveyors' operating plan; groundwater flow modeling; annual reporting on basin conditions; and technical reporting focused on geologic and hydrologic aspects of the overall stream-aquifer system.

In 2003, subsequent to the MOU, Castaic Lake Water Agency (CLWA) prepared and adopted a formal Groundwater Management Plan (CLWA, 2003), which includes 14 elements intended to achieve four management objectives, or goals, for the groundwater basin. Those four management objectives include development of local groundwater for water supply; avoidance of overdraft and associated undesirable effects; preservation of groundwater quality; and preservation of interrelated surface water resources. The intent of the Groundwater Management Plan is to ensure that ongoing utilization of local groundwater continues to result in acceptable aquifer conditions, specifically avoidance of overdraft (Element 3 of the Plan), no degradation of quality (Element 6 of the Plan), and no adverse impacts to surface waters (Element 2 of the Plan). The Plan identified these objectives and elements as being accomplished via continued conjunctive use operations that have been ongoing since the initial importation of supplemental surface water in 1980 (Element 5 of the Plan) and via monitoring and interpretation of surface water and groundwater conditions on an ongoing basis (Elements 1 and 2 of the Plan).

The Purveyors initially agreed in the MOU, and the Purveyors subsequently committed in the Groundwater Management Plan, to develop and use a numerical groundwater flow model for the sustainability evaluation of the local groundwater operating plan. Prior to that, the available data showed that no long-term lowering of the water table or degradation of water quality had occurred during the 50 to 60 years of recorded historical groundwater development in the valley, and the various studies and water planning efforts performed up to that time had resulted in a local groundwater operating plan that placed future pumping of the Alluvial Aquifer in the same range as historical pumping. However, although the MOU recognized a need to formally analyze the Alluvial Aquifer, it identified that the primary question to be evaluated with the model would be the operational yield of the Saugus Formation, given that the Purveyors' operating plan called for dry-year pumping from that aquifer at rates higher than had historically

been pumped. For that reason, the MOU identified that the model would evaluate the effect of the current groundwater operating plan on groundwater conditions in both the Alluvial Aquifer and the Saugus Formation over a multi-year wet/dry cycle. The operational yield was defined in the MOU as an operating plan for the local groundwater basin that would allow continued pumping from the Alluvial Aquifer and Saugus Formation while assuring that groundwater supplies would be adequately replenished from one wet/dry cycle to the next.

As introduced above, a groundwater operating plan was formally analyzed with the groundwater model as part of the perchlorate containment analysis in 2004, and then specifically as the focus of basin yield analysis in 2005. In summary, that plan was as follows:

- Pumping from the Alluvial Aquifer in a given year is governed by local hydrologic conditions in the basin. Under the operating plan, pumping ranges between 30,000 and 40,000 afy during normal and above-normal rainfall years but, because of operational constraints in the eastern part of the basin, is reduced to between 30,000 and 35,000 afy during locally dry years.

- Pumping from the Saugus Formation in a given year is tied directly to the availability of other water supplies, particularly imported water from the SWP system. For the Saugus Formation, the operating plan consists of pumping between 7,500 and 15,000 afy during average-year to wet-year conditions within the SWP system. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 25,000 afy during a dry year, and increases to between 21,000 and 25,000 afy if SWP deliveries are reduced for two consecutive years, and between 21,000 and 35,000 afy if SWP deliveries are reduced for three consecutive years. Such high pumping would be followed by periods of reduced (average-year) pumping, at rates between 7,500 and 15,000 afy, to further enhance the effectiveness of natural recharge processes that would recover water levels and groundwater storage volumes in the Saugus Formation, as has been historically experienced.

Simulated groundwater basin response to groundwater pumping in accordance with the 2004 Operating Plan, over a long-term period of varying hydrologic conditions, was concluded to be sustainable based on a two-part definition of sustainability, which is continued in the updated analysis reported herein, as follows:

- lack of chronic, or sustained, depletion of groundwater storage, as indicated by projected groundwater levels, over a reasonable range of wet, normal, and dry hydrologic conditions

- maintenance of surface water flows in the western portion of the basin (which are partially maintained by groundwater discharge) and surface water outflow to downstream basins over the same range of hydrologic conditions

The primary conclusion from the modeling analysis of the 2004 Operating Plan was that it would not cause detrimental short-or long-term effects to the groundwater and surface water resources in the Valley and was, therefore, sustainable. In summary, the groundwater basin could be

expected to respond to the 2004 Operating Plan in a manner similar to what had been experienced over approximately the preceding 50 years: Use of water from the Alluvium, slightly decreased during locally drier periods, was projected to result in small to large fluctuations in Alluvial Aquifer groundwater levels from the middle to the eastern part of the basin, followed by full to near-full recovery in wet years or periods of years. Different from historically experienced conditions is in the Saugus Formation, where greater Saugus pumping during periods of significantly reduced imported water supplies was projected to cause larger fluctuations in groundwater levels during such pumping, with full to near-full recovery of Saugus water levels in subsequent years when the availability of imported water supplies was expected to return to normal.

After completion of the sustainability analysis, the 2004 Operating Plan was incorporated in the Purveyors' collective 2005 Urban Water Management Plan (UWMP) to reflect the groundwater component of overall water supplies available to meet current and projected water requirements over the planning horizon of the UWMP.

1.2 Scope of Updated Analysis

In 2008, partly in preparation for the next UWMP in 2010, and in part because of recent events that are expected to impact the future reliability of the principal supplemental water supply for Santa Clarita Valley, i.e., from the State Water Project, the Purveyors concluded that an updated analysis was needed to further assess groundwater development potential and possible augmentation of the groundwater operating plan. Near-term reductions in SWP water deliveries to CLWA are possible because of an August 2007 court ruling that is expected to reduce exports from the Bay-Delta by approximately 30 percent in the immediate future. Additionally, the National Marine Fisheries Service (NMFS) released its Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project on June 4, 2009. The proposed regulatory actions will further restrict Delta export operations of the State Water Project, however, studies have not been completed quantifying impacts on SWP reliability. The duration of reductions are unknown and depend on a number of factors, including whether DWR can construct alternative facilities in the future to make up for reductions. Additionally, DWR is evaluating the potential magnitude of longer-term future reductions in SWP deliveries because of potential effects of global climate change.

A second consideration in conducting an updated analysis of the basin is that global climate change could alter local rainfall and associated recharge patterns, thus affecting local groundwater supplies, i.e. the yield of the basin. Finally, the Los Angeles County Flood Control District (LACFCD) is planning a number of small flood control projects in the Santa Clarita Valley; estimated amounts of conservation/groundwater recharge potential are being included for each of the individual projects in the overall LACFCD planning, and the Purveyors have interest in whether that potential could appreciably augment the yield of the basin.

In light of the above, the scope of the updated basin yield analysis, reported herein, includes the following:

- consider potential increased utilization of groundwater for regular (wet/normal) and/or dry-year water supply, including distribution of the yield by reach of the Santa Clara River alluvium and its various tributaries;

- consider potential augmentation of basin yield via initiation of artificial groundwater recharge using stormwater runoff in selected areas of the basin as being planned by LACFCD; and

- quantitatively or qualitatively, depending on the availability of technical reference material, describe general impacts of climate change on the groundwater basin and its yield.

1.3 Report Organization

To address the scope of the updated basin yield analysis outlined above, the remainder of this report is organized as follows:

Chapter 2 discusses the extension of the numerical groundwater flow model from its previous calibration period of 1980 through 2004 to add three years and thus extend calibration through 2007; this section also describes some limited model recalibration after extension of the model through 2007.

Chapter 3 describes the operating plans that were developed for updated analysis of basin yield, and the process that was used to simulate basin response to those plans and to evaluate the results.

Chapter 4 discusses the results of the simulated basin response to the 2008 and Potential groundwater operating plans, including the sustainability and achievability of the plans.

Chapter 5 describes climate change considerations, the selection of a range of potential climate change impacts on local hydrologic conditions, and the simulated effects of those resultant hydrologic conditions on the sustainability and achievability of the 2008 groundwater operating plan.

Chapter 6 describes the potential groundwater recharge projects being planned by LACFCD and discusses the potential benefit to the yield of the basin.

Chapter 7 summarizes the conclusions derived from the overall updated basin yield analysis, and the implications of those conclusions for long-term groundwater supply and groundwater management in the Santa Clarita Valley.

References and Appendices follow Section 7. The Appendices include a description of the Santa Clarita Valley numerical groundwater flow model, description of the updated model calibration, hydrographs to illustrate simulated basin response to the operating plans, and discussion of climate projections and their incorporation in the analyses reported herein.

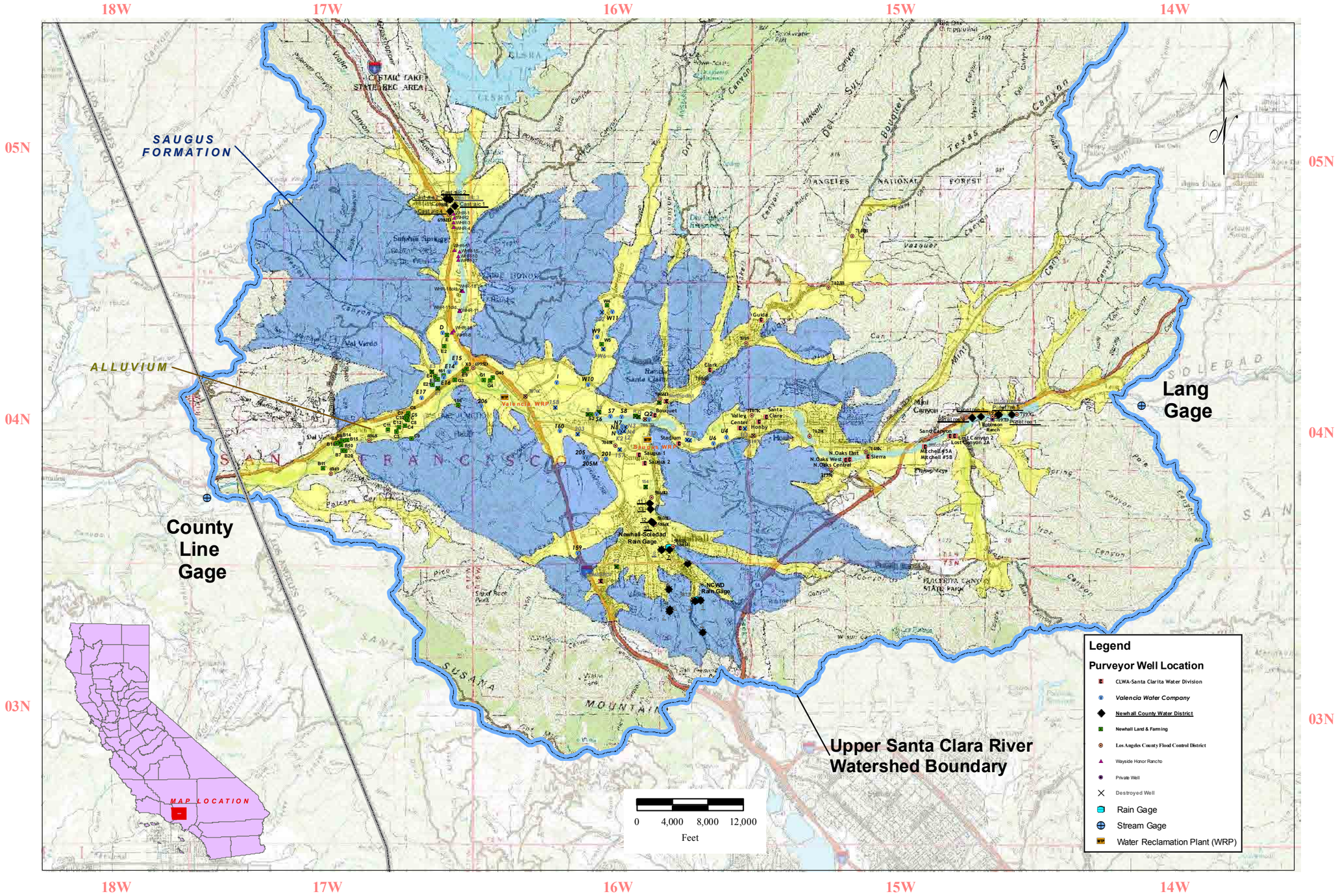

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Figure 1-1
Basin Location Map
Upper Santa Clara River Valley Groundwater Basin, East Subbasin

II. Updated Model Calibration

2.1 Model Description

The Santa Clarita Valley groundwater flow model is a three-dimensional, numerical model that uses the MicroFEM® finite-element software (Hemker and de Boer, 2003). The model covers the entire area underlain by the Saugus Formation, plus the portions of the Alluvial Aquifer that lie beyond the limits of the Saugus Formation (Figure 3-1). The model's construction and calibration are summarized in Appendix A and discussed in detail in *Regional Groundwater Flow Model for the Santa Clarita Valley: Model Development and Calibration* (CH2M HILL, 2004a).

The model simulates groundwater conditions within an area that largely coincides with the Santa Clara River Valley Groundwater Basin, East Subbasin, delineated by DWR. This area extends from the Lang stream gage at the eastern end of the valley to the County Line stream gage area in the west. The model is based on a finite-element mesh consisting of seven layers, with 17,103 nodes and 32,496 elements in each layer (Figure 2-1). The upper model layer simulates the Alluvial Aquifer and also the upper portion of the Saugus Formation where the Alluvial Aquifer is not present. The underlying layers simulate the underlying freshwater Saugus Formation and its Sunshine Ranch Member. Figure 2-2 shows the model layering in three cross-sectional views.

The boundary conditions in the model consist of the following:

- Specified flux boundaries for the following:
  - precipitation
  - irrigation
  - recharge from ephemeral streams
  - pumping
  - underflow from beneath Castaic Dam

- Head-dependent flux boundaries for the following:
  - groundwater discharges to the perennial reach of the Santa Clara River
  - residual drainage of groundwater to the Santa Clara River in the ephemeral reach under high water table conditions
  - evapotranspiration (ET) by phreatophyte plants, which extract groundwater from the shallow water table that lies along riparian river corridors

- Constant-head boundaries for the following:
  - subsurface inflow in the Alluvial Aquifer at the eastern end of the valley, at the Lang gage[1]

[1] A constant-head boundary was established in the groundwater model at this location using recent field conditions that were observed after the model calibration report (CH2M HILL, 2004a) was published. This change improved the groundwater model's calibration in the Alluvial Aquifer in the upper reaches of Soledad Canyon and did not appreciably change the calibration quality elsewhere. See CH2M HILL (2005) for further details.

- subsurface outflow in the Alluvial Aquifer at the western end of the valley, at the County Line gage

Groundwater recharge rates are estimated using precipitation records, streamflow records, watershed maps, topographic maps, and aerial photography. These recharge rates are calculated using a detailed Surface Water Routing Model (SWRM), which was written specifically to provide time-dependent, spatially varying recharge rates as input to the groundwater model. The SWRM relies on streamflow records at the Lang and County Line gages; historical records of rainfall data from the NCWD rain gage (see Figure 1-1), spatial variations in rainfall across the basin, the rates and locations of future WRP discharges to the Santa Clara River, and irrigation from agricultural and urban water uses.

The depths from which production wells obtain water are defined in the groundwater model from well construction records. The rates and locations of pumping are based on the Purveyors' operating plan for the basin and on the surveyed location of each production well.

2.2 Calibration Update Approach

The calibration update process consisted of transient modeling that simulated monthly variations in pumping from, and recharge to, the Alluvial Aquifer and the Saugus Formation during the period January 2005 through December 2007. As with the original calibration effort, simulation results were compared to measured fluctuations in groundwater elevations and streamflows in the Santa Clara River.

Hydrologic input data for the calibration update simulation are tabulated in Appendix B and were as follows:

- Groundwater pumping data were provided by the Purveyors for each production well. Appendix Tables B-1 and B-2 show annual pumping for the Alluvial Aquifer and Saugus Formation, respectively, from 1980 through 2007. As with the initial model calibration effort, the monthly distribution of pumping was defined from information on the monthly distribution of urban and agricultural water demands, as listed in Appendix Table B-3.
- Groundwater recharge was defined using the SWRM, which was written specifically for the groundwater model during the original model development effort (see Appendix C of CH2M HILL, 2004a). The SWRM defined recharge from applied water use (i.e., irrigation)[2]; direct precipitation within the model domain (see Appendix Table B-4); Santa Clara River flows into the valley as measured at the Lang stream gage (see Appendix Table B-5); SWRM-estimated stormwater inflows into the model domain along ephemeral streams that are tributaries to the Santa Clara River; measured volumes of treated water discharge into the Santa Clara River from two Los Angeles County Sanitation District (LACSD) water reclamation plants (WRPs) (see Appendix Tables B-6

[2] Infiltration of applied water was simulated in the same locations as in the original model calibration effort, and at the 1999 rates described in the model development report (CH2M HILL, 2004a). These rates were 24.7 inches per year (in/yr) for irrigated agricultural land, 2.2 in/yr for residential areas, and 1.0 in/yr for retail/industrial lands and golf courses.

and B-7); and water released from Castaic Lagoon into Castaic Creek by DWR (see Appendix Table B-8).

- Coefficients for the riverbed leakage term at each river node vary over time in the model. For the years 2005 through 2007, the calibration update process initially used the same values as used for 1992, 1996, and 1989, respectively. These values were then adjusted as necessary during the calibration update process.

The quality of the model's calibration was evaluated as follows:

- Simulated groundwater elevation trends were compared with data collected at production wells where long-term records of groundwater elevations are available. These wells are referred to herein as target wells. As discussed in the model development report (CH2M HILL, 2004a), the calibration goal at target wells was to simulate groundwater elevations that were higher than the pumping elevations and as close as possible to the static elevations. Therefore, the hydrographs show the model-simulated groundwater elevations, the measured static groundwater elevations, and, for production wells, the measured pumping groundwater elevations. Additionally, the comparison of time-varying simulated and measured groundwater elevations was equally focused on the slopes of the hydrographs, not just the absolute values of the groundwater elevations at any given time.

- The groundwater budget was evaluated to compare simulation results with measured flows in the Santa Clara River at the west end of the basin (at the County Line gage; see Appendix Table B-9); and estimated volumes of groundwater discharge to the Santa Clara River (see Appendix Table B-10).

2.3 Results from the Calibration Update Process

The initial simulation of conditions during 2005 through 2007 produced findings that were deemed to require adjustments to the model's calibration of portions of the Alluvial Aquifer prior to conducting the predictive modeling necessary for the basin yield update analysis. Specifically, the results from the initial calibration update indicated that, from 2005 through 2007, the model simulated:

- too much groundwater level recovery in Castaic Valley at NCWD's Castaic wellfield during the high streamflow event of early 2005

- too much decline in groundwater levels in lower San Francisquito Canyon (at VWC's W9 and W11 wells)

- groundwater levels that were too high in lower Bouquet Canyon (at SCWD's Clark well) and below the mouth of Bouquet Canyon (at VWC's S6, S7, and S8 wells)

It was also noted that, the model simulated too little groundwater level decline immediately prior to 2005 in the eastern-most portions of the Alluvial Aquifer along the Santa Clara River (at and east of the mouth of Mint Canyon). Additionally, it was determined that, for NCWD's Pinetree wellfield, the groundwater level database contained incorrect reference elevations, which are

used to convert groundwater depths to groundwater elevations. As a result, it was concluded that the original calibration effort (during 2004) had compared simulation results with database-derived groundwater elevation values that were lower than the actual elevations of the water table throughout the entire simulation period (January 1980 to the present).

As a result of these findings, efforts were undertaken to improve the model's calibration quality in the eastern-most portion of the Alluvial Aquifer and in the tributary canyons noted above. This focused re-calibration process resulted in changes to the hydraulic conductivity in certain areas and riverbed leakage coefficients along certain reaches of Castaic Creek and the eastern reaches of the Santa Clara River. These changes were:

- increasing the hydraulic conductivity from 105 feet/day to between 250 and 500 feet/day in San Francisquito Canyon

- increasing the hydraulic conductivity from 245 feet/day to 300 feet/day in lower Bouquet Canyon

- introducing a zone of reduced hydraulic conductivity (250 feet/day) along the Santa Clara River at the mouth of Mint Canyon, to better simulate the hydraulic gradient between SCWD's Sierra and Mitchell wells

- reducing the hydraulic conductivity by 50 percent along the Santa Clara River from just east of NCWD's Pinetree wellfield upstream to the Lang gage at the eastern end of the valley (from 300 to 150 feet/day) and also in two nearby tributaries (Tick Canyon and Bee Canyon, from 150 to 75 feet/day)

- raising the Castaic Creek riverbed leakage coefficients during the high-flow events of 2001 and late 2004/early 2005

- raising the riverbed leakage coefficients in San Francisquito and Bouquet Canyons during and after the high-flow event of late 2004/early 2005

- raising the riverbed leakage coefficients for the reach of the Santa Clara River near SCWD's North Oaks and Sierra wells during the high-flow event of late 2004/early 2005

- revising the rainfall-runoff-recharge relationship for the basin. This relationship is based on a power-function equation developed by Turner (1986). As shown in Figure 2-3, the coefficients were revised slightly in a manner that, when compared with the original calibration (CH2M HILL, 2004a), generates slightly more recharge when annual precipitation is above normal. This increase in recharge ranges from about 0.25 inches to 1 inch for annual rainfall between 21 and 40 inches at the NCWD gage. For the wettest year on record at the NCWD gage (48.33 inches in calendar year 1983), annual recharge is 22.5 and 23.8 inches in the 2004 and 2008 calibrations, respectively, which is a difference of about 1.3 inches.

Appendix B contains groundwater elevation hydrographs comparing the model-simulated groundwater elevations with static and pumping groundwater elevations at the many production wells in the valley. Model simulation results are shown both for the original calibration (CH2M HILL, 2004a) and the updated calibration. The hydrographs are organized according to the primary subareas for the Alluvial Aquifer (see Figure 2-4 for the locations of these subareas) and by Purveyor for the Saugus Formation. The hydrographs show notable improvements in calibration quality in Castaic Valley, San Francisquito Canyon, and Bouquet Canyon. However, little improvement could be achieved at VWC's S-series wells without degrading the calibration quality in nearby wells (such as VWC's N-series wells). Along the Santa Clara River, substantial improvements to the model's simulation of drought periods in the Alluvial Aquifer were achieved at NCWD's Pinetree wellfield, and to a lesser extent at other wells further west (for example, SCWD's North Oaks, Sierra, and Honby wells).

In the Saugus Formation, the model simulates the trends in groundwater elevations quite well at each Saugus production well. The trends (hydrograph slopes) are particularly close in the NCWD wellfield (NCWD production wells 11, 12, and 13). Farther downgradient, the model tends to slightly over-predict groundwater elevations in SCWD's two production wells. However, the model closely simulates the groundwater elevation trends at these two wells, which is the primary consideration for evaluating the quality of the transient calibration process in the Saugus Formation. Groundwater elevations and trends are well-simulated at VWC's Saugus production wells (including the recently constructed VWC-206).

Appendix B also contains hydrographs comparing the simulated and measured values of 1) total river flow and 2) groundwater discharge to the river for the Santa Clara River at the County Line gage, where the river exits the valley and flows into Ventura County.[3] The hydrographs show that the model adequately replicates seasonal and year-to-year cycles of low and high river flows. Additionally, the model simulates temporal cycles in groundwater discharge to the river in a manner that is generally consistent with the cycles reflected in the estimates made from available stream gage data. As discussed in prior model development reports (CH2M HILL, 2004a and 2005), it is likely that differences between modeled and measured hydrographs for total river flow and groundwater discharges result from uncertainties in both the model and the County Line gage data, particularly during periods of low river flows.

[3] The "measured" groundwater discharges to the river are estimates that were derived from a hydrograph separation process, described by CH2M HILL (2004). This process estimated the monthly groundwater discharge to the river by examining the daily streamflow data at the County Line gage, the daily and monthly precipitation at local rain gages, monthly flows into Castaic Creek from Castaic Lagoon, and monthly flows into the Santa Clara River from the Saugus and Valencia WRPs.

III. Modeling Approach for Analyzing Basin Yield

3.1 Modeling Approach

The process of designing the modeling analysis to evaluate the sustainability and achievability of a given operating plan consisted of the following five activities:

- Selecting a period over which to simulate groundwater conditions under each operating plan, including:
    - defining a sequence of varying local hydrology (rainfall, streamflows, and groundwater recharge) on a month-to-month basis throughout the simulation period
    - defining a sequence of varying availability of imported water supplies, as defined from availability studies of the State Water Project (SWP), on a month-to-month basis throughout the simulation period
- Defining pumping rates and schedules for each production well in the valley, including consideration of the varying local hydrology and SWP water availability
- Running the model to calculate time-varying (monthly) groundwater elevations and groundwater discharge terms throughout the multi-year simulation period
- Evaluating the modeling results by examining forecasted time-series plots (hydrographs) of water budget terms and groundwater elevations to evaluate the effects of the operating plan in the Alluvial Aquifer, the Saugus Formation, and the Santa Clara River

These activities are described in further detail below.

3.2 Simulation Period

The locations and temporal variation in pumping from the Alluvial Aquifer were defined in the model from the operating plan and from historical records of the year-to-year variability in local hydrology. Simulated pumping from the Saugus Formation was defined from the operating plan, historical pumping records, and operational constraints and historical patterns of SWP water supply availability.

3.2.1 Original Simulation Period

Because the operating plan for the Saugus Formation is linked to the hydrology and operational constraints for the SWP system, the year-to-year variability in Saugus Formation pumping is, to a great extent, dependent on the hydrology outside the valley (i.e., in northern California). As discussed in the original basin yield analysis report (CH2M HILL and LSCE, 2005), local hydrology affects the availability of Alluvial Aquifer groundwater, but is not always a good

indicator of local pumping conditions in the Saugus Formation, because local droughts and SWP droughts do not necessarily coincide with each other. Consequently, it was decided that the model would need to be run over several decades to capture the year-to-year differences between local hydrology and SWP hydrology and water availability, as well as the less frequent times when both systems experience similar hydrologic conditions (as occurred periodically during the 1960s and in 1994). Historical records were then analyzed to identify a simulation period that would be long enough to capture the variety of year-to-year and longer-term trends in local hydrology and imported water availability.

The original basin yield analysis was conducted using a synthetic 78-year period that replicated the historical hydrology from 1980 through 2003, followed by a replication of historical hydrology from 1950 through 2003. This synthetic time period simulated 24 years of reduced pumping from the Alluvial Aquifer, including two 3-year periods and one 4-year period of reduced pumping. For the Saugus Formation, this synthetic time period contained 18 "drought years" in which imported water volumes were sufficiently low to result in increased pumping from the Saugus Formation. These 18 years included two droughts lasting 2 years and two droughts lasting 3 years.

3.2.2 Current Simulation Period and Associated Hydrology

As introduced in Section 1.2, the update of the basin yield analysis was conducted in part because of the possibility of near-term reductions in SWP water deliveries to CLWA. The most recent analysis of the SWP's delivery reliability (DWR, 2008) includes year-to-year projections of delivery volumes under various development conditions, assuming both a repeat of historical climate and the potential effects of climate change. The analyses that are based on historical climate are reported for the climate that occurred from 1922 through 2003. These year-to-year projections had not been completed and published at the time of the original basin yield analysis in 2004 and 2005. Because these new analyses are now available, the basin yield update analysis simulated the historical record of climate and corresponding SWP delivery volumes for an 86-year period beginning in 1922 and ending in 2007, rather than using a synthetic time period. This 86-year period is characterized by:

- 14 years when deliveries are 35 percent or less of maximum Table A amounts, including 3 years when the deliveries do not exceed 10 percent of the Table A amounts

- Two droughts lasting 6 years (1929 through 1934, and 1987 through 1992)

Under the groundwater operating plan for the Santa Clarita Valley, the SWP delivery volume in any given year affects the amount of groundwater pumping that occurs from the Saugus Formation during that year. The amount of groundwater pumping from the Alluvial Aquifer is controlled by local hydrology, as determined by the amount of rainfall that occurs within the watershed during a given year. Figure 3-1 shows the historical pattern of annual rainfall on a calendar year basis from 1922 through 2007 at the Newhall-Soledad rain gage, which has the longest rainfall record of any location within the watershed. Values for 1922 through 1930 are estimated from RCS (2002). RCS personnel have since indicated that the source of data to 1931 is an unofficial record obtained in 2001 from a former California State Climatologist. The figure

also shows the average and median values of rainfall for the period 1931 through 2007 (18.16 and 15.82 inches per year, respectively). The estimated rainfall values from 1922 through 1930 were not included in the calculations of the average and median values. The figure shows that annual rainfall at the Newhall-Soledad rain gage since 1922 has ranged from about 4.1 inches in the driest years (in 1947 and 1972) to as much as 42.1 inches in the wettest years (1941 and 1978). 52 of the 86 years of record were characterized by below-average rainfall, and 36 years were particularly dry years characterized by rainfall values below 13.5 inches/year, which is 85 percent of the long-term median rainfall.

For annual rainfall at the Newhall-Soledad rain gage, Figure 3-2 shows the cumulative departure since 1922 from the 1931-2007 average rainfall. The cumulative departure refers to the cumulative (accumulated) amount of rainfall deficit or rainfall surplus over time, compared with long-term average rainfall. The slope of the cumulative departure plot is indicative of whether a given time period is characterized by generally dry conditions (downward slope), near-normal conditions (flat), or wetter-than-normal conditions (upward slope). The figure shows the following patterns in the local rainfall cycle:

- Generally dry conditions (downward-trending slope) after 1922 and continuing through 1935

- Generally wet conditions (upward-trending slope) from 1938 through 1944

- Thirty years of generally dry conditions (downward-trending slope) from 1947 through 1976, except for modestly wet conditions from 1965 through 1970

- Generally wet conditions (upward-trending slope) from 1977 through 2005, interrupted by drought conditions from 1984 through 1991 and from 1999 through 2004

An additional noteworthy feature of the cumulative departure plot is the 48-inch rainfall deficit that occurred from 1947 through 1951, which was not fully captured in the original basin yield analysis, but is modeled in its entirety in this updated analysis. The total rainfall deficit from 1947 through 1976 was approximately 86 inches (from a cumulative 31 inches above average in 1946 to a cumulative 55 inches below average in 1976). After 1976, the cumulative departure returned to a slightly positive value because of significant rainfall events in 1978, 1980, and 1983.

Table 3-1 shows the sequence of normal-year versus dry-year pumping conditions for the Alluvial Aquifer, as derived from the local rainfall records, and for the Saugus Formation as derived from the availability of SWP water. For the Alluvial Aquifer, the pumping year type is assumed to lag the local hydrology by one year. An examination of historical rainfall data and Alluvial Aquifer pumping patterns shows such a lag occurred in several years during the past two decades. The table shows dry-year pumping occurring in 55 years from the Alluvial Aquifer and 15 years from the Saugus Formation. During the 86-year simulation period, there are nine periods when dry-year pumping from the Alluvial Aquifer lasts more than two consecutive years, and two periods have dry-year Saugus pumping lasting more than one year. The longest dry-year pumping periods last for 7 years in the Alluvial Aquifer and 4 years in the Saugus Formation.

During the predominantly dry period from 1922 through 1978, only 16 of these 57 years (28 percent) were years in which normal pumping would have occurred from the Alluvial Aquifer.

3.3 2008 Operating Plan

Following are a general description of the 2008 Operating Plan and discussions of how pumping is distributed spatially and over time in the Alluvial Aquifer and the Saugus Formation under this plan. This plan was analyzed for its long-term sustainability by using the groundwater flow model to simulate the plan under the historical hydrology dating back to 1922. Actual historical pumping at the operating plan rates and for the current basin-wide network of production wells dates back only to the mid-1990s. Prior to that time, less pumping occurred in some years, while in other years pumping was limited to the western portion of the valley. Consequently, the modeling analysis was conducted in a manner to allow evaluation of how the basin might respond to the current operating plan and the current network of production wells, as might occur if past multi-decadal cycles of local and SWP hydrology (such as those measured as far back as 1922) were to repeat themselves in the future.

3.3.1 General Description of 2008 Operating Plan

As discussed in Section 1.1, the 2008 Operating Plan for the local groundwater basin is as follows:

- Pumping from the Alluvial Aquifer ranges between 30,000 and 40,000 afy during normal and above-normal rainfall years but, because of operational constraints in the eastern part of the basin, is reduced to between 30,000 and 35,000 afy during locally dry years. Table 3-2 shows the sequence of historical rainfall cycles and associated pumping from the Alluvial Aquifer, based on this operating plan and the 86-year simulation period that reflects historical rainfall in the valley from 1922 through 2007.

- Pumping from the Saugus Formation ranges between 7,500 and 15,000 afy during average-year to wet-year conditions within the SWP system. Planned dry-year pumping from the Saugus Formation ranges between 15,000 and 25,000 afy during a dry year, and increases to between 21,000 and 25,000 afy if SWP allocation is reduced to about 35 percent or less of the maximum Table A amount for two consecutive years, and between 21,000 and 35,000 afy if SWP allocation is reduced to about 35 percent or less of the maximum Table A amount for three consecutive years. Table 3-3 shows the sequence of SWP water availability and associated pumping from the Saugus Formation, based on this operating plan and the 86-year simulation period that reflects historical hydrology in the SWP system from 1922 through 2007.

Pumping rates for Purveyor-owned wells were assigned in accordance with the groundwater operating plan for the Santa Clarita Valley, which defines ranges of valley-wide annual pumping, given the water supply needs of the Purveyors. Pumping rates at individual wells were also assigned using the recent and planned production schedules for each well, information on the depths and lengths of the intake sections (open intervals) of each well, and by incorporating current plans addressing two other specific issues affecting Purveyor pumping:

- The presence of ammonium perchlorate in parts of the Saugus Formation and the Alluvial Aquifer

- Intermittent planned pumping from the Saugus Formation for the purpose of meeting regulatory objectives for chloride concentrations in the Santa Clara River.

These two issues and the details of how pumping was specified in the modeling analysis of the current operating plan are discussed further in Sections 3.3.2 and 3.3.3 below.

3.3.2 Alluvial Aquifer Pumping

Simulated pumping rates under the 2008 Operating Plan for production wells completed in the Alluvial Aquifer are listed in Table 3-4. The table provides this information for 8 wells owned by NCWD, 13 wells owned by SCWD, 15 wells owned by VWC, 16 wells owned by NLF, and private wells owned by Robinson Ranch and Wayside Honor Rancho. Most Alluvial Aquifer wells were specified to operate at similar rates regardless of year type, except in the eastern portion of the basin. Wells in this area (the Robinson Ranch well, the four Pinetree wells owned by NCWD, and 11 wells owned by SCWD) were assumed to have lower pumping capacities during dry years than non-drought years because of historically experienced lower groundwater elevations during dry periods.

The 2008 Operating Plan for the Alluvial Aquifer accounts for historical perchlorate detections in two alluvial wells, as the result of contamination emanating from the former Whittaker-Bermite property.

- In 2002, an Alluvial production well owned by SCWD (SCWD-Stadium) was shut down because of the detection of perchlorate. SCWD has recently drilled a replacement well (Valley Center) further to the east, north-northeast of the Whittaker-Bermite property.

- In March 2005, an Alluvial production well owned by VWC (VWC-Q2) was shut down because of perchlorate detection. After returning the well to service with wellhead treatment in October 2005, followed by nearly two years of operation with wellhead treatment, during which there was no detection of perchlorate, Valencia was authorized by the California Department of Public Health (DPH) to discontinue treatment. Well Q2 has since been operated without treatment and there has been no detection of perchlorate since discontinuation of wellhead treatment. Consequently, Well Q2 is included in the 2008 Operating Plan.

The 2008 Operating Plan for the Alluvial Aquifer also accounts for known private pumping at wells owned by the Newhall Land & Farming Company (NLF) for agricultural water supply; wells owned by Los Angeles County Water District No. 36 that provide potable water to the Wayside Honor Rancho; and a well in eastern Soledad Canyon owned by Robinson Ranch that is used for golf course irrigation. In the future, portions of the current pumping by NLF are planned to be converted to pumping by Valencia Water Company to supply potable water to the future Newhall Ranch development. However, for the purposes of the groundwater modeling analysis,

this pumping volume is indicated in Table 3-4 as continuing to be conducted by NLF, to reflect current ownership and current operating conditions. The planned change from agricultural to municipal supply is expected to result in only locally small changes in pumping locations (new municipal wells in close proximity to existing agricultural wells that will then be abandoned), resulting in practically similar spatial distribution of pumping and thus similar conditions as simulated in the 2008 Operating Plan.

The water management practices of the Purveyors also recognize ongoing Alluvial Aquifer pumping for other smaller private domestic and related pumping. For the last ten years of formal annual water report preparation in the Santa Clarita Valley, those reports have included estimates of the latter private pumping. Based on limited data provided by private well owners as part of the overall Groundwater Management Plan effort, it is estimated that small private pumping is within 500 afy, or approximately one percent of typical Alluvial Aquifer pumping by the Purveyors and other known private well owners (including agricultural pumpers) combined. However, the small private wells are not explicitly modeled in the basin yield analysis described herein because their locations and operations are not known, and their operation creates a pumping stress that is essentially negligible at the scale of the overall groundwater model. Ultimately, as discussed throughout this report, the intent is to maintain overall pumping, including private pumping, within the operating plan to result in sustainable groundwater conditions to support the combination of municipal (Purveyor), agricultural, and private groundwater use on an ongoing basis. Thus, private well owners in the basin, like the large municipal and agricultural pumpers, can expect groundwater supplies to continue to be available as they have been in the past, with some fluctuations in water levels through wet and dry periods, but no long-term depletion of supply.

3.3.3 Saugus Aquifer Pumping

Simulated pumping rates under the 2008 Operating Plan for production wells completed in the Saugus Formation are listed in Table 3-5. The table provides this information for two wells owned by NCWD, two wells owned by SCWD, six wells owned by VWC, and a private well at the Palmer golf course, located just north of Hasley Canyon. Pumping rates at specific Saugus Formation production wells were assigned for each type of year (normal, dry year 1, dry year 2, and dry year 3) using information on the capacity, recent and planned use, and location of each well[1]. Significant aspects of the pumping rate selection at each well are as follows:

- Pumping from most existing Saugus Formation production wells was based on recent and planned use of these wells, as defined by the Purveyors. The simulation included increased dry-year pumping from the Saugus Formation in the western portion of the basin, where it is anticipated that future wells will be installed.

- Each Saugus Formation production well has an intake section (open interval) that is significantly longer in vertical extent than the thicknesses of the individual layers that represent the Saugus Formation in the groundwater flow model. Consequently, the

[1] Table 3-5 only lists wells that are anticipated to be operating in the future. Existing wells that are not listed in this table (such as NCWD-7, NCWD-10, and NCWD-11) are currently not in service and, therefore, are not expected to provide significant quantities of water in the future.

Saugus pumping rates were assigned to multiple layers in the model by considering the depths of the intake section of each well and the transmissivity of each model layer. Table 3-6 shows the allocation of pumping in each model layer for each Saugus Formation production well, along with the intake sections of each well and the model-simulated transmissivity in each layer at each well location.

The 2008 Operating Plan for the Saugus Formation accounts for historical perchlorate detections and the resulting containment and remedial response activities that are being constructed at this time. In 1997, two Saugus Formation production wells owned by SCWD (wells SCWD-Saugus1 and SCWD-Saugus2), one Saugus Formation production well owned by NCWD (well NCWD-11), and one former Saugus Formation production well owned by VWC (well VWC-157) were removed from service because perchlorate was detected in groundwater at these wells[2]. Under oversight by the California Department of Toxic Substances Control (DTSC), and with ultimate approval by DPH, in accordance with its Policy 97-005 (for restoration of water supply from "severely impaired" water sources), the Purveyors developed a remedial strategy that will entail pumping of two impacted wells for containment of perchlorate migration; treatment and subsequent use of the pumped water for water supply; and installation of replacement wells in non-impacted portions of the basin to restore the remainder of groundwater supply impacted by perchlorate. A noteworthy detail of these activities is that the groundwater flow model was used to identify the design of a pumping scheme that would meet the Purveyors' objectives for perchlorate containment in the Saugus Formation (CH2M HILL, 2004b). The final containment plan specifies that wells SCWD-Saugus1 and SCWD-Saugus 2 operate at an instantaneous pumping rate of 1,200 gallons per minute (gpm) at each well (for a combined total of 2,400 gpm from the two wells). The annual pumping volume of 1,772 afy per well shown in Table 3-5 is based on this rate and also on the assumption that pumping will occur continuously, except for up to four weeks per year for maintenance purposes. Construction of facilities and pipelines necessary to implement the containment program and to restore inactivated well capacity, to be followed by operational start-up, are currently scheduled to occur in 2009.

The 2008 Operating Plan for the Saugus Formation also accounts for intermittent pumping from the Saugus Formation that is expected to occur for the purpose of meeting regulatory objectives for chloride in the Santa Clara River. This pumping program is one component of an Alternative Water Resources Management (AWRM) program to be implemented by the Santa Clarita Valley Sanitation District of Los Angeles County (SCVSD, a division of the Los Angeles County Sanitation District [LACSD]), the Purveyors, and other parties for the purpose of meeting Total Maximum Daily Loads (TMDLs) for chloride in the Santa Clara River in western Los Angeles County and eastern Ventura County. The AWRM program was finalized in the form of a Memorandum of Understanding (MOU) dated October 2008. Under the AWRM program, CLWA will develop a plan to provide imported water to replace Saugus Formation groundwater that will be pumped to provide supplemental water for the AWRM program. The supplemental pumped groundwater from the Saugus Formation will be released to the Santa Clara River near the Los Angeles County / Ventura County line to improve water quality conditions in the river

[2]As part of the ongoing implementation of perchlorate containment and restoration of impacted capacity, well VWC-157 was abandoned in January 2005 and replaced by new well VWC-206. Thus, this analysis includes planned pumping from replacement well VWC-206.

and to allow for attainment of the AWRM's stated water quality objectives for the river. Under the AWRM, the supplemental water will be directed to the river during years of extreme drought conditions in the SWP, defined as time periods when chloride concentrations equal or exceed 80 milligrams per liter (mg/L) in SWP water (Geomatrix, 2008; LARWQCB, 2008). Pumping under this program is planned to occur from well VWC-206 and from two future wells that will be drilled near VWC-206. This supplemental pumping is factored into the annual pumping volumes listed in Table 3-5. The pumping rates listed in Table 3-5 for the individual Saugus Formation wells will occur regardless of whether a portion of a given year's pumping is being directed to the AWRM program. Any volume of pumping directed to the AWRM program in a given year will be made up with imported water supplies, rather than from increased pumping of Alluvial or other Saugus groundwater. Technical analyses indicate that this pumping could occur in about 24 percent of all years, with total pumping occurring at rates ranging from less than 1 million gallons per day (mgd) to as much as 8 mgd (Geomatrix, 2008).

3.3.4 Monthly Allocation of Pumping

The model simulations that evaluated the operating plan were conducted by modeling groundwater recharge and pumping on a monthly basis. Consequently, the annual pumping volumes specified in the groundwater operating plan were converted to monthly values at each well for modeling purposes. The allocation of pumping, by month, for agricultural and urban production wells in both the Alluvial Aquifer and the Saugus Formation is listed in Table 3-7. Separate monthly distributions were used because agricultural demands are for exclusively outdoor uses, whereas urban demands are for both indoor and outdoor uses. As discussed in the model development report (CH2M HILL, 2004a), the monthly distribution of agricultural pumping was derived from crop consumptive use requirements published by the California Irrigation Management Information Service. The monthly distribution of urban demand was determined by examining historical monthly flow records for the two water reclamation plants (WRPs) that are present in the valley, and also by examining the distributions of monthly water consumption recorded by the Purveyors within their service areas during the past several years.

3.3.5 Total Available Potable Water Supply Under the 2008 Operating Plan

For the 2008 Operating Plan and the 1922-2007 simulation period, Table 3-8 lists the annual volumes of water available from each potable water source (Alluvial Aquifer, Saugus groundwater, and SWP imports), along with their combined total. The combined pumping from the Alluvial Aquifer and the Saugus Formation averages 51,400 afy and ranges between 47,335 and 73,577 under the 2008 Operating Plan. Year-by-year pumping from each aquifer is shown in Figure 3-3, along with total groundwater pumping.

Figure 3-4 compares total groundwater pumping with SWP water supply availability and the resulting total volume of water from a combination of local groundwater and imported SWP water (not including other water supplies, for example, purchased water, water banked in other groundwater basins, etc.). The total water supply from those two sources is as low as 64,858 afy during the driest years in the SWP system, when SWP deliveries are below 10,000 afy. For the 86-year simulation period, the total available supply from local groundwater and imported SWP water averages about 110,000 afy and can exceed 140,000 afy in the wettest years.

3.4 2008 Operating Plan with Pumping Redistribution

The 2008 Operating Plan with Pumping Redistribution was developed in response to model simulation results (discussed in Section 4 of this report) that identified a potential lack of achievability in maintaining alluvial pumping in the eastern portion of the basin, due to decline in groundwater levels below the intake sections of wells. The model simulations of the 2008 operating plan indicated that such declines, and the associated potential lack of achievability, could occur during periods which experience prolonged dry conditions, such as occurred from the mid-1940s through the mid-1970s, when there were few years of significantly greater-than-average rainfall. For this three-decade period, the model simulation found the 2008 Operating Plan to not be achievable in the most eastern part of the basin, the "Above Mint Canyon" subarea. However, it was also recognized that achievability might be accomplished by redistributing some pumping to other areas, specifically to reduce pumping stress in the far east and replace it with increased pumping farther west in the basin. This redistribution may not be necessary during other historical periods that were characterized by intermittent years of significant rainfall, streamflow, and associated groundwater recharge (such as occurred periodically from the late 1970s through 2005).

This variation of the 2008 Operating Plan was examined as follows. Recognizing that SCWD is in the midst of constructing new or replacement wells (e.g. to replace its perchlorate-impacted Stadium well) to the west of the "Above Mint Canyon" subarea, a redistribution of some SCWD pumping, as analyzed in the 2008 Operating Plan, was crafted whereby 1,600 afy of pumping was moved from three SCWD wells in the "Above Mint Canyon" subarea (near the mouth of Sand Canyon) to the replacement SCWD Santa Clara and Bouquet wells, located in the "Above Saugus WRP" and "Bouquet Canyon" subareas, respectively. Table 3-9 shows the resulting pumping plan for each Alluvial well under this redistribution scheme.

Besides the pumping redistribution in these Alluvial wells, all other aspects of Alluvial and Saugus pumping remains unchanged from the 2008 Operating Plan.

3.5 Potential Future Operating Plan

A third operating plan was analyzed at the request of the Purveyors. This plan is referred to herein as the Potential Operating Plan and contemplates increased utilization of groundwater during both regular (wet/normal) years and dry years. Target pumping volumes and locations under this plan were provided by the Purveyors and are summarized in Table 3-10 for the Alluvial Aquifer and Table 3-11 for the Saugus Formation. Under this plan, Alluvial Aquifer pumping would be on the order of 47,500 afy in normal/wet years and would be reduced to about 41,500 afy following two or more years of below-normal rainfall locally. Saugus Formation pumping would be on the order of 16,350 afy during years of normal SWP water availability and would increase to over 39,500 afy in the third year of reduced SWP water availability.

Consequently, total groundwater pumping under this plan would be almost 64,000 afy during normal years (compared with about 51,000 afy in the 2008 Operating Plan) and could be as high as about 87,000 afy during the highest pumping years (compared with about 73,500 afy in the 2008 Operating Plan). Figure 3-5 shows the fluctuation during the 86-year simulation period in

total groundwater pumping under this Potential Operating Plan, as well as the fluctuations in total Alluvial pumping and total Saugus pumping. Figure 3-6 compares the year-to-year pumping volumes, as well as the 86-year total pumping, for the potential plan and the 2008 plan. Total groundwater pumping during the 86-year simulation period would be about 1 million acre-feet, or about 80 percent, higher under the Potential Operating Plan.

The Potential Operating Plan differs from the 2008 Operating Plan only in the amount of groundwater being extracted. Both plans assume the same amount of SWP water availability. As shown in Table 3-12 and Figure 3-7, under the Potential Operating Plan, the total contemplated volume of available potable water supply from a combination of local groundwater and imported SWP water (not including other water supplies, for example, purchased water, water banked in other groundwater basins, etc.) ranges between about 77,000 afy and 156,000 afy, and averages nearly 122,000 afy for the 86-year simulation period. This represents an approximate 10 percent increase in water supply from those two sources during average and wet years, compared with the 2008 Operating Plan. During years of reduced SWP imports, the Potential Operating Plan contemplates almost 20 percent more potable water availability from local groundwater and imported SWP water during the driest years, compared with the 2008 Operating Plan.

3.6 Simulation of Other Local Hydrologic Processes

In addition to groundwater pumping, infiltration from irrigation (from urban and agricultural lands), precipitation, and streamflows (stormwater and WRP discharges) were also modeled. These other local hydrologic processes were defined using the Surface Water Routing Model (SWRM), which is described in Appendix C to the model development and calibration report (CH2M HILL, 2004a). The procedures used to derive these terms were the same as in the original basin yield analysis (CH2M HILL and LSCE, 2005) and are described in the following sections.

3.6.1 Recharge from Urban Irrigation

Under existing land use and water use conditions, the estimated long-term infiltration rates of applied irrigation water beneath urban areas, under full build-out conditions in the valley, were estimated to be 1.0 in/yr for industrial and retail lands, 2.2 in/yr for residential developments and parks, and 4.6 in/yr for golf courses (CH2M HILL, 2004a; CH2M HILL and LSCE, 2005). These rates were applied during each year (and each month) of the 86-year simulation period. The areas over which these rates were applied were larger than under current conditions. The areas were defined from recent land use data and LACSD mapping of projected future land uses in the rest of the Santa Clarita Valley under full build-out conditions[3] (CH2M HILL and LSCE, 2005).

[3]LACSD land use mapping indicates that, including Newhall Ranch, approximately 14,000 acres of currently undeveloped land will be urbanized in the future within the model simulation area. Additional urbanization will also occur in areas that are within the watershed, but outside the model's boundaries.

3.6.2 Recharge from Agricultural Irrigation

As discussed in the *Newhall Ranch Updated Water Resources Impact Evaluation* (CH2M HILL, 2002), irrigation of lands owned by NLF results in existing agricultural return flows. The source of most irrigation water is groundwater pumping from the Alluvial Aquifer, with some limited pumping occurring from one Saugus Formation well (NLF-156) prior to 2008, when this well was taken out of service. Under full Valley build-out conditions, the currently irrigated lands will no longer be irrigated because their water source will be used as part of the water supply for Newhall Ranch. Therefore, under full build-out conditions, no agricultural irrigation will occur within the area simulated by the model.

3.6.3 Precipitation Recharge

Infiltration from direct precipitation within the model domain was defined using data from the Newhall-Soledad and NCWD rain gages, an isohyet map of rainfall throughout the watershed, and the Turner (1986) power-function equation that describes the relationship between annual rainfall and annual groundwater recharge within the valley. Details concerning the derivation of precipitation infiltration rates from these data are contained in Appendix C to the model development and calibration report (CH2M HILL, 2004a). Table 3-13 lists the simulated monthly precipitation at the NCWD rain gage for the 86-year model period[4].

3.6.4 Stormwater Flows and Recharge from Streams

For each month of the simulation, the SWRM calculated the amounts of stormwater flow and groundwater recharge in all streams, plus the amount of flow and groundwater recharge arising from projected future WRP discharges to the Santa Clara River (including from the future Newhall WRP, which will service the planned Newhall Ranch development). For the Santa Clara River, the volume of streamflow was defined from measured and estimated streamflow data at the Lang gage (Table 3-14). For Castaic Creek, the volume of streamflow was defined from historical DWR operations and consideration of the hydrologic year type (Table 3-15). For the remaining Santa Clara River tributaries, streamflow volumes were defined by the SWRM using monthly rainfall data and the Turner (1986) relationship between rainfall, ET, and the subsequent yield from each watershed.

3.6.5 WRP Discharges to the Santa Clara River

Treated water is discharged to the Santa Clara River from the two WRPs that are present in the Valley. The Saugus WRP discharges to the river immediately above the mouth of the South Fork Santa Clara River, and the Valencia WRP discharges to the river just west of Interstate 5. The planned Newhall WRP will discharge to the river just east of the Los Angeles / Ventura County line for limited durations in the winter months.

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[4]The simulated monthly precipitation was defined from measurements at the NCWD rain gage from 1979 through 2003, as well as by combining the isohyet map with measurements at the Newhall-Soledad rain gage from prior to 1979.

Under full Valley build-out conditions, future flows into and from WRPs will be higher than historical flows because of increased development and the associated increase in indoor water use volumes. Additionally, a portion of the future treated water will be reclaimed, as described in CLWA's recycled water master plan (Kennedy/Jenks Consultants, 2002). In the original basin yield analysis work (CH2M HILL and LSCE, 2005), future inflows to the Saugus and Valencia WRPs were estimated from projected future water demands and from comparisons of historical water use and measured inflows to both WRPs. Table 3-16 shows the derivation of urban water demands outside the Newhall Ranch development (which will be served by a new, separate WRP). Table 3-17 shows the total amount of treated water generated by the Saugus and Valencia WRPs, and the amount of this water that is reclaimed and discharged to the river, by month. These values are the same as were used in the original basin yield analysis work. The values in Table 3-17 assume that the reclaimed water volume will be no more than 16,000 afy, to maintain existing flow volumes in the Santa Clara River. For the Newhall Ranch WRP, discharges to the river will be 286 afy, occurring primarily in December and January, when demands for reclaimed water are at their seasonal low. The total combined volumes of treated water discharged to the Santa Clara River under full Valley build-out conditions (including Newhall Ranch) are summarized, by month, in Table 3-18. These rates, which were used in the original basin yield analysis, were carried forward and used in each year of the 86-year simulation for the basin yield update analysis.

3.6.6 Monthly Assignment and Tracking of Surface Water Budget

The month-by-month assignment of the rates and locations of surface water infiltration to the underlying Alluvial Aquifer system was performed by the SWRM using the procedures described in Section C.8.5 of Appendix C to the model development and calibration report (CH2M HILL, 2004a). Streambed infiltration capacities for the last 28 years of the 86-year simulation period (calendar years 1980 through 2007) were the same as those used in the calibrated model. For the prior 58 years (1922 through 1979), the monthly streambed infiltration capacity values for a given year were selected by using one of the calibration years as a prototype year. Rainfall and streamflow records were used to identify the best prototype year and to subsequently specify the corresponding streambed infiltration rates.

For each month of the 86-year simulation period, the SWRM also tracked the volume of surface water that does not infiltrate to groundwater from a given stream because of gaining stream conditions (i.e., rejected stream leakage). This rejected stream leakage was calculated to remain as surface water in the Santa Clara River and to eventually exit the model domain at the west end of the Valley, at the County Line gage.

3.7 Running the Model and Evaluating Results

As discussed in the previous sections, the modeling evaluations were performed by simulating conditions on a monthly basis for the 86-year simulation period. The first step in this process consisted of running the SWRM to calculate the monthly distribution of recharge to the Alluvial Aquifer system (from rainfall, streamflow, irrigation, and WRP discharges) and recharge to the Saugus Formation (from rainfall and irrigation) in areas where the Alluvial Aquifer is not

present. The output from the SWRM consisted of monthly files that assigned recharge to each node in the model grid.

The model was then run using monthly time steps, in which pumping and recharge terms were varied each month. For each sub-interval of time, the model was run by solving the groundwater flow equations for a given month, using a convergence criterion of 0.005 foot for groundwater elevations and a water budget convergence criterion of 2 cubic feet per day. The model results were then evaluated by generating time-series plots (hydrographs) of water budget terms and groundwater elevations to evaluate the potential effects of the groundwater operating plan across the basin. The hydrographs were used to evaluate whether the operating plan is consistent with the objective of operating the basin in a manner that maintains long-term stability in groundwater levels and river flows. This analysis and its findings are presented in the following Chapter 4.

Table 3-1

Alluvial and Saugus Formation Pumping Patterns for the Simulation of 1922-2007 Historical Hydrology

Calendar Year	Local Rainfall (inches)[a]	SWP Water Availability[b]	Simulated Pumping Conditions	
			Alluvium	Saugus
1922	~ 32	89%	Normal	Normal
1923	~ 14	76%	Normal	Normal
1924	~ 8	10%	Dry Year 1	Dry Year 1
1925	~ 7	40%	Dry Year 2	Normal
1926	~ 26	53%	Dry Year 3	Normal
1927	~ 24	89%	Normal	Normal
1928	~ 10	50%	Normal	Normal
1929	~ 12	18%	Dry Year 1	Dry Year 1
1930	~ 12	49%	Dry Year 2	Normal
1931	24.41	27%	Dry Year 3	Dry Year 2
1932	13.73	32%	Normal	Dry Year 3
1933	20.52	48%	Dry Year 1	Dry Year 4
1934	18.05	32%	Dry Year 2	Dry Year 5
1935	12.21	81%	Dry Year 3	Normal
1936	20.47	76%	Dry Year 4	Normal
1937	17.92	78%	Dry Year 5	Normal
1938	32.75	82%	Dry Year 6	Normal
1939	11.27	79%	Normal	Normal
1940	21.37	77%	Dry Year 1	Normal
1941	42.14	61%	Dry Year 2	Normal
1942	7.10	77%	Normal	Normal
1943	37.03	76%	Dry Year 1	Normal
1944	24.63	71%	Normal	Normal
1945	14.56	75%	Normal	Normal
1946	21.71	77%	Normal	Normal
1947	4.16	56%	Normal	Normal
1948	9.13	63%	Dry Year 1	Normal
1949	9.93	31%	Dry Year 2	Dry Year 1
1950	6.84	60%	Dry Year 3	Normal
1951	12.42	85%	Dry Year 4	Normal
1952	34.19	63%	Dry Year 5	Normal
1953	4.88	80%	Normal	Normal
1954	15.82	77%	Dry Year 1	Normal
1955	13.91	28%	Dry Year 2	Dry Year 1
1956	14.21	87%	Dry Year 3	Normal
1957	22.85	62%	Dry Year 4	Normal
1958	23.14	73%	Dry Year 5	Normal
1959	9.81	84%	Normal	Normal
1960	11.64	35%	Dry Year 1	Dry Year 1
1961	8.82	57%	Dry Year 2	Normal
1962	21.22	72%	Dry Year 3	Normal
1963	12.79	82%	Dry Year 4	Normal
1964	10.09	53%	Dry Year 5	Normal
1965	32.28	69%	Dry Year 6	Normal
1966	14.57	79%	Normal	Normal
1967	23.23	72%	Dry Year 1	Normal
1968	6.90	80%	Dry Year 2	Normal
1969	32.42	64%	Dry Year 3	Normal
1970	23.19	79%	Normal	Normal
1971	13.75	80%	Normal	Normal
1972	4.15	41%	Dry Year 1	Normal
1973	19.79	75%	Dry Year 2	Normal
1974	18.04	77%	Dry Year 3	Normal
1975	10.92	78%	Dry Year 4	Normal
1976	14.02	63%	Dry Year 5	Normal
1977	20.87	6%	Dry Year 6	Dry Year 3
1978	42.17	87%	Dry Year 7	Normal
1979	21.47	76%	Normal	Normal
1980	27.00	66%	Normal	Normal
1981	13.42	76%	Normal	Normal
1982	20.20	71%	Dry Year 1	Normal
1983	39.07	60%	Normal	Normal
1984	12.86	78%	Normal	Normal
1985	8.37	77%	Dry Year 1	Normal
1986	18.02	56%	Dry Year 2	Normal
1987	14.45	68%	Normal	Normal
1988	16.92	12%	Dry Year 1	Dry Year 1
1989	7.56	76%	Dry Year 2	Normal
1990	6.98	9%	Dry Year 3	Dry Year 2
1991	17.21	18%	Dry Year 4	Dry Year 3
1992	32.03	26%	Dry Year 5	Dry Year 4
1993	32.72	90%	Normal	Normal
1994	10.27	51%	Normal	Normal
1995	29.15	72%	Dry Year 1	Normal
1996	15.88	83%	Normal	Normal
1997	13.35	75%	Normal	Normal
1998	30.73	73%	Normal	Normal
1999	8.96	83%	Normal	Normal
2000	14.04	84%	Normal	Normal
2001	22.24	28%	Dry Year 1	Dry Year 1
2002	7.90	52%	Dry Year 2	Normal
2003	15.70	71%	Dry Year 3	Normal
2004	22.79	65%	Dry Year 4	Normal
2005	37.15	90%	Normal	Normal
2006	13.89	100%	Normal	Normal
2007	5.78	60%	Dry Year 1	Normal

aFrom records at Newhall-Soledad rain gage (Station No. FC32CE). Pumping year type lags local rainfall by one year. Dry year pumping occurs when rainfall in prior year is 12.5 inches or less, and may continue until after a year with high rainfall (well above normal) has occurred.

[b]Values for 1922-2003 are from Table B.3 in DWR (2008) and are for SWP Table A Deliveries under current (2007) conditions. Values in 2004 through 2007 are actual historical deliveries during those years.

TABLE 3-2

Local Hydrology and 2008 Operating Plan for the Alluvial Aquifer

Calendar Year	Local Rainfall (inches)[a]	Year Type	Alluvial Aquifer Pumping under the Groundwater Operating Plan (afy)
1922	~ 32	Normal	35,000-40,000
1923	~ 14	Normal	35,000-40,000
1924	~ 8	Dry Year 1	30,000-35,000
1925	~ 7	Dry Year 2	30,000-35,000
1926	~ 26	Dry Year 3	30,000-35,000
1927	~ 24	Normal	35,000-40,000
1928	~ 10	Normal	35,000-40,000
1929	~ 12	Dry Year 1	30,000-35,000
1930	~ 12	Dry Year 2	30,000-35,000
1931	24.41	Dry Year 3	30,000-35,000
1932	13.73	Normal	35,000-40,000
1933	20.52	Dry Year 1	30,000-35,000
1934	18.05	Dry Year 2	30,000-35,000
1935	12.21	Dry Year 3	30,000-35,000
1936	20.47	Dry Year 4	30,000-35,000
1937	17.92	Dry Year 5	30,000-35,000
1938	32.75	Dry Year 6	30,000-35,000
1939	11.27	Normal	35,000-40,000
1940	21.37	Dry Year 1	30,000-35,000
1941	42.14	Dry Year 2	30,000-35,000
1942	7.10	Normal	35,000-40,000
1943	37.03	Dry Year 1	30,000-35,000
1944	24.63	Normal	35,000-40,000
1945	14.56	Normal	35,000-40,000
1946	21.71	Normal	35,000-40,000
1947	4.16	Normal	35,000-40,000
1948	9.13	Dry Year 1	30,000-35,000
1949	9.93	Dry Year 2	30,000-35,000
1950	6.84	Dry Year 3	30,000-35,000
1951	12.42	Dry Year 4	30,000-35,000
1952	34.19	Dry Year 5	30,000-35,000
1953	4.88	Normal	35,000-40,000
1954	15.82	Dry Year 1	30,000-35,000
1955	13.91	Dry Year 2	30,000-35,000
1956	14.21	Dry Year 3	30,000-35,000
1957	22.85	Dry Year 4	30,000-35,000
1958	23.14	Dry Year 5	30,000-35,000
1959	9.81	Normal	35,000-40,000
1960	11.64	Dry Year 1	30,000-35,000
1961	8.82	Dry Year 2	30,000-35,000
1962	21.22	Dry Year 3	30,000-35,000
1963	12.79	Dry Year 4	30,000-35,000
1964	10.09	Dry Year 5	30,000-35,000
1965	32.28	Dry Year 6	30,000-35,000
1966	14.57	Normal	35,000-40,000
1967	23.23	Dry Year 1	30,000-35,000
1968	6.90	Dry Year 2	30,000-35,000
1969	32.42	Dry Year 3	30,000-35,000
1970	23.19	Normal	35,000-40,000
1971	13.75	Normal	35,000-40,000
1972	4.15	Dry Year 1	30,000-35,000
1973	19.79	Dry Year 2	30,000-35,000
1974	18.04	Dry Year 3	30,000-35,000
1975	10.92	Dry Year 4	30,000-35,000
1976	14.02	Dry Year 5	30,000-35,000
1977	20.87	Dry Year 6	30,000-35,000
1978	42.17	Dry Year 7	30,000-35,000
1979	21.47	Normal	35,000-40,000
1980	27.00	Normal	35,000-40,000
1981	13.42	Normal	35,000-40,000
1982	20.20	Dry Year 1	30,000-35,000
1983	39.07	Normal	35,000-40,000
1984	12.86	Normal	35,000-40,000
1985	8.37	Dry Year 1	30,000-35,000
1986	18.02	Dry Year 2	30,000-35,000
1987	14.45	Normal	35,000-40,000
1988	16.92	Dry Year 1	30,000-35,000
1989	7.56	Dry Year 2	30,000-35,000
1990	6.98	Dry Year 3	30,000-35,000
1991	17.21	Dry Year 4	30,000-35,000
1992	32.03	Dry Year 5	30,000-35,000
1993	32.72	Normal	35,000-40,000
1994	10.27	Normal	35,000-40,000
1995	29.15	Dry Year 1	30,000-35,000
1996	15.88	Normal	35,000-40,000
1997	13.35	Normal	35,000-40,000
1998	30.73	Normal	35,000-40,000
1999	8.96	Normal	35,000-40,000
2000	14.04	Normal	35,000-40,000
2001	22.24	Dry Year 1	30,000-35,000
2002	7.90	Dry Year 2	30,000-35,000
2003	15.70	Dry Year 3	30,000-35,000
2004	22.79	Dry Year 4	30,000-35,000
2005	37.15	Normal	35,000-40,000
2006	13.89	Normal	35,000-40,000
2007	5.78	Dry Year 1	30,000-35,000

aFrom records at Newhall-Soledad rain gage (Station No. FC32CE). Pumping year type lags local rainfall by one year. Dry year pumping occurs when rainfall in prior year is 12.5 inches or less, and may continue until after a year with high rainfall (well above normal) has occurred.

afy = acre-feet per year

TABLE 3-3

SWP Deliveries and 2008 Operating Plan for the Saugus Formation

Calendar Year	Historical SWP Hydrology	SWP Water Delivery from the California Bay-Delta: Percent of Maximum Table A Deliveries (Current Conditions)	Design of Updated Basin Analysis: Saugus Pumping: Year Type	Design of Updated Basin Analysis: Saugus Operating Plan Pumping Volume (afy)	
1922	Above Normal	89%	Normal	11,000	
1923	Below Normal	76%	Normal	11,000	
1924	Critical	10%	Dry Year 1	15,000	Mild Single Dry Year
1925	Dry	40%	Normal	11,000	
1926	Dry	53%	Normal	11,000	
1927	Wet	89%	Normal	11,000	
1928	Above Normal	50%	Normal	11,000	
1929	Critical	18%	Dry Year 1	15,000	6-Year Drought (1929-1934) and 4-Year Drought (1931-1934)
1930	Dry	49%	Normal	11,000	
1931	Critical	27%	Dry Year 2	25,000	
1932	Dry	32%	Dry Year 3	35,000	
1933	Critical	48%	Dry Year 4	35,000	
1934	Critical	32%	Dry Year 5	35,000	
1935	Below Normal	81%	Normal	11,000	
1936	Below Normal	76%	Normal	11,000	
1937	Below Normal	78%	Normal	11,000	
1938	Wet	82%	Normal	11,000	
1939	Dry	79%	Normal	11,000	
1940	Above Normal	77%	Normal	11,000	
1941	Wet	61%	Normal	11,000	
1942	Wet	77%	Normal	11,000	
1943	Wet	76%	Normal	11,000	
1944	Dry	71%	Normal	11,000	
1945	Below Normal	75%	Normal	11,000	
1946	Below Normal	77%	Normal	11,000	
1947	Dry	56%	Normal	11,000	
1948	Below Normal	63%	Normal	11,000	
1949	Dry	31%	Dry Year 1	15,000	Mild Single Dry Year
1950	Below Normal	60%	Normal	11,000	
1951	Above Normal	85%	Normal	11,000	
1952	Wet	63%	Normal	11,000	
1953	Wet	80%	Normal	11,000	
1954	Above Normal	77%	Normal	11,000	
1955	Dry	28%	Dry Year 1	15,000	Mild Single Dry Year
1956	Wet	87%	Normal	11,000	
1957	Above Normal	62%	Normal	11,000	
1958	Wet	73%	Normal	11,000	
1959	Below Normal	84%	Normal	11,000	
1960	Dry	35%	Dry Year 1	15,000	Mild Single Dry Year
1961	Dry	57%	Normal	11,000	
1962	Below Normal	72%	Normal	11,000	
1963	Wet	82%	Normal	11,000	
1964	Dry	53%	Normal	11,000	
1965	Wet	69%	Normal	11,000	
1966	Below Normal	79%	Normal	11,000	
1967	Wet	72%	Normal	11,000	
1968	Below Normal	80%	Normal	11,000	
1969	Wet	64%	Normal	11,000	
1970	Wet	79%	Normal	11,000	
1971	Wet	80%	Normal	11,000	
1972	Below Normal	41%	Normal	11,000	
1973	Above Normal	75%	Normal	11,000	
1974	Wet	77%	Normal	11,000	
1975	Wet	78%	Normal	11,000	
1976	Critical	63%	Normal	11,000	2-year Drought (1976-1977); Single Critical Dry Year (1977)
1977	Critical	6%	Dry Year 3	35,000	
1978	Above Normal	87%	Normal	11,000	
1979	Below Normal	76%	Normal	11,000	
1980	Above Normal	66%	Normal	11,000	
1981	Dry	76%	Normal	11,000	
1982	Wet	71%	Normal	11,000	
1983	Wet	60%	Normal	11,000	
1984	Wet	78%	Normal	11,000	
1985	Dry	77%	Normal	11,000	
1986	Wet	56%	Normal	11,000	
1987	Dry	68%	Normal	11,000	6-Year Drought (1987-1992)
1988	Critical	12%	Dry Year 1	15,000	
1989	Dry	76%	Normal	11,000	
1990	Critical	9%	Dry Year 2	25,000	
1991	Critical	18%	Dry Year 3	35,000	
1992	Critical	26%	Dry Year 4	35,000	
1993	Above Normal	90%	Normal	11,000	
1994	Critical	51%	Normal	11,000	
1995	Wet	72%	Normal	11,000	
1996	Wet	83%	Normal	11,000	
1997	Wet	75%	Normal	11,000	
1998	Wet	73%	Normal	11,000	
1999	Wet	83%	Normal	11,000	
2000	Above Normal	84%	Normal	11,000	
2001	Dry	28%	Dry Year 1	15,000	Mild Single Dry Year
2002	Dry	52%	Normal	11,000	
2003	Above Normal	71%	Normal	11,000	
2004	Below Normal / Dry	65%	Normal	11,000	
2005	Wet / Above Normal	90%	Normal	11,000	
2006	Wet / Wet	100%	Normal	11,000	
2007	Dry / Critical	60%	Normal	11,000	

[a]Values for 1922-2003 are from Table B.3 in DWR (2008) and are for SWP Table A Deliveries under current (2007) conditions.
Values in 2004 through 2007 are actual historical deliveries during those years. afy = acre-feet per year

TABLE 3-4
Pumping Rates Simulated for Individual Alluvial Aquifer Wells under the 2008 Groundwater Operating Plan

Well Name	Alluvial Subarea	2005 Operating Plan Normal	2005 Operating Plan Dry	2008 Operating Plan Normal	2008 Operating Plan Dry Yr 1	2008 Operating Plan Dry Yr 2+	Comments
NCWD-Castaic 1	Castaic Valley	385	345	350	300	250	
NCWD-Castaic 2	Castaic Valley	166	125	100	100	100	
NCWD-Castaic 4	Castaic Valley	100	45	100	0	0	
NCWD-Castaic 7	Castaic Valley			300	200	200	Assume similar pumping as at NCWD-Castaic3 during early 1980s
NCWD-Pinetree 1	Above Mint Canyon	164	0	150	0	0	
NCWD-Pinetree 3	Above Mint Canyon	545	525	350	300	300	
NCWD-Pinetree 4	Above Mint Canyon	300	0	300	200	200	
NCWD-Pinetree 5	Above Mint Canyon			300	200	200	
NCWD Total		**1,660**	**1,040**	**1,950**	**1,300**	**1,250**	
NLF-161	Below Valencia WRP	485	485	1,000	1,000	1,000	
NLF-B10	Below Valencia WRP	344	344	500	350	350	
NLF-B11	Below Valencia WRP	232	232	100	200	200	
NLF-B14	Below Valencia WRP			300	1,000	1,000	
NLF-B20	Below Valencia WRP	584	584	350	500	500	Pumping was assigned to former B7 well in 2005 analysis.
NLF-B5	Below Valencia WRP	1,582	1,582	2,400	1,900	1,900	
NLF-B6	Below Valencia WRP	1,766	1,766	1,100	1,100	1,100	
NLF-C	Below Valencia WRP	1,373	1,373	1,100	1,000	1,000	
NLF-C3	Below Valencia WRP	192	192	100	200	200	
NLF-C4	Below Valencia WRP	809	809	200	450	450	
NLF-C5	Below Valencia WRP	850	850	900	850	850	
NLF-C7	Below Valencia WRP	1,107	1,107	350	300	300	
NLF-C8	Below Valencia WRP	594	594	400	400	400	
NLF-E5	Below Valencia WRP	750	750	100	150	150	
NLF-E9	Below Valencia WRP	814	814	900	350	350	
NLF-G45	Below Valencia WRP	390	390	350	400	400	
NLF Total		**11,872**	**11,872**	**10,150**	**10,150**	**10,150**	
SCWD-Clark	Bouquet Canyon	782	700	700	700	700	
SCWD-Guida	Bouquet Canyon	1,320	1,230	1,300	1,250	1,200	
SCWD-Honby	Above Saugus WRP	696	870	1,000	850	700	
SCWD-Lost Canyon 2	Above Mint Canyon	741	640	700	700	650	
SCWD-Lost Canyon 2A	Above Mint Canyon	1,034	590	700	650	600	
SCWD-Mitchell #5A	Above Mint Canyon	0	0	500	350	200	
SCWD-Mitchell #5B	Above Mint Canyon	557	0	800	550	300	
SCWD-N. Oaks Central	Above Mint Canyon	822	1,640	850	800	700	
SCWD-N. Oaks East	Above Mint Canyon	1,234	485	800	750	700	
SCWD-N. Oaks West	Above Mint Canyon	898	0	800	750	700	
SCWD-Sand Canyon	Above Mint Canyon	930	195	1,000	600	200	
SCWD-Sierra	Above Mint Canyon	846	0	1,100	900	700	
SCWD-Valley Center	Above Saugus WRP	800	800	800	800	800	Pumping transferred from former well SCWD-Stadium
SCWD Total		**10,660**	**7,150**	**11,050**	**9,650**	**8,150**	
VWC-D	Castaic Valley	690	690	880	880	880	
VWC-E15	Below Valencia WRP			800	800	800	
VWC-N	Below Saugus WRP	620	620	650	650	650	
VWC-N7	Below Saugus WRP	1,160	1,160	1,160	1,160	1,160	
VWC-N8	Below Saugus WRP	1,160	1,160	1,160	1,160	1,160	
VWC-Q2	Below Saugus WRP	985	985	1,100	1,100	1,100	
VWC-S6	Below Saugus WRP	865	865	1,000	1,000	1,000	
VWC-S7	Below Saugus WRP	865	865	500	500	500	
VWC-S8	Below Saugus WRP	865	865	500	500	500	
VWC-T7	Above Saugus WRP	920	920	750	750	750	Pumping transferred from former wells VWC-T2 and VWC-T4
VWC-U4	Above Saugus WRP	935	935	800	800	800	
VWC-U6	Above Saugus WRP	825	825	800	800	800	Pumping transferred from former well VWC-U3
VWC-W10	San Francisquito Canyon	865	865	1,000	1,000	1,000	Pumping was assigned to former W6 well in 2005 analysis.
VWC-W11	San Francisquito Canyon	600	600	800	800	800	
VWC-W9	San Francisquito Canyon	350	350	950	950	950	
VWC Total		**11,705**	**11,705**	**12,850**	**12,850**	**12,850**	
Robinson Ranch	Above Mint Canyon	932	400	600	550	450	
WHR	Castaic Valley	1,600	1,600	2,000	2,000	2,000	
Purveyor Alluvial Usage		**24,025**	**19,895**	**25,850**	**23,800**	**22,250**	**2008 Operating Plan:**
Other Alluvial Usage		**14,404**	**13,872**	**12,750**	**12,700**	**12,600**	**35,000 to 40,000 AF/yr in normal and wet years**
Total Alluvial Pumping		**38,429**	**33,767**	**38,600**	**36,500**	**34,850**	**30,000 to 35,000 AF/yr in dry years**

Notes:
All pumping volumes are listed in units of acre-feet per year (afy).
Wells that are not listed are assumed to not be pumping in the future.
NLF = Newhall Land & Farming Company
NCWD = Newhall County Water District
SCWD = Santa Clarita Division of Castaic Lake Water Agency
VWC = Valencia Water Company
WHR = Wayside Honor Rancho, whose wells are owned by the Los Angeles County Waterworks District No. 36
"Other Alluvial Usage" consists of pumping by NLF, WHR, and Robinson Ranch. An additional 500 afy of pumping by other private well owners is not included in this table.

TABLE 3-5

Pumping Rates Simulated for Individual Saugus Formation Wells under the 2008 Groundwater Operating Plan

Owner	Well Name	Non-Drought Years	Drought Year 1	Drought Year 2	Drought Year 3
NCWD	12	1,765	2,494	2,494	2,494
	13	1,765	2,494	2,494	2,494
Total Pumping (NCWD Wells)		**3,530**	**4,988**	**4,988**	**4,988**
SCWD	Saugus1	1,772	1,772	1,772	1,772
	Saugus2	1,772	1,772	1,772	1,772
Total Pumping (SCWD Wells)		**3,544**	**3,544**	**3,544**	**3,544**
Private	Palmer Golf Course	500	500	500	500
Total Pumping (Future Golf)		**500**	**500**	**500**	**500**
VWC	159	50	50	50	50
	160 (Municipal)	500	830	830	830
	160 (Val. Ctry Club)	500	500	500	500
	201	300	300	3,777	3,777
	205	1,211	2,945	4,038	4,038
	206	1,175	2,734	3,500	3,500
	207	1,175	2,734	3,500	3,500
Total Pumping (VWC Wells)		**4,911**	**10,093**	**16,195**	**16,195**
	Future #1	0	0	0	3,250
	Future #2	0	0	0	3,250
	Future #3	0	0	0	3,250
Total Pumping (Future Wells)		**0**	**0**	**0**	**9,750**
Total Pumping (All Saugus Wells)		**12,485**	**19,125**	**25,227**	**34,977**

Notes:

All pumping volumes are listed in units of acre-feet per year (afy).

Wells that are not listed are assumed to not be pumping in the future.

NLF = Newhall Land & Farming Company

SCWD = Santa Clarita Division of Castaic Lake Water Agency

NCWD = Newhall County Water District

VWC = Valencia Water Company

TABLE 3-6

Allocation of Pumping by Layer for Wells Completed in the Saugus Formation

Well Owner - Well Name	Model Layer	Depth to Open Interval (feet) Top	Bottom	Length of Open Interval in Model Layer (feet)	Kh (ft/day)	T in Open Interval (ft^2/day)	Percentage of Yield from Model Layer
NCWD-12	2	485	1,280	15	10	150	8.8
	3			500	2	1,000	58.5
	4			280	2	560	32.7
NCWD-13	2	420	750	80	10	800	61.5
	3			250	2	500	38.5
SCWD-Saugus1	2	490	1,620	10	10	100	1.8
	3			500	6.5	3,250	59.9
	4			500	4	2,000	36.8
	5			20	4	80	1.5
SCWD-Saugus2	2	490	1,591	10	10	100	1.7
	3			500	6.5	3,250	56.9
	4			500	4	2,000	35.0
	5			91	4	364	6.4
Palmer Golf Course	2			250	1	250	20.0
	3			500	1	500	40.0
	4			500	1	500	40.0
VWC-159	3	662	1,900	338	0.025	8.45	27.3
	4			500	0.025	12.5	40.4
	5			400	0.025	10	32.3
VWC-160	3	950	2,000	50	6.5	325	7.6
	4			500	4	2,000	46.2
	5			500	4	2,000	46.2
VWC-201	3	540	1,670	460	6.5	2,990	52.7
	4			500	4	2,000	35.3
	5			170	4	680	12.0
VWC-205	3	820	1,930	180	6.5	1,170	23.9
	4			500	4	2,000	40.9
	5			430	4	1,720	35.2
VWC-206	3	500	2,000	500	6.5	3,250	44.8
	4			500	4	2,000	27.6
	5			500	4	2,000	27.6
VWC-207*	3	500	2,000	500	6.5	3,250	44.8
	4			500	4	2,000	27.6
	5			500	4	2,000	27.6
Future Wells	3	500	2,000	500	6.5	3,250	44.8
Near VWC-206	4			500	4	2,000	27.6
(Assumed)	5			500	4	2,000	27.6

Notes:

* VWC-207 well construction information was not available at the time of this investigation and therefore the allocation of pumping was assumed to be similar to VWC-206.

Existing wells NCWD-7, NCWD-10, and NCWD-11 are assumed to no longer operate in the future.

Kh = horizontal hydraulic conductivity
ft/day = feet per day

T = transmissivity
ft^2/day = square feet per day

Table 3-7

Allocation of Pumping, by Month, for Agricultural and Urban Production Wells

Month	Percent of Annual Water Use, Agricultural	Percent of Annual Water Use, Urban	Percent of May through October Water Use, Urban
January	3.75	5.2	
February	5.1	3.7	
March	6.6	5.2	
April	9.1	6.6	
May	10.55	8.7	13.2
June	11.4	10.4	15.8
July	14.1	13	19.7
August	12.95	13.6	20.6
September	10.2	10.9	16.6
October	7.5	9.3	14.1
November	5	7.1	
December	3.75	6.3	
Total	**100**	**100**	**100**

TABLE 3-8

Total Groundwater and SWP Supplies for 2008 Groundwater Operating Plan (Not Including Recycled Water and Other Water Supplies, e.g. Purchased or Banked Water)

Model Year	Based on Historical Year	SWP Hydrology [a]	SWP Allocations [b] (%)	SWP Deliveries (afy)	Simulated Pumping From Alluvial Aquifer (afy)	Simulated Pumping From Saugus Formation (afy)	Total Groundwater Pumping (afy)	SWP + Groundwater (afy)
1	1922	Above Normal	89%	82,227	38,600	12,485	51,085	133,312
2	1923	Below Normal	76%	70,699	38,600	12,485	51,085	121,784
3	1924	Critical	10%	8,960	36,500	19,125	55,625	64,585
4	1925	Dry	40%	36,784	34,850	12,485	47,335	84,119
5	1926	Dry	53%	48,929	34,850	12,485	47,335	96,264
6	1927	Wet	89%	82,786	38,600	12,485	51,085	133,871
7	1928	Above Normal	50%	46,079	38,600	12,485	51,085	97,164
8	1929	Critical	18%	16,858	36,500	19,125	55,625	72,483
9	1930	Dry	49%	45,379	34,850	12,485	47,335	92,714
10	1931	Critical	27%	24,732	34,850	25,227	60,077	84,809
11	1932	Dry	32%	29,204	38,600	34,977	73,577	102,781
12	1933	Critical	48%	44,339	36,500	34,977	71,477	115,816
13	1934	Critical	32%	29,424	34,850	34,977	69,827	99,251
14	1935	Below Normal	81%	74,625	34,850	12,485	47,335	121,960
15	1936	Below Normal	76%	69,911	34,850	12,485	47,335	117,246
16	1937	Below Normal	78%	72,037	34,850	12,485	47,335	119,372
17	1938	Wet	82%	75,970	34,850	12,485	47,335	123,305
18	1939	Dry	79%	72,883	38,600	12,485	51,085	123,968
19	1940	Above Normal	77%	70,837	36,500	12,485	48,985	119,822
20	1941	Wet	61%	56,535	34,850	12,485	47,335	103,870
21	1942	Wet	77%	70,890	38,600	12,485	51,085	121,975
22	1943	Wet	76%	70,599	36,500	12,485	48,985	119,584
23	1944	Dry	71%	65,569	38,600	12,485	51,085	116,654
24	1945	Below Normal	75%	69,041	38,600	12,485	51,085	120,126
25	1946	Below Normal	77%	71,596	38,600	12,485	51,085	122,681
26	1947	Dry	56%	51,794	38,600	12,485	51,085	102,879
27	1948	Below Normal	63%	58,403	36,500	12,485	48,985	107,388
28	1949	Dry	31%	28,443	34,850	19,125	53,975	82,418
29	1950	Below Normal	60%	55,099	34,850	12,485	47,335	102,434
30	1951	Above Normal	85%	78,272	34,850	12,485	47,335	125,607
31	1952	Wet	63%	57,855	34,850	12,485	47,335	105,190
32	1953	Wet	80%	74,381	38,600	12,485	51,085	125,466
33	1954	Above Normal	77%	71,652	36,500	12,485	48,985	120,637
34	1955	Dry	28%	25,439	34,850	19,125	53,975	79,414
35	1956	Wet	87%	80,155	34,850	12,485	47,335	127,490
36	1957	Above Normal	62%	56,957	34,850	12,485	47,335	104,292
37	1958	Wet	73%	67,806	34,850	12,485	47,335	115,141
38	1959	Below Normal	84%	77,554	38,600	12,485	51,085	128,639
39	1960	Dry	35%	32,679	36,500	19,125	55,625	88,304
40	1961	Dry	57%	52,756	34,850	12,485	47,335	100,091
41	1962	Below Normal	72%	66,287	34,850	12,485	47,335	113,622
42	1963	Wet	82%	76,230	34,850	12,485	47,335	123,565
43	1964	Dry	53%	49,474	34,850	12,485	47,335	96,809
44	1965	Wet	69%	64,021	34,850	12,485	47,335	111,356
45	1966	Below Normal	79%	73,083	38,600	12,485	51,085	124,168
46	1967	Wet	72%	66,920	36,500	12,485	48,985	115,905
47	1968	Below Normal	80%	73,794	34,850	12,485	47,335	121,129
48	1969	Wet	64%	58,766	34,850	12,485	47,335	106,101
49	1970	Wet	79%	72,904	38,600	12,485	51,085	123,989
50	1971	Wet	80%	74,236	38,600	12,485	51,085	125,321
51	1972	Below Normal	41%	38,213	36,500	12,485	48,985	87,198
52	1973	Above Normal	75%	69,052	34,850	12,485	47,335	116,387
53	1974	Wet	77%	71,257	34,850	12,485	47,335	118,592
54	1975	Wet	78%	72,018	34,850	12,485	47,335	119,353
55	1976	Critical	63%	58,273	34,850	12,485	47,335	105,608
56	1977	Critical	6%	5,428	34,850	34,977	69,827	75,255
57	1978	Above Normal	87%	80,556	34,850	12,485	47,335	127,891
58	1979	Below Normal	76%	70,013	38,600	12,485	51,085	121,098
59	1980	Above Normal	66%	60,652	38,600	12,485	51,085	111,737
60	1981	Dry	76%	69,997	38,600	12,485	51,085	121,082
61	1982	Wet	71%	65,809	36,500	12,485	48,985	114,794
62	1983	Wet	60%	55,886	38,600	12,485	51,085	106,971
63	1984	Wet	78%	72,233	38,600	12,485	51,085	123,318
64	1985	Dry	77%	71,579	36,500	12,485	48,985	120,564
65	1986	Wet	56%	51,344	34,850	12,485	47,335	98,679
66	1987	Dry	68%	63,232	38,600	12,485	51,085	114,317
67	1988	Critical	12%	10,665	36,500	19,125	55,625	66,290
68	1989	Dry	76%	70,061	34,850	12,485	47,335	117,396
69	1990	Critical	9%	8,056	34,850	25,227	60,077	68,133
70	1991	Critical	18%	16,313	34,850	34,977	69,827	86,140
71	1992	Critical	26%	24,330	34,850	34,977	69,827	94,157
72	1993	Above Normal	90%	83,055	38,600	12,485	51,085	134,140
73	1994	Critical	51%	47,101	38,600	12,485	51,085	98,186
74	1995	Wet	72%	66,992	36,500	12,485	48,985	115,977
75	1996	Wet	83%	76,979	38,600	12,485	51,085	128,064
76	1997	Wet	75%	69,401	38,600	12,485	51,085	120,486
77	1998	Wet	73%	67,316	38,600	12,485	51,085	118,401
78	1999	Wet	83%	76,976	38,600	12,485	51,085	128,061
79	2000	Above Normal	84%	77,238	38,600	12,485	51,085	128,323
80	2001	Dry	28%	26,050	36,500	19,125	55,625	81,675
81	2002	Dry	52%	48,382	34,850	12,485	47,335	95,717
82	2003	Above Normal	71%	65,873	34,850	12,485	47,335	113,208
83	2004	Below Normal / Dry	Actual was 65%	60,125	34,850	12,485	47,335	107,460
84	2005	Wet / Above Normal	Actual was 90%	83,250	38,600	12,485	51,085	134,335
85	2006	Wet / Wet	Actual was 100%	92,500	38,600	12,485	51,085	143,585
86	2007	Dry / Critical	Actual was 60%	55,500	36,500	12,485	48,985	104,485

[a]Defined by water year, using DWR's Sacramento Valley Unimpaired Runoff Index: wet = wettest; critical = driest

[b]From Table B.3 in *The State Water Project Delivery Reliability Report 2007* (DWR, August 2008). This is for current (2007) conditions as defined in the DWR report. In any given year, the allocation may be made up, in part, of carryover water from the prior year.

afy = acre-feet per year SWP = State Water Project

Table 3-9

Pumping Rates Simulated for Individual Alluvial Aquifer Wells Under the Redistributed 2008 Groundwater Operating Plan (Listed By Alluvial Subarea)

		Original 2008 Operating Plan			Redistributed 2008 Operating Plan			
Well Name	**Alluvial Subarea**	**Normal**	**Dry Yr 1**	**Dry Yr 2+**	**Normal**	**Dry Yr 1**	**Dry Yr 2+**	**Comments**
NCWD-Pinetree 1	Above Mint Canyon	150	0	0	150	0	0	
NCWD-Pinetree 3	Above Mint Canyon	350	300	300	350	300	300	
NCWD-Pinetree 4	Above Mint Canyon	300	200	200	300	200	200	
NCWD-Pinetree 5	Above Mint Canyon	300	200	200	300	200	200	
Robinson Ranch	Above Mint Canyon	600	550	450	600	550	450	
SCWD-Sand Canyon	**Above Mint Canyon**	**1,000**	**600**	**200**	**200**	**150**	**0**	**Reduce these three wells by 1,600 afy in order to**
SCWD-Lost Canyon 2	**Above Mint Canyon**	**700**	**700**	**650**	**300**	**150**	**0**	**offset increased pumping at the SCWD-Santa Clara and**
SCWD-Lost Canyon 2A	**Above Mint Canyon**	**700**	**650**	**600**	**300**	**150**	**0**	**SCWD-Bouquet wells in the "Above Saugus WRP" area.**
SCWD-Mitchell #5A	Above Mint Canyon	500	350	200	500	350	200	
SCWD-Mitchell #5B	Above Mint Canyon	800	550	300	800	550	300	
SCWD-N. Oaks Central	Above Mint Canyon	850	800	700	850	800	700	
SCWD-N. Oaks East	Above Mint Canyon	800	750	700	800	750	700	
SCWD-N. Oaks West	Above Mint Canyon	800	750	700	800	750	700	
SCWD-Sierra	Above Mint Canyon	1,100	900	700	1,100	900	700	
Mint Canyon Total		**8,950**	**7,300**	**5,900**	**7,350**	**5,800**	**4,450**	
SCWD-Honby	Above Saugus WRP	1,000	850	700	1,000	850	700	
SCWD-Santa Clara	Above Saugus WRP	800	800	800	800	800	800	
SCWD-Valley Center	**Above Saugus WRP**	**0**	**0**	**0**	**800**	**800**	**800**	**Pumps 800 afy moved from the "Above Mint Canyon" area.**
SCWD-Bouquet	**Above Saugus WRP**	**0**	**0**	**0**	**800**	**800**	**800**	**Pumps 800 afy moved from the "Above Mint Canyon" area.**
VWC-T7	Above Saugus WRP	750	750	750	750	750	750	
VWC-U4	Above Saugus WRP	800	800	800	800	800	800	
VWC-U6	Above Saugus WRP	800	800	800	800	800	800	
Above Saugus WRP Total		**4,150**	**4,000**	**3,850**	**5,750**	**5,600**	**5,450**	
VWC-N	Below Saugus WRP	650	650	650	650	650	650	
VWC-N7	Below Saugus WRP	1,160	1,160	1,160	1,160	1,160	1,160	
VWC-N8	Below Saugus WRP	1,160	1,160	1,160	1,160	1,160	1,160	
VWC-Q2	Below Saugus WRP	1,100	1,100	1,100	1,100	1,100	1,100	
VWC-S6	Below Saugus WRP	1,000	1,000	1,000	1,000	1,000	1,000	
VWC-S7	Below Saugus WRP	500	500	500	500	500	500	
VWC-S8	Below Saugus WRP	500	500	500	500	500	500	
Below Saugus WRP Total		**6,070**	**6,070**	**6,070**	**6,070**	**6,070**	**6,070**	
NLF-161	Below Valencia WRP	1,000	1,000	1,000	1,000	1,000	1,000	
NLF-B10	Below Valencia WRP	500	350	350	500	350	350	
NLF-B11	Below Valencia WRP	100	200	200	100	200	200	
NLF-B14	Below Valencia WRP	300	1,000	1,000	300	1,000	1,000	
NLF-B20	Below Valencia WRP	350	500	500	350	500	500	
NLF-B5	Below Valencia WRP	2,400	1,900	1,900	2,400	1,900	1,900	
NLF-B6	Below Valencia WRP	1,100	1,100	1,100	1,100	1,100	1,100	
NLF-C	Below Valencia WRP	1,100	1,000	1,000	1,100	1,000	1,000	
NLF-C3	Below Valencia WRP	100	200	200	100	200	200	
NLF-C4	Below Valencia WRP	200	450	450	200	450	450	
NLF-C5	Below Valencia WRP	900	850	850	900	850	850	
NLF-C7	Below Valencia WRP	350	300	300	350	300	300	
NLF-C8	Below Valencia WRP	400	400	400	400	400	400	
NLF-E5	Below Valencia WRP	100	150	150	100	150	150	
NLF-E9	Below Valencia WRP	900	350	350	900	350	350	
NLF-G45	Below Valencia WRP	350	400	400	350	400	400	
VWC-E15	Below Valencia WRP	800	800	800	800	800	800	
Below Valencia WRP Total		**10,950**	**10,950**	**10,950**	**10,950**	**10,950**	**10,950**	
SCWD-Clark	Bouquet Canyon	700	700	700	700	700	700	
SCWD-Guida	Bouquet Canyon	1,300	1,250	1,200	1,300	1,250	1,200	
Bouquet Canyon Total		**2,000**	**1,950**	**1,900**	**2,000**	**1,950**	**1,900**	
VWC-W10	San Francisquito Canyon	1,000	1,000	1,000	1,000	1,000	1,000	
VWC-W11	San Francisquito Canyon	800	800	800	800	800	800	
VWC-W9	San Francisquito Canyon	950	950	950	950	950	950	
San Francisquito Canyon Total		**2,750**	**2,750**	**2,750**	**2,750**	**2,750**	**2,750**	
NCWD-Castaic 1	Castaic Valley	350	300	250	350	300	250	
NCWD-Castaic 2	Castaic Valley	100	100	100	100	100	100	
NCWD-Castaic 4	Castaic Valley	100	0	0	100	0	0	
NCWD-Castaic 7	Castaic Valley	300	200	200	300	200	200	
VWC-D	Castaic Valley	880	880	880	880	880	880	
WHR	Castaic Valley	2,000	2,000	2,000	2,000	2,000	2,000	
Castaic Valley Total:		**3,730**	**3,480**	**3,430**	**3,730**	**3,480**	**3,430**	
Total Alluvial Pumping		**38,600**	**36,500**	**34,850**	**38,600**	**36,600**	**35,000**	**Current Operating Plan:**
								35,000 to 40,000 AF/yr in normal and wet years
								30,000 to 35,000 AF/yr in dry years

Notes:

All pumping volumes are listed in acre-feet per year (afy).

Wells that are not listed are assumed to not be pumping in the future.

NLF = Newhall Land & Farming Company

NCWD = Newhall County Water District

SCWD = Santa Clarita Division of Castaic Lake Water Agency

VWC = Valencia Water Company

WHR = Wayside Honor Rancho, whose wells are owned by the Los Angeles County Waterworks District No. 36

TABLE 3- 0

Pumping Rates Simulated for Individual Alluvial Aquifer Wells under the Potential Groundwater Operating Plan

Well Name	Alluvial Subarea	Potential Operating Plan Normal	Dry Yr 1	Dry Yr 2+	Comments
NCWD-Castaic 1	Castaic Valley	450	400	400	100 to 150 afy more than 2008 operating plan.
NCWD-Castaic 2	Castaic Valley	300	200	100	0 to 200 afy more than 2008 operating plan.
NCWD-Castaic 4	Castaic Valley	150	100	50	50 to 100 afy more than 2008 operating plan.
NCWD-Castaic 7	Castaic Valley	1,800	1,800	1,800	1500 to 1600 afy more than 2008 operating plan.
NCWD-Pinetree 1	Above Mint Canyon	200	200	200	50 to 200 afy more than 2008 operating plan.
NCWD-Pinetree 3	Above Mint Canyon	450	450	450	100 to 150 afy more than 2008 operating plan.
NCWD-Pinetree 4	Above Mint Canyon	300	300	200	0 to 100 afy more than 2008 operating plan.
NCWD-Pinetree 5	Above Mint Canyon	300	300	200	0 to 100 afy more than 2008 operating plan.
NCWD Total		**3,950**	**3,750**	**3,400**	**Total is 2,000 to 2,450 afy more than in the 2008 operating plan.**
NLF-B14	Below Valencia WRP	650	650	650	Future agricultural supply for Newhall Land & Farming Co.
NLF-B15	Below Valencia WRP	650	650	650	Future agricultural supply for Newhall Land & Farming Co.
NLF-B16	Below Valencia WRP	650	650	650	Future agricultural supply for Newhall Land & Farming Co.
NLF-C10	Below Valencia WRP	650	650	650	Future agricultural supply for Newhall Land & Farming Co.
NLF-C11	Below Valencia WRP	650	650	650	Future agricultural supply for Newhall Land & Farming Co.
NLF-C12	Below Valencia WRP	650	650	650	Future agricultural supply for Newhall Land & Farming Co.
NLF-E21	Castaic Valley	650	650	650	Future agricultural supply for Newhall Land & Farming Co.
NLF Total		**4,550**	**4,550**	**4,550**	**Total is 5,600 afy less than in the 2008 operating plan.**
SCWD-Clark	Bouquet Canyon	800	750	700	0 to 100 afy more than 2008 operating plan.
SCWD-Guida	Bouquet Canyon	1,500	1,400	1,300	100 to 200 afy more than 2008 operating plan.
SCWD-Honby	Above Saugus WRP	1,200	1,000	700	0 to 200 afy more than 2008 operating plan.
SCWD-Lost Canyon 2	Above Mint Canyon	850	800	700	50 to 150 afy more than 2008 operating plan.
SCWD-Lost Canyon 2A	Above Mint Canyon	800	700	600	0 to 100 afy more than 2008 operating plan.
SCWD-Mitchell #5A	Above Mint Canyon	900	550	200	0 to 400 afy more than 2008 operating plan.
SCWD-Mitchell #5B	Above Mint Canyon	1,000	900	800	200 to 500 afy more than 2008 operating plan.
SCWD-N. Oaks Central	Above Mint Canyon	1,400	800	800	0 to 550 afy more than 2008 operating plan.
SCWD-N. Oaks East	Above Mint Canyon	1,000	800	600	50 to 200 afy more than 2008 operating plan.
SCWD-N. Oaks West	Above Mint Canyon	1,000	800	600	50 to 200 afy more than 2008 operating plan.
SCWD-Sand Canyon	Above Mint Canyon	1,300	1,000	600	300 to 400 afy more than 2008 operating plan.
SCWD-Sierra	Above Mint Canyon	1,400	1,100	800	100 to 300 afy more than 2008 operating plan.
SCWD-Santa Clara	Above Saugus WRP	950	950	950	Future well.
SCWD-Valley Center	Above Saugus WRP	1,200	1,000	800	800 gpm (2008 plan) + 0 to 400 afy additional pumping.
SCWD-Bouquet	Above Saugus WRP	1,200	1,100	1,100	Future well.
SCWD Total		**16,500**	**13,650**	**11,250**	**Total is 3,100 to 5,450 afy more than in the 2008 operating plan.**
VWC-D	Castaic Valley	880	880	880	Same as 2008 operating plan.
VWC-E14	Castaic Valley	1,175	1,175	1,175	Future operations for Newhall Ranch.
VWC-E15	Castaic Valley	800	800	800	Same as 2008 operating plan.
VWC-E16	Castaic Valley	1,175	1,175	1,175	Future operations for Newhall Ranch.
VWC-E17	Castaic Valley	1,175	1,175	1,175	Future operations for Newhall Ranch.
VWC-G1	Below Valencia WRP	1,175	1,175	1,175	Future operations for Newhall Ranch.
VWC-G3	Below Valencia WRP	1,175	1,175	1,175	Future operations for Newhall Ranch.
VWC-G4	Below Valencia WRP	1,175	1,175	1,175	Future operations for Newhall Ranch.
VWC-N	Below Saugus WRP	650	650	650	Same as 2008 operating plan.
VWC-N7	Below Saugus WRP	1,160	1,160	1,160	Same as 2008 operating plan.
VWC-N8	Below Saugus WRP	1,160	1,160	1,160	Same as 2008 operating plan.
VWC-Q2	Below Saugus WRP	1,100	1,100	1,100	Same as 2008 operating plan.
VWC-S6	Below Saugus WRP	1,000	1,000	1,000	Same as 2008 operating plan.
VWC-S7	Below Saugus WRP	500	500	500	Same as 2008 operating plan.
VWC-S8	Below Saugus WRP	500	500	500	Same as 2008 operating plan.
VWC-T7	Above Saugus WRP	750	750	750	Same as 2008 operating plan.
VWC-U4	Above Saugus WRP	800	800	800	Same as 2008 operating plan.
VWC-U6	Above Saugus WRP	800	800	800	Same as 2008 operating plan.
VWC-W10	San Francisquito Canyon	1,000	1,000	1,000	Same as 2008 operating plan.
VWC-W11	San Francisquito Canyon	800	800	800	Same as 2008 operating plan.
VWC-W9	San Francisquito Canyon	950	950	950	Same as 2008 operating plan.
VWC Total		**19,900**	**19,900**	**19,900**	**VWC and NLF total is 1,450 afy more than in the 2008 operating plan.**
Robinson Ranch	Above Mint Canyon	600	550	450	Same as 2008 operating plan.
WHR	Castaic Valley	2,000	2,000	2,000	Same as 2008 operating plan.
Purveyor Alluvial Usage		**40,350**	**37,300**	**34,550**	**2008 Operating Plan:**
Other Alluvial Usage		**7,150**	**7,100**	**7,000**	**35,000 to 40,000 afy in normal and wet years**
Total Alluvial Pumping		**47,500**	**44,400**	**41,550**	**30,000 to 35,000 afy in dry years**

Notes:

All pumping volumes are listed in units of acre-feet per year (afy).

Wells that are not listed are assumed to not be pumping in the future.

NLF = Newhall Land & Farming Company

NCWD = Newhall County Water District

SCWD = Santa Clarita Division of Castaic Lake Water Agency

VWC = Valencia Water Company

WHR = Wayside Honor Rancho, whose wells are owned by the Los Angeles County Waterworks District No. 36

"Other Alluvial Usage" consists of pumping by NLF, WHR, and Robinson Ranch. An additional 500 afy of pumping by other private well owners is not included in this table.

TABLE 3-11

Pumping Rates Simulated for Individual Saugus Formation Wells under the Potential Groundwater Operating Plan

Owner	Well Name	Non-Drought Years	Drought Year 1	Drought Year 2	Drought Year 3
NCWD	12	1,765	2,494	2,494	2,494
	13	1,765	2,494	2,494	2,494
	Future well	1,765	2,494	2,494	2,494
Total Pumping (NCWD Wells)		**5,295**	**7,482**	**7,482**	**7,482**
SCWD	Saugus1	1,772	1,772	1,772	1,772
	Saugus2	1,772	1,772	1,772	1,772
	Future well	1,800	1,800	1,800	1,800
Total Pumping (SCWD Wells)		**5,344**	**5,344**	**5,344**	**5,344**
LA County Water District #36	Future well	300	300	300	300
Total Pumping (LACWD #36)		**300**	**300**	**300**	**300**
Private (Palmer)	Future Golf Course	500	500	500	500
Total Pumping (Future Golf)		**500**	**500**	**500**	**500**
VWC	159	50	50	50	50
	160 (Municipal)	500	830	830	830
	160 (Val. Ctry Club)	500	500	500	500
	201	300	300	3,777	3,777
	205	1,211	2,945	4,038	4,038
	206	1,175	2,734	3,500	3,500
	207	1,175	2,734	3,500	3,500
Total Pumping (VWC Wells)		**4,911**	**10,093**	**16,195**	**16,195**
	Future #1	0	0	0	3,250
	Future #2	0	0	0	3,250
	Future #3	0	0	0	3,250
Total Pumping (Future Wells)		**0**	**0**	**0**	**9,750**
Total Pumping (All Saugus Wells)		**16,350**	**23,719**	**29,821**	**39,571**

Notes:

All pumping volumes are listed in units of acre-feet per year (afy).

Wells that are not listed are assumed to not be pumping in the future.

NLF = Newhall Land & Farming Company

SCWD = Santa Clarita Division of Castaic Lake Water Agency

NCWD = Newhall County Water District

VWC = Valencia Water Company

TABLE 3-12

Total Groundwater and SWP Supplies for Potential Groundwater Operating Plan (Not Including Recycled Water and Other Water Supplies, e.g. Purchased or Banked Water)

Model Year	Based on Historical Year	SWP Hydrology [a]	SWP Allocations [b] (%)	SWP Deliveries (afy)	Simulated Pumping From Alluvial Aquifer (afy)	Simulated Pumping From Saugus Formation (afy)	Total Groundwater Pumping (afy)	SWP + Groundwater (afy)
1	1922	Above Normal	89%	82,227	47,500	16,350	63,850	146,077
2	1923	Below Normal	76%	70,699	47,500	16,350	63,850	134,549
3	1924	Critical	10%	8,960	44,400	23,719	68,119	77,079
4	1925	Dry	40%	36,784	41,550	16,350	57,900	94,684
5	1926	Dry	53%	48,929	41,550	16,350	57,900	106,829
6	1927	Wet	89%	82,786	47,500	16,350	63,850	146,636
7	1928	Above Normal	50%	46,079	47,500	16,350	63,850	109,929
8	1929	Critical	18%	16,858	44,400	23,719	68,119	84,977
9	1930	Dry	49%	45,379	41,550	16,350	57,900	103,279
10	1931	Critical	27%	24,732	41,550	29,821	71,371	96,103
11	1932	Dry	32%	29,204	47,500	39,571	87,071	116,275
12	1933	Critical	48%	44,339	44,400	39,571	83,971	128,310
13	1934	Critical	32%	29,424	41,550	39,571	81,121	110,545
14	1935	Below Normal	81%	74,625	41,550	16,350	57,900	132,525
15	1936	Below Normal	76%	69,911	41,550	16,350	57,900	127,811
16	1937	Below Normal	78%	72,037	41,550	16,350	57,900	129,937
17	1938	Wet	82%	75,970	41,550	16,350	57,900	133,870
18	1939	Dry	79%	72,883	47,500	16,350	63,850	136,733
19	1940	Above Normal	77%	70,837	44,400	16,350	60,750	131,587
20	1941	Wet	61%	56,535	41,550	16,350	57,900	114,435
21	1942	Wet	77%	70,890	47,500	16,350	63,850	134,740
22	1943	Wet	76%	70,599	44,400	16,350	60,750	131,349
23	1944	Dry	71%	65,569	47,500	16,350	63,850	129,419
24	1945	Below Normal	75%	69,041	47,500	16,350	63,850	132,891
25	1946	Below Normal	77%	71,596	47,500	16,350	63,850	135,446
26	1947	Dry	56%	51,794	47,500	16,350	63,850	115,644
27	1948	Below Normal	63%	58,403	44,400	16,350	60,750	119,153
28	1949	Dry	31%	28,443	41,550	23,719	65,269	93,712
29	1950	Below Normal	60%	55,099	41,550	16,350	57,900	112,999
30	1951	Above Normal	85%	78,272	41,550	16,350	57,900	136,172
31	1952	Wet	63%	57,855	41,550	16,350	57,900	115,755
32	1953	Wet	80%	74,381	47,500	16,350	63,850	138,231
33	1954	Above Normal	77%	71,652	44,400	16,350	60,750	132,402
34	1955	Dry	28%	25,439	41,550	23,719	65,269	90,708
35	1956	Wet	87%	80,155	41,550	16,350	57,900	138,055
36	1957	Above Normal	62%	56,957	41,550	16,350	57,900	114,857
37	1958	Wet	73%	67,806	41,550	16,350	57,900	125,706
38	1959	Below Normal	84%	77,554	47,500	16,350	63,850	141,404
39	1960	Dry	35%	32,679	44,400	23,719	68,119	100,798
40	1961	Dry	57%	52,756	41,550	16,350	57,900	110,656
41	1962	Below Normal	72%	66,287	41,550	16,350	57,900	124,187
42	1963	Wet	82%	76,230	41,550	16,350	57,900	134,130
43	1964	Dry	53%	49,474	41,550	16,350	57,900	107,374
44	1965	Wet	69%	64,021	41,550	16,350	57,900	121,921
45	1966	Below Normal	79%	73,083	47,500	16,350	63,850	136,933
46	1967	Wet	72%	66,920	44,400	16,350	60,750	127,670
47	1968	Below Normal	80%	73,794	41,550	16,350	57,900	131,694
48	1969	Wet	64%	58,766	41,550	16,350	57,900	116,666
49	1970	Wet	79%	72,904	47,500	16,350	63,850	136,754
50	1971	Wet	80%	74,236	47,500	16,350	63,850	138,086
51	1972	Below Normal	41%	38,213	44,400	16,350	60,750	98,963
52	1973	Above Normal	75%	69,052	41,550	16,350	57,900	126,952
53	1974	Wet	77%	71,257	41,550	16,350	57,900	129,157
54	1975	Wet	78%	72,018	41,550	16,350	57,900	129,918
55	1976	Critical	63%	58,273	41,550	16,350	57,900	116,173
56	1977	Critical	6%	5,428	41,550	39,571	81,121	86,549
57	1978	Above Normal	87%	80,556	41,550	16,350	57,900	138,456
58	1979	Below Normal	76%	70,013	47,500	16,350	63,850	133,863
59	1980	Above Normal	66%	60,652	47,500	16,350	63,850	124,502
60	1981	Dry	76%	69,997	47,500	16,350	63,850	133,847
61	1982	Wet	71%	65,809	44,400	16,350	60,750	126,559
62	1983	Wet	60%	55,886	47,500	16,350	63,850	119,736
63	1984	Wet	78%	72,233	47,500	16,350	63,850	136,083
64	1985	Dry	77%	71,579	44,400	16,350	60,750	132,329
65	1986	Wet	56%	51,344	41,550	16,350	57,900	109,244
66	1987	Dry	68%	63,232	47,500	16,350	63,850	127,082
67	1988	Critical	12%	10,665	44,400	23,719	68,119	78,784
68	1989	Dry	76%	70,061	41,550	16,350	57,900	127,961
69	1990	Critical	9%	8,056	41,550	29,821	71,371	79,427
70	1991	Critical	18%	16,313	41,550	39,571	81,121	97,434
71	1992	Critical	26%	24,330	41,550	39,571	81,121	105,451
72	1993	Above Normal	90%	83,055	47,500	16,350	63,850	146,905
73	1994	Critical	51%	47,101	47,500	16,350	63,850	110,951
74	1995	Wet	72%	66,992	44,400	16,350	60,750	127,742
75	1996	Wet	83%	76,979	47,500	16,350	63,850	140,829
76	1997	Wet	75%	69,401	47,500	16,350	63,850	133,251
77	1998	Wet	73%	67,316	47,500	16,350	63,850	131,166
78	1999	Wet	83%	76,976	47,500	16,350	63,850	140,826
79	2000	Above Normal	84%	77,238	47,500	16,350	63,850	141,088
80	2001	Dry	28%	26,050	44,400	23,719	68,119	94,169
81	2002	Dry	52%	48,382	41,550	16,350	57,900	106,282
82	2003	Above Normal	71%	65,873	41,550	16,350	57,900	123,773
83	2004	Below Normal / Dry	Actual was 65%	60,125	41,550	16,350	57,900	118,025
84	2005	Wet / Above Normal	Actual was 90%	83,250	47,500	16,350	63,850	147,100
85	2006	Wet / Wet	Actual was 100%	92,500	47,500	16,350	63,850	156,350
86	2007	Dry / Critical	Actual was 60%	55,500	44,400	16,350	60,750	116,250

[a]Defined by water year, using DWR's Sacramento Valley Unimpaired Runoff Index: wet = wettest; critical = driest

[b]From Table B.3 in *The State Water Project Delivery Reliability Report 2007* (DWR, August 2008). This is for current (2007) conditions as defined in the DWR report. In any given year, the allocation may be made up, in part, of carryover water from the prior year.

afy = acre-feet per year SWP = State Water Project

TABLE 3-13

Simulated Monthly Precipitation at the Newhall County Water District Rain Gage for the 86-year Simulation

Model Year	Historical Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1	1922	3.28	16.64	9.73	0.15	0.34	0.00	0.30	0.00	0.00	1.55	0.00	7.25	39.24
2	1923	1.21	9.43	3.15	2.10	0.00	0.00	0.00	0.31	0.00	1.13	0.00	0.00	17.33
3	1924	2.89	4.23	0.22	0.48	0.88	0.00	0.00	0.00	0.00	0.00	0.63	0.01	9.34
4	1925	0.89	4.13	1.30	0.30	0.00	0.00	0.00	0.00	0.62	0.86	0.37	0.00	8.47
5	1926	10.36	14.63	4.84	0.36	0.40	0.00	0.00	0.00	0.00	0.00	0.00	1.36	31.95
6	1927	5.84	10.76	3.38	2.56	0.00	0.00	0.00	0.00	0.00	0.22	3.18	1.30	27.24
7	1928	1.55	0.51	0.38	0.05	0.12	0.01	0.00	0.00	0.02	0.00	3.01	5.85	11.50
8	1929	4.17	2.21	0.20	2.05	0.00	0.00	0.00	0.00	0.00	0.00	4.96	0.07	13.66
9	1930	4.17	2.21	0.20	2.05	0.00	0.00	0.00	0.00	0.00	0.00	4.96	0.07	13.66
10	1931	4.10	6.45	0.00	2.29	0.97	0.02	0.00	3.78	0.06	0.14	3.30	7.53	28.65
11	1932	4.81	9.42	0.18	0.46	0.21	0.00	0.00	0.00	0.08	0.06	0.00	0.89	16.11
12	1933	16.04	0.00	0.05	0.34	1.04	0.31	0.00	0.08	0.00	0.22	0.05	5.95	24.08
13	1934	6.54	2.93	0.11	0.00	0.02	0.59	0.00	0.00	0.01	2.17	2.25	6.56	21.18
14	1935	4.45	2.50	3.41	1.95	0.00	0.00	0.00	0.06	0.08	0.12	0.95	0.81	14.33
15	1936	0.06	8.40	1.84	0.36	0.00	0.00	0.06	0.00	0.01	2.45	0.01	10.82	24.02
16	1937	3.34	6.79	6.16	0.21	0.33	0.00	0.00	0.00	0.00	0.00	0.00	4.19	21.03
17	1938	0.62	12.79	11.37	0.84	0.05	0.12	0.00	0.00	0.15	0.07	0.01	12.40	38.43
18	1939	3.80	1.91	2.05	0.27	0.12	0.00	0.00	0.00	3.60	0.22	0.34	0.90	13.23
19	1940	3.29	6.25	1.43	2.12	0.00	0.00	0.00	0.00	0.00	1.29	0.07	10.62	25.08
20	1941	3.92	19.84	10.82	5.82	0.00	0.00	0.00	0.01	0.00	2.45	0.35	6.23	49.45
21	1942	0.14	0.88	1.64	2.73	0.00	0.00	0.00	0.68	0.00	0.93	0.23	1.09	8.33
22	1943	19.90	4.59	7.80	1.04	0.00	0.00	0.00	0.00	0.00	0.15	0.33	9.63	43.45
23	1944	1.20	16.38	3.76	0.54	0.01	0.00	0.00	0.00	0.00	0.00	5.82	1.20	28.90
24	1945	0.14	4.11	3.13	0.19	0.00	0.00	0.00	0.00	0.00	1.33	0.45	7.75	17.09
25	1946	0.19	2.42	5.95	0.61	0.00	0.00	0.00	0.00	0.00	0.75	10.87	4.69	25.48
26	1947	0.47	0.42	1.28	0.56	0.14	0.00	0.00	0.08	0.05	0.04	0.00	1.84	4.88
27	1948	0.00	1.87	3.49	1.56	0.00	0.09	0.00	0.00	0.00	0.14	0.00	3.57	10.71
28	1949	2.83	1.06	2.18	0.02	1.35	0.00	0.00	0.00	0.00	0.00	1.36	2.85	11.65
29	1950	2.58	1.69	1.27	0.86	0.01	0.00	0.00	0.00	0.32	0.36	0.73	0.21	8.03
30	1951	2.96	0.93	1.16	1.69	0.09	0.00	0.00	0.05	0.00	0.49	1.33	5.88	14.57
31	1952	17.68	0.61	10.30	1.80	0.00	0.00	0.00	0.00	0.12	0.00	4.52	5.09	40.12
32	1953	0.80	0.02	0.21	1.64	0.69	0.00	0.00	0.00	0.00	0.00	2.32	0.04	5.73
33	1954	6.38	3.36	4.86	0.12	0.00	0.00	0.00	0.00	0.00	0.00	2.38	1.47	18.56
34	1955	5.69	1.69	0.21	3.38	1.91	0.00	0.00	0.00	0.00	0.00	1.43	2.01	16.32
35	1956	7.55	1.00	0.00	5.90	1.82	0.00	0.11	0.00	0.00	0.15	0.00	0.15	16.68
36	1957	7.22	2.71	3.05	1.16	1.06	0.25	0.00	0.00	0.00	2.68	0.40	8.30	26.81
37	1958	2.11	10.42	5.82	7.18	0.00	0.00	0.00	0.00	0.04	1.35	0.23	0.00	27.15
38	1959	3.70	5.47	0.00	0.59	0.00	0.00	0.00	0.00	0.08	0.00	0.00	1.68	11.51
39	1960	4.17	2.21	0.20	2.05	0.00	0.00	0.00	0.00	0.00	0.00	4.96	0.07	13.66
40	1961	1.88	0.00	0.76	0.33	0.09	0.00	0.07	0.00	0.11	0.00	4.12	2.99	10.35
41	1962	3.86	19.44	1.53	0.00	0.02	0.00	0.00	0.00	0.00	0.05	0.00	0.00	24.90
42	1963	0.99	3.63	4.10	2.23	0.06	0.43	0.00	0.00	0.77	0.50	2.29	0.01	15.01
43	1964	2.95	0.00	1.88	2.41	0.04	0.12	0.00	0.00	0.00	0.52	1.47	2.48	11.84
44	1965	0.25	0.07	1.65	9.14	0.00	0.02	0.26	0.16	0.95	0.00	17.49	7.89	37.88
45	1966	1.42	1.55	0.33	0.00	0.09	0.00	0.00	0.00	0.09	0.11	7.56	5.95	17.10

TABLE 3-13

Simulated Monthly Precipitation at the Newhall County Water District Rain Gage for the 86-year Simulation

Model Year	Historical Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
46	1967	6.76	0.22	3.23	5.41	0.19	0.00	0.00	0.00	0.50	0.00	9.36	1.58	27.26
47	1968	0.86	0.93	2.91	0.97	0.07	0.00	0.00	0.38	0.00	0.39	0.35	1.24	8.10
48	1969	19.53	13.89	0.82	1.16	0.05	0.05	0.18	0.00	0.00	0.00	2.32	0.05	38.04
49	1970	0.94	6.63	4.33	0.00	0.00	0.00	0.00	0.00	0.00	0.13	8.86	6.33	27.21
50	1971	1.23	1.41	0.48	0.94	0.15	0.00	0.00	0.00	0.47	0.50	0.38	10.57	16.14
51	1972	0.00	0.12	0.00	0.02	0.05	0.05	0.00	0.06	0.00	0.05	3.45	1.08	4.87
52	1973	5.19	11.74	3.29	0.00	0.00	0.00	0.00	0.00	0.00	0.15	1.83	1.03	23.22
53	1974	10.58	0.02	4.30	0.06	0.00	0.00	0.02	0.00	0.00	1.17	0.12	4.89	21.17
54	1975	0.28	3.02	6.04	2.96	0.00	0.00	0.00	0.00	0.00	0.39	0.04	0.09	12.81
55	1976	0.00	7.39	1.47	0.46	0.15	0.35	0.01	0.00	3.40	0.22	2.09	0.90	16.45
56	1977	5.75	0.12	2.15	0.00	5.27	0.00	0.00	2.68	0.02	0.05	0.06	8.40	24.49
57	1978	10.74	13.23	17.10	2.72	0.00	0.00	0.00	0.00	1.23	0.01	2.70	1.76	49.49
58	1979	12.44	3.20	6.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.89	1.19	23.75
59	1980	10.36	14.63	4.84	0.36	0.40	0.00	0.00	0.00	0.00	0.00	0.00	1.36	31.95
60	1981	4.76	1.66	5.50	0.46	0.00	0.00	0.00	0.00	0.00	0.58	3.62	0.22	16.80
61	1982	3.33	1.21	9.50	1.09	0.13	0.00	0.00	0.00	1.02	0.25	5.34	2.95	24.82
62	1983	8.67	6.85	13.07	4.61	0.20	0.00	0.00	1.17	1.85	1.74	5.04	5.13	48.33
63	1984	0.00	0.00	0.27	0.07	0.00	0.00	0.00	0.00	0.05	0.16	3.87	8.13	12.55
64	1985	0.78	1.20	1.04	0.14	0.07	0.00	0.06	0.00	0.12	0.54	5.11	0.70	9.76
65	1986	5.84	6.65	5.39	0.88	0.00	0.00	0.05	0.00	1.78	0.68	1.55	0.24	23.06
66	1987	2.10	0.61	1.69	0.14	0.00	0.00	0.09	0.02	0.00	3.47	3.84	4.80	16.76
67	1988	3.27	3.39	1.16	3.98	0.09	0.00	0.00	0.00	0.10	0.00	0.92	7.14	20.05
68	1989	0.89	4.13	1.30	0.30	0.00	0.00	0.00	0.00	0.62	0.86	0.37	0.00	8.47
69	1990	2.89	4.23	0.22	0.48	0.88	0.00	0.00	0.00	0.00	0.00	0.63	0.01	9.34
70	1991	1.11	5.72	11.33	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	5.95	24.61
71	1992	3.28	16.64	9.73	0.15	0.34	0.00	0.30	0.00	0.00	1.55	0.00	7.25	39.24
72	1993	17.11	11.73	4.27	0.00	0.00	0.65	0.00	0.00	0.00	0.57	0.75	1.00	36.08
73	1994	0.48	5.31	2.33	0.42	0.00	0.00	0.00	0.00	0.00	0.78	0.71	1.94	11.97
74	1995	21.98	1.93	8.30	0.72	0.26	0.76	0.00	0.00	0.00	0.00	0.00	2.33	36.28
75	1996	2.97	6.73	2.08	0.13	0.68	0.00	0.00	0.00	0.00	1.30	1.06	8.70	23.65
76	1997	6.67	0.23	0.00	0.00	0.00	0.00	0.05	0.00	0.53	0.00	3.73	6.72	17.93
77	1998	3.49	22.00	3.98	2.28	5.50	0.06	0.00	0.00	0.21	0.33	1.36	1.39	40.60
78	1999	2.08	0.65	3.00	3.78	0.00	0.48	0.00	0.00	0.01	0.00	0.00	0.05	10.05
79	2000	1.21	9.43	3.15	2.10	0.00	0.00	0.00	0.31	0.00	1.13	0.00	0.00	17.33
80	2001	5.84	10.76	3.38	2.56	0.00	0.00	0.00	0.00	0.00	0.22	3.18	1.30	27.24
81	2002	1.55	0.51	0.38	0.05	0.12	0.01	0.00	0.00	0.02	0.00	3.01	5.85	11.50
82	2003	0.00	9.03	2.38	2.35	1.70	0.00	0.02	0.00	0.00	1.10	0.63	2.57	19.78
83	2004	0.65	8.07	0.37	0.20	0.00	0.00	0.00	0.00	0.00	4.79	0.64	8.54	23.26
84	2005	17.06	16.69	2.70	1.42	0.45	0.00	0.00	0.00	0.17	1.91	0.59	0.14	41.13
85	2006	3.27	3.78	5.68	4.22	0.99	0.00	0.00	0.00	0.00	0.42	0.05	0.83	19.24
86	2007	1.66	1.38	0.17	0.71	0.00	0.00	0.00	0.00	1.32	0.25	0.50	2.67	8.66

All precipitation values are listed in units of inches.

TABLE 3-14

Simulated Monthly Streamflows in the Santa Clara River at the Lang Gage for the 86-year Simulation

Model Year	Historical Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Prototype Year
1	1922	336	534	429	398	117	84	16	5	108	144	498	1,446	4,115	1992
2	1923	117	117	65	31	12	0	0	0	0	0	258	516	1,116	2000
3	1924	212	276	230	46	46	5	0	0	0	27	36	147	1,025	1990
4	1925	50	111	60	25	6	0	0	0	102	94	34	18	499	1989
5	1926	1,310	7,449	1,213	568	218	78	6	0	37	274	467	553	12,175	1980
6	1927	333	1,420	785	283	238	0	0	0	0	95	178	855	4,188	2001
7	1928	50	111	60	25	6	0	0	0	102	94	34	18	499	2002
8	1929	68	67	70	69	70	68	65	65	60	58	316	164	1,140	1960
9	1930	68	67	70	69	70	68	65	65	60	58	316	164	1,140	1960
10	1931	333	1,420	785	283	238	0	0	0	0	95	178	855	4,188	2001
11	1932	117	117	65	31	12	0	0	0	0	0	258	516	1,116	1987
12	1933	0	30	0	0	0	0	0	0	0	25	0	1,652	1,707	2004
13	1934	222	209	506	117	77	68	0	0	0	0	12	25	1,236	1988
14	1935	1,211	1,421	954	802	268	156	62	8	6	1	27	189	5,104	1995
15	1936	0	30	0	0	0	0	0	0	0	25	0	1,652	1,707	2004
16	1937	222	209	506	117	77	68	0	0	0	0	12	25	1,236	1988
17	1938	1,211	1,421	954	802	268	156	62	8	6	1	27	189	5,104	1995
18	1939	7,355	2,668	597	265	120	55	27	5	32	73	132	141	11,468	Half of 1993
19	1940	0	30	0	0	0	0	0	0	0	25	0	1,652	1,707	2004
20	1941	13,686	11,359	11,699	2,378	1,458	721	322	120	77	128	179	206	42,333	2005
21	1942	50	111	60	25	6	0	0	0	102	94	34	18	499	1989
22	1943	18,997	8,508	3,837	961	667	347	81	91	70	139	190	186	34,074	1998
23	1944	1,211	1,421	954	802	268	156	62	8	6	1	27	189	5,104	1995
24	1945	517	346	140	85	33	5	4	50	66	240	566	809	2,859	1997
25	1946	1,211	1,421	954	802	268	156	62	8	6	1	27	189	5,104	1995
26	1947	332	250	131	90	50	22	32	6	0	0	11	58	983	1972
27	1948	50	111	60	25	6	0	0	0	102	94	34	18	499	2002
28	1949	50	111	60	25	6	0	0	0	102	94	34	18	499	2002
29	1950	83	198	184	126	105	83	51	54	56	53	43	42	1,078	1950
30	1951	49	40	66	91	98	84	79	72	57	71	47	53	807	1951
31	1952	9,629	636	7,091	2,114	895	326	153	138	86	97	178	313	21,656	1952
32	1953	300	282	271	237	165	134	102	86	85	83	74	68	1,888	1953
33	1954	145	278	404	356	181	108	110	99	91	90	80	75	2,017	1954
34	1955	103	156	157	128	153	99	78	76	74	68	66	62	1,220	1955
35	1956	69	85	130	137	139	98	86	80	77	76	67	69	1,113	1956
36	1957	67	55	78	90	93	80	78	78	76	79	66	71	910	1957
37	1958	66	329	743	4,550	825	283	130	108	95	145	146	116	7,536	1958
38	1959	246	351	189	127	111	92	84	86	83	69	68	68	1,575	1959
39	1960	68	67	70	69	70	68	65	65	60	58	316	164	1,140	1960
40	1961	124	91	38	38	36	32	28	33	22	19	19	119	597	1961
41	1962	139	1,904	791	449	329	169	97	82	80	84	82	82	4,287	1962
42	1963	85	142	145	131	104	86	79	74	66	65	62	58	1,096	1963
43	1964	69	50	51	62	66	54	53	53	54	45	43	41	640	1964
44	1965	30	23	25	46	43	36	31	34	37	35	1,305	3,300	4,944	1965
45	1966	1,765	1,014	778	450	308	115	68	54	45	63	91	523	5,274	1966

TABLE 3-14

Simulated Monthly Streamflows in the Santa Clara River at the Lang Gage for the 86-year Simulation

Model Year	Historical Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Prototype Year
46	1967	757	489	1,028	2,295	1,880	729	212	104	89	73	255	487	8,397	1967
47	1968	300	247	276	180	72	32	32	30	25	133	208	851	2,384	1968
48	1969	13,797	2,856	1,005	489	320	147	98	98	46	318	392	399	19,966	1969
49	1970	461	550	1,168	465	290	169	74	60	58	27	501	1,338	5,161	1970
50	1971	614	524	556	397	262	167	70	25	5	30	200	420	3,270	1971
51	1972	332	250	131	90	50	22	32	6	0	0	11	58	983	1972
52	1973	153	1,717	950	471	226	71	18	12	8	3	8	44	3,679	1973
53	1974	608	229	392	190	129	49	17	6	0	3	19	87	1,728	1974
54	1975	53	90	228	181	104	31	15	3	0	0	0	0	704	1975
55	1976	0	110	63	39	33	12	0	0	1	0	0	0	258	1976
56	1977	28	7	28	19	60	5	0	0	0	0	0	0	147	1977
57	1978	744	9,486	11,412	1,696	2,736	1,154	418	209	101	264	422	86	28,730	1978
58	1979	1,254	433	1,113	506	246	190	178	111	125	90	120	558	4,925	1979
59	1980	1,310	7,449	1,213	568	218	78	6	0	37	274	467	553	12,175	1980
60	1981	594	98	339	240	107	18	18	12	338	321	258	394	2,739	1981
61	1982	333	1,420	785	283	238	0	0	0	0	95	178	855	4,188	1982
62	1983	1,922	16,971	2,755	2,576	958	523	639	512	0	0	0	0	26,855	1983
63	1984	0	596	405	240	143	166	228	411	154	220	904	578	4,044	1984
64	1985	483	461	274	215	77	0	0	0	12	179	221	301	2,224	1985
65	1986	483	1,138	488	283	107	6	0	12	6	12	80	129	2,744	1986
66	1987	117	117	65	31	12	0	0	0	0	0	258	516	1,116	1987
67	1988	222	209	506	117	77	68	0	0	0	0	12	25	1,236	1988
68	1989	50	111	60	25	6	0	0	0	102	94	34	18	499	1989
69	1990	212	276	230	46	46	5	0	0	0	27	36	147	1,025	1990
70	1991	162	775	879	736	145	142	14	0	45	69	62	263	3,291	1991
71	1992	336	534	429	398	117	84	16	5	108	144	498	1,446	4,115	1992
72	1993	14,709	5,336	1,194	530	239	110	54	10	64	145	264	281	22,937	1993
73	1994	388	493	497	319	163	80	20	7	37	102	193	941	3,239	1994
74	1995	1,211	1,421	954	802	268	156	62	8	6	1	27	189	5,104	1995
75	1996	666	896	730	315	151	46	7	0	54	154	307	510	3,836	1996
76	1997	517	346	140	85	33	5	4	50	66	240	566	809	2,859	1997
77	1998	18,997	8,508	3,837	961	667	347	81	91	70	139	190	186	34,074	1998
78	1999	92	85	204	224	197	107	80	46	52	54	31	80	1,252	1999
79	2000	117	117	65	31	12	0	0	0	0	0	258	516	1,116	1987
80	2001	333	1,420	785	283	238	0	0	0	0	95	178	855	4,188	1982
81	2002	50	111	60	25	6	0	0	0	102	94	34	18	499	1989
82	2003	666	896	730	315	109	0	0	0	0	0	0	0	2,715	1996 and 2003
83	2004	0	30	0	0	0	0	0	0	0	25	0	1,652	1,707	2004
84	2005	13,686	11,359	11,699	2,378	1,458	721	322	120	77	128	179	206	42,333	2005
85	2006	418	352	510	920	381	69	0	0	0	0	0	0	2,650	2006
86	2007	1	57	30	20	0	0	0	0	0	3	8	6	125	2007

All simulated streamflow volumes are listed in units of acre-feet (af).

TABLE 3-15

Simulated Monthly Water Releases from Castaic Lagoon to Castaic Creek for the 86-year Simulation

Model Year	Historical Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Prototype Year
1	1922	0	0	580	3,052	667	127	24	0	0	0	0	0	4,450	1992
2	1923	0	660	855	0	2,087	3,484	0	0	0	0	0	0	7,086	2000
3	1924	0	0	0	0	0	0	0	0	0	0	0	0	0	1990
4	1925	0	0	0	0	0	0	0	0	0	0	0	0	0	1989
5	1926	0	0	0	0	0	834	1,052	919	0	0	0	0	2,805	1980
6	1927	0	389	1,218	0	0	0	0	0	0	0	0	0	1,607	2001
7	1928	0	0	0	0	0	0	0	0	0	0	0	0	0	2002
8	1929	0	0	0	0	0	0	0	0	0	0	0	0	0	2002
9	1930	0	0	0	0	0	0	0	0	0	0	0	0	0	1984
10	1931	0	389	1,218	0	0	0	0	0	0	0	0	0	1,607	2001
11	1932	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641	1986
12	1933	0	59	1,004	0	0	0	0	0	0	0	0	60	1,123	2004
13	1934	0	0	809	341	900	0	0	0	0	0	0	0	2,050	1988
14	1935	0	0	0	0	0	1,668	2,104	1,839	0	0	0	0	5,611	1995
15	1936	0	59	1,004	0	0	0	0	0	0	0	0	60	1,123	2004
16	1937	0	0	809	341	900	0	0	0	0	0	0	0	2,050	1988
17	1938	0	0	0	0	0	1,668	2,104	1,839	0	0	0	0	5,611	1995
18	1939	0	70	93	1,516	951	318	171	169	407	0	0	171	3,863	Half of 1993
19	1940	0	59	1,004	0	0	0	0	0	0	0	0	60	1,123	2004
20	1941	32,391	37,514	12,993	3,613	2,891	90	1,657	32	0	0	0	0	91,181	2005
21	1942	0	0	0	0	0	0	0	0	0	0	0	0	0	1989
22	1943	1,186	19,545	10,747	4,566	7,561	47	1,370	436	464	302	652	926	47,802	1998
23	1944	0	0	0	0	0	1,668	2,104	1,839	0	0	0	0	5,611	1995
24	1945	0	0	8,701	873	0	0	0	0	0	0	0	310	9,884	1997
25	1946	0	0	0	0	0	1,668	2,104	1,839	0	0	0	0	5,611	1995
26	1947	0	0	0	0	0	0	0	0	0	0	0	0	0	1989
27	1948	0	0	0	0	0	0	0	0	0	0	0	0	0	2002
28	1949	0	0	0	0	0	0	0	0	0	0	0	0	0	2002
29	1950	0	0	0	0	0	0	0	0	0	0	0	0	0	2007
30	1951	0	0	0	0	0	0	0	0	0	0	0	0	0	1984
31	1952	0	140	186	3,031	1,901	635	341	337	813	0	0	341	7,725	1993
32	1953	0	0	0	0	0	0	0	0	0	0	0	0	0	1989
33	1954	0	0	0	4,961	671	0	0	0	0	0	0	0	5,632	1996
34	1955	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641	1986
35	1956	105	0	0	1,490	46	0	0	0	0	0	212	0	1,853	1987
36	1957	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
37	1958	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
38	1959	210	0	0	2,979	93	0	0	0	0	0	0	0	3,282	1994
39	1960	0	0	0	0	0	0	0	0	0	0	0	0	0	1984
40	1961	612	691	0	3,187	1,191	149	0	0	0	0	0	0	5,830	1999
41	1962	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
42	1963	0	0	0	0	0	0	0	0	0	0	0	0	0	1984
43	1964	210	0	0	2,979	93	0	0	0	0	0	0	0	3,282	1994
44	1965	0	0	580	3,052	667	127	24	0	0	0	0	0	4,450	1992
45	1966	105	0	0	1,490	46	0	0	0	0	0	212	0	1,853	1987

TABLE 3-15

Simulated Monthly Water Releases from Castaic Lagoon to Castaic Creek for the 86-year Simulation

Model Year	Historical Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Prototype Year
46	1967	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
47	1968	0	0	0	0	0	0	0	0	0	0	0	0	0	2007
48	1969	0	140	186	3,031	1,901	635	341	337	813	0	0	341	7,725	1993
49	1970	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
50	1971	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641	1986
51	1972	0	0	0	0	0	0	0	0	0	0	0	0	0	1989
52	1973	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
53	1974	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641	1986
54	1975	210	0	0	2,979	93	0	0	0	0	0	0	0	3,282	1994
55	1976	105	0	0	1,490	46	0	0	0	0	0	212	0	1,853	1987
56	1977	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
57	1978	0	0	0	0	0	1,168	1,473	1,287	0	0	0	0	3,928	1983
58	1979	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
59	1980	0	0	0	0	0	834	1,052	919	0	0	0	0	2,805	1980
60	1981	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641	1986
61	1982	0	0	0	0	0	667	842	735	0	0	0	0	2,244	1982
62	1983	0	0	0	0	0	1,168	1,473	1,287	0	0	0	0	3,928	1983
63	1984	0	0	0	0	0	0	0	0	0	0	0	0	0	1984
64	1985	0	0	0	0	0	0	0	0	0	0	0	0	0	1985
65	1986	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641	1986
66	1987	105	0	0	1,490	46	0	0	0	0	0	212	0	1,853	1987
67	1988	0	0	809	341	900	0	0	0	0	0	0	0	2,050	1988
68	1989	0	0	0	0	0	0	0	0	0	0	0	0	0	1989
69	1990	0	0	0	0	0	0	0	0	0	0	0	0	0	1990
70	1991	0	0	0	0	0	0	0	0	0	0	0	66	66	1991
71	1992	0	0	580	3,052	667	127	24	0	0	0	0	0	4,450	1992
72	1993	0	140	186	3,031	1,901	635	341	337	813	0	0	341	7,725	1993
73	1994	210	0	0	2,979	93	0	0	0	0	0	0	0	3,282	1994
74	1995	0	0	0	0	0	1,668	2,104	1,839	0	0	0	0	5,611	1995
75	1996	0	0	0	4,961	671	0	0	0	0	0	0	0	5,632	1996
76	1997	0	0	8,701	873	0	0	0	0	0	0	0	310	9,884	1997
77	1998	1,186	19,545	10,747	4,566	7,561	47	1,370	436	464	302	652	926	47,802	1998
78	1999	612	691	0	3,187	1,191	149	0	0	0	0	0	0	5,830	1999
79	2000	0	660	855	0	2,087	3,484	0	0	0	0	0	0	7,086	2000
80	2001	0	389	1,218	0	0	0	0	0	0	0	0	0	1,607	2001
81	2002	0	0	0	0	0	0	0	0	0	0	0	0	0	2002
82	2003	0	0	0	2,286	418	315	0	0	0	0	0	0	3,019	2003
83	2004	0	59	1,004	0	0	0	0	0	0	0	0	60	1,123	2004
84	2005	32,391	37,514	12,993	3,613	2,891	90	1,657	32	0	0	0	0	91,181	2005
85	2006	1,403	2,185	2,648	5,906	3,395	2,307	0	0	0	0	0	0	17,844	2006
86	2007	0	0	0	0	0	0	0	0	0	0	0	0	0	2007

All simulated water releases are listed in units of acre-feet (af).

Table 3-16

Water Demands and Indoor Water Use under Full Build-out Conditions (Excluding Newhall Ranch)

Year 2000 Actual (afy)	Full Build-out Conditions (afy)	Comments
Annual Urban Water Use Outside Newhall Ranch		
60,988	123,038	Year 2000 value is retail purveyor demand plus other demands in Table II-6 of the *2004 Santa Clarita Valley Water Report* (LSCE, 2005a). Year 2045 value is from Table 2.5-4 of the *Newhall Ranch Draft Additional Analysis* (Impact Sciences, Inc., 2001). Consists of 89,805 AF/yr Development Monitoring System[a] demand, plus 55,995 AF/yr additional urban demand, minus 14,480 AF/yr conservation, minus 5,193 AF/yr agricultural uses and 3,089 AF/yr "other" uses. Does not include 4,500 AF/yr for aquifer storage and recovery or 17,680 AF/yr of demand for the Newhall Ranch Specific Plan.
Annual Indoor Water Use Outside Newhall Ranch (Equal to LACSD WRP Influent Volumes)		
18,723	40,313 (average year)	The year 2000 volume is from the Saugus and Valencia WRPs for the period January 2000 through December 2000. The long-term current generated effluent volume is based on the influent volume estimated from water balance calculations performed for the chloride mass balance analysis. The effluent volume is 32.8 percent of the total urban water production of 123,038 AF/yr, which includes other uses.

[a]Development Monitoring System water demands are demands associated with future build-out of developments identified in Los Angeles County's Development Monitoring System for the Santa Clarita Valley.

Table 3-17

Treated Water Discharges from the Saugus and Valencia WRPs to the Santa Clara River under Full Build-out Conditions

Month	Treated Water Volume (2000)[a]	Treated Water Volume (Full Build-out Conditions)[b]	Percent of Annual Outdoor Demand	Reclaimed Volume under Full Build-out Conditions (Before Maintaining Existing Streamflows)	Reclaimed Volume under Full Build-out Conditions (After Maintaining Existing Streamflows)	WRP Discharges to River under Full Build-out Conditions[c]	Month
January	1,503	3,237	3.75	637	637	2,600	January
February	1,443	3,106	5.1	867	867	2,239	February
March	1,528	3,290	6.6	1,122	1,122	2,168	March
April	1,505	3,240	9.1	1,547	1,547	1,693	April
May	1,569	3,379	10.55	1,794	1,794	1,585	May
June	1,543	3,322	11.4	1,938	1,781	1,541	June
July	1,606	3,459	14.1	2,397	1,854	1,605	July
August	1,649	3,550	12.95	2,202	1,902	1,648	August
September	1,593	3,430	10.2	1,734	1,734	1,696	September
October	1,631	3,512	7.5	1,275	1,275	2,237	October
November	1,546	3,329	5	850	850	2,479	November
December	1,607	3,459	3.75	637	637	2,822	December
Total Annual	**18,723**	**40,313**	**100**	**17,000**	**16,000**	**24,313**	**Total Annual**

[a]Values shown are the actual volumes of treated water discharged to the Santa Clara River from the Saugus and Valencia WRPs during calendar year 2000. (See also Table 3-16.)

[b]Values shown are the combined treated water volumes estimated to be produced by the Saugus and Valencia WRPs for full build-out conditions in the Santa Clarita Valley. These values do not include the future Newhall Ranch WRP, which will be operated by LACSD.

[c]Values shown do not include discharges of treated water to the river from the future Newhall Ranch WRP. These volumes are 10 acre-feet in November, 138 acre-feet in December, and 138 acre-feet in January. During the other nine months of the year, this WRP will not discharge treated water to the river (see the *Newhall Ranch Draft Additional Analysis* [Impact Sciences, Inc., 2001] for further details). The combined total discharge from the Saugus, Valencia, and Newhall Ranch WRPs is summarized in Table 3-18.

Note: All volumes are in acre-feet.

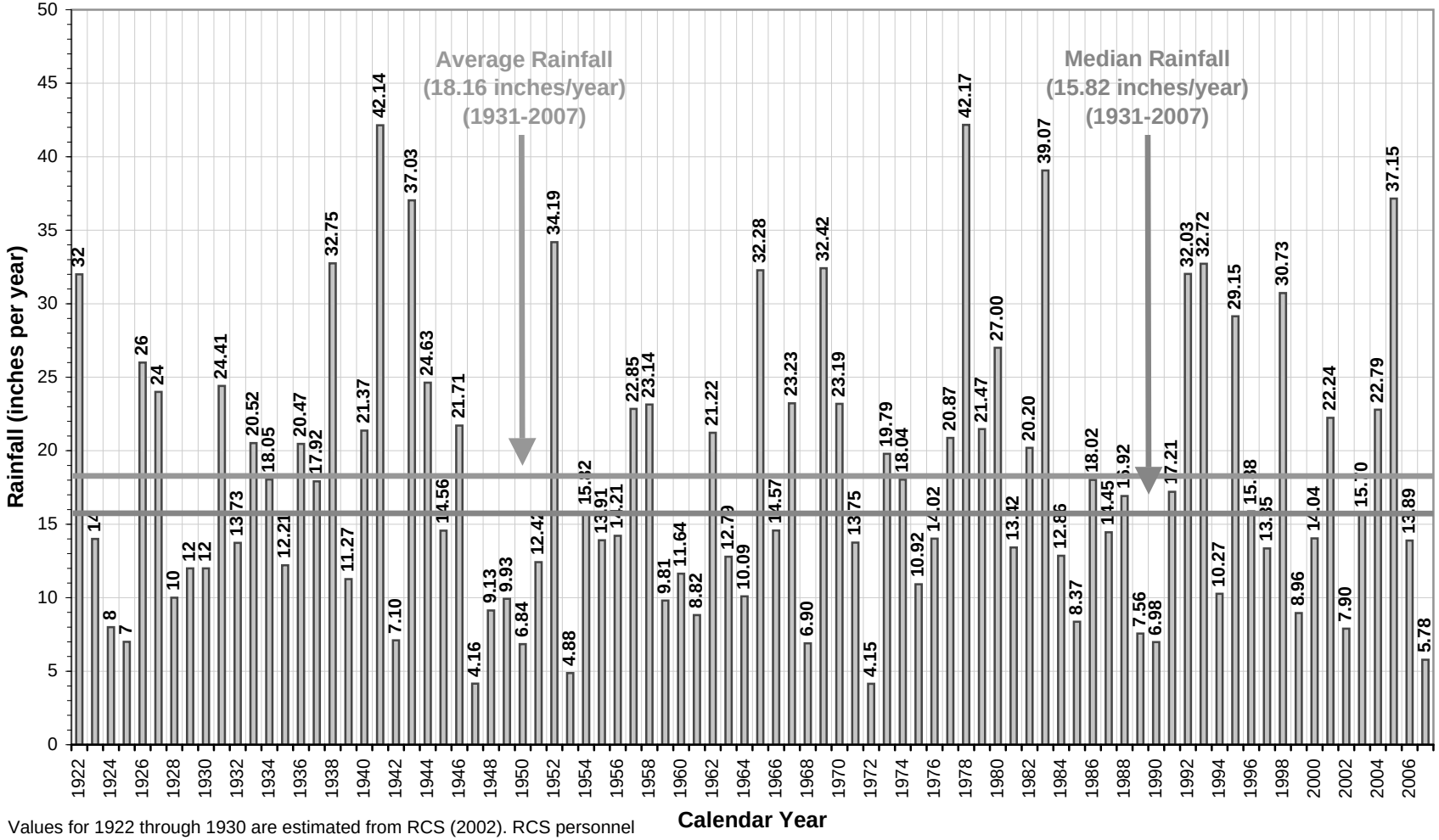
Table 3-18

Simulated Monthly Treated Wastewater Discharges from Santa Clarita Valley WRPs under Full Build-out Conditions

WRP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Saugus	493	487	500	490	503	466	457	508	586	555	514	596	**6,155**
Valencia	2,107	1,752	1,668	1,203	1,082	1,075	1,148	1,140	1,110	1,682	1,965	2,226	**18,158**
Newhall	138	0	0	0	0	0	0	0	0	0	10	138	**286**
Total	**2,738**	**2,239**	**2,168**	**1,693**	**1,585**	**1,541**	**1,605**	**1,648**	**1,696**	**2,237**	**2,489**	**2,960**	**24,599**

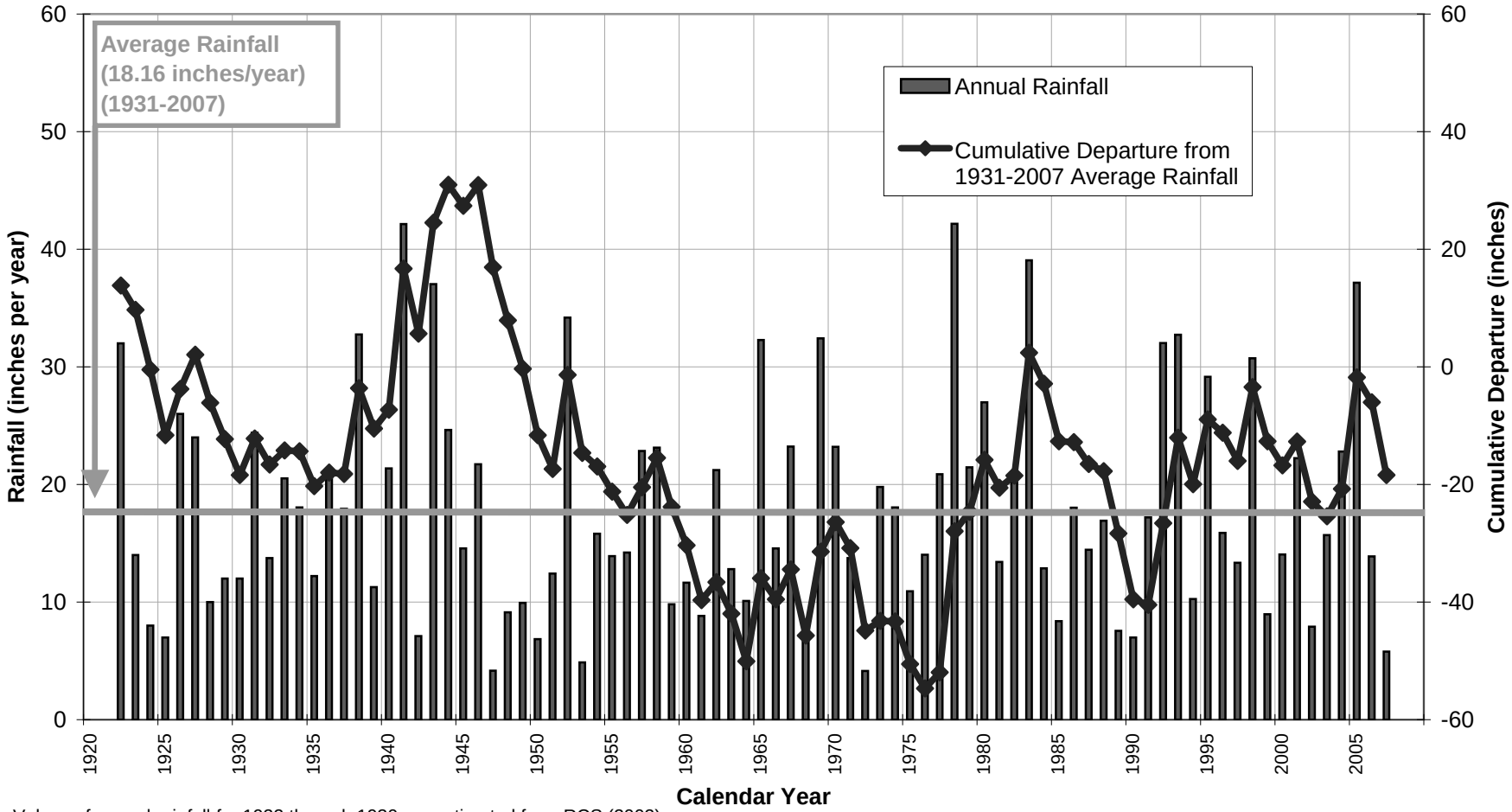
Note: All volumes are in acre-feet.

Figure 3-1
Annual Rainfall
(Newhall-Soledad Rain Gage)



Values for 1922 through 1930 are estimated from RCS (2002). RCS personnel have since indicated that the source of data to 1931 is an unofficial record obtained in 2001 from a former California State Climatologist.

Figure 3-2
Annual Rainfall and Cumulative Departure from Average Rainfall
(Newhall-Soledad Rain Gage)



Values of annual rainfall for 1922 through 1930 are estimated from RCS (2002). RCS personnel have since indicated that the source of data to 1931 is an unofficial record obtained in 2001 from a former California State Climatologist.

Figure 3-3
Simulated Groundwater Pumping for 2008 Groundwater Operating Plan

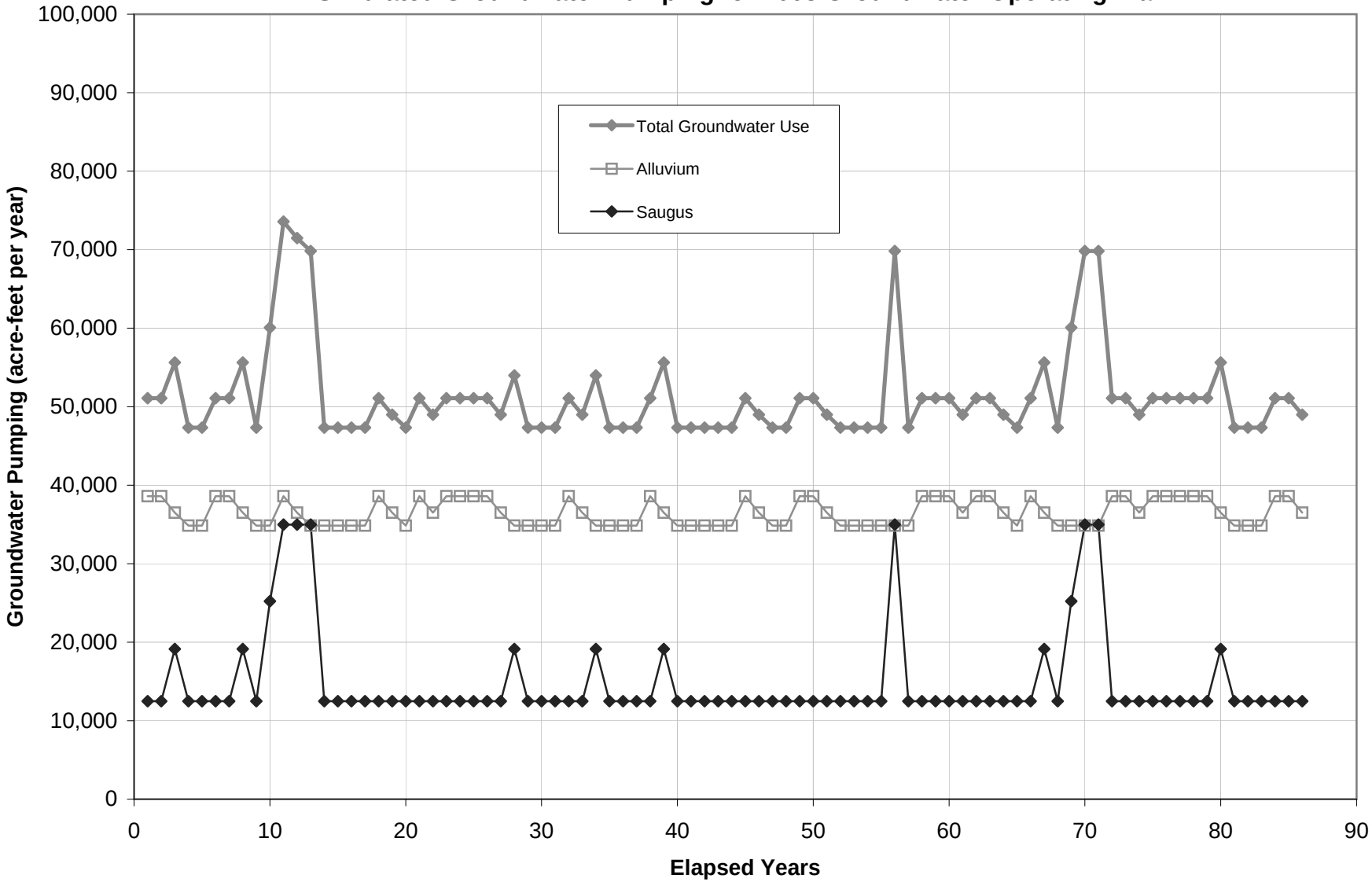


Figure 3-4
Simulated Water Supplies For 2008 Groundwater Operating Plan (Excluding Recycled Water)

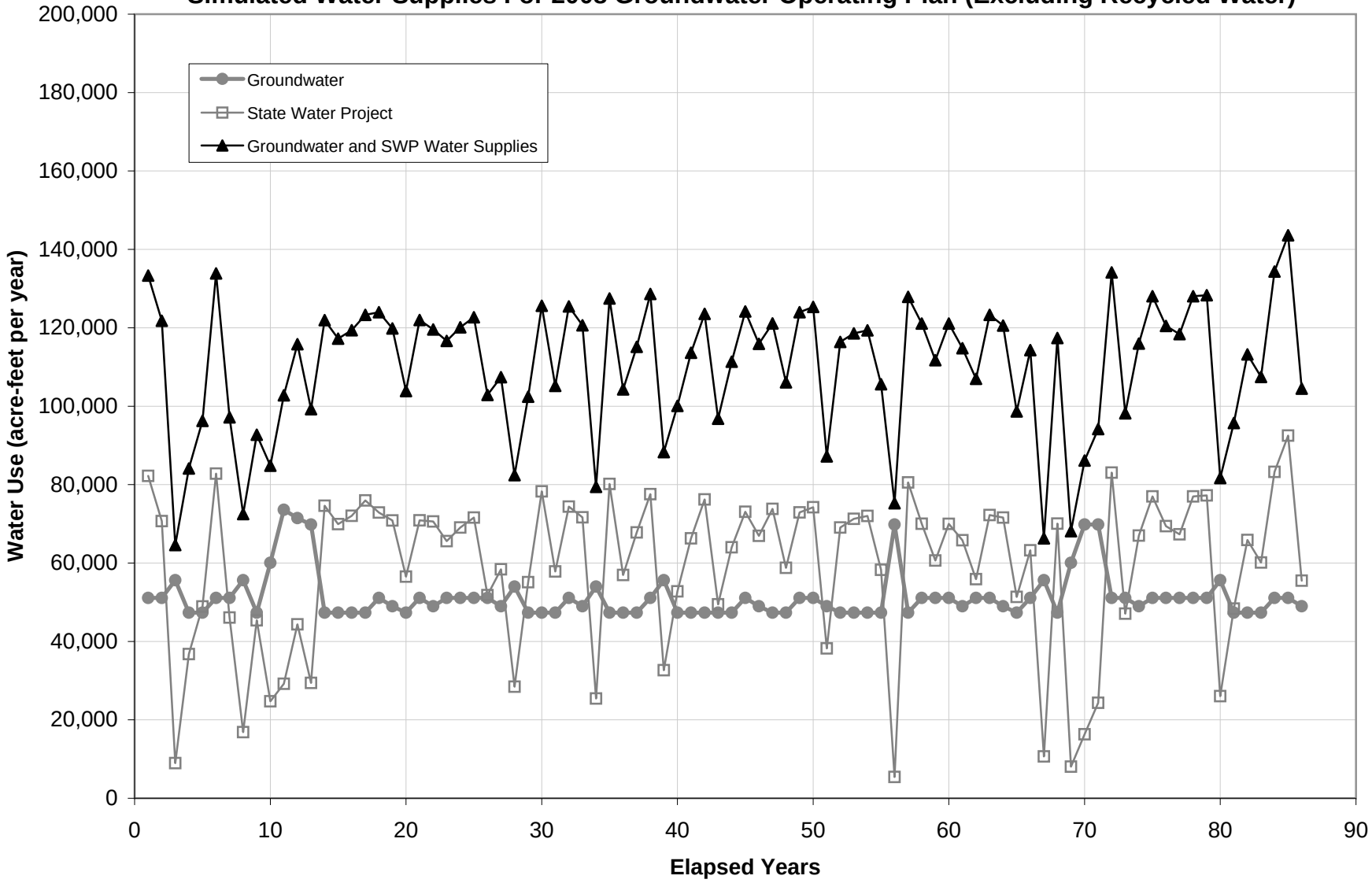


Figure 3-5
Simulated Groundwater Pumping For Potential Groundwater Operating Plan

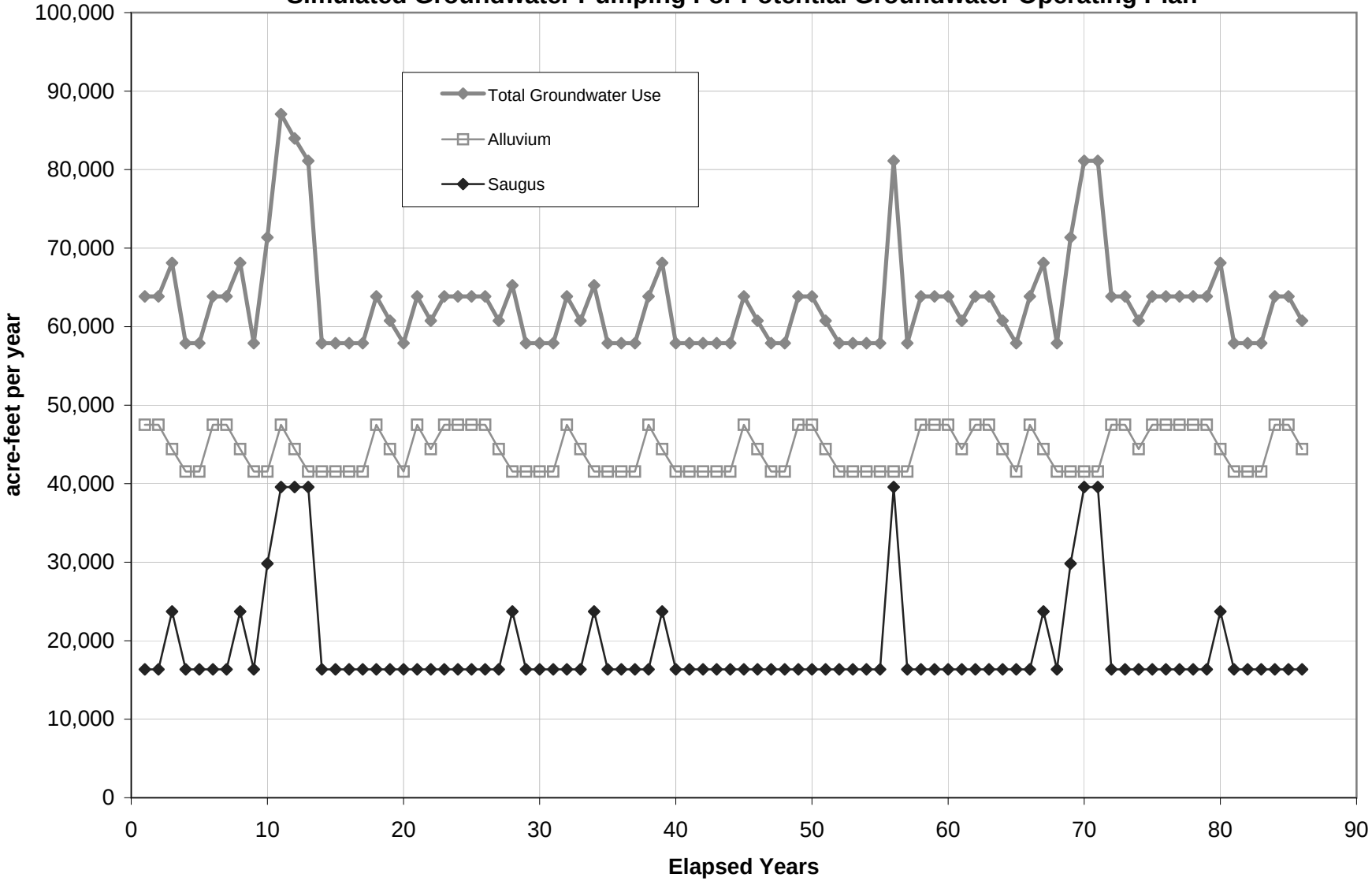


Figure 3-6
Simulated Groundwater Pumping For 2008 and Potential Groundwater Operating Plans

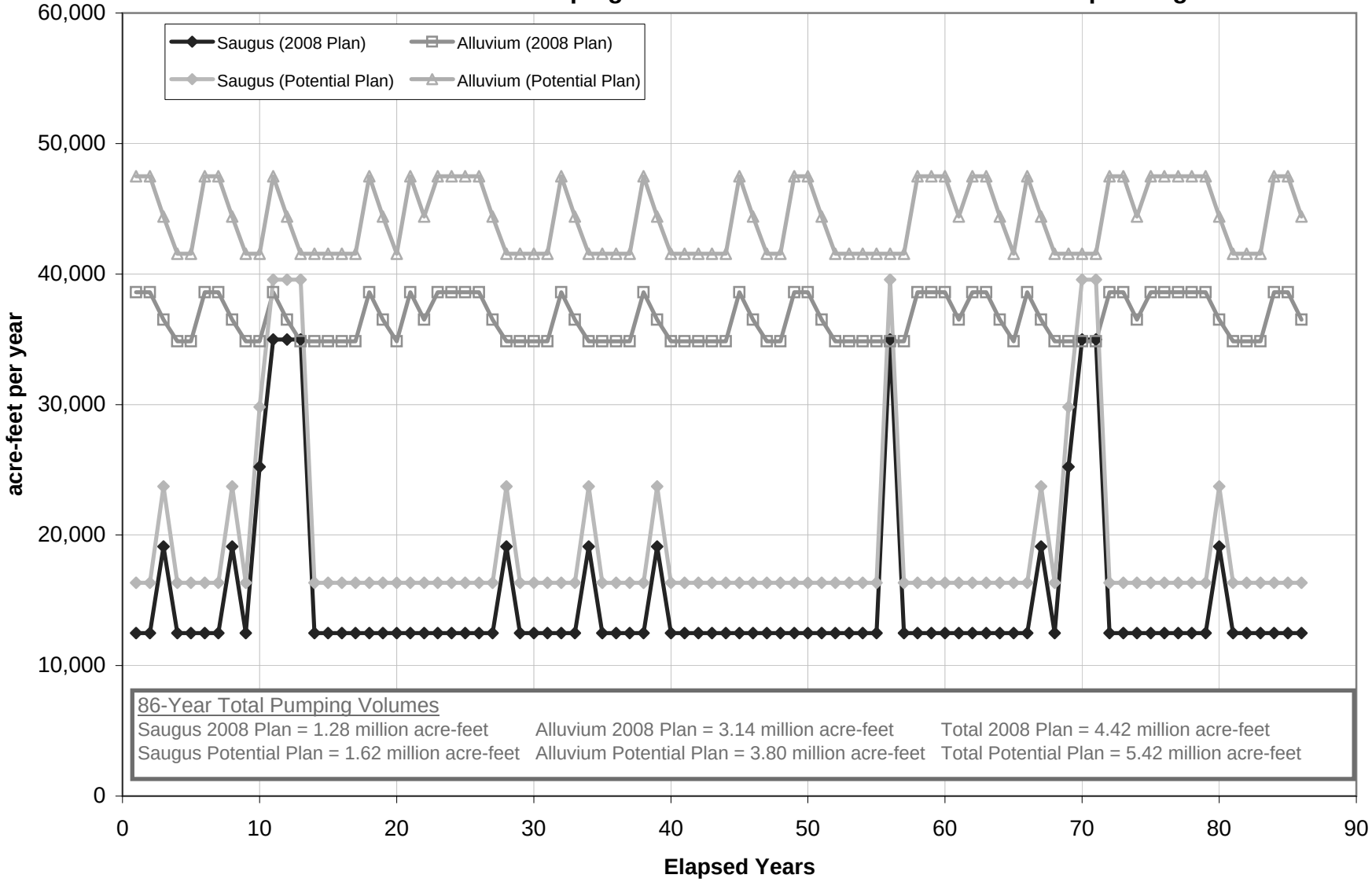
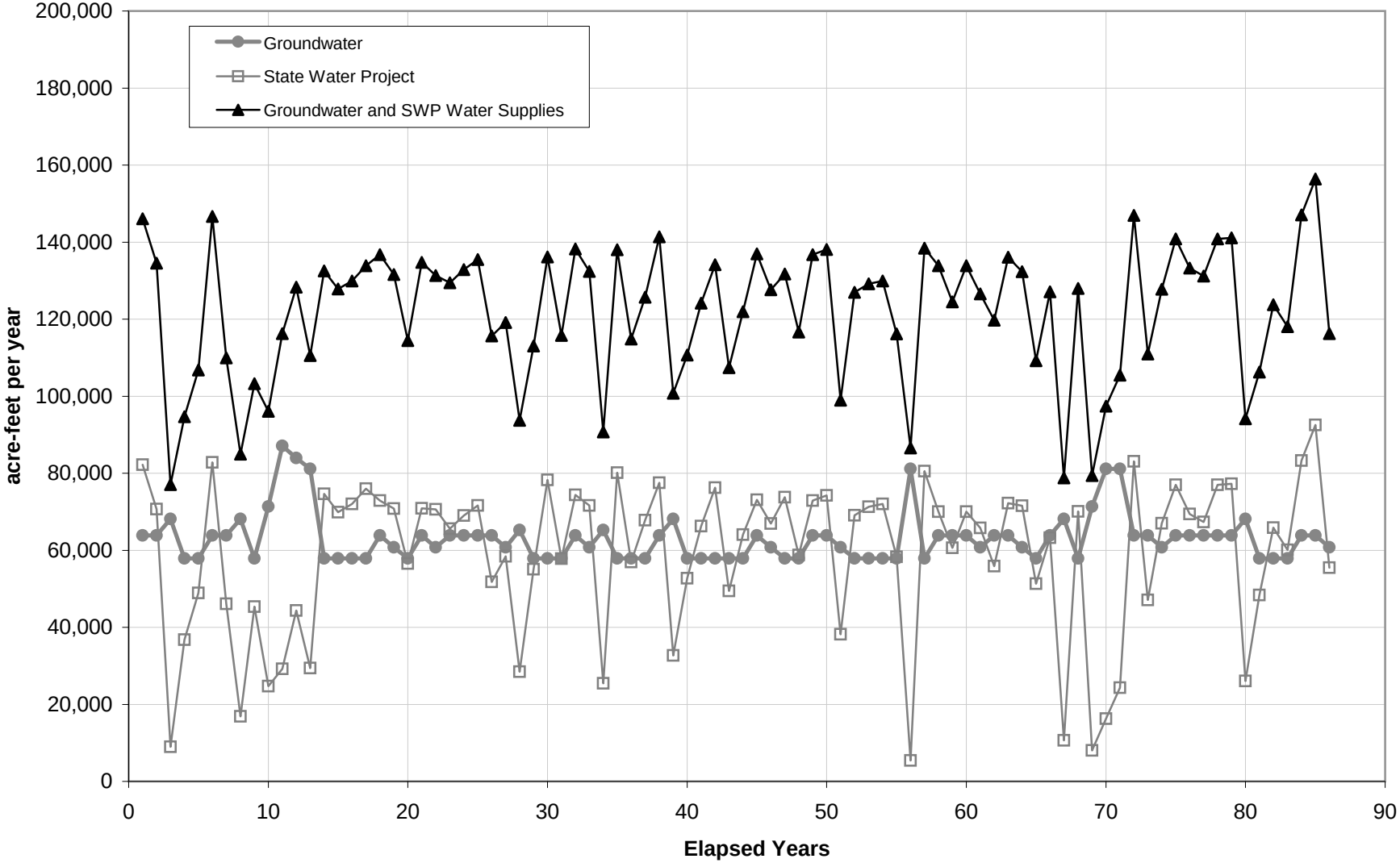


Figure 3-7
Simulated Water Supplies For Potential Groundwater Operating Plan
(Excluding Recycled Water)



IV. Sustainability of Operating Plans

This section of the report presents and discusses time-series plots (hydrographs) of simulated groundwater elevations, groundwater budget terms, and Santa Clara River flows for the 86-year modeling period. The results for the 2008 Operating Plan, the 2008 Operating Plan with Pumping Redistribution, and the future Potential Operating Plan are presented and discussed together.

4.1 Groundwater Elevations

As introduced above, groundwater elevation trends are considered to be the key indicator of long-term sustainability of an operating plan. A sustainable plan is characterized by the absence of long-term declines in groundwater levels or, if declines occur initially, subsequent long-term stabilization of groundwater levels. Concurrent with sustainability considerations, i.e. groundwater resource response to a certain level of pumping, is whether an operating plan is physically achievable. An achievable plan is one in which target pumping capacities and long-term (monthly and/or annual) target pumping volumes can be expected to be pumped without exceeding practical well and pump performance. Achievability of the plan at a given well can be evaluated by comparing groundwater elevations and trends against historical levels and against the depths in the aquifer to which the well is open (i.e., the depth interval for the well screen or the perforated steel casing).

Sections 4.1.1 through 4.1.3 discuss sustainability and achievability of the 2008 Operating Plan, the 2008 Operating Plan with Pumping Redistribution, and the Potential Operating Plan, respectively. Hydrographs illustrating basin response to each operating plan at each production well location in the Valley are contained in Appendix C.

4.1.1 2008 Operating Plan

Selected groundwater elevation hydrographs for different portions of the Alluvial Aquifer are presented on Figures 4-1 through 4-8. Each figure presents hydrographs for wells that are considered representative of conditions in the following alluvial subareas:

- Along the Santa Clara River, below the Valencia WRP (well VWC-E15)
- Along the Santa Clara River, below the Saugus WRP (well VWC-S8)
- Along the Santa Clara River, above the Saugus WRP (well VWC-T7)
- Along the Santa Clara River, at and above Mint Canyon (wells SCWD-Sierra and NCWD-Pinetree1)
- Castaic Valley (well NCWD-Castaic7)
- San Francisquito Canyon (well VWC-W11)
- Bouquet Canyon (well SCWD-Clark)

Each set of hydrographs in Figures 4-1 through 4-8 shows the simulated monthly groundwater elevations for both operating plans, as well as three sets of historical groundwater elevations

from 1980-2007 (static [non-pumping] groundwater elevations, groundwater elevations measured during pumping, and the model's simulation of historical conditions from 1980-2007).

Key findings from the simulated hydrographs for the 2008 Operating Plan are as follows:

The model simulates distinct multi-year periods of overall declining or overall increasing groundwater elevations resulting from cycles of below-normal and above-normal rainfall periods. This variation is consistent with historical observations of the relationship between rainfall and groundwater level fluctuations (CH2M HILL, 2004a; CH2M HILL and LSCE, 2005) and is particularly pronounced in much of the Alluvial Aquifer.

The 2008 Operating Plan is sustainable, but not fully achievable, in the Alluvial Aquifer as configured. Specifically:

- Alluvial Aquifer wells in each subarea do not show sustained long-term declines in groundwater elevations. Groundwater elevations decline notably in some areas during drought periods, but eventually recover in response to significant rainfall/recharge events that occur periodically, marking the end of a given drought cycle.

- The 2008 plan is achievable in most Alluvial Aquifer subareas in that the groundwater elevations remain similar to historical groundwater elevations, do not drop appreciably into the open intervals of the wells or, at wells such as SCWD-Clark, where groundwater levels are already within the open interval, are only modestly below levels observed in recent years. This means that groundwater levels in most areas are not expected to pose operational difficulties that would significantly reduce the pumping capacities of individual wells.

- However, a notable exception is in the "Above Mint Canyon" subarea, where groundwater elevations are simulated to be within the open intervals of wells during most of the simulation period. In some instances, the simulated groundwater elevations are predicted to drop below the bottom of the well, meaning that the pumping rates programmed into the model at, and prior to, that time are not expected to be physically achievable. As shown by the hydrographs, the 2008 Operating Plan is predicted to not be fully achievable in the "Above Mint Canyon" subarea under the types of drought cycles such as were observed from the mid-1920s through the late 1930s and from the mid-1940s through the mid-1970s.

- It is important to note that, because the model simulates more pumping than can physically be achieved in the "Above Mint Canyon" alluvial subarea during drought periods, actual groundwater elevations will be higher at the ends of the drought cycles than predicted by the model (because actual pumping will have to be less than what is simulated by the model). This in turn means that the relatively low groundwater elevations depicted on the hydrographs between 1976 and the early 1990s are lower than will actually occur. It also means that, while pumping at the rates contemplated in the 2008 Operating Plan may not be achievable, some lower extraction rates can likely be achieved in the "Above Mint Canyon" area, with the possibility that reductions in this

area could be offset by increased pumping in other parts of the basin. This idea is supported by a group of focused test simulations that were conducted during the course of evaluating the 2008 Operating Plan. Results are discussed in the following Section 4.1.2.

Figures 4-9 through 4-11 contain groundwater elevation hydrographs for three representative wells in the Saugus Formation (SCWD-Saugus1 just south of Bouquet Junction; NCWD-13 further to the south, along the South Fork Santa Clara River; and VWC-206 near the Valencia WRP). The principal observations from these hydrographs are:

- Groundwater elevations show long-term stability under the 2008 Operating Plan, with no sustained declines being evident. At each well, the groundwater elevations under this operating plan are slightly below the historical static elevations that were observed from 1980 through 2007, reflecting greater use of Saugus wells under the 2008 Operating Plan than has occurred historically (in particular, greater use of SCWD-Saugus1 and SCWD-Saugus2, which will begin pumping under the perchlorate containment plan described in Section 3.3.3). Nonetheless, the groundwater elevations are at or above historically recorded pumping elevations, and notably above the top of the open interval of each well, indicating that the 2008 Operating Plan should be achievable at each well and sustainable in the long-run.

4.1.2 2008 Operating Plan with Pumping Redistribution

During the prolonged dry period from the mid-1940s through the mid-1970s, when there were few years of significantly greater-than-average rainfall, the 2008 Operating Plan might have been achievable if pumping in the “Above Mint Canyon” alluvial subarea had been lower than the pumping volume contemplated in the 2008 Operating Plan. This reduction would not have been necessary during other historical periods that were characterized by intermittent years of significant rainfall, streamflow, and associated groundwater recharge (such as occurred periodically from the late 1970s through 2005).

This possibility was examined as follows. Recognizing that SCWD is in the midst of constructing new or replacement wells (e.g. to replace its perchlorate-impacted Stadium well) to the west of the “Above Mint Canyon” subarea, a potential redistribution of some SCWD pumping, as analyzed in the 2008 Operating Plan, was crafted whereby 1,600 afy of pumping was moved from three SCWD wells in the “Above Mint Canyon” subarea (near the mouth of Sand Canyon) to the replacement SCWD Santa Clara and Bouquet wells, located in the “Above Saugus WRP” and “Bouquet Canyon” subareas, respectively (Table 3-9). The resultant impact on groundwater levels to the west was nearly insignificant, indicating no adverse effect on either sustainability or achievability of groundwater at a higher pumping rate in those subareas (Figures 4-12 through 4-15). However, in the “Above Mint Canyon” area to the east, while there was appreciable improvement, in places up to 20 feet of higher groundwater levels through prolonged dry periods, the redistribution of 1,600 afy from this alluvial subarea is not predicted to significantly improve operating conditions at most of the production wells in this area, as groundwater levels are still predicted to decline close to, or below, the open intervals of many of the existing production wells under the historical hydrologic conditions observed from the mid-1940s through the mid-1970s (see Figures 4-12 through 4-15).

The preceding "redistribution" analysis suggests that the Purveyors can expect that the "Above Mint Canyon" subarea will suffer from significantly depressed groundwater levels through extended dry periods that will, in turn, physically limit the amount of groundwater pumping in that area, most notably from the SCWD wells in that subarea. The "redistribution" analysis indicates that increased pumping to the west, to offset reduced pumping in the "Above Mint Canyon" area, is both sustainable and achievable. The residual "Above Mint Canyon" pumping (a total of 4,450 afy in multiple dry years; 3,300 afy by SCWD, 700 afy by NCWD, and 450 afy by Robinson Ranch) in the 2008 Operating Plan does not appear to be fully achievable through those dry periods. Implications are likely to be in the following range of possibilities. One possibility is that additional redistribution can be achieved by further increasing pumping to the west; that would tend to keep the total groundwater supply near the upper end (35,000 afy) of the dry-year range in the Operating Plan (Section 3.3.1). Model results of limited redistribution above indicate the probability that such can be accomplished with small decreases in groundwater levels that will not have an adverse effect on overall sustainability and achievability. A second possibility is that pumping is not increased to the west, even if pumping is reduced in the "Above Mint Canyon" area; in that case, the total achievable pumping in dry periods would be near the lower end (30,000 afy) of the dry-year range in the Operating Plan. Additionally, in this second case, because of the absence of episodic recharge events during such a prolonged period, pumping during or after years of near-normal rainfall may also require reduction to this same low end of the range in the Operating Plan (30,000 afy).

In summary, the 2008 Operating Plan, as originally crafted, would utilize groundwater in a sustainable manner, but is not expected to be fully achievable due to depressed groundwater levels at the eastern end of the basin, i.e. in the "Above Mint Canyon" area, through extended dry periods. As pumping in that area declines due to depressed groundwater levels, total Alluvial pumping can be expected to remain within the overall dry-period range in the 2008 Operating Plan (30,000 to 35,000 afy). With redistribution of pumping to the west, Alluvial pumping can be achieved toward the upper end of that range. However, without pumping redistribution to the west, Alluvial pumping can be expected to decrease toward the lower end of that range during most years until an episodic rainfall and recharge event occurs that substantially recharges the aquifer in the "Above Mint Canyon" area.

4.1.3 Potential Operating Plan

The Potential Operating Plan is not sustainable or achievable in the Alluvial Aquifer as configured. Although there are local areas where groundwater conditions would appear sustainable, overall the Potential Operating Plan is not sustainable or achievable because several of the Alluvial Aquifer subareas show groundwater elevations that are distinctly lower during most of the 86-year simulation period than under the 2008 Operating Plan, and show a continued decline over time (Figures 4-1 through 4-8).

The Potential Operating Plan shows modest long-term declines in Saugus Formation groundwater elevations at each Saugus production well, as indicated by comparing the relatively high groundwater elevations in the mid-1940s (following the drought of the mid-1920s through late 1930s) with the relatively high, but slightly lower, groundwater elevations of the mid-1980s

(following the drought of the mid-1940s through mid-1970s). The hydrographs in Figures 4-9 through 4-11 indicate that pumping during the next several decades from the Saugus Formation under the Potential Operating Plan would likely be achievable, but the long-term decline indicates that the Potential Operating Plan may not be sustainable beyond the next several decades.

4.2 Groundwater Recharge, Discharge, and Storage

The sustainability of each operating plan can also be evaluated by examining trends in groundwater recharge and groundwater discharge during the 86-year simulation period. The magnitudes of individual groundwater recharge mechanisms at any given time are the same for the 2008 Operating Plan and the Potential Operating Plan, because recharge is an input to the model and is not affected by groundwater pumping. However, the groundwater discharge terms are different for the two plans because of the different groundwater pumping rates and the corresponding differences between the two plans in how they affect groundwater levels and, therefore, the magnitudes of the various components of groundwater discharge.

Figure 4-16 compares the magnitudes and trends in groundwater recharge and groundwater discharge for the 2008 Operating Plan. The figure shows that groundwater recharge rates vary greatly from year to year because of year-to-year variations in precipitation and stormwater generation within the groundwater basin and in the contiguous upstream watersheds. In contrast, total groundwater discharge is much less variable from year to year, with variations arising from increased pumping during drought years and increased evapotranspiration and groundwater discharge to the Santa Clara River during wet years. The groundwater discharge plot shows no obvious downward trend over time in groundwater discharges to streams or other discharge terms, and total discharges are do not show a continued downward trend over time. This indicates that the 2008 Operating Plan is sustainable in the long-term, a conclusion that is consistent with the examination of the groundwater elevation hydrographs discussed previously in Section 4.1.1.

Figure 4-17 compares the groundwater discharge terms for the 2008 and Potential Operating Plans. The figure shows that total groundwater discharges and discharges to streams are lower under the Potential Operating Plan than under the 2008 Operating Plan. The discharges to streams appear to decline gradually over time under the Potential Operating Plan, whereas these discharges appear more stable under the 2008 plan after the 1940s and early 1950s. This difference in groundwater discharge trends between the two operating plans is also evident in a plot showing the cumulative change in groundwater storage over time during the 86-year simulation period (Figure 4-18). The cumulative change in groundwater storage is a measure of the longer-term trends in the amount of groundwater in storage, and is plotted on a monthly basis. The 2008 Operating Plan shows a recovery of groundwater storage volumes beginning in the late 1970s, after the droughts of prior years. While the Potential Operating Plan also shows some recovery in the late 1970s, the curve as a whole remains lower in value after the 1940s than during the first two decades of the simulation.

In summary, the differences between the two operating plans' groundwater discharge trends and groundwater storage trends during the 86-year simulation period is consistent with the observed

trends in groundwater elevations and the associated conclusions about sustainability discussed above.

4.3 River Flows

Figure 4-19 shows the total flows estimated by the model for the Santa Clara River at the County Line gage, which is located at the western end of the Valley. The figure contains both a linear plot and a semi-logarithmic plot, to better illustrate the flows during low-flow periods. As shown by both plots, total flow in the river at the County Line varies considerably over time. This variation occurs because of temporal variations in rainfall, streamflow, and groundwater discharges to the river.

The influences of the local hydrology and the groundwater operating plans on the Santa Clara River are also shown by Figure 4-20, which displays the model-calculated volumes of monthly groundwater discharge to the river. Groundwater discharges to the river occur along the river reach lying downstream of the mouth of San Francisquito Canyon. The figure shows that the groundwater discharge rates to the river also vary over time, both seasonally and over multi-year periods. For the 2008 Operating Plan, the model simulates no groundwater discharge to the river at certain times during the droughts of the mid-1930s and the mid-1940s to mid-1970s. In contrast, the Potential Operating Plan not only results in smaller discharges to the river at most times, but also results in many more months of no groundwater discharge to the river compared with the 2008 Operating Plan.

As discussed by CH2M HILL (2004a), the river baseflow (flow other than from stormwater runoff) gage has increased at the County Line since water imports into the Valley began in 1980. Figure 4-21 shows the historically recorded monthly flow during the driest month of each year since 1950 and compares this flow with the driest-month flow predicted to occur each year under the 2008 and Potential Operating Plans. The plot shows that under the local, ambient hydrologic conditions observed from 1922 through 1979, the 2008 Operating Plan would have maintained river flows at levels higher than were actually recorded during those years (prior to the importation of water). The Potential Operating Plan also would have maintained higher river flow in most years, with a few years (1969, 1972, and 1975) showing similar driest-month river flows as were historically recorded. This indicates that both operating plans, and in particular the 2008 Operating Plan, will maintain river flows at higher levels than occurred prior to urbanization of the Valley.

4.4 Relationship of Simulation Results to Future Conditions

The curves presented on Figures 4-1 through 4-21 provide a general indication of the types of fluctuations in groundwater conditions that could be expected to occur in the future in the Santa Clarita Valley over a period of many years under the two operating plans. However, these curves have been derived using an assumed sequence of local hydrologic conditions that is based on the sequence of rainfall and streamflow volumes that were measured during the past several decades. In the future, the year-to-year volumes and trends in rainfall and streamflow could vary from those observed in the past because of 1) changes in the timing and magnitude of multi-decadal cycles of drought and wetter-than-normal conditions such as those that have been observed in the

past; and/or 2) because of global-scale changes in climate. The latter topic and its potential effect on the sustainability of the 2008 Operating Plan are discussed in the following Chapter 5 of this report.

Ta le 4-

Pumping Rates Simulated for Individual Alluvial Aquifer Wells nder the Re- istri uted 2008 Groundwater Operating Plan Listed B Alluvial Su area

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Well Name	Alluvial Subarea	Original 2008 Operating Plan Normal	Dry Yr 1	Dry Yr 2+	Re-Distributed 2008 Operating Plan Normal	Dry Yr 1	Dry Yr 2+	Comments
NCWD-Pinetree 1	Above Mint Canyon	150	0	0	150	0	0	
NCWD-Pinetree 3	Above Mint Canyon	350	300	300	350	300	300	
NCWD-Pinetree 4	Above Mint Canyon	300	200	200	300	200	200	
NCWD-Pinetree 5	Above Mint Canyon	300	200	200	300	200	200	
Robinson Ranch	Above Mint Canyon	600	550	450	600	550	450	
SCWD-Sand Canyon	**Above Mint Canyon**	**1,000**	**600**	**200**	**200**	**150**	**0**	**Reduce these three wells by 1,600 afy in order to**
SCWD-Lost Canyon 2	**Above Mint Canyon**	**700**	**700**	**650**	**300**	**150**	**0**	**offset increased pumping at the SCWD-Santa Clara and**
SCWD-Lost Canyon 2A	**Above Mint Canyon**	**700**	**650**	**600**	**300**	**150**	**0**	**SCWD-Bouquet wells in the "Above Saugus WRP" area.**
SCWD-Mitchell #5A	Above Mint Canyon	500	350	200	500	350	200	
SCWD-Mitchell #5B	Above Mint Canyon	800	550	300	800	550	300	
SCWD-N. Oaks Central	Above Mint Canyon	850	800	700	850	800	700	
SCWD-N. Oaks East	Above Mint Canyon	800	750	700	800	750	700	
SCWD-N. Oaks West	Above Mint Canyon	800	750	700	800	750	700	
SCWD-Sierra	Above Mint Canyon	1,100	900	700	1,100	900	700	
Mint Canyon Total		**8,950**	**7,300**	**5,900**	**7,350**	**5,800**	**4,450**	
SCWD-Honby	Above Saugus WRP	1,000	850	700	1,000	850	700	
SCWD-Santa Clara	Above Saugus WRP	800	800	800	800	800	800	
SCWD-Valley Center	**Above Saugus WRP**	**0**	**0**	**0**	**800**	**800**	**800**	**Pumps 800 afy moved from the "Above Mint Canyon" area.**
SCWD-Bouquet	**Above Saugus WRP**	**0**	**0**	**0**	**800**	**800**	**800**	**Pumps 800 afy moved from the "Above Mint Canyon" area.**
VWC-T7	Above Saugus WRP	750	750	750	750	750	750	
VWC-U4	Above Saugus WRP	800	800	800	800	800	800	
VWC-U6	Above Saugus WRP	800	800	800	800	800	800	
Above Saugus WRP Total		**4,150**	**4,000**	**3,850**	**5,750**	**5,600**	**5,450**	
VWC-N	Below Saugus WRP	650	650	650	650	650	650	
VWC-N7	Below Saugus WRP	1,160	1,160	1,160	1,160	1,160	1,160	
VWC-N8	Below Saugus WRP	1,160	1,160	1,160	1,160	1,160	1,160	
VWC-Q2	Below Saugus WRP	1,100	1,100	1,100	1,100	1,100	1,100	
VWC-S6	Below Saugus WRP	1,000	1,000	1,000	1,000	1,000	1,000	
VWC-S7	Below Saugus WRP	500	500	500	500	500	500	
VWC-S8	Below Saugus WRP	500	500	500	500	500	500	
Below Saugus WRP Total		**6,070**	**6,070**	**6,070**	**6,070**	**6,070**	**6,070**	
NLF-161	Below Valencia WRP	1,000	1,000	1,000	1,000	1,000	1,000	
NLF-B10	Below Valencia WRP	500	350	350	500	350	350	
NLF-B11	Below Valencia WRP	100	200	200	100	200	200	
NLF-B14	Below Valencia WRP	300	1,000	1,000	300	1,000	1,000	
NLF-B20	Below Valencia WRP	350	500	500	350	500	500	
NLF-B5	Below Valencia WRP	2,400	1,900	1,900	2,400	1,900	1,900	
NLF-B6	Below Valencia WRP	1,100	1,100	1,100	1,100	1,100	1,100	
NLF-C	Below Valencia WRP	1,100	1,000	1,000	1,100	1,000	1,000	
NLF-C3	Below Valencia WRP	100	200	200	100	200	200	
NLF-C4	Below Valencia WRP	200	450	450	200	450	450	
NLF-C5	Below Valencia WRP	900	850	850	900	850	850	
NLF-C7	Below Valencia WRP	350	300	300	350	300	300	
NLF-C8	Below Valencia WRP	400	400	400	400	400	400	
NLF-E5	Below Valencia WRP	100	150	150	100	150	150	
NLF-E9	Below Valencia WRP	900	350	350	900	350	350	
NLF-G45	Below Valencia WRP	350	400	400	350	400	400	
VWC-E15	Below Valencia WRP	800	800	800	800	800	800	
Below Valencia WRP Total		**10,950**	**10,950**	**10,950**	**10,950**	**10,950**	**10,950**	
SCWD-Clark	Bouquet Canyon	700	700	700	700	700	700	
SCWD-Guida	Bouquet Canyon	1,300	1,250	1,200	1,300	1,250	1,200	
Bouquet Canyon Total		**2,000**	**1,950**	**1,900**	**2,000**	**1,950**	**1,900**	
VWC-W10	San Francisquito Canyon	1,000	1,000	1,000	1,000	1,000	1,000	
VWC-W11	San Francisquito Canyon	800	800	800	800	800	800	
VWC-W9	San Francisquito Canyon	950	950	950	950	950	950	
San Francisquito Canyon Total		**2,750**	**2,750**	**2,750**	**2,750**	**2,750**	**2,750**	
NCWD-Castaic 1	Castaic Valley	350	300	250	350	300	250	
NCWD-Castaic 2	Castaic Valley	100	100	100	100	100	100	
NCWD-Castaic 4	Castaic Valley	100	0	0	100	0	0	
NCWD-Castaic 7	Castaic Valley	300	200	200	300	200	200	
VWC-D	Castaic Valley	880	880	880	880	880	880	
WHR	Castaic Valley	2,000	2,000	2,000	2,000	2,000	2,000	
Castaic Valley Total:		**3,730**	**3,480**	**3,430**	**3,730**	**3,480**	**3,430**	
Total Alluvial Pumping		**38,600**	**36,500**	**34,850**	**38,600**	**36,600**	**35,000**	**Current Operating Plan:**
								35,000 to 40,000 AF/yr in normal and wet years
								30,000 to 35,000 AF/yr in dry years

Notes:

All pumping volumes are listed in acre-feet per year (afy).

Wells that are not listed are assumed to not be pumping in the future.

NLF = Newhall Land & Farming Company

NCWD = Newhall County Water District

SCWD = Santa Clarita Division of Castaic Lake Water Agency

VWC = Valencia Water Company

WHR = Wayside Honor Rancho, whose wells are owned by the Los Angeles County Waterworks District No. 36

Figure 4-1: VWC-E15 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer Below Valencia WRP)

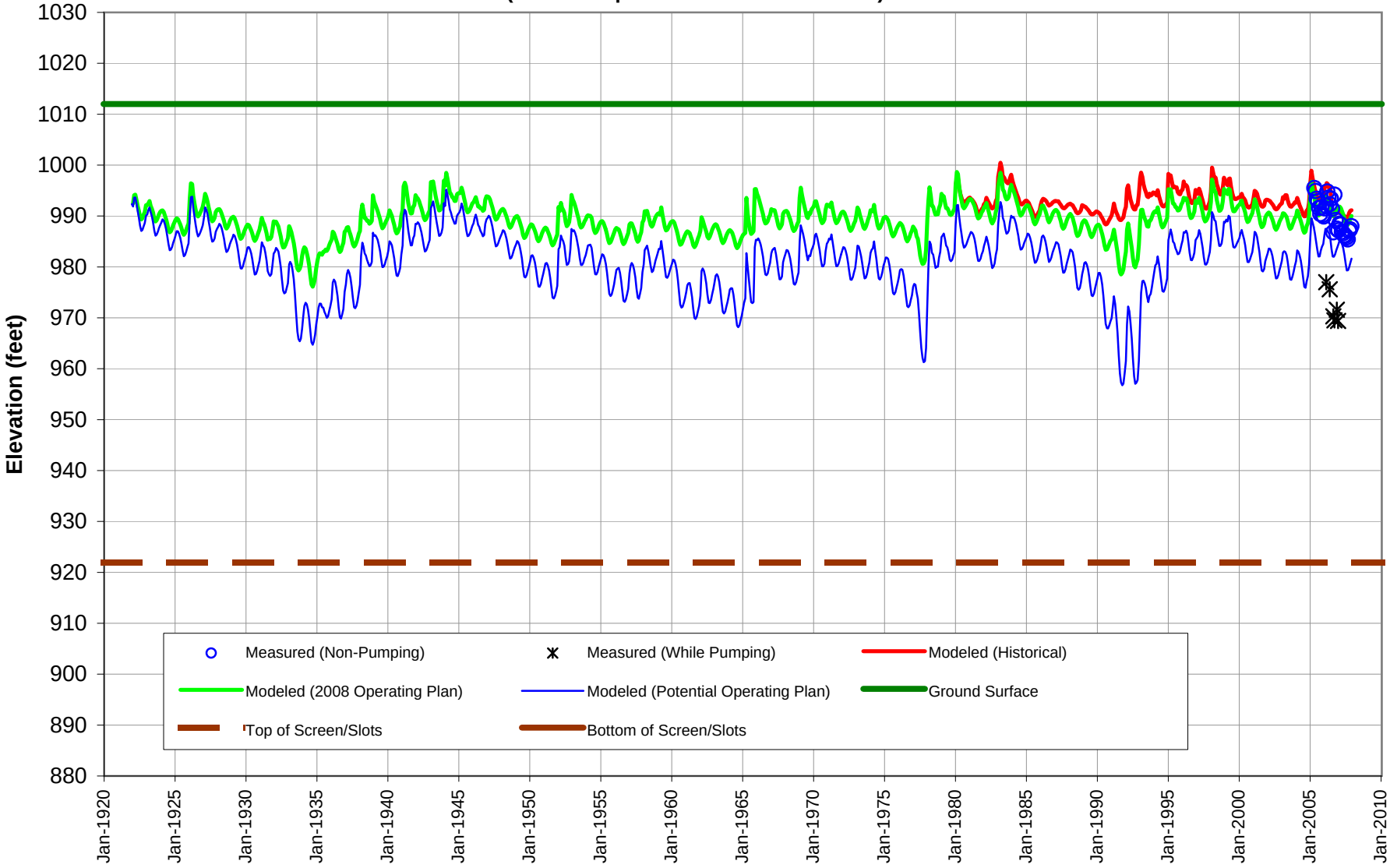


Figure 4-2: VWC-S8 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer Below Saugus WRP)

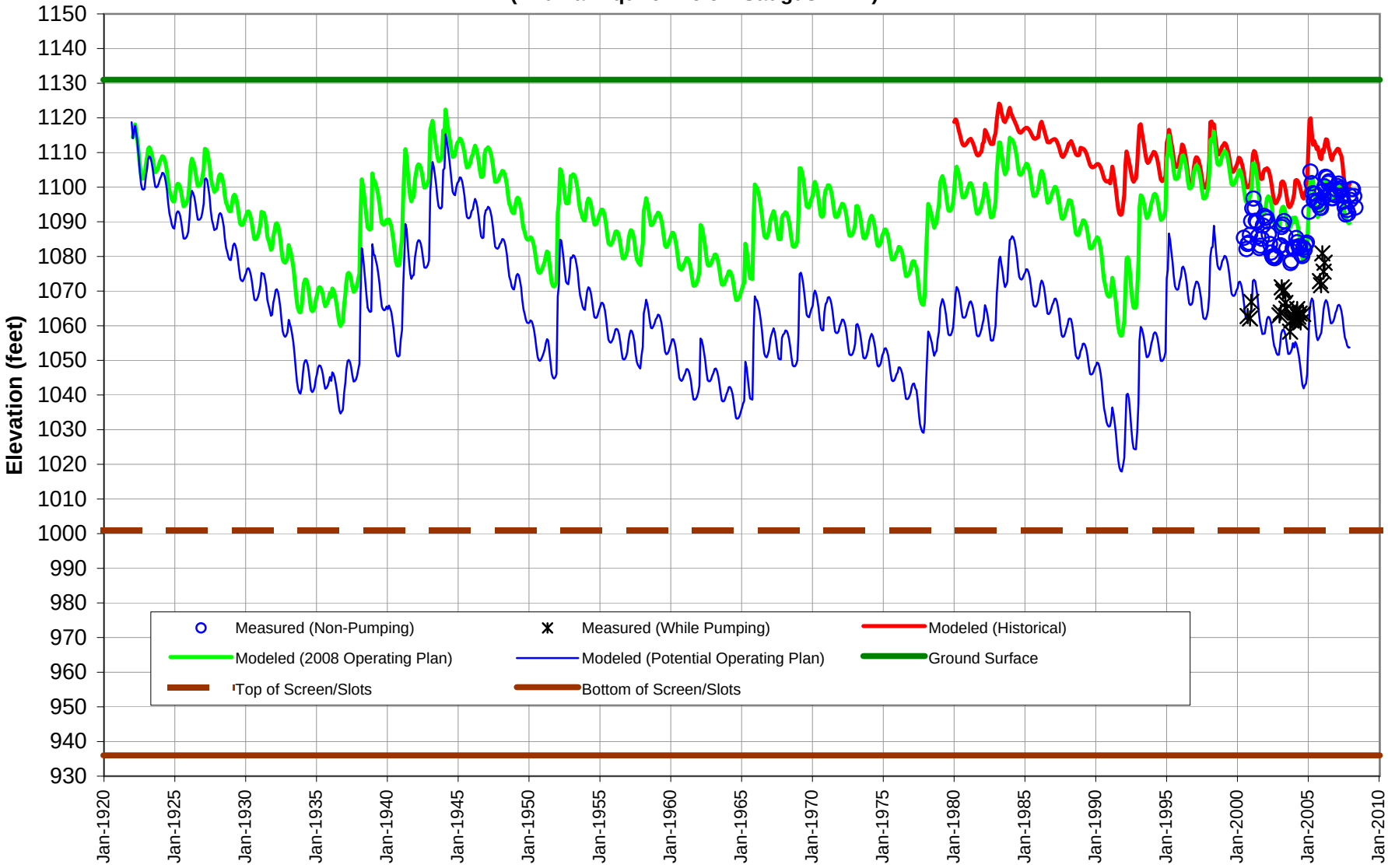


Figure 4-3: VWC-T7 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer Above Saugus WRP)

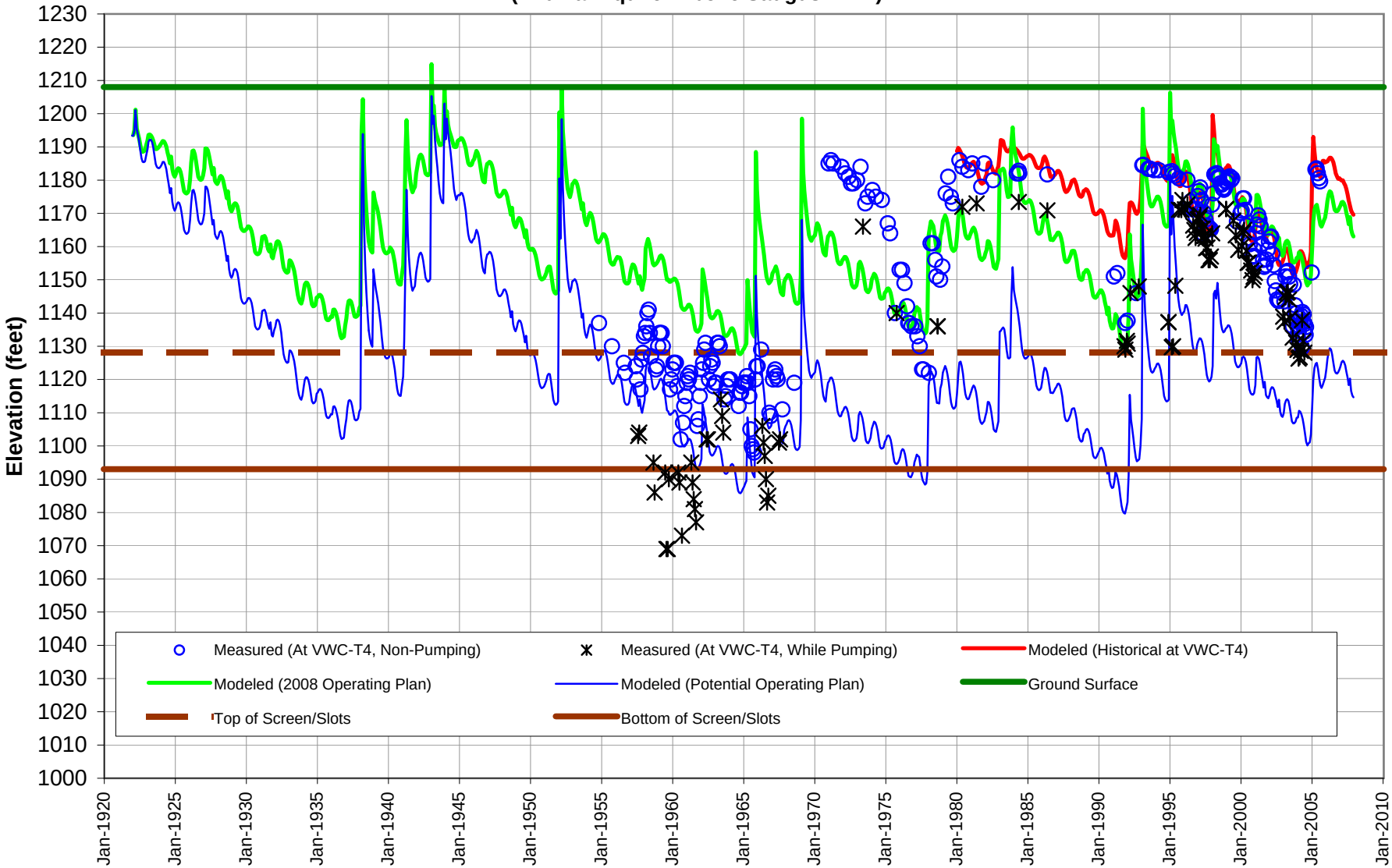


Figure 4-4: SCWD - Sierra Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer Along Santa Clara River, At and Above Mint Canyon)

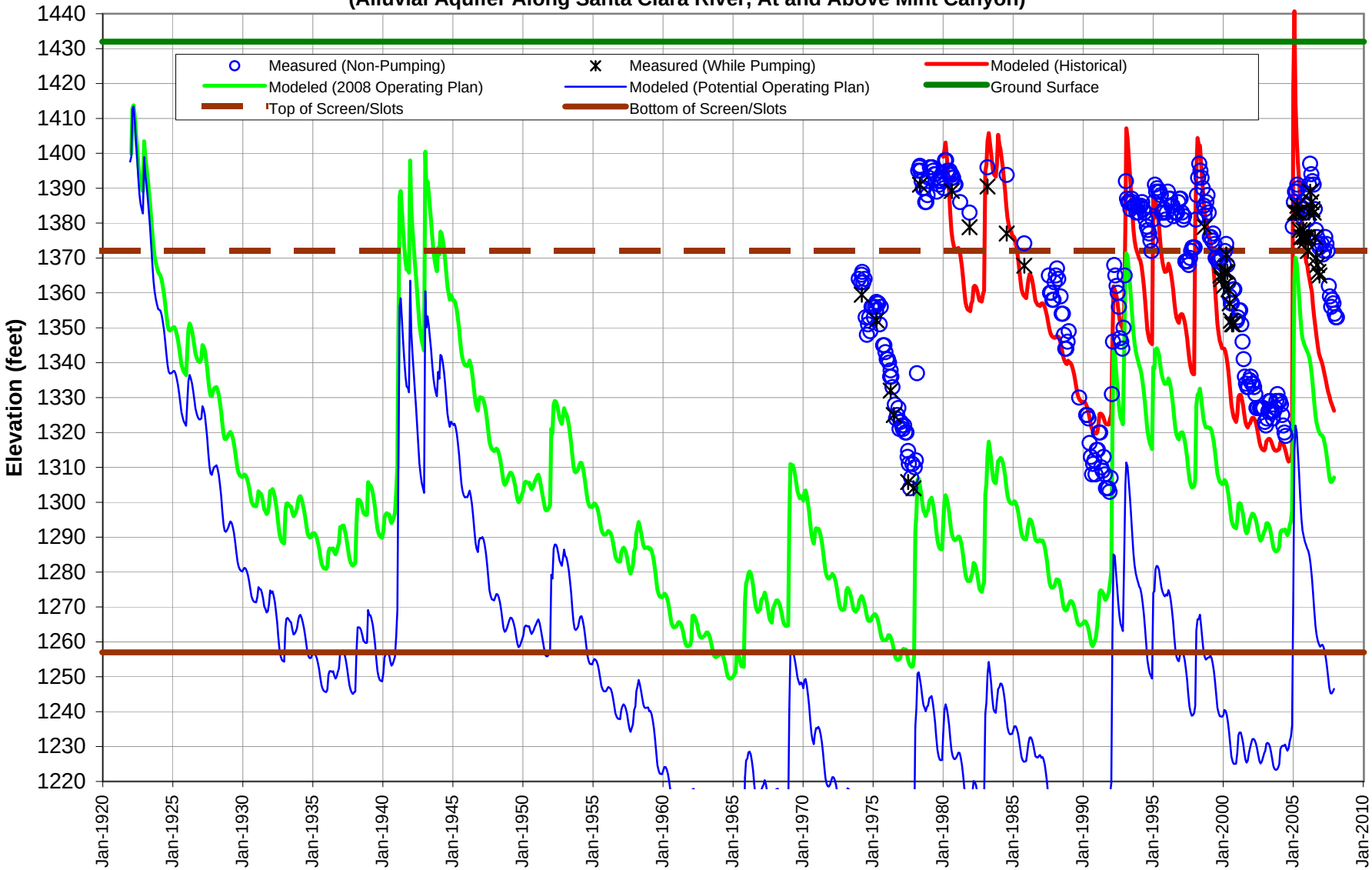


Figure 4-5: NCWD - Pinetree 1 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer Along Santa Clara River, At and Above Mint Canyon)

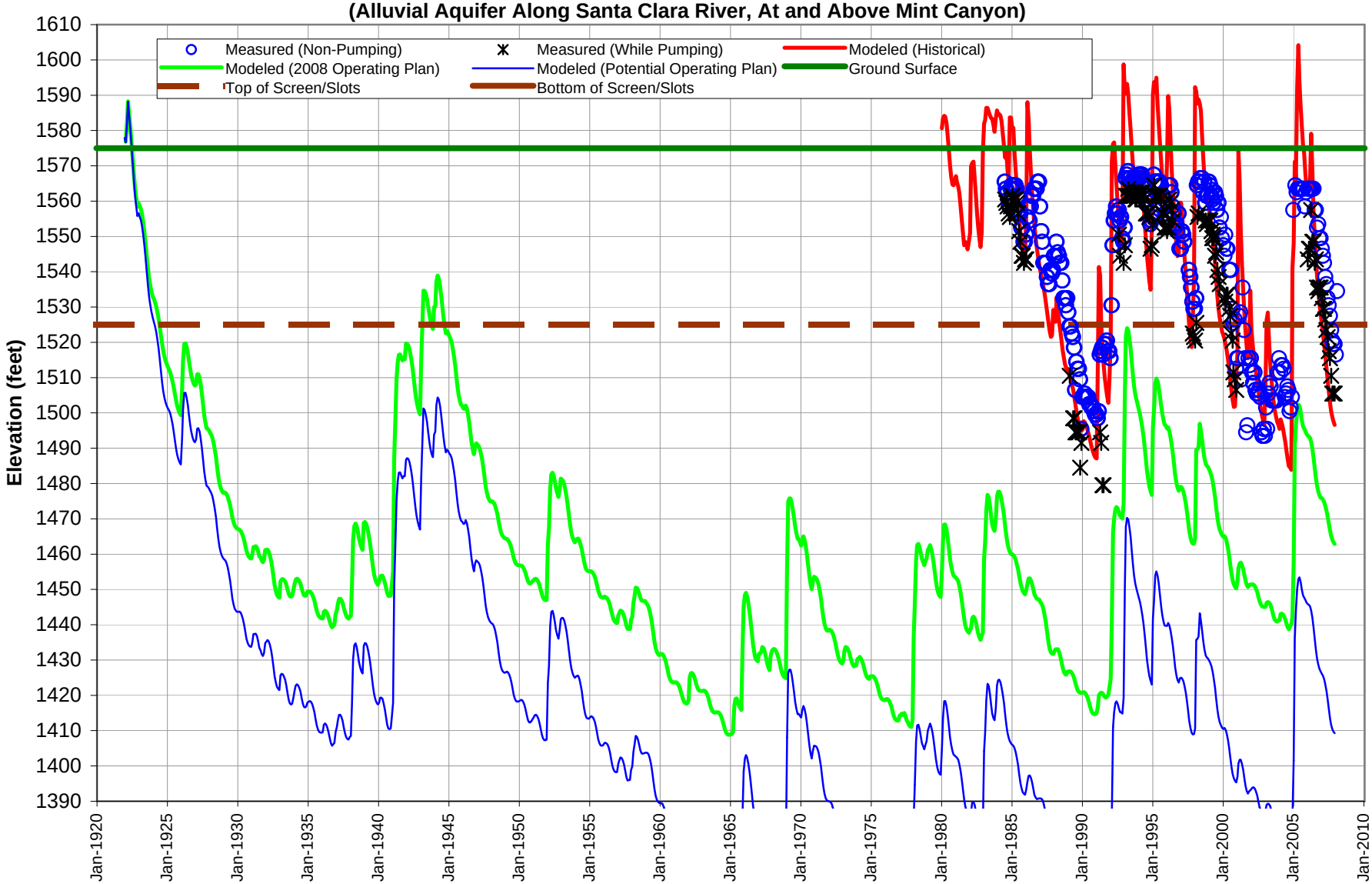


Figure 4-6: NCWD - Castaic 7 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer in Castaic Valley)

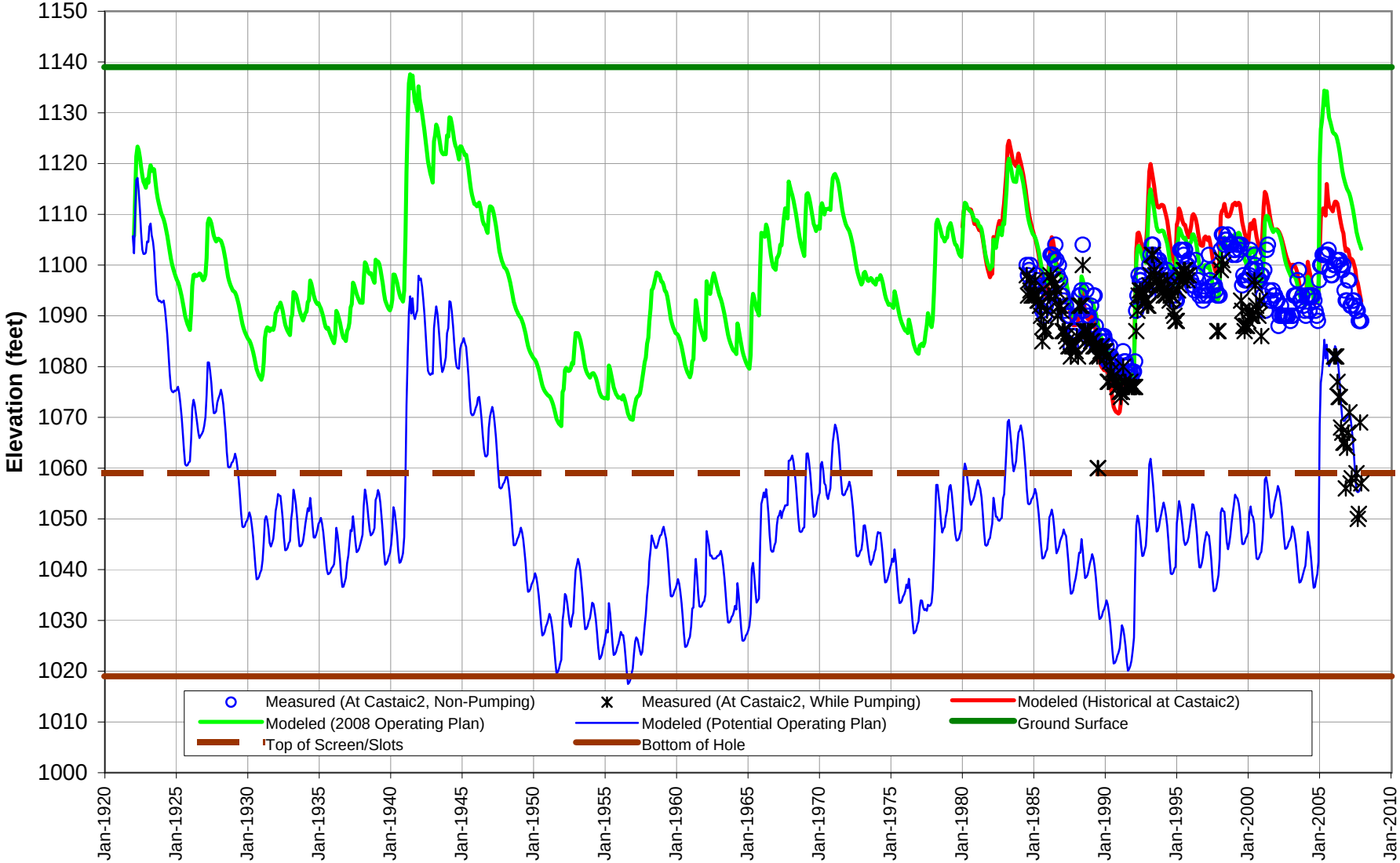


Figure 4-7: VWC-W11 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer in San Francisquito Canyon)

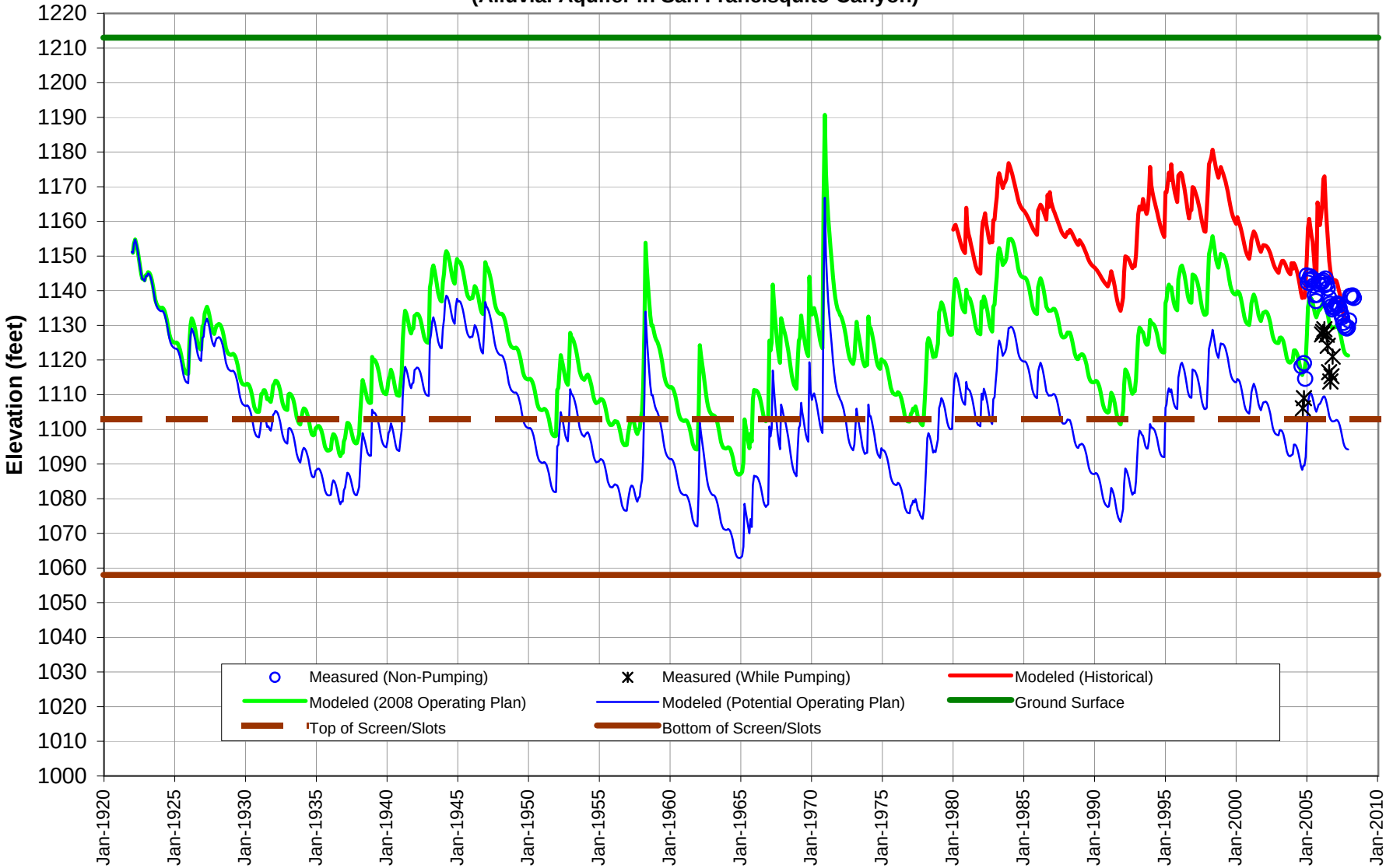


Figure 4-8: SCWD - Clark Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Alluvial Aquifer in Bouquet Canyon)

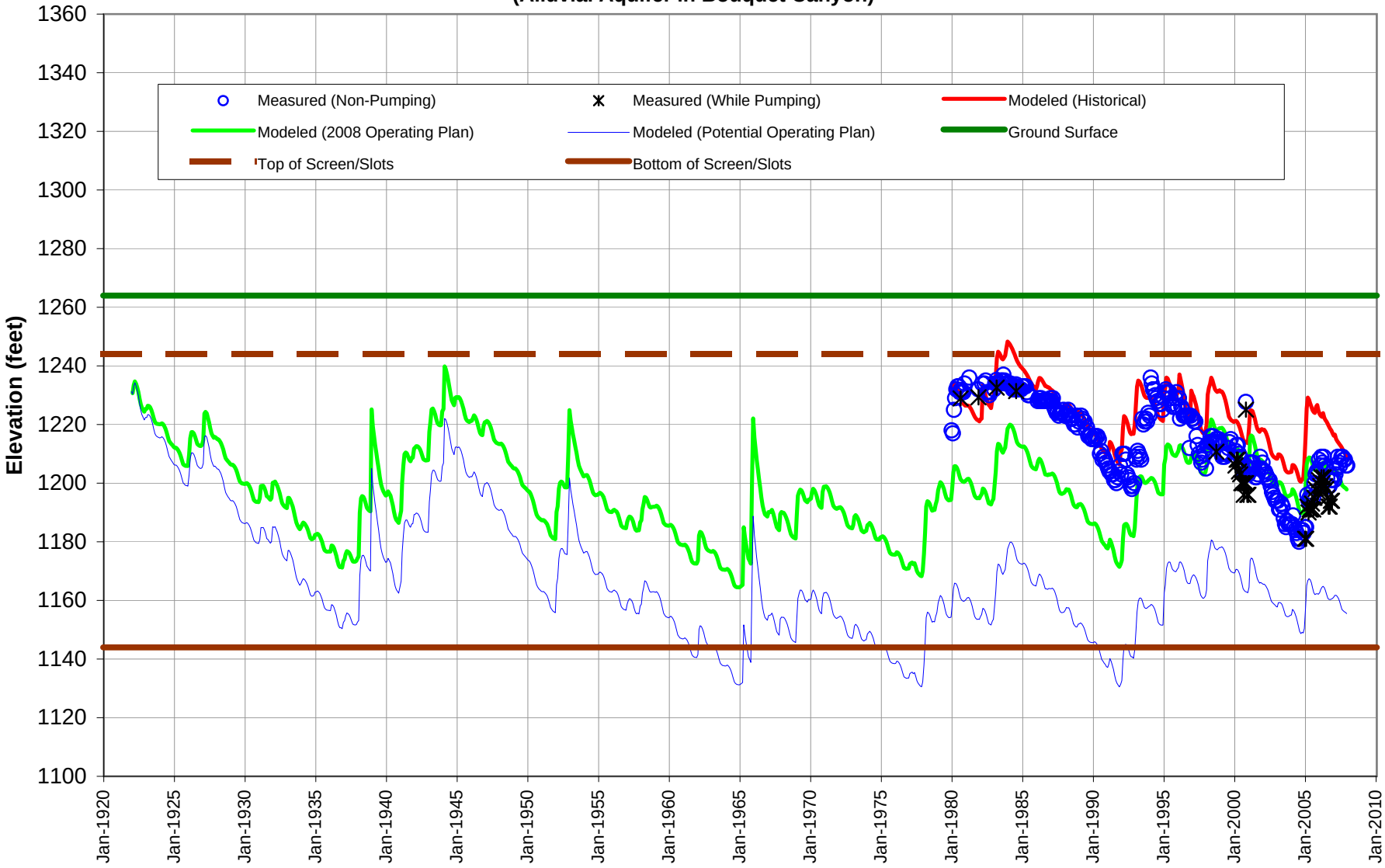


Figure 4-9: SCWD-Saugus1 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Saugus Formation)

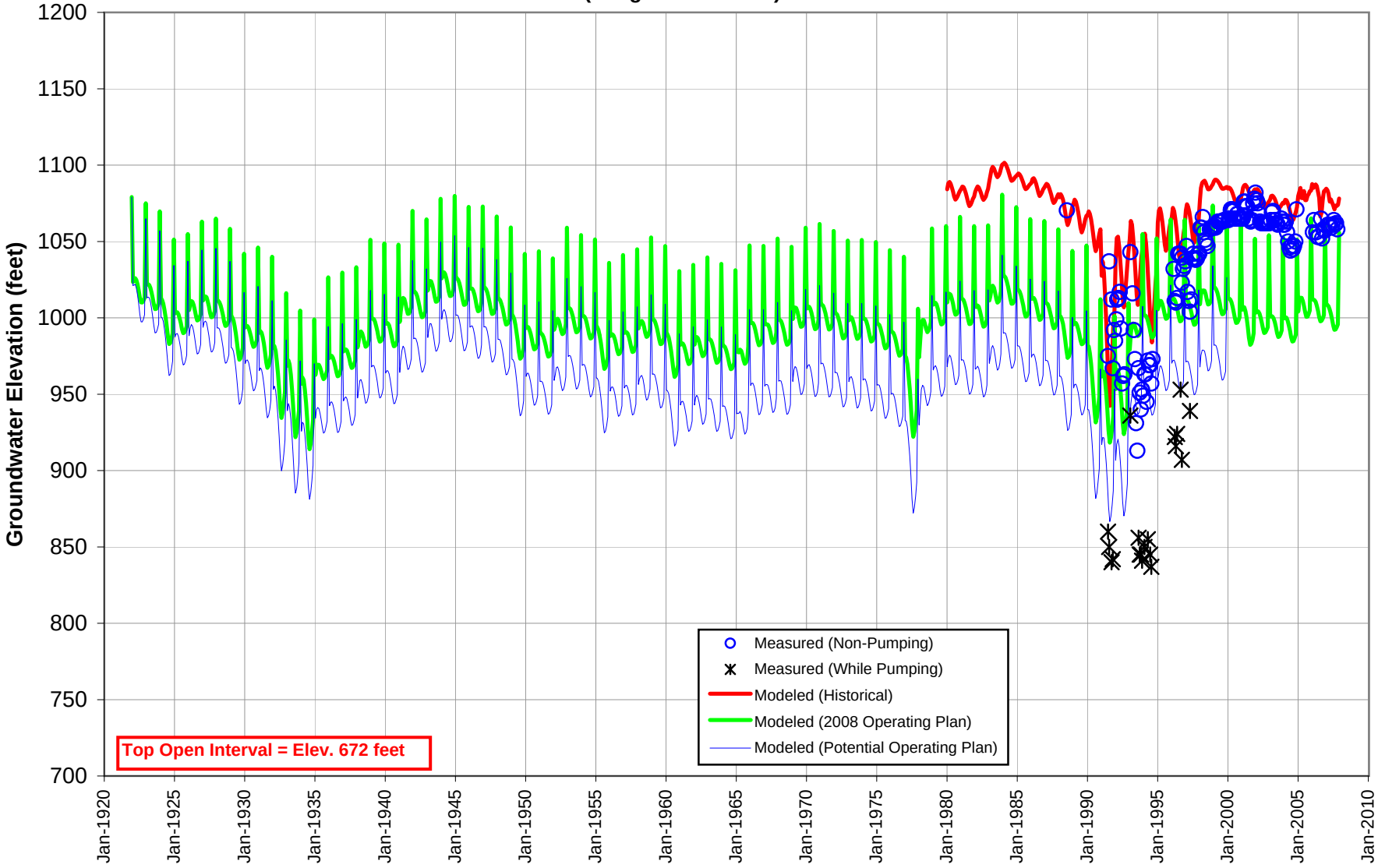


Figure 4-10: VWC-206 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Saugus Formation)

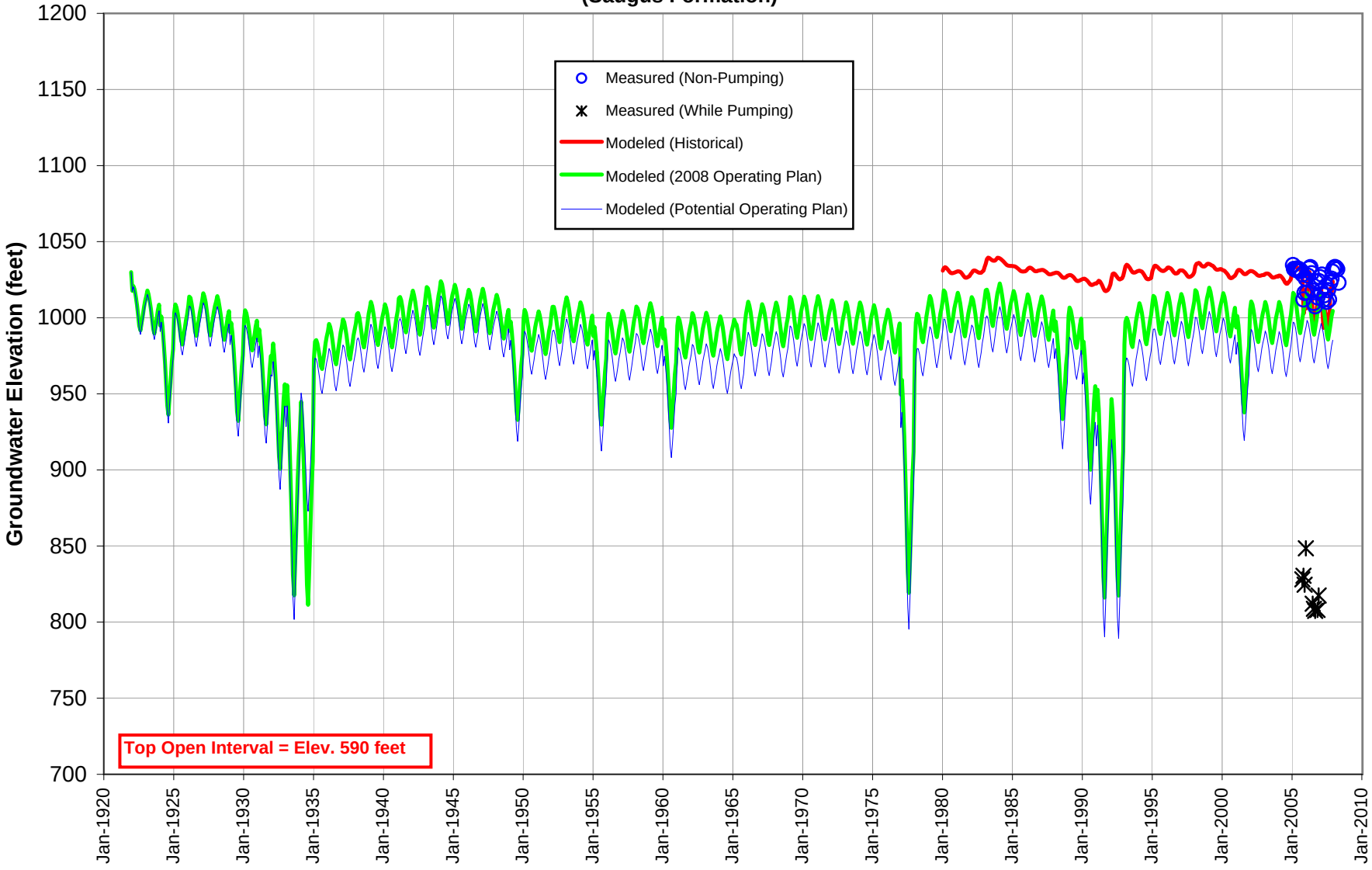


Figure 4-11: NCWD-13 Modeled Groundwater Elevations for 2008 and Potential Operating Plans (Saugus Formation)

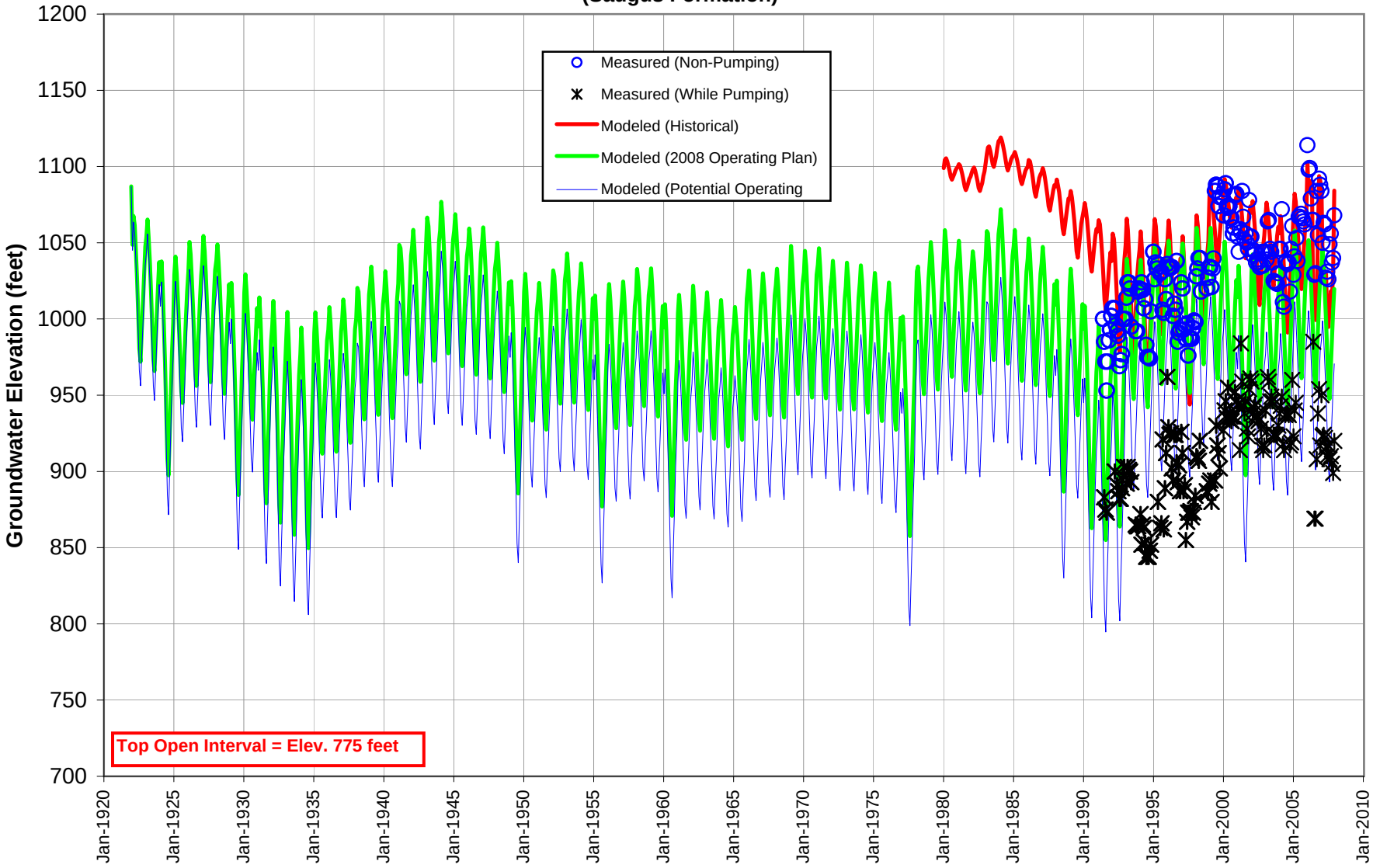


Figure 4-12: VWC-T7 Modeled Groundwater Elevations for Initial and Modified 2008 Operating Plans (Alluvial Aquifer Above Saugus WRP)

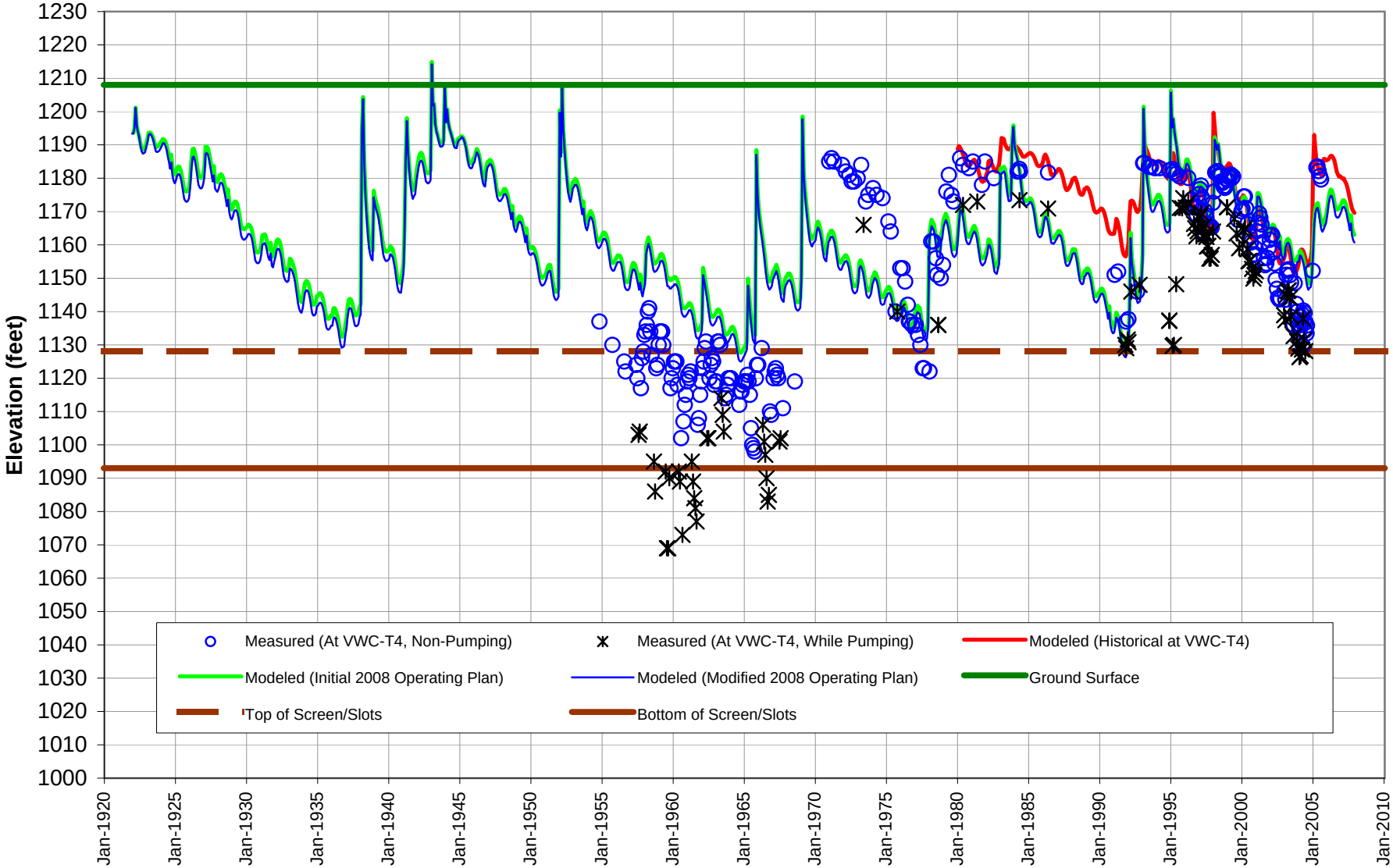


Figure 4-13: SCWD-Clark Modeled Groundwater Elevations for Initial and Modified 2008 Operating Plans (Alluvial Aquifer in Bouquet Canyon)

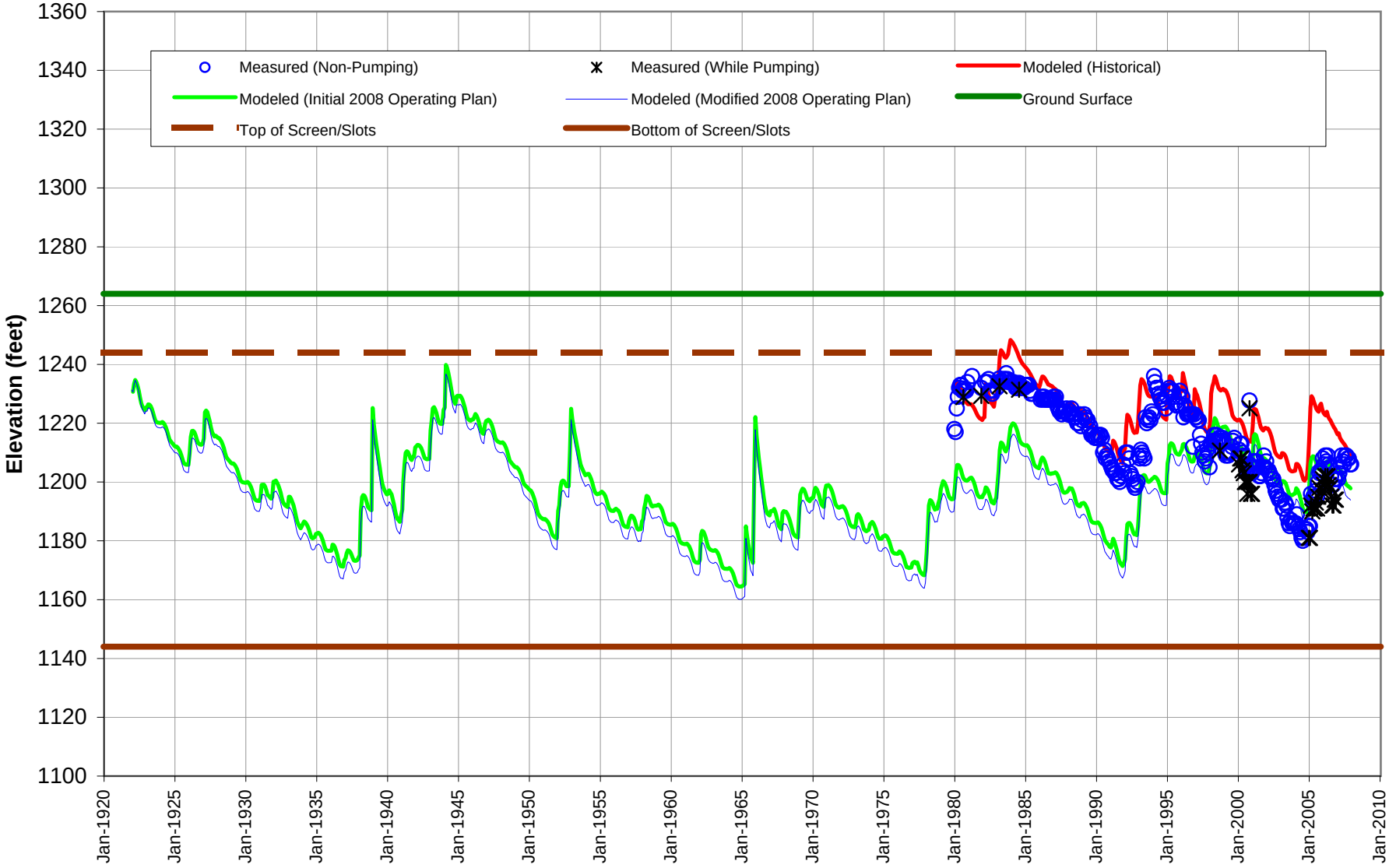


Figure 4-14: SCWD-Sierra Modeled Groundwater Elevations for Initial and Modified 2008 Operating Plans (Alluvial Aquifer Along Santa Clara River, At and Above Mint Canyon)

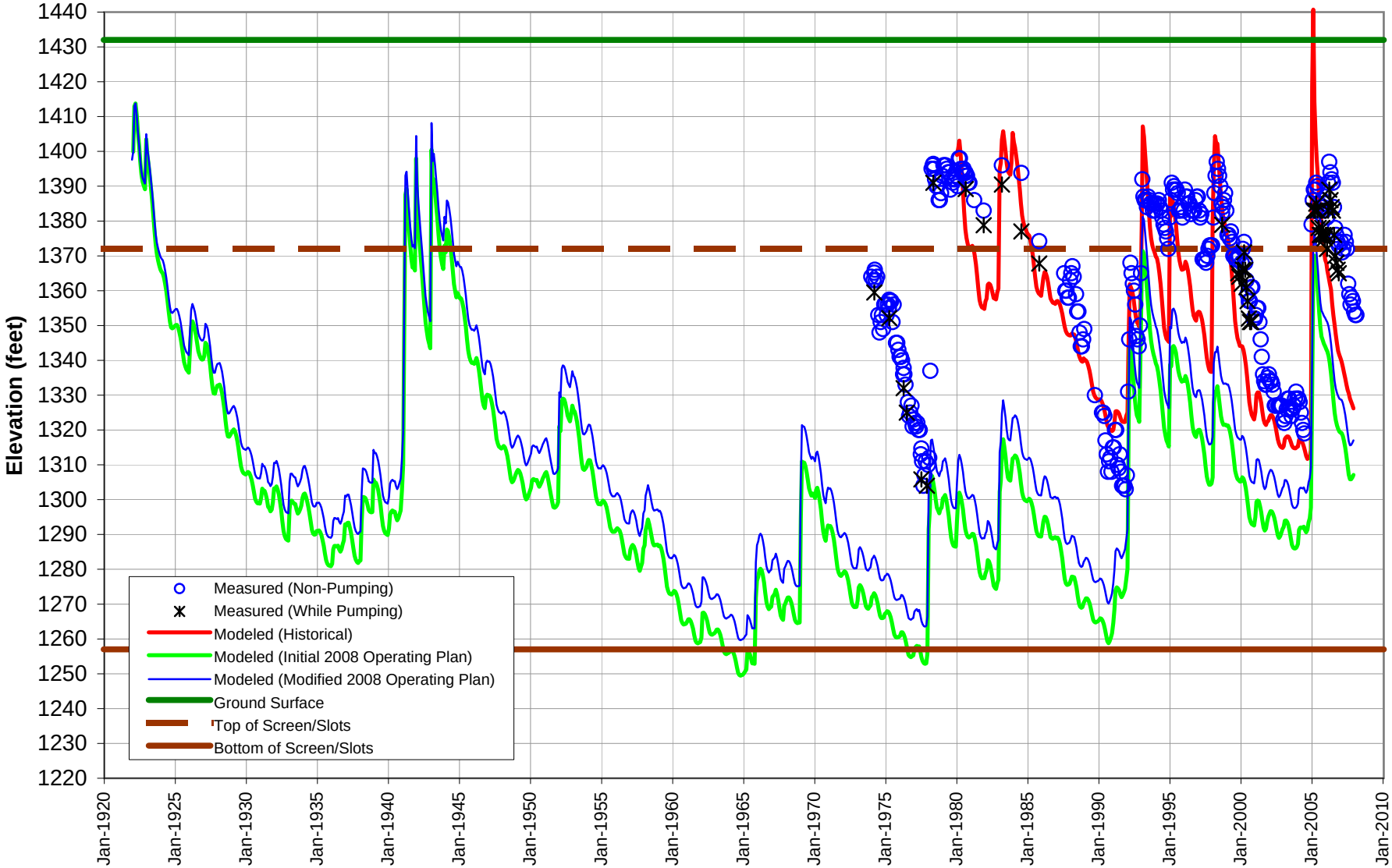


Figure 4-15: NCWD-Pinetree3 Modeled Groundwater Elevations for Initial and Modified 2008 Operating Plans (Alluvial Aquifer Along Santa Clara River, At and Above Mint Canyon)

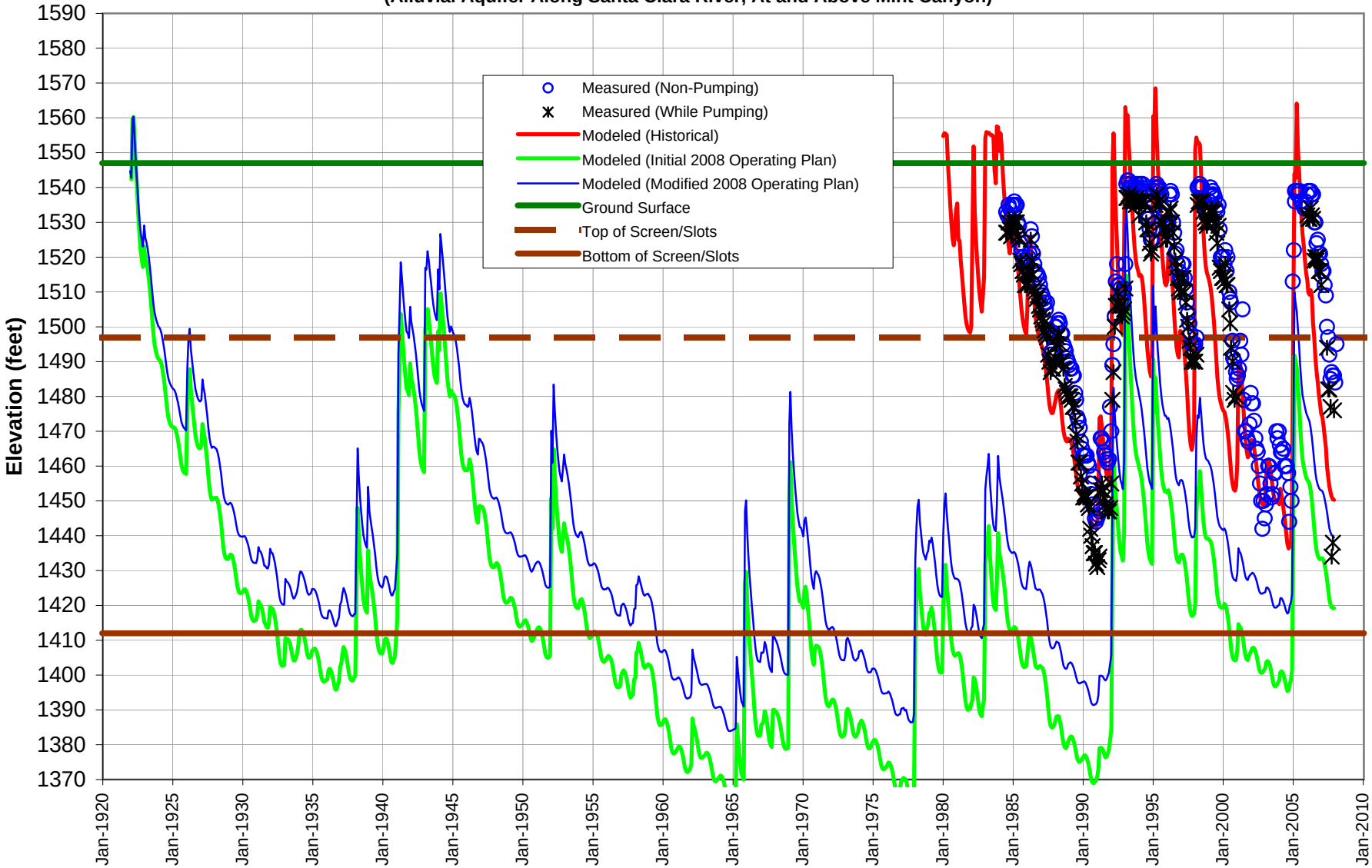
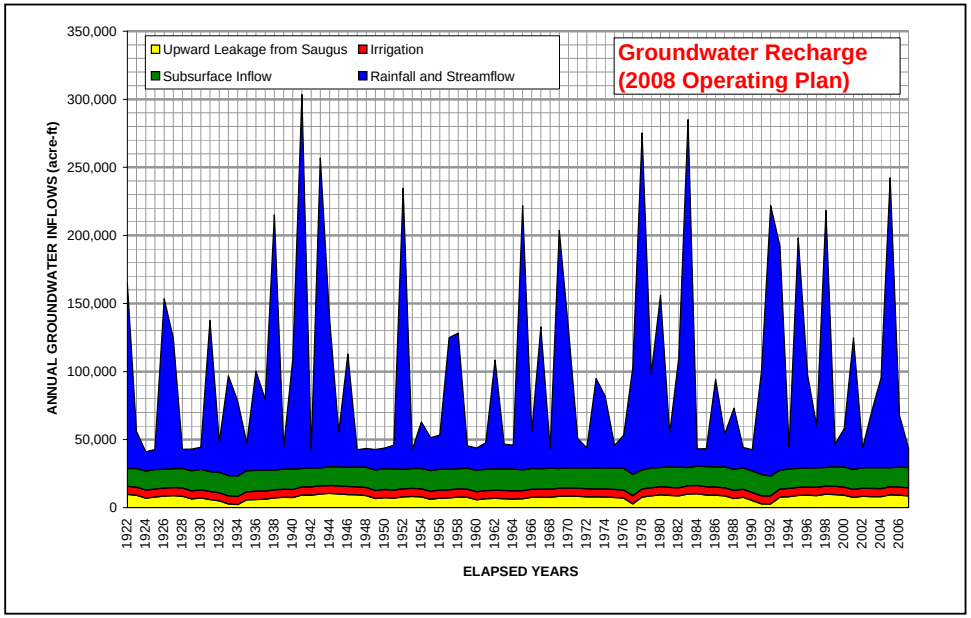
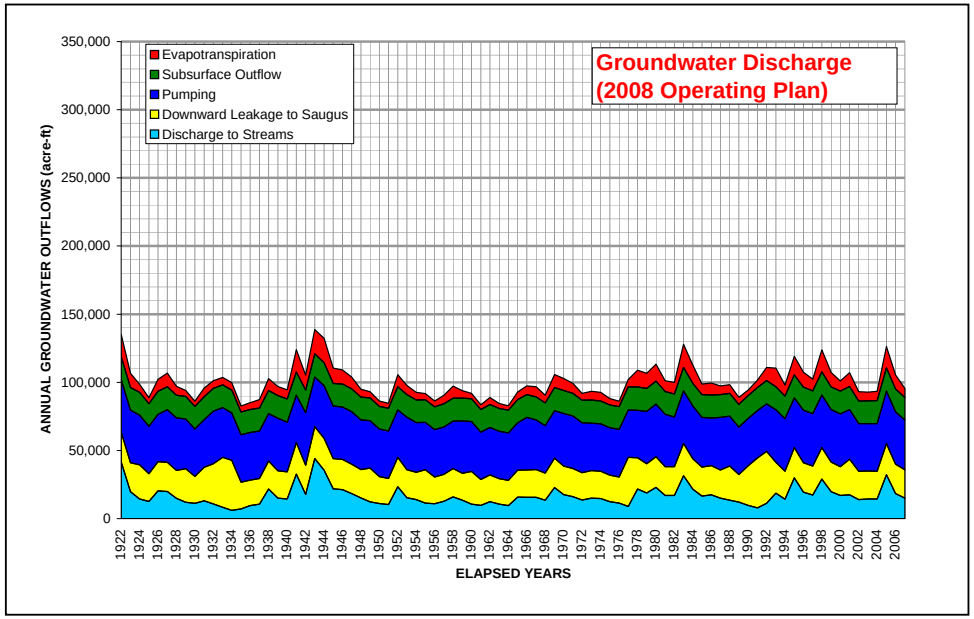


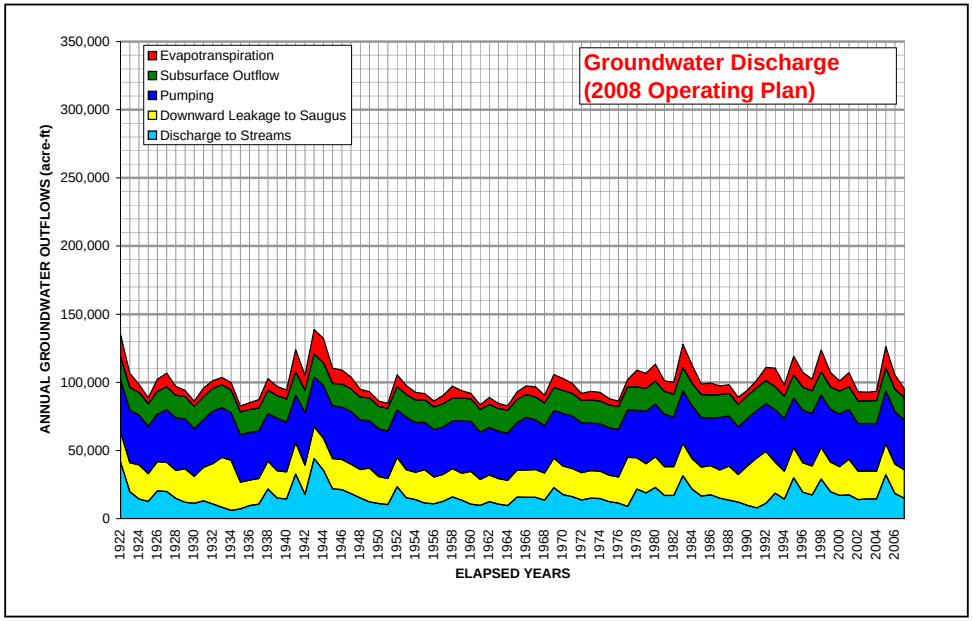
Figure 4-16: Comparison of Simulated Trends in Groundwater Recharge and Discharge Terms for the 2008 Operating Plan Under Historical Hydrology

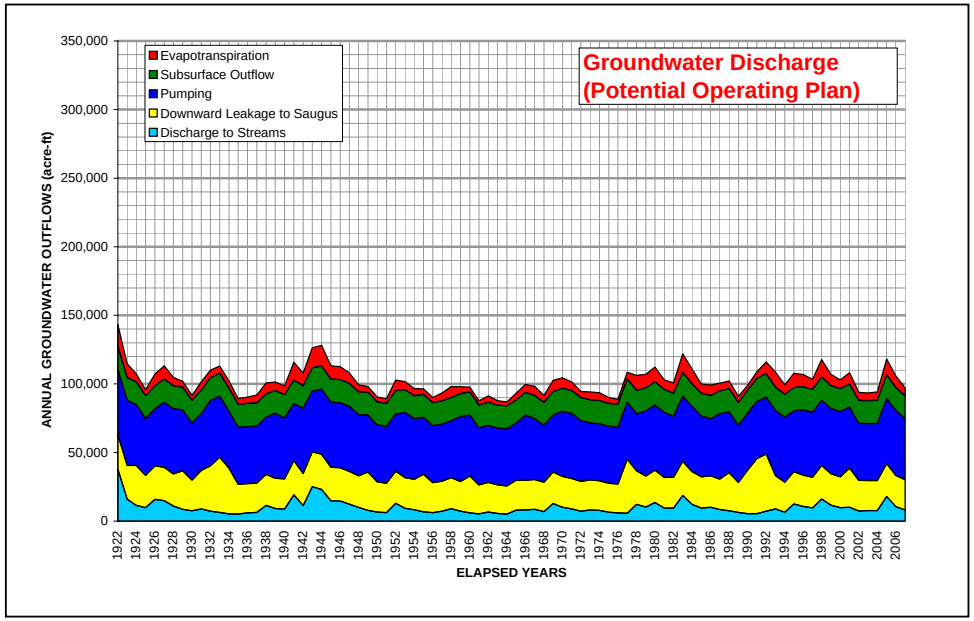




Figures_Section4_Part3_WaterBudget.xls/Figure4-16

Figure 4-17: Comparison of Simulated Trends in Groundwater Discharge Terms for the 2008 and Potential Operating Plans Under Historical Hydrology





Figures_Section4_Part3_WaterBudget.xls/Figure4-17

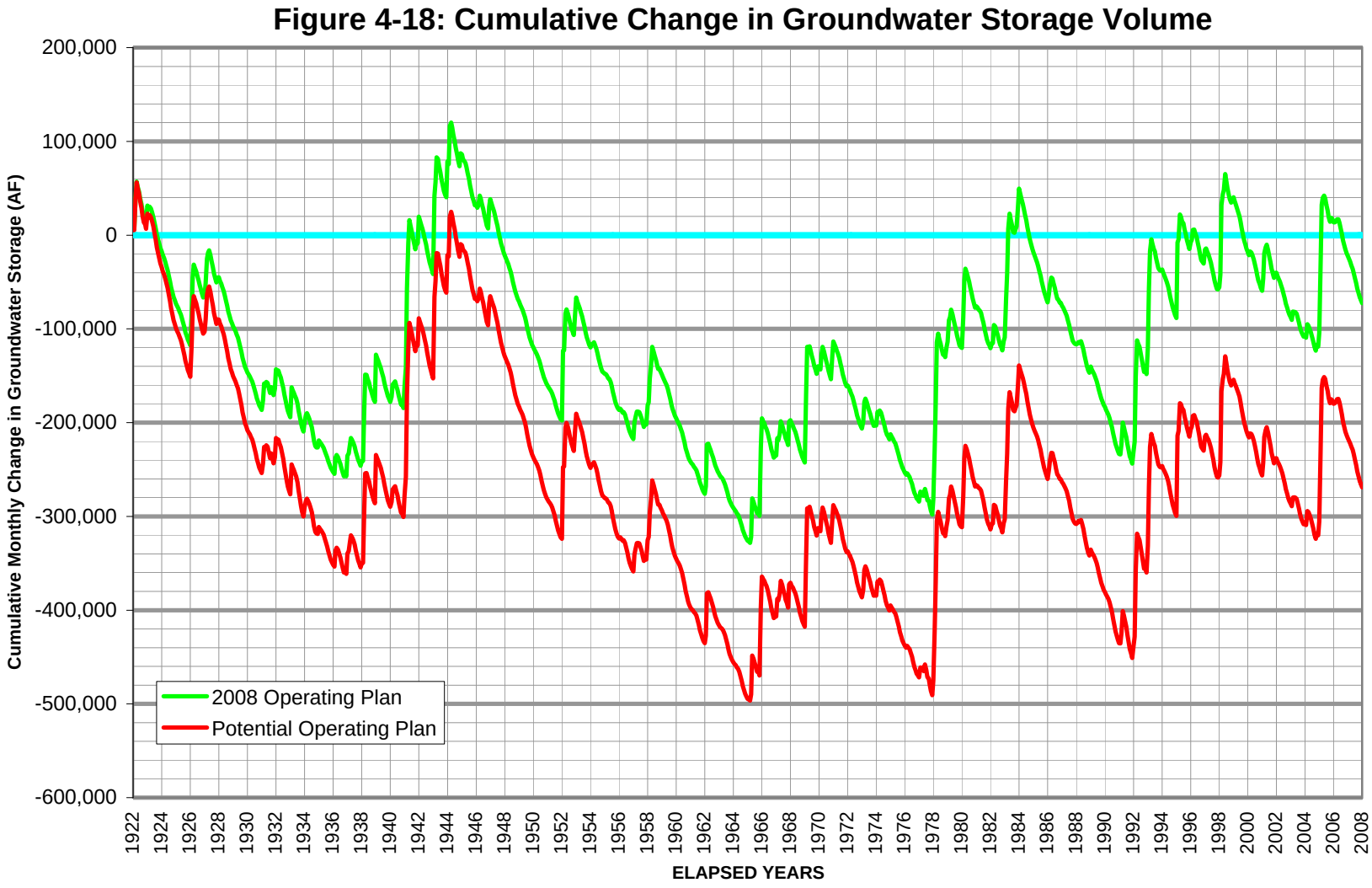
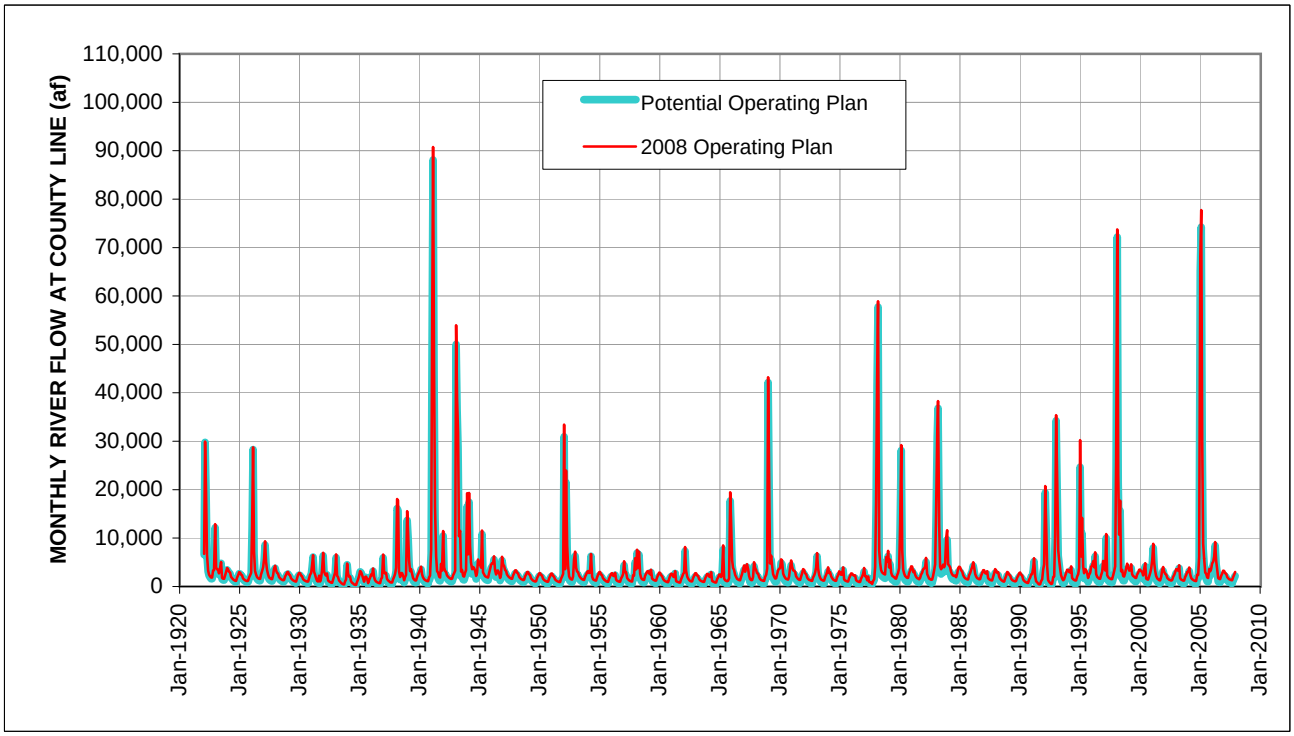


Figure 4-18: Cumulative Change in Groundwater Storage Volume
Cumulative Monthly Change in Groundwater Storage (AF)
200,000
100,000
0
-100,000
-200,000
-300,000
-400,000
-500,000
-600,000
1922
1924
1926
1928
1930
1932
1934
1936
1938
1940
1942
1944
1946
1948
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
ELAPSED YEARS
2008 Operating Plan
Potential Operating Plan

Figure 4-19
Simulated Monthly Flow in the Santa Clara River at the County Line
For the 2008 and Potential Operating Plans Under Historical Hydrology



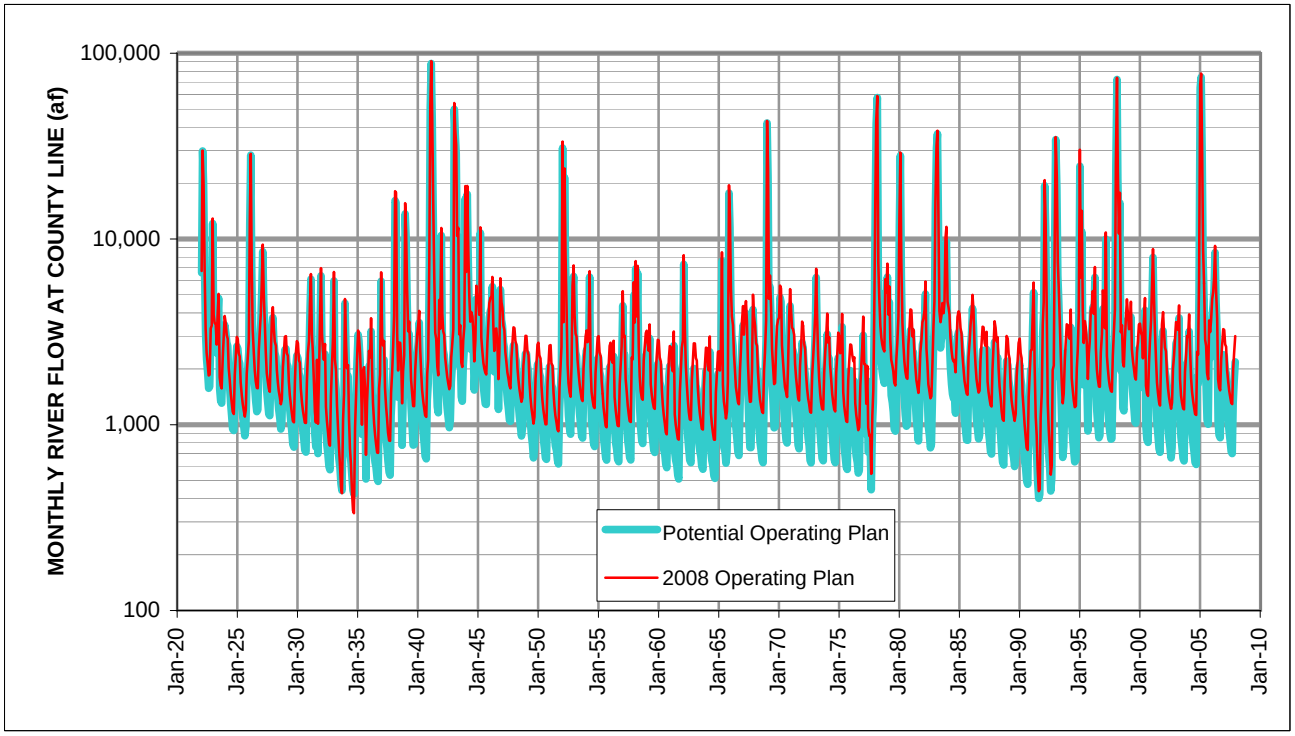


Figure 4-20
Modeled and Estimated Monthly Groundwater Discharges to the Perennial Reach of the Santa Clara River (from Round Mountain to Blue Cut)

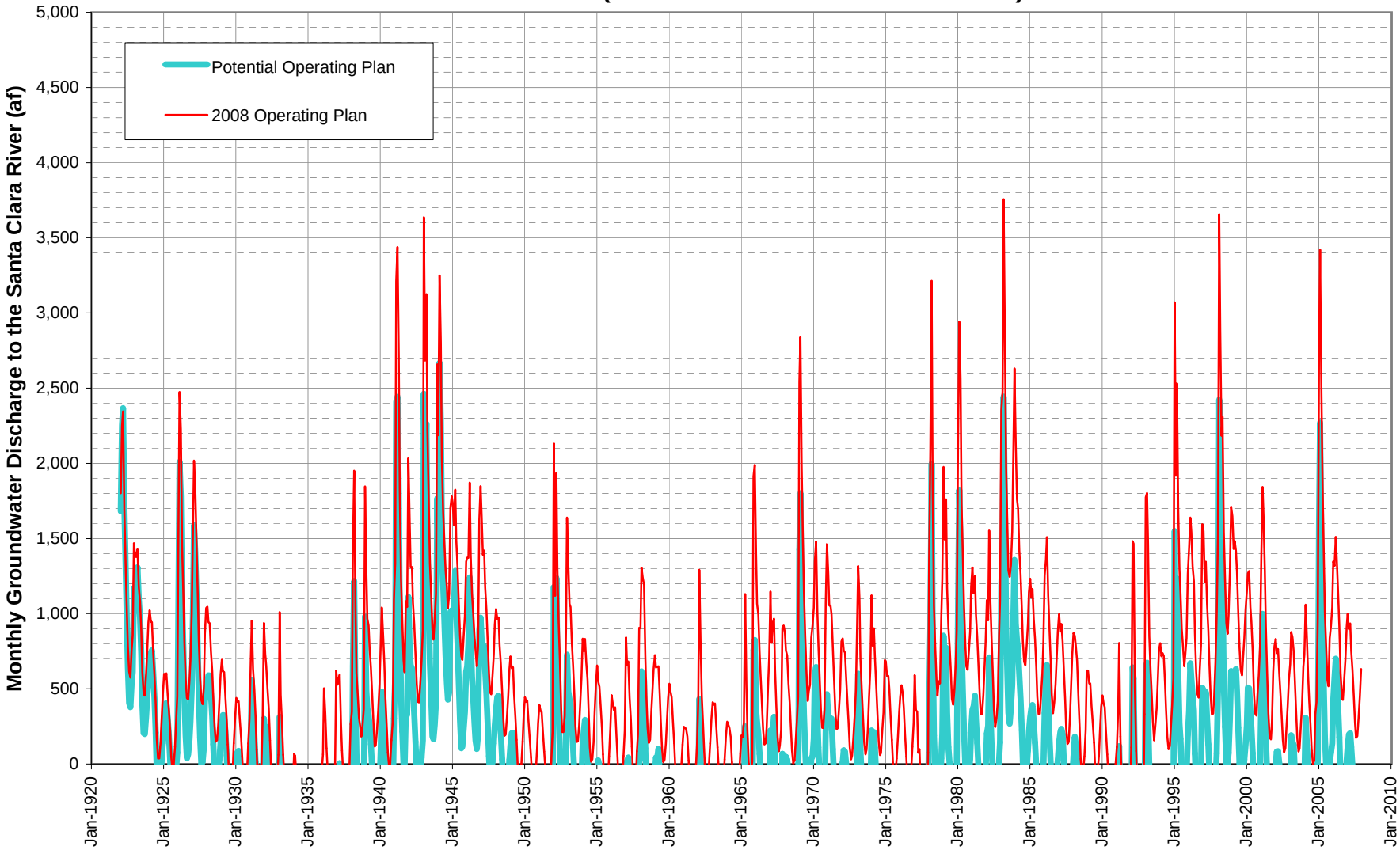
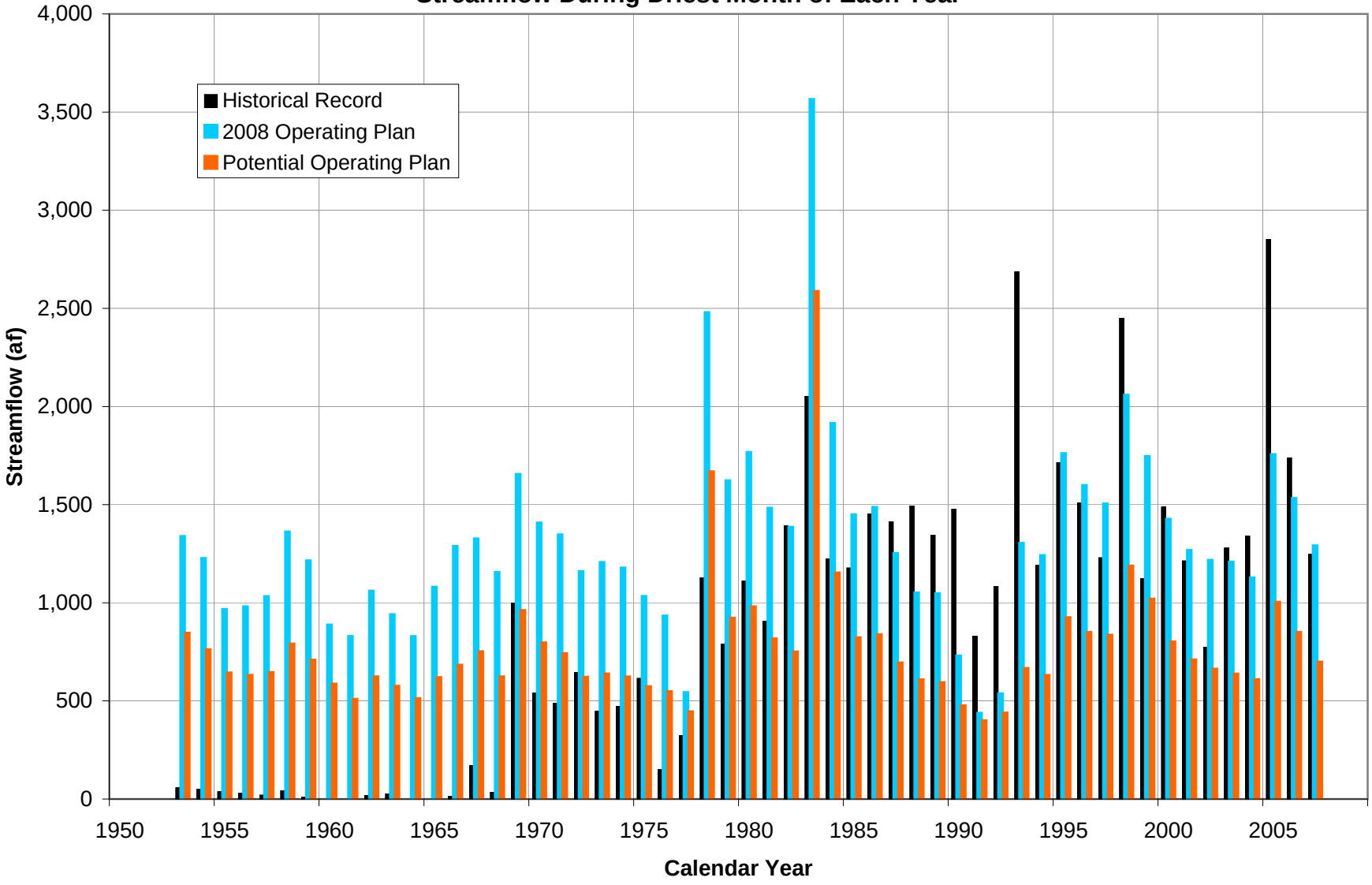


Figure 4-21
Streamflow During Driest Month of Each Year



V. Climate Change Considerations

This section of the report describes an analysis of the potential impacts of climate change on the 2008 Operating Plan for the Santa Clarita Valley. The analysis simulates a group of different potential future groundwater recharge events arising from a suite of published spatial-temporal distributions of future rainfall, as derived from global climate models that in turn have been scaled to watershed scales throughout California, including at the scale of the Santa Clarita Valley. The rainfall distributions, which are also known as rainfall projections, account for a variety of possible changes in global climate and have been published by climatologists conducting research and modeling of possible changes in climate arising from historic and potential future greenhouse gas emissions.

Following are discussions of the objectives of the analysis, a description of the technical approach that was used to simulate potential climate change effects on the local groundwater system in the Santa Clarita Valley, and the results of the modeling evaluation as they pertain to the 2008 Operating Plan. An overview of the current understanding regarding potential climate change in southern California is contained in Appendix D, along with details regarding the projections of future rainfall that were used in the groundwater model to evaluate potential climate change effects on local groundwater.

5.1 Objectives

As recently noted by California's state climatologist (Anderson, 2009), the scientific community's research on global climate processes "includes the expectation that climate will be changing over the course of the next century to an extent that these changes must be accounted for in the water resources planning process". The need to understand and plan for climate change was recognized in 2007 by the Purveyors who, in commissioning the updated basin yield analysis specified that this study should include an evaluation of the potential significance of climate change on local groundwater supplies.

As discussed below in Section 5.2, there are many different climate models, each with its own strengths and limitations. Additionally, the international scientific community has formally identified multiple scenarios for future greenhouse gas emissions. Each scenario has different assumptions about the magnitude and timing of these emissions. Consequently, absolute predictions regarding future climatic conditions and subsequent effect on local groundwater are not possible. Instead, the primary objective of the analysis reported herein is to quantitatively, or qualitatively, describe general impacts of climate change on the groundwater basin and its yield. As the work has progressed, this general objective has focused on understanding whether the yield of the basin, operated in accordance with the 2008 Operating Plan, might be different for future climate change scenarios than for the historical rainfall patterns under which the 2008 Operating Plan was evaluated in Chapter 4. The general objective and the more specific objective together seek to understand the sensitivity of the aquifer and the 2008 Operating Plan to climate change, rather than to make predictions about future climate and groundwater conditions.

5.2 Approach

The analysis was conducted by selecting a small number of published projections regarding possible future patterns of monthly rainfall over time between now and the year 2099. An 86-year time period from 2010 through 2095 was then simulated with the groundwater model, using monthly variations in groundwater recharge that were derived from the monthly projections of future rainfall patterns under a given climate change scenario. Details regarding this process are summarized below and described in greater detail in Appendix D.

5.2.1 Evaluation and Selection of Climate Change Scenarios

Nine of 112 published climate projections were studied for potential use in the Santa Clarita groundwater model. The nine projections that were studied are the same group of projections (models) that were evaluated by DWR in its most recent report on the reliability of State Water Project water deliveries (DWR, 2008).

The nine rainfall projections were studied for their ability to reasonably replicate recent historical rainfall at the Newhall-Soledad rain gage. More importantly, the projections were studied to ascertain the degree to which they show different or similar trends and magnitudes of rainfall at various times (during the Purveyor's UWMP planning time frame [20 to 25 years], and beyond that time frame); and the degree to which they project generally dry, wet, or average conditions over the long-term (through the next 86-year period). This trend evaluation was conducted by examining the cumulative departure of rainfall on a monthly basis for each projection, compared with the 1931-2007 long-term average rainfall. Figure 5-1 displays the cumulative departure from mean precipitation, beginning in 2010, for the nine projections that were studied and for the three projections that were selected for evaluating potential climate-change impacts on groundwater in the Santa Clarita Valley. The figure shows that the nine projections exhibit a broad range in the cumulative departure over time, with an increase in the range of predicted values as time goes on. This increase with time arises in part from differences between the emissions scenarios beginning in about the year 2030, as well as from the general increase in predictive uncertainty that exists in each climate model as it projects into the future the many physical processes that affect climate.

The three projections that were evaluated using the groundwater model were selected because they display a variety of rainfall cycles during the UWMP planning horizon and beyond. In particular:

- Over the course of the UWMP planning horizon, projection #1 shows considerable fluctuation and is generally wetter than normal, while projections #6 and #9 show less fluctuation and are generally drier than normal.

- Afterwards, the three projections show a variety of trends. Projection #1 shows a sustained long-term progressive drying of the climate, with rainfall generally below the historical average. Projection #9 shows the opposite trend: sustained long-term progressive wetting of the climate with more rainfall than the historical average.

Projection #6 shows wet conditions immediately after the UWMP planning horizon, then fluctuating cycles of below-normal and above-normal rainfall, with no net departure from historical average rainfall by the end of the projection time frame.

5.2.2 Simulation Period

An 86-year period beginning in 2010 and continuing through the year 2095 was evaluated with the model, using the local monthly rainfall projections specific to each of these years to define groundwater recharge terms and Alluvial Aquifer pumping patterns. The same pattern of Saugus Formation pumping that was used for the 2008 Operating Plan (representing SWP water availability from 1922 through 2007) was utilized in conjunction with the 2010-2095 simulation of conditions in the Alluvial Aquifer to assess the basin's response to a combination of pumping dictated by local and SWP hydrologic conditions plus runoff/recharge in the Valley resulting from local rainfall conditions.

5.2.3 Hydrologic Processes for Climate Change Scenarios

Four separate hydrologic processes were varied in the groundwater flow model for each climate change scenario. The four processes and the methods by which they were varied were as follows.

- **Groundwater pumping pattern -** Different approaches were taken for the Alluvium versus the Saugus.

  The sequence of normal-year versus dry-year pumping from the alluvium was defined from the prior year's rainfall, as contained in the particular climate projection being evaluated. Tables 5-1 through 5-3 list the alluvial year types for each of the three climate runs that were evaluated.

  The Saugus pumping pattern and pumping rates were specified to be the same as for the 1922-2007 period that was evaluated for the 2008 Operating Plan. Tables 5-4 through 5-6 compare the Saugus pumping pattern with the pumping pattern for the Alluvial Aquifer.

- **Infiltration of direct precipitation -** The month-by-month rainfall from a given climate projection was used by the SWRM to calculate this term for the uppermost layer in the model grid. This is calculated at each node in the grid.

- **Infiltration from stormwater generated within the watershed and from Santa Clara River flows entering the eastern end of the Valley (at the Lang gage) -** For a given future year, these terms were estimated by first identifying one or more similar rainfall years in the historic record, which were treated as prototypical years for the purpose of defining annual and monthly streamflow at each stream node. If more than one year was identified as a possible prototype for a given future year, then the prototypical year was selected by further considering whether hydrologic conditions were generally dry or generally wet. Infiltration from streamflow during a given year was then calculated by the SWRM model from the prototypical year's monthly flow rates and monthly riverbed infiltration rates.

- **Infiltration from water released by DWR from Castaic Lagoon to Castaic Creek -** The prototype-year method was used to identify this term, using the same general procedure as described above for Santa Clara River flows at the Lang gage.

5.3 2008 Operating Plan under Climate Change Scenarios

Hydrographs of simulated groundwater levels, at the locations of each production well, are included in Appendix E to show the simulated response of the groundwater system to the three modeled rainfall projections. Extracted from the complete set in Appendix E, Figures 5-2 through 5-9 are illustrative groundwater elevation hydrographs for each Alluvial Aquifer subarea, using the same set of representative wells as shown for the sustainability discussions in Chapter 4. Figures 5-10 through 5-12 are groundwater elevation hydrographs for the three representative Saugus Formation production wells discussed in Chapter 4.

Based on simulated aquifer response to a combination of pumping in accordance with the 2008 Operating Plan and the range of climate change hydrology, the potential effects of climate change on the yield of the local groundwater basin and the associated availability of groundwater as part of the Valley's overall water supply can be summarized as follows. In all cases, it should be noted that specific short-term patterns of precipitation, as projected by the climate models, significantly influence the potential sustainability of overall groundwater yield and/or the achievability, i.e. the physical ability to extract groundwater at the operating plan rates, of the operating plan in certain subareas of the overall basin.

5.3.1 Drying Climate Trend (Climate Scenario 1)

In the short term, i.e. through the horizon of current UWMP planning, a long-term drying trend in the local climate would not be expected to result in unsustainable groundwater conditions, but could result in unachievable pumping in the "Above Mint Canyon" area at the rates specified in the 2008 Operating Plan. Beyond that planning horizon, the prevailing trend of drier climate would be expected to result in a general long-term lowering of groundwater levels in most of the basin, indicative that pumping in accordance with the 2008 Operating Plan would not be considered sustainable. Directly related to the latter long-term lowering of groundwater levels, the prevailing trend of drier climate would be expected to result in groundwater levels sufficiently lowered in several parts of the basin (e.g. at and above Mint Canyon, below the Saugus WRP, and in Bouquet and San Francisquito Canyon) that the wells in those areas would no longer support the pumping rates in the 2008 Operating Plan. On a long-term basis, then, the drying climate trend analyzed herein would be expected to result in a smaller local groundwater supply over time.

5.3.2 Wetter Climate Trend (Climate Scenario 9)

A tendency toward wetter local hydrologic conditions would logically suggest that the 2008 Operating Plan, considered sustainable through historical hydrologic conditions, would continue to be sustainable. Simulated basin response supports that expectation. Ironically, however, primarily as a result of the specific patterns of precipitation as projected by this climate model,

near-term conditions through the UWMP planning horizon, could appear to be unsustainable, i.e. general declining trend in groundwater levels. Subsequent wetter conditions ultimately lead to the long-term appearance of groundwater sustainability at the pumping rates in the 2008 Operating Plan.

Over both the short term (UWMP planning horizon) and the long term simulated herein, the wetter climate trend appears to result in local issues with regard to achievability of 2008 Operating Plan pumping, commonly in the eastern part of the basin at and above Mint Canyon, and also in San Francisquito Canyon in the near term.

For the most part, the wetter climate trend analyzed herein would be expected to result in a sustainable local groundwater supply at the rates in the 2008 Operating Plan, albeit with some short-term challenges to physically extracting full pumping rates in the eastern part of the basin.

5.3.3 Average Climate Trend (Climate Scenario 6)

A climate tendency toward general continuation of a climate similar, on average, to historically experienced conditions would logically suggest that the 2008 Operating Plan, considered sustainable through historical hydrologic conditions, would continue to be sustainable. Simulated basin response supports that expectation. Similar also to expected response under historical hydrologic conditions, there would be expected challenges to the achievability of the 2008 Operating Plan, notably in the near-term UWMP planning horizon, under a climate "change" that continues long-term average historical precipitation. In summary, a "climate change" that results in essential continuation of long-term average precipitation would be expected to result in a sustainable local groundwater supply at the rates in the 2008 Operating Plan, with basically the same local issues relative to actual pumping capability as derived from the analysis of that operating plan through historical hydrologic conditions.

5.4 Climate Change Summary

Examination of the three simulated climate change scenarios was undertaken to provide a level of quantification to the possible impact of climate change on local groundwater basin yield and availability of groundwater as part of overall water supply to the Valley. In light of the range of global climate model output that was considered for development of the local scenarios analyzed herein, it is obvious that there is neither a unique result that can be expected to become a representative hydrologic condition in the Valley, nor is there a unique result that can be expected in terms of basin yield and associated sustainable groundwater supply as an outcome of climate change. Obviously, the Valley does not get to "choose" a future climate scenario, but rather will have to manage within whatever future patterns of rainfall actually occur over time, whether the future rainfall exhibit wet-dry cycles that are similar to or different from historically recorded conditions. Perhaps most useful in the consideration of climate change effects analyzed herein is with respect to results over the UWMP planning horizon of 20 to 25 years. For the range of relatively wet to relatively dry conditions analyzed herein, all three scenarios suggest that the 2008 Operating Plan can be considered sustainable and, with the same local exceptions as simulated through a repetition of historical hydrology (e.g. mainly at and above Mint Canyon), achievable over the UWMP planning horizon. Beyond that horizon, greater uncertainty

exists because the global climate models use different emissions scenarios and also become increasingly uncertain over time because of predictive uncertainty pertaining to the forward-looking representation of the many physical processes that affect climate into the future. As a result, for time periods beyond the UWMP planning horizon, some models predict long-term drying and subsequent sustained declines in groundwater levels, which would result in a smaller local groundwater supply over time, while other models predict hydrologic conditions similar to or wetter than those that have been historically observed, in which case the 2008 Operating Plan can be considered sustainable, albeit with some local issues relative to actual pumping capability at certain times (mainly in the Alluvium at the eastern end of the Valley).

Table 5-1

Climate Projection #1 (Global Climate Model GFDL_cm2_0.1_sresB1)

Local Hydrology and Corresponding Pumping from the Alluvial Aquifer for the 86-year Simulation

Model Year	Calendar Year	Local Rainfall (inches)[a]	Year Type	Alluvial Aquifer Pumping under the Groundwater Operating Plan (AF/yr)
1	2010	18.27	Normal	35,000-40,000
2	2011	19.17	Normal	35,000-40,000
3	2012	43.26	Normal	35,000-40,000
4	2013	20.63	Normal	35,000-40,000
5	2014	13.96	Normal	35,000-40,000
6	2015	11.24	Normal	35,000-40,000
7	2016	13.80	Dry Year 1	30,000-35,000
8	2017	22.80	Dry Year 2	30,000-35,000
9	2018	15.37	Normal	35,000-40,000
10	2019	23.75	Normal	35,000-40,000
11	2020	45.78	Normal	35,000-40,000
12	2021	38.53	Normal	35,000-40,000
13	2022	43.23	Normal	35,000-40,000
14	2023	25.37	Normal	35,000-40,000
15	2024	24.15	Normal	35,000-40,000
16	2025	9.65	Normal	35,000-40,000
17	2026	20.35	Dry Year 1	30,000-35,000
18	2027	15.10	Normal	35,000-40,000
19	2028	17.37	Normal	35,000-40,000
20	2029	22.37	Normal	35,000-40,000
21	2030	14.77	Normal	35,000-40,000
22	2031	14.56	Normal	35,000-40,000
23	2032	9.17	Dry Year 1	30,000-35,000
24	2033	31.25	Dry Year 2	30,000-35,000
25	2034	31.80	Normal	35,000-40,000
26	2035	10.36	Normal	35,000-40,000
27	2036	12.98	Dry Year 1	30,000-35,000
28	2037	13.51	Dry Year 2	30,000-35,000
29	2038	28.59	Dry Year 3	30,000-35,000
30	2039	16.63	Normal	35,000-40,000
31	2040	12.83	Normal	35,000-40,000
32	2041	20.67	Dry Year 1	30,000-35,000
33	2042	16.41	Normal	35,000-40,000
34	2043	9.38	Normal	35,000-40,000
35	2044	24.67	Dry Year 1	30,000-35,000
36	2045	29.24	Normal	35,000-40,000
37	2046	17.91	Normal	35,000-40,000
38	2047	10.47	Normal	35,000-40,000
39	2048	15.97	Dry Year 1	30,000-35,000
40	2049	19.69	Dry Year 2	30,000-35,000
41	2050	27.84	Dry Year 3	30,000-35,000
42	2051	12.19	Normal	35,000-40,000
43	2052	20.08	Dry Year 1	30,000-35,000
44	2053	14.02	Normal	35,000-40,000
45	2054	33.91	Dry Year 1	30,000-35,000
46	2055	19.94	Normal	35,000-40,000
47	2056	14.32	Normal	35,000-40,000
48	2057	14.01	Normal	35,000-40,000
49	2058	28.83	Dry Year 1	30,000-35,000
50	2059	35.10	Normal	35,000-40,000
51	2060	11.01	Normal	35,000-40,000
52	2061	9.40	Dry Year 1	30,000-35,000
53	2062	20.34	Dry Year 2	30,000-35,000
54	2063	10.66	Dry Year 3	30,000-35,000
55	2064	9.63	Dry Year 4	30,000-35,000
56	2065	17.94	Dry Year 5	30,000-35,000
57	2066	18.07	Dry Year 6	30,000-35,000
58	2067	13.68	Dry Year 7	30,000-35,000
59	2068	7.10	Dry Year 8	30,000-35,000
60	2069	20.97	Dry Year 9	30,000-35,000
61	2070	14.49	Dry Year 10	30,000-35,000
62	2071	17.87	Dry Year 11	30,000-35,000
63	2072	20.27	Dry Year 12	30,000-35,000
64	2073	11.02	Dry Year 13	30,000-35,000
65	2074	23.74	Dry Year 14	30,000-35,000
66	2075	20.98	Normal	35,000-40,000
67	2076	8.79	Normal	35,000-40,000
68	2077	12.56	Dry Year 1	30,000-35,000
69	2078	21.59	Dry Year 2	30,000-35,000
70	2079	30.22	Dry Year 3	30,000-35,000
71	2080	12.53	Normal	35,000-40,000
72	2081	21.67	Dry Year 1	30,000-35,000
73	2082	17.97	Normal	35,000-40,000
74	2083	36.13	Normal	35,000-40,000
75	2084	32.25	Normal	35,000-40,000
76	2085	18.51	Normal	35,000-40,000
77	2086	20.78	Normal	35,000-40,000
78	2087	30.97	Normal	35,000-40,000
79	2088	8.45	Normal	35,000-40,000
80	2089	32.79	Dry Year 1	30,000-35,000
81	2090	34.48	Normal	35,000-40,000
82	2091	18.49	Normal	35,000-40,000
83	2092	7.60	Normal	35,000-40,000
84	2093	21.56	Dry Year 1	30,000-35,000
85	2094	16.99	Normal	35,000-40,000
86	2095	21.56	Normal	35,000-40,000

aThe values from the global climate model were extrapolated to the location of the Newhall County Water District Rain Gage.

Table 5-2

Climate Projection #6 (Global Climate Model NCAR_PCM1.3_sresA2)

Local Hydrology and Corresponding Pumping from the Alluvial Aquifer for the 86-year Simulation

Model Year	Calendar Year	Local Rainfall (inches)[a]	Year Type	Alluvial Aquifer Pumping under the Groundwater Operating Plan (AF/yr)
1	2010	17.22	Normal	35,000-40,000
2	2011	13.37	Normal	35,000-40,000
3	2012	16.14	Dry Year 1	30,000-35,000
4	2013	16.53	Dry Year 2	30,000-35,000
5	2014	15.33	Dry Year 3	30,000-35,000
6	2015	40.92	Dry Year 4	30,000-35,000
7	2016	20.24	Normal	35,000-40,000
8	2017	19.50	Normal	35,000-40,000
9	2018	10.68	Normal	35,000-40,000
10	2019	15.15	Dry Year 1	30,000-35,000
11	2020	24.58	Dry Year 2	30,000-35,000
12	2021	16.38	Normal	35,000-40,000
13	2022	22.64	Normal	35,000-40,000
14	2023	21.29	Normal	35,000-40,000
15	2024	13.37	Normal	35,000-40,000
16	2025	19.50	Dry Year 1	30,000-35,000
17	2026	12.05	Dry Year 2	30,000-35,000
18	2027	18.89	Dry Year 3	30,000-35,000
19	2028	11.56	Dry Year 4	30,000-35,000
20	2029	8.46	Dry Year 5	30,000-35,000
21	2030	16.41	Dry Year 6	30,000-35,000
22	2031	19.44	Dry Year 7	30,000-35,000
23	2032	18.66	Dry Year 8	30,000-35,000
24	2033	30.29	Dry Year 9	30,000-35,000
25	2034	42.86	Normal	35,000-40,000
26	2035	16.39	Normal	35,000-40,000
27	2036	17.74	Dry Year 1	30,000-35,000
28	2037	50.04	Dry Year 2	30,000-35,000
29	2038	35.50	Normal	35,000-40,000
30	2039	39.98	Normal	35,000-40,000
31	2040	28.83	Normal	35,000-40,000
32	2041	23.15	Normal	35,000-40,000
33	2042	22.57	Normal	35,000-40,000
34	2043	22.20	Normal	35,000-40,000
35	2044	16.25	Normal	35,000-40,000
36	2045	34.88	Normal	35,000-40,000
37	2046	20.82	Normal	35,000-40,000
38	2047	14.35	Normal	35,000-40,000
39	2048	12.06	Dry Year 1	30,000-35,000
40	2049	12.16	Dry Year 2	30,000-35,000
41	2050	11.37	Dry Year 3	30,000-35,000
42	2051	28.47	Dry Year 4	30,000-35,000
43	2052	26.84	Normal	35,000-40,000
44	2053	25.59	Normal	35,000-40,000
45	2054	15.97	Normal	35,000-40,000
46	2055	21.26	Normal	35,000-40,000
47	2056	23.32	Normal	35,000-40,000
48	2057	13.55	Normal	35,000-40,000
49	2058	23.32	Dry Year 1	30,000-35,000
50	2059	13.04	Normal	35,000-40,000
51	2060	22.71	Dry Year 1	30,000-35,000
52	2061	10.15	Normal	35,000-40,000
53	2062	20.52	Dry Year 1	30,000-35,000
54	2063	71.95	Dry Year 2	30,000-35,000
55	2064	33.61	Normal	35,000-40,000
56	2065	13.39	Normal	35,000-40,000
57	2066	25.96	Dry Year 1	30,000-35,000
58	2067	28.69	Normal	35,000-40,000
59	2068	18.22	Normal	35,000-40,000
60	2069	11.17	Normal	35,000-40,000
61	2070	18.25	Dry Year 1	30,000-35,000
62	2071	17.85	Dry Year 2	30,000-35,000
63	2072	19.30	Dry Year 3	30,000-35,000
64	2073	14.70	Normal	35,000-40,000
65	2074	9.82	Dry Year 1	30,000-35,000
66	2075	14.96	Dry Year 2	30,000-35,000
67	2076	29.84	Dry Year 3	30,000-35,000
68	2077	19.05	Normal	35,000-40,000
69	2078	45.70	Normal	35,000-40,000
70	2079	25.20	Normal	35,000-40,000
71	2080	31.12	Normal	35,000-40,000
72	2081	29.50	Normal	35,000-40,000
73	2082	27.59	Normal	35,000-40,000
74	2083	15.50	Normal	35,000-40,000
75	2084	8.74	Normal	35,000-40,000
76	2085	18.76	Dry Year 1	30,000-35,000
77	2086	13.07	Dry Year 2	30,000-35,000
78	2087	22.89	Dry Year 3	30,000-35,000
79	2088	50.06	Normal	35,000-40,000
80	2089	27.24	Normal	35,000-40,000
81	2090	12.53	Normal	35,000-40,000
82	2091	9.14	Dry Year 1	30,000-35,000
83	2092	10.81	Dry Year 2	30,000-35,000
84	2093	23.07	Dry Year 3	30,000-35,000
85	2094	12.91	Dry Year 4	30,000-35,000
86	2095	26.47	Dry Year 5	30,000-35,000

aThe values from the global climate model were extrapolated to the location of the Newhall County Water District Rain Gage.

Table 5-3

Climate Projection #9 (Global Climate Model NCAR_PCM1.3_sresB1)

Local Hydrology and Corresponding Pumping from the Alluvial Aquifer for the 86-year Simulation

Model Year	Calendar Year	Local Rainfall (inches)[a]	Year Type	Alluvial Aquifer Pumping under the Groundwater Operating Plan (AF/yr)
1	2010	22.14	Normal	35,000-40,000
2	2011	28.62	Normal	35,000-40,000
3	2012	18.21	Normal	35,000-40,000
4	2013	18.42	Normal	35,000-40,000
5	2014	17.85	Normal	35,000-40,000
6	2015	22.34	Normal	35,000-40,000
7	2016	17.51	Normal	35,000-40,000
8	2017	16.21	Normal	35,000-40,000
9	2018	11.56	Dry Year 1	30,000-35,000
10	2019	11.83	Dry Year 2	30,000-35,000
11	2020	37.62	Dry Year 3	30,000-35,000
12	2021	16.56	Normal	35,000-40,000
13	2022	15.17	Normal	35,000-40,000
14	2023	22.88	Normal	35,000-40,000
15	2024	13.18	Normal	35,000-40,000
16	2025	20.34	Dry Year 1	30,000-35,000
17	2026	26.96	Dry Year 2	30,000-35,000
18	2027	26.47	Normal	35,000-40,000
19	2028	18.04	Normal	35,000-40,000
20	2029	18.04	Normal	35,000-40,000
21	2030	16.49	Normal	35,000-40,000
22	2031	22.51	Dry Year 1	30,000-35,000
23	2032	22.84	Normal	35,000-40,000
24	2033	15.01	Normal	35,000-40,000
25	2034	13.40	Dry Year 1	30,000-35,000
26	2035	18.72	Dry Year 2	30,000-35,000
27	2036	26.43	Dry Year 3	30,000-35,000
28	2037	11.11	Normal	35,000-40,000
29	2038	12.97	Dry Year 1	30,000-35,000
30	2039	41.47	Dry Year 2	30,000-35,000
31	2040	18.62	Normal	35,000-40,000
32	2041	39.65	Normal	35,000-40,000
33	2042	33.75	Normal	35,000-40,000
34	2043	57.56	Normal	35,000-40,000
35	2044	14.63	Normal	35,000-40,000
36	2045	15.63	Dry Year 1	30,000-35,000
37	2046	15.41	Dry Year 2	30,000-35,000
38	2047	24.66	Dry Year 3	30,000-35,000
39	2048	53.80	Normal	35,000-40,000
40	2049	14.70	Normal	35,000-40,000
41	2050	9.79	Dry Year 1	30,000-35,000
42	2051	38.49	Dry Year 2	30,000-35,000
43	2052	19.57	Normal	35,000-40,000
44	2053	20.65	Normal	35,000-40,000
45	2054	10.40	Normal	35,000-40,000
46	2055	12.58	Dry Year 1	30,000-35,000
47	2056	17.80	Dry Year 2	30,000-35,000
48	2057	15.56	Dry Year 3	30,000-35,000
49	2058	45.18	Dry Year 4	30,000-35,000
50	2059	26.78	Normal	35,000-40,000
51	2060	23.78	Normal	35,000-40,000
52	2061	47.61	Normal	35,000-40,000
53	2062	28.90	Normal	35,000-40,000
54	2063	30.43	Normal	35,000-40,000
55	2064	18.15	Normal	35,000-40,000
56	2065	30.15	Normal	35,000-40,000
57	2066	13.65	Normal	35,000-40,000
58	2067	16.34	Dry Year 1	30,000-35,000
59	2068	10.60	Dry Year 2	30,000-35,000
60	2069	60.56	Dry Year 3	30,000-35,000
61	2070	20.56	Normal	35,000-40,000
62	2071	15.31	Normal	35,000-40,000
63	2072	33.67	Normal	35,000-40,000
64	2073	46.34	Normal	35,000-40,000
65	2074	33.69	Normal	35,000-40,000
66	2075	15.71	Normal	35,000-40,000
67	2076	14.36	Normal	35,000-40,000
68	2077	21.25	Dry Year 1	30,000-35,000
69	2078	37.14	Normal	35,000-40,000
70	2079	31.87	Normal	35,000-40,000
71	2080	8.14	Normal	35,000-40,000
72	2081	25.22	Dry Year 1	30,000-35,000
73	2082	32.82	Normal	35,000-40,000
74	2083	28.25	Normal	35,000-40,000
75	2084	7.23	Normal	35,000-40,000
76	2085	11.37	Dry Year 1	30,000-35,000
77	2086	27.47	Dry Year 2	30,000-35,000
78	2087	20.97	Normal	35,000-40,000
79	2088	16.12	Normal	35,000-40,000
80	2089	64.70	Normal	35,000-40,000
81	2090	21.30	Normal	35,000-40,000
82	2091	12.38	Normal	35,000-40,000
83	2092	22.06	Dry Year 1	30,000-35,000
84	2093	19.32	Normal	35,000-40,000
85	2094	20.91	Normal	35,000-40,000
86	2095	21.05	Normal	35,000-40,000

aThe values from the global climate model were extrapolated to the location of the Newhall County Water District Rain Gage.

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Climate Projection #1 (Global Climate Model GFDL_cm2_0.1_sresB1)

llu ial an Saugus For ation Pu ing for t e Si ulation of 1 22-2 istorical rolog

Model Year	Alluvium Year	Saugus Year	Year Name for Model Run	Simulated Pumping Conditions	
				Alluvium	Saugus
1	2010	1922	1922	Normal	Normal
2	2011	1923	1923	Normal	Normal
3	2012	1924	1924	Normal	Dry Year 1
4	2013	1925	1925	Normal	Normal
5	2014	1926	1926	Normal	Normal
6	2015	1927	1927	Normal	Normal
7	2016	1928	1928	Dry Year 1	Normal
8	2017	1929	1929	Dry Year 2	Dry Year 1
9	2018	1930	1930	Normal	Normal
10	2019	1931	1931	Normal	Dry Year 1
11	2020	1932	1932	Normal	Dry Year 2
12	2021	1933	1933	Normal	Dry Year 3
13	2022	1934	1934	Normal	Dry Year 4
14	2023	1935	1935	Normal	Normal
15	2024	1936	1936	Normal	Normal
16	2025	1937	1937	Normal	Normal
17	2026	1938	1938	Dry Year 1	Normal
18	2027	1939	1939	Normal	Normal
19	2028	1940	1940	Normal	Normal
20	2029	1941	1941	Normal	Normal
21	2030	1942	1942	Normal	Normal
22	2031	1943	1943	Normal	Normal
23	2032	1944	1944	Dry Year 1	Normal
24	2033	1945	1945	Dry Year 2	Normal
25	2034	1946	1946	Normal	Normal
26	2035	1947	1947	Normal	Normal
27	2036	1948	1948	Dry Year 1	Normal
28	2037	1949	1949	Dry Year 2	Dry Year 1
29	2038	1950	1950	Dry Year 3	Normal
30	2039	1951	1951	Normal	Normal
31	2040	1952	1952	Normal	Normal
32	2041	1953	1953	Dry Year 1	Normal
33	2042	1954	1954	Normal	Normal
34	2043	1955	1955	Normal	Dry Year 1
35	2044	1956	1956	Dry Year 1	Normal
36	2045	1957	1957	Normal	Normal
37	2046	1958	1958	Normal	Normal
38	2047	1959	1959	Normal	Normal
39	2048	1960	1960	Dry Year 1	Dry Year 1
40	2049	1961	1961	Dry Year 2	Normal
41	2050	1962	1962	Dry Year 3	Normal
42	2051	1963	1963	Normal	Normal
43	2052	1964	1964	Dry Year 1	Normal
44	2053	1965	1965	Normal	Normal
45	2054	1966	1966	Dry Year 1	Normal
46	2055	1967	1967	Normal	Normal
47	2056	1968	1968	Normal	Normal
48	2057	1969	1969	Normal	Normal
49	2058	1970	1970	Dry Year 1	Normal
50	2059	1971	1971	Normal	Normal
51	2060	1972	1972	Normal	Normal
52	2061	1973	1973	Dry Year 1	Normal
53	2062	1974	1974	Dry Year 2	Normal
54	2063	1975	1975	Dry Year 3	Normal
55	2064	1976	1976	Dry Year 4	Normal
56	2065	1977	1977	Dry Year 5	Dry Year 1
57	2066	1978	1978	Dry Year 6	Normal
58	2067	1979	1979	Dry Year 7	Normal
59	2068	1980	1980	Dry Year 8	Normal
60	2069	1981	1981	Dry Year 9	Normal
61	2070	1982	1982	Dry Year 10	Normal
62	2071	1983	1983	Dry Year 11	Normal
63	2072	1984	1984	Dry Year 12	Normal
64	2073	1985	1985	Dry Year 13	Normal
65	2074	1986	1986	Dry Year 14	Normal
66	2075	1987	1987	Normal	Normal
67	2076	1988	1988	Normal	Dry Year 1
68	2077	1989	1989	Dry Year 1	Normal
69	2078	1990	1990	Dry Year 2	Dry Year 2
70	2079	1991	1991	Dry Year 3	Dry Year 3
71	2080	1992	1992	Normal	Dry Year 4
72	2081	1993	1993	Dry Year 1	Normal
73	2082	1994	1994	Normal	Normal
74	2083	1995	1995	Normal	Normal
75	2084	1996	1996	Normal	Normal
76	2085	1997	1997	Normal	Normal
77	2086	1998	1998	Normal	Normal
78	2087	1999	1999	Normal	Normal
79	2088	2000	2000	Normal	Normal
80	2089	2001	2001	Dry Year 1	Dry Year 1
81	2090	2002	2002	Normal	Normal
82	2091	2003	2003	Normal	Normal
83	2092	2004	2004	Normal	Normal
84	2093	2005	2005	Dry Year 1	Normal
85	2094	2006	2006	Normal	Normal
86	2095	2007	2007	Normal	Normal

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Climate Projection #6 (Global Climate Model NCAR_PCM1.3_sresA2)

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Model Year	Alluvium Year	Saugus Year	Year Name for Model Run	Simulated Pumping Conditions	
				Alluvium	Saugus
1	2010	1922	1922	Normal	Normal
2	2011	1923	1923	Normal	Normal
3	2012	1924	1924	Dry Year 1	Dry Year 1
4	2013	1925	1925	Dry Year 2	Normal
5	2014	1926	1926	Dry Year 3	Normal
6	2015	1927	1927	Dry Year 4	Normal
7	2016	1928	1928	Normal	Normal
8	2017	1929	1929	Normal	Dry Year 1
9	2018	1930	1930	Normal	Normal
10	2019	1931	1931	Dry Year 1	Dry Year 1
11	2020	1932	1932	Dry Year 2	Dry Year 2
12	2021	1933	1933	Normal	Dry Year 3
13	2022	1934	1934	Normal	Dry Year 4
14	2023	1935	1935	Normal	Normal
15	2024	1936	1936	Normal	Normal
16	2025	1937	1937	Dry Year 1	Normal
17	2026	1938	1938	Dry Year 2	Normal
18	2027	1939	1939	Dry Year 3	Normal
19	2028	1940	1940	Dry Year 4	Normal
20	2029	1941	1941	Dry Year 5	Normal
21	2030	1942	1942	Dry Year 6	Normal
22	2031	1943	1943	Dry Year 7	Normal
23	2032	1944	1944	Dry Year 8	Normal
24	2033	1945	1945	Dry Year 9	Normal
25	2034	1946	1946	Normal	Normal
26	2035	1947	1947	Normal	Normal
27	2036	1948	1948	Dry Year 1	Normal
28	2037	1949	1949	Dry Year 2	Dry Year 1
29	2038	1950	1950	Normal	Normal
30	2039	1951	1951	Normal	Normal
31	2040	1952	1952	Normal	Normal
32	2041	1953	1953	Normal	Normal
33	2042	1954	1954	Normal	Normal
34	2043	1955	1955	Normal	Dry Year 1
35	2044	1956	1956	Normal	Normal
36	2045	1957	1957	Normal	Normal
37	2046	1958	1958	Normal	Normal
38	2047	1959	1959	Normal	Normal
39	2048	1960	1960	Dry Year 1	Dry Year 1
40	2049	1961	1961	Dry Year 2	Normal
41	2050	1962	1962	Dry Year 3	Normal
42	2051	1963	1963	Dry Year 4	Normal
43	2052	1964	1964	Normal	Normal
44	2053	1965	1965	Normal	Normal
45	2054	1966	1966	Normal	Normal
46	2055	1967	1967	Normal	Normal
47	2056	1968	1968	Normal	Normal
48	2057	1969	1969	Normal	Normal
49	2058	1970	1970	Dry Year 1	Normal
50	2059	1971	1971	Normal	Normal
51	2060	1972	1972	Dry Year 1	Normal
52	2061	1973	1973	Normal	Normal
53	2062	1974	1974	Dry Year 1	Normal
54	2063	1975	1975	Dry Year 2	Normal
55	2064	1976	1976	Normal	Normal
56	2065	1977	1977	Normal	Dry Year 1
57	2066	1978	1978	Dry Year 1	Normal
58	2067	1979	1979	Normal	Normal
59	2068	1980	1980	Normal	Normal
60	2069	1981	1981	Normal	Normal
61	2070	1982	1982	Dry Year 1	Normal
62	2071	1983	1983	Dry Year 2	Normal
63	2072	1984	1984	Dry Year 3	Normal
64	2073	1985	1985	Normal	Normal
65	2074	1986	1986	Dry Year 1	Normal
66	2075	1987	1987	Dry Year 2	Normal
67	2076	1988	1988	Dry Year 3	Dry Year 1
68	2077	1989	1989	Normal	Normal
69	2078	1990	1990	Normal	Dry Year 2
70	2079	1991	1991	Normal	Dry Year 3
71	2080	1992	1992	Normal	Dry Year 4
72	2081	1993	1993	Normal	Normal
73	2082	1994	1994	Normal	Normal
74	2083	1995	1995	Normal	Normal
75	2084	1996	1996	Normal	Normal
76	2085	1997	1997	Dry Year 1	Normal
77	2086	1998	1998	Dry Year 2	Normal
78	2087	1999	1999	Dry Year 3	Normal
79	2088	2000	2000	Normal	Normal
80	2089	2001	2001	Normal	Dry Year 1
81	2090	2002	2002	Normal	Normal
82	2091	2003	2003	Dry Year 1	Normal
83	2092	2004	2004	Dry Year 2	Normal
84	2093	2005	2005	Dry Year 3	Normal
85	2094	2006	2006	Dry Year 4	Normal
86	2095	2007	2007	Dry Year 5	Normal

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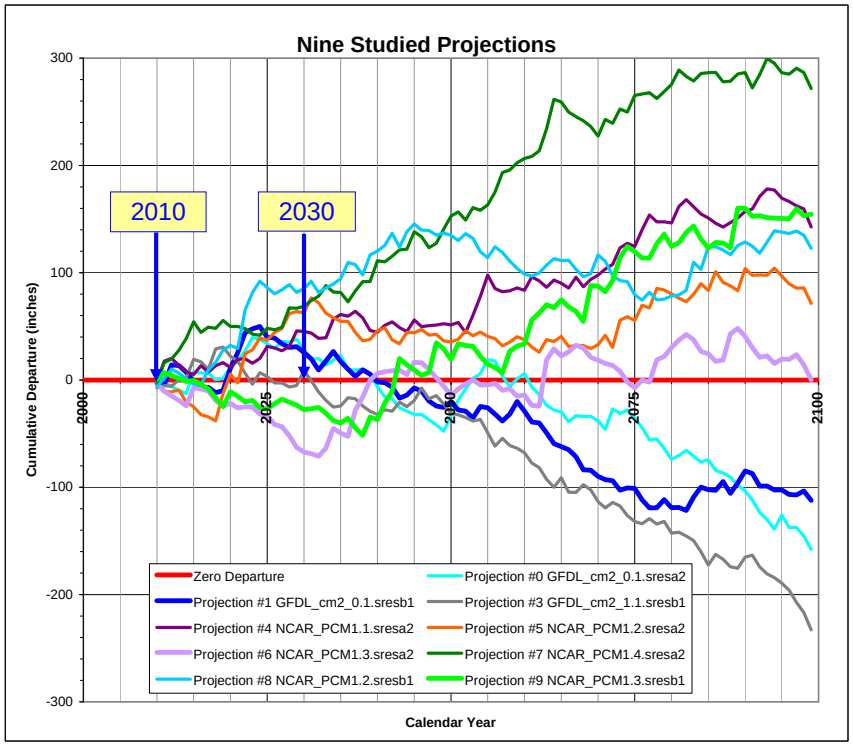
Climate Projection #9 (Global Climate Model NCAR_PCM1.3_sresB1)

llu ial an Saugus For ation Pu ing for t e Si ulation of 1 22-2 istorical rolog

Model Year	Alluvium Year	Saugus Year	Year Name for Model Run	Simulated Pumping Conditions	
				Alluvium	Saugus
1	2010	1922	1922	Normal	Normal
2	2011	1923	1923	Normal	Normal
3	2012	1924	1924	Normal	Dry Year 1
4	2013	1925	1925	Normal	Normal
5	2014	1926	1926	Normal	Normal
6	2015	1927	1927	Normal	Normal
7	2016	1928	1928	Normal	Normal
8	2017	1929	1929	Normal	Dry Year 1
9	2018	1930	1930	Dry Year 1	Normal
10	2019	1931	1931	Dry Year 2	Dry Year 1
11	2020	1932	1932	Dry Year 3	Dry Year 2
12	2021	1933	1933	Normal	Dry Year 3
13	2022	1934	1934	Normal	Dry Year 4
14	2023	1935	1935	Normal	Normal
15	2024	1936	1936	Normal	Normal
16	2025	1937	1937	Dry Year 1	Normal
17	2026	1938	1938	Dry Year 2	Normal
18	2027	1939	1939	Normal	Normal
19	2028	1940	1940	Normal	Normal
20	2029	1941	1941	Normal	Normal
21	2030	1942	1942	Normal	Normal
22	2031	1943	1943	Dry Year 1	Normal
23	2032	1944	1944	Normal	Normal
24	2033	1945	1945	Normal	Normal
25	2034	1946	1946	Dry Year 1	Normal
26	2035	1947	1947	Dry Year 2	Normal
27	2036	1948	1948	Dry Year 3	Normal
28	2037	1949	1949	Normal	Dry Year 1
29	2038	1950	1950	Dry Year 1	Normal
30	2039	1951	1951	Dry Year 2	Normal
31	2040	1952	1952	Normal	Normal
32	2041	1953	1953	Normal	Normal
33	2042	1954	1954	Normal	Normal
34	2043	1955	1955	Normal	Dry Year 1
35	2044	1956	1956	Normal	Normal
36	2045	1957	1957	Dry Year 1	Normal
37	2046	1958	1958	Dry Year 2	Normal
38	2047	1959	1959	Dry Year 3	Normal
39	2048	1960	1960	Normal	Dry Year 1
40	2049	1961	1961	Normal	Normal
41	2050	1962	1962	Dry Year 1	Normal
42	2051	1963	1963	Dry Year 2	Normal
43	2052	1964	1964	Normal	Normal
44	2053	1965	1965	Normal	Normal
45	2054	1966	1966	Normal	Normal
46	2055	1967	1967	Dry Year 1	Normal
47	2056	1968	1968	Dry Year 2	Normal
48	2057	1969	1969	Dry Year 3	Normal
49	2058	1970	1970	Dry Year 4	Normal
50	2059	1971	1971	Normal	Normal
51	2060	1972	1972	Normal	Normal
52	2061	1973	1973	Normal	Normal
53	2062	1974	1974	Normal	Normal
54	2063	1975	1975	Normal	Normal
55	2064	1976	1976	Normal	Normal
56	2065	1977	1977	Normal	Dry Year 1
57	2066	1978	1978	Normal	Normal
58	2067	1979	1979	Dry Year 1	Normal
59	2068	1980	1980	Dry Year 2	Normal
60	2069	1981	1981	Dry Year 3	Normal
61	2070	1982	1982	Normal	Normal
62	2071	1983	1983	Normal	Normal
63	2072	1984	1984	Normal	Normal
64	2073	1985	1985	Normal	Normal
65	2074	1986	1986	Normal	Normal
66	2075	1987	1987	Normal	Normal
67	2076	1988	1988	Normal	Dry Year 1
68	2077	1989	1989	Dry Year 1	Normal
69	2078	1990	1990	Normal	Dry Year 2
70	2079	1991	1991	Normal	Dry Year 3
71	2080	1992	1992	Normal	Dry Year 4
72	2081	1993	1993	Dry Year 1	Normal
73	2082	1994	1994	Normal	Normal
74	2083	1995	1995	Normal	Normal
75	2084	1996	1996	Normal	Normal
76	2085	1997	1997	Dry Year 1	Normal
77	2086	1998	1998	Dry Year 2	Normal
78	2087	1999	1999	Normal	Normal
79	2088	2000	2000	Normal	Normal
80	2089	2001	2001	Normal	Dry Year 1
81	2090	2002	2002	Normal	Normal
82	2091	2003	2003	Normal	Normal
83	2092	2004	2004	Dry Year 1	Normal
84	2093	2005	2005	Normal	Normal
85	2094	2006	2006	Normal	Normal
86	2095	2007	2007	Normal	Normal

Figure 5-1: 2010-2098 Cumulative Departure from Average Annual Rainfall at Newhall-Soledad Rain Gage



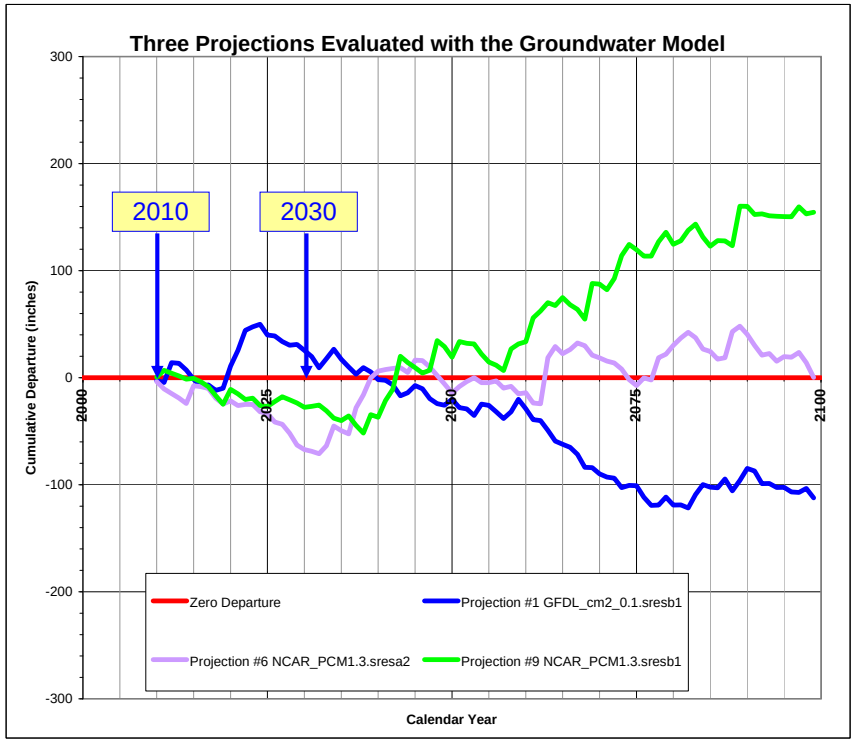


Figure 5-2: VWC-E15 Modeled Groundwater Elevations For Various Climate Projections (Alluvial Aquifer Below Valencia WRP)

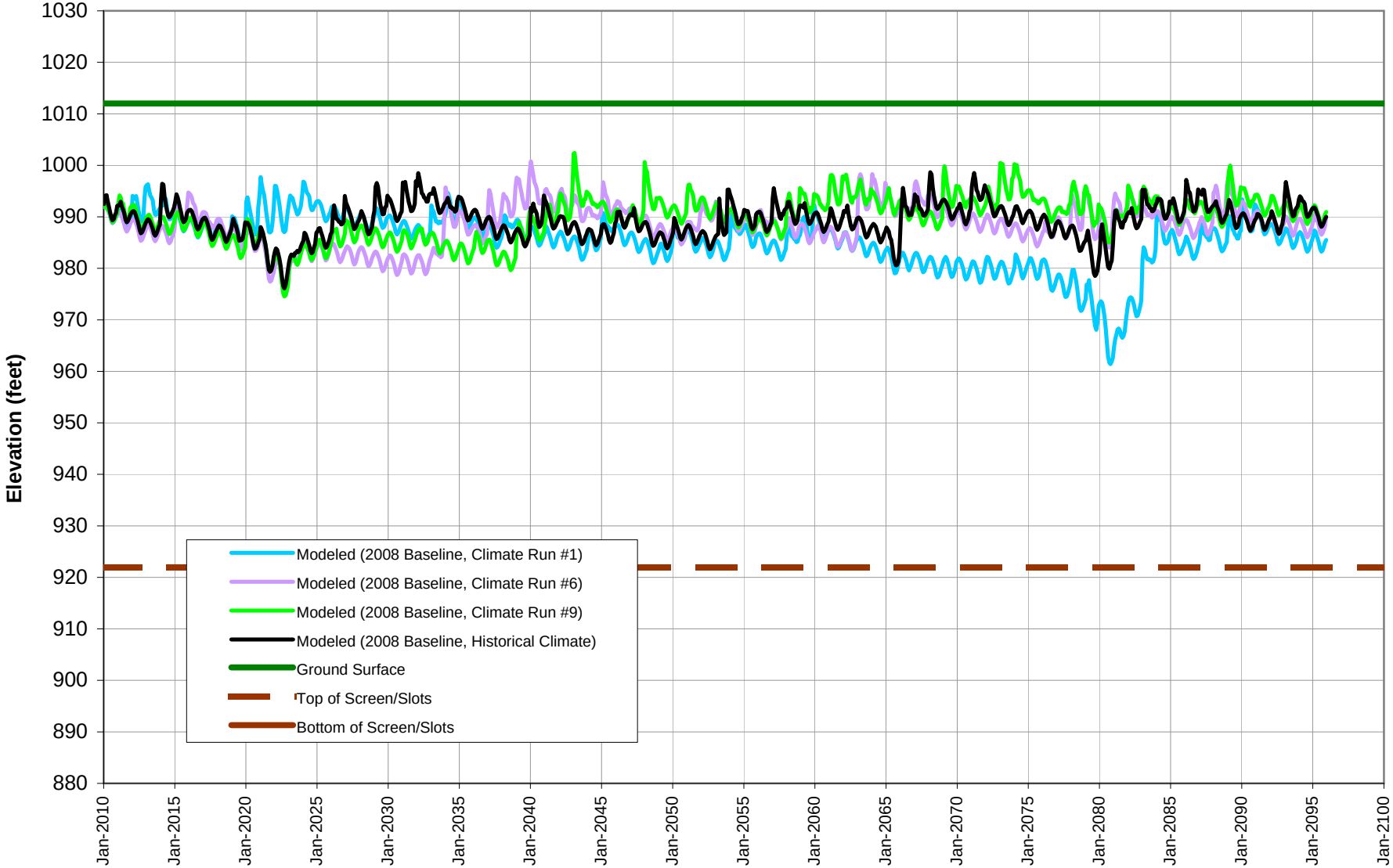


Figure 5-3: VWC-S8 Modeled Groundwater Elevations For Various Climate Projections (Alluvial Aquifer Below Saugus WRP)

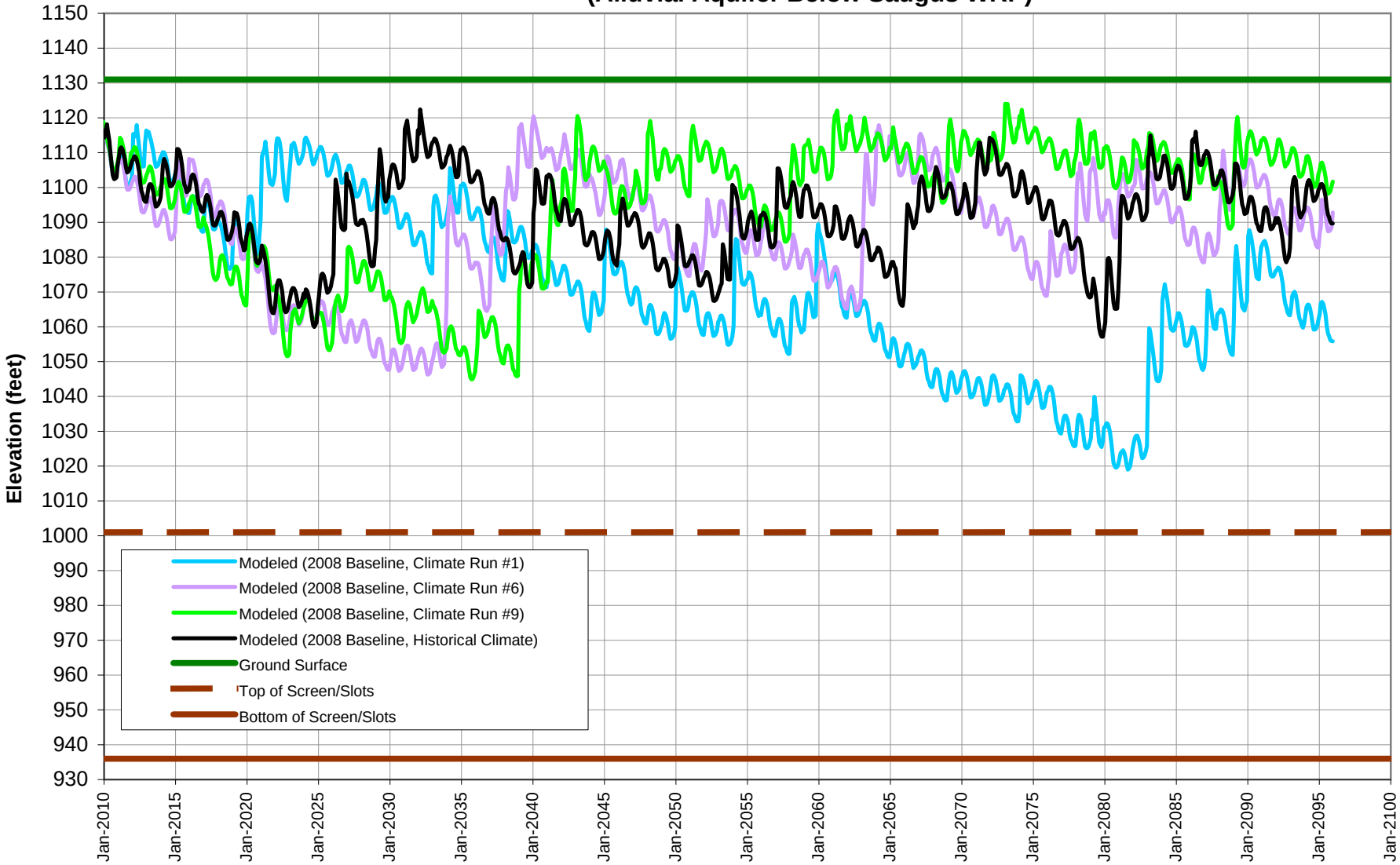


Figure 5-4: VWC-T7 Modeled Groundwater Elevations For Various Climate Projections (Alluvial Aquifer Below Saugus WRP)

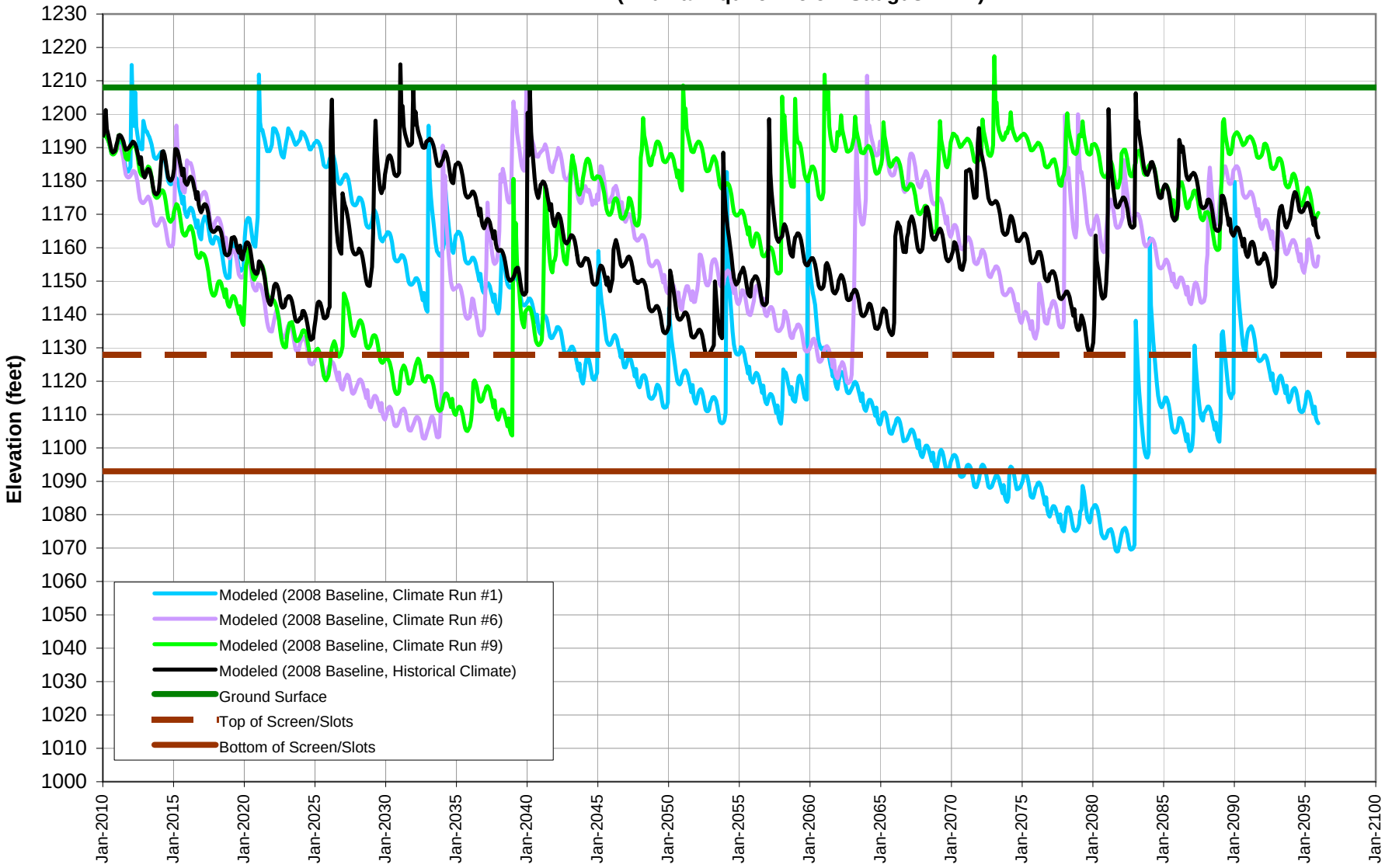


Figure 5-5: SCWD-Sierra Modeled Groundwater Elevations for Various Climate Projections (Alluvial Aquifer along Santa Clara River, At and Above Mint Canyon)

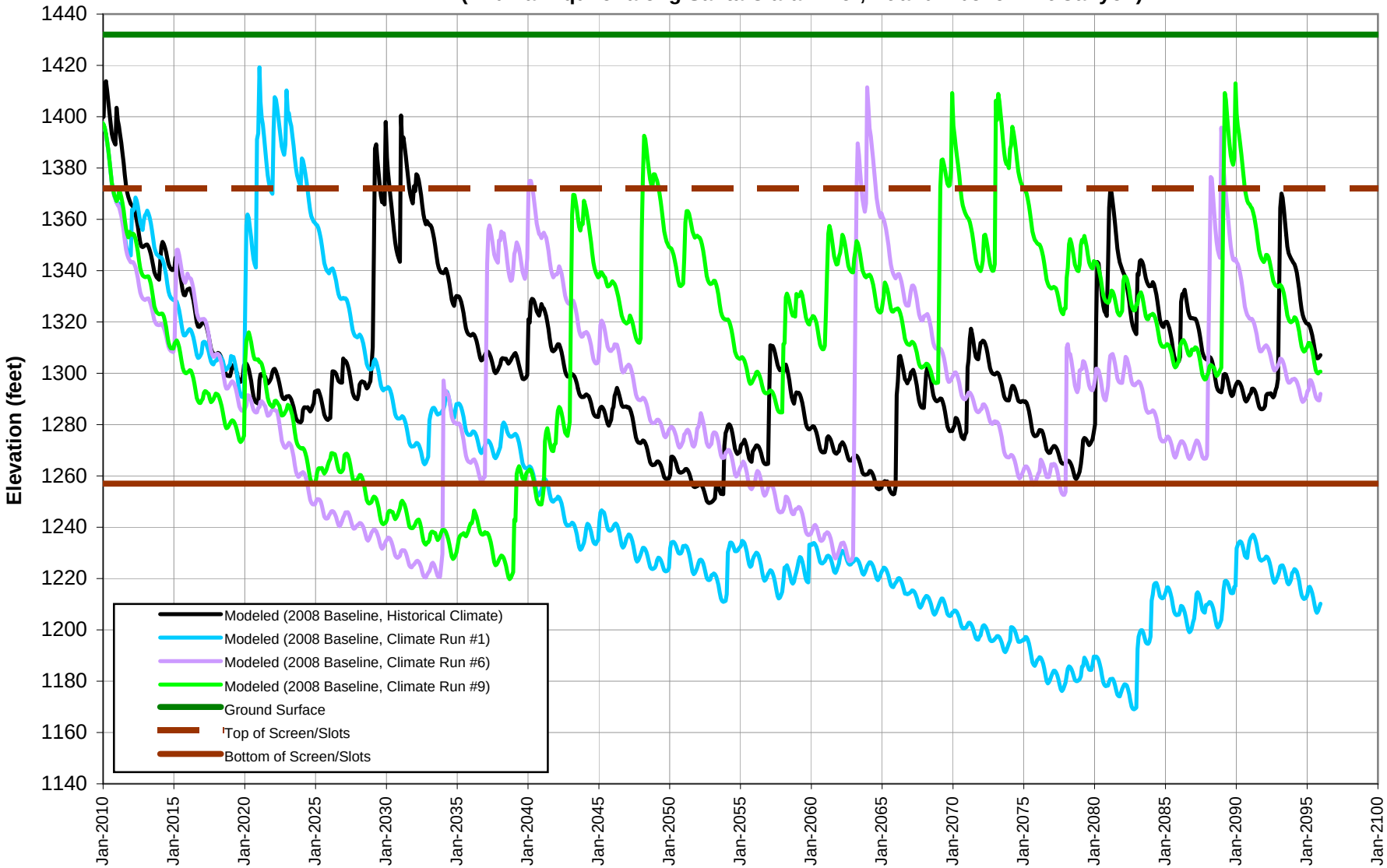


Figure 5-6: NCWD-Pinetree1 Modeled Groundwater Elevations For Various Climate Projections (Alluvial Aquifer Along Santa Clara River, At and Above Mint Canyon)

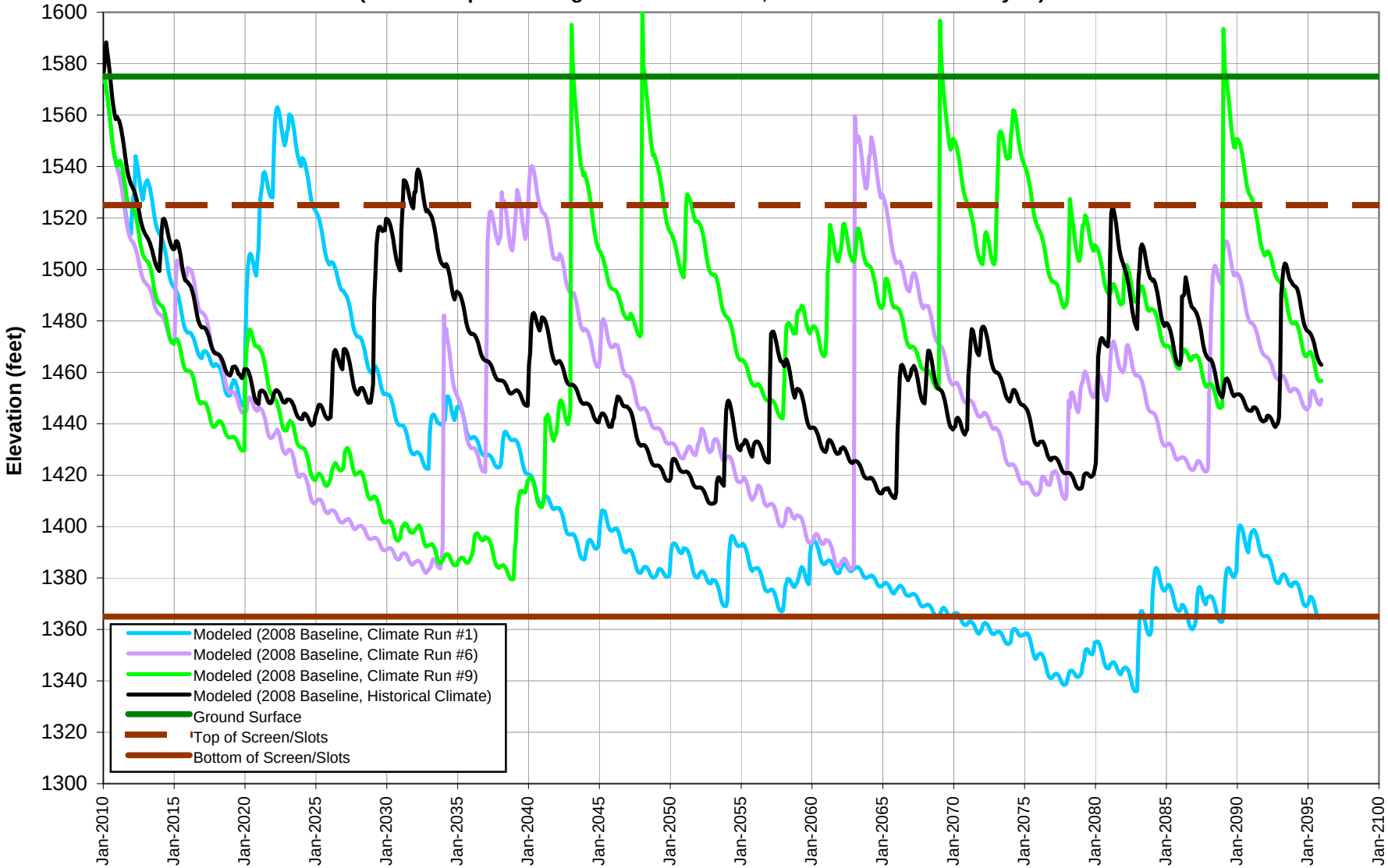


Figure 5-7: NCWD-Castaic7 Modeled Groundwater Elevations For Various Climate Projections (Alluvial Aquifer in Castaic Valley)

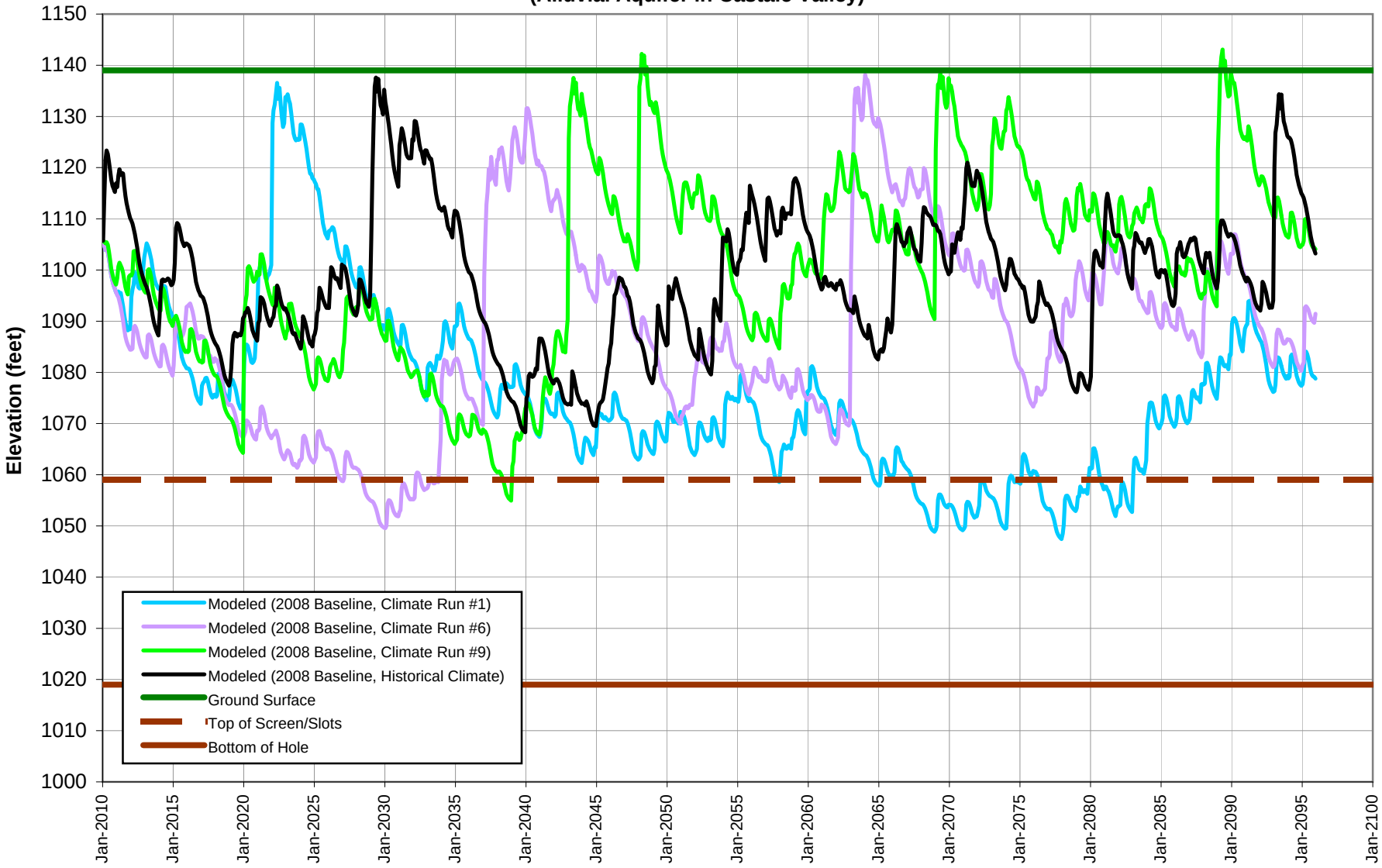


Figure 5-8: VWC-W11 Modeled Groundwater Elevations For Various Climate Projections (Alluvial Aquifer in San Francisquito Canyon)

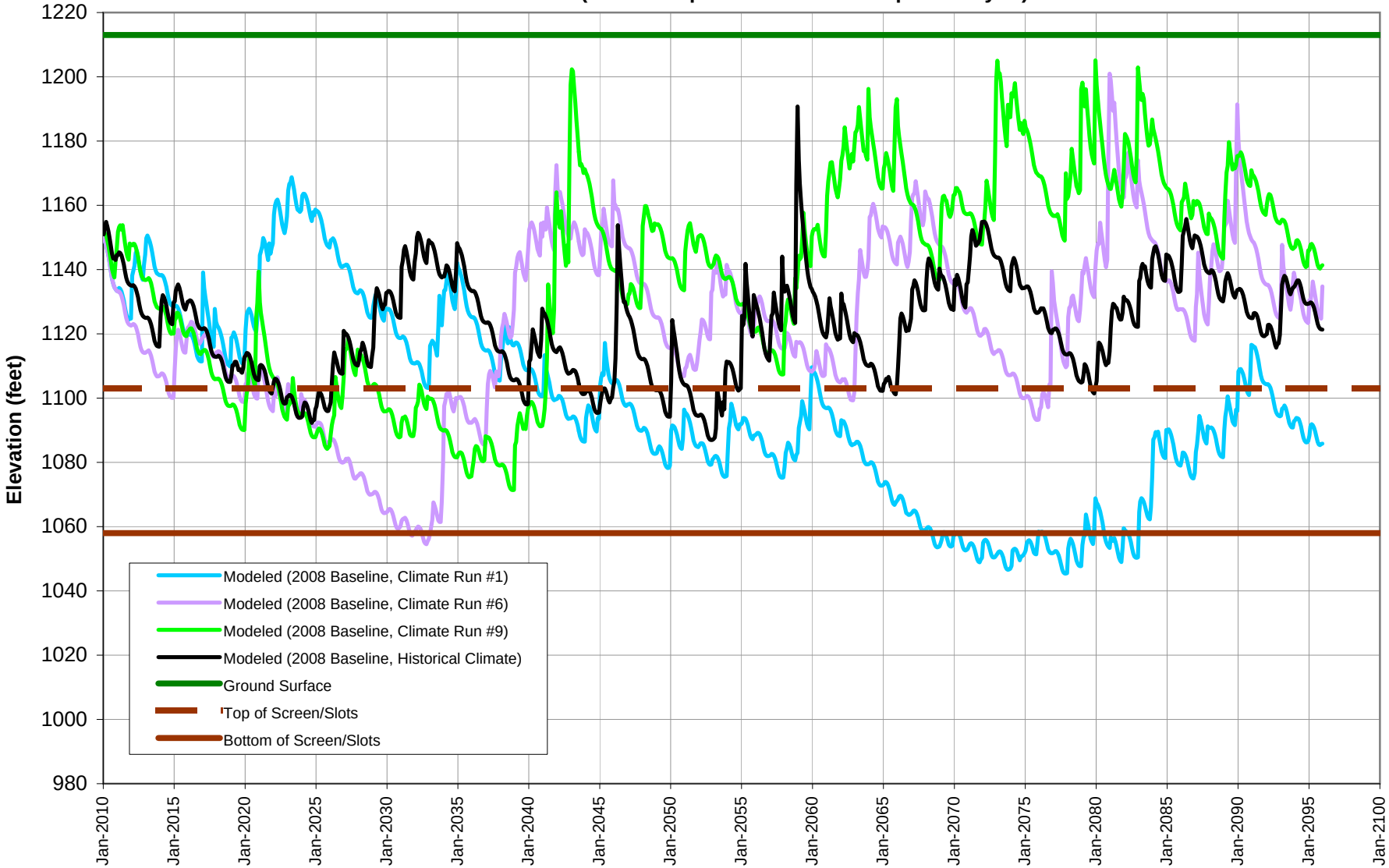


Figure 5-9: SCWD-Clark Modeled Groundwater Elevations for Various Climate Projections (Alluvial Aquifer in Bouquet Canyon)

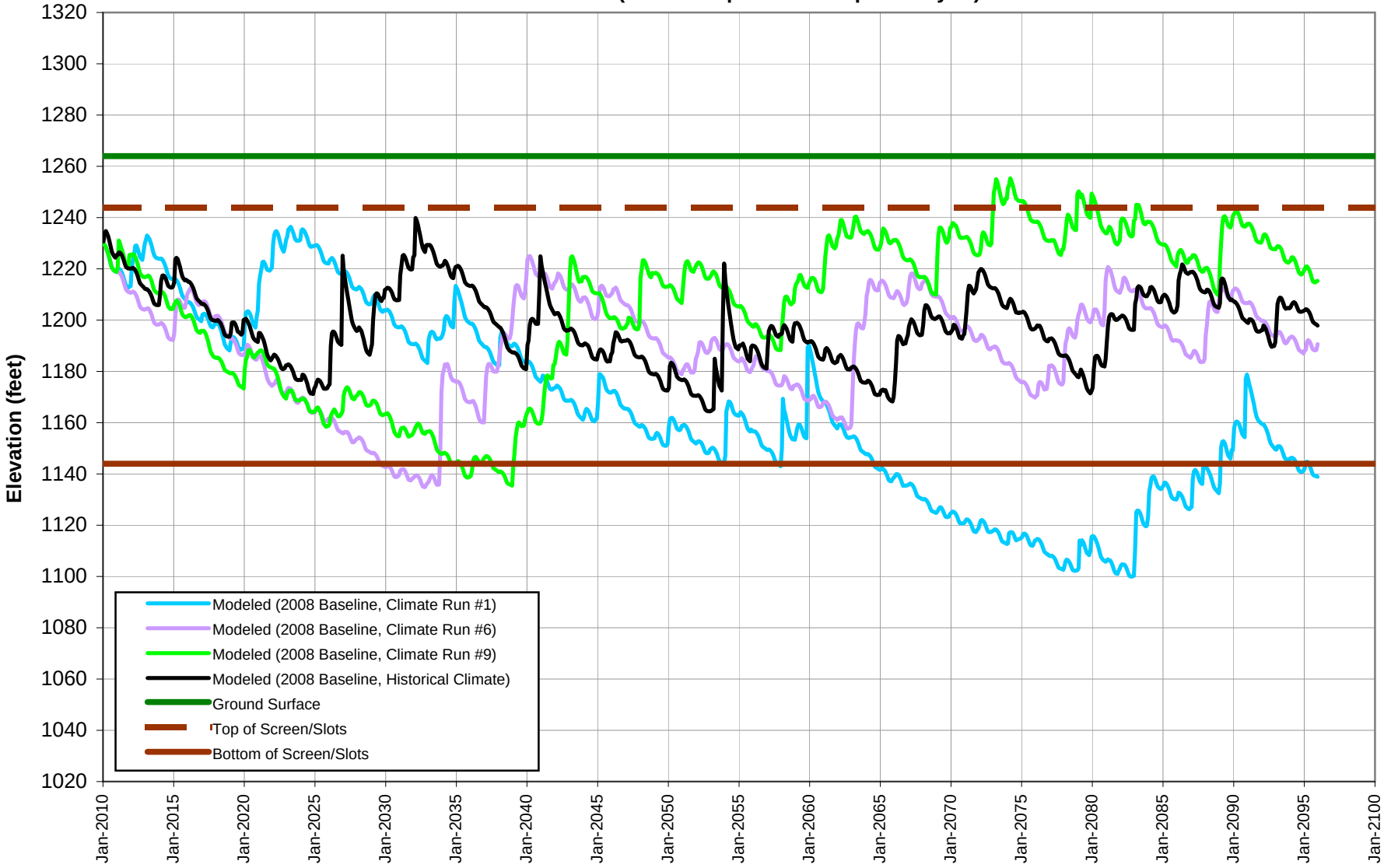
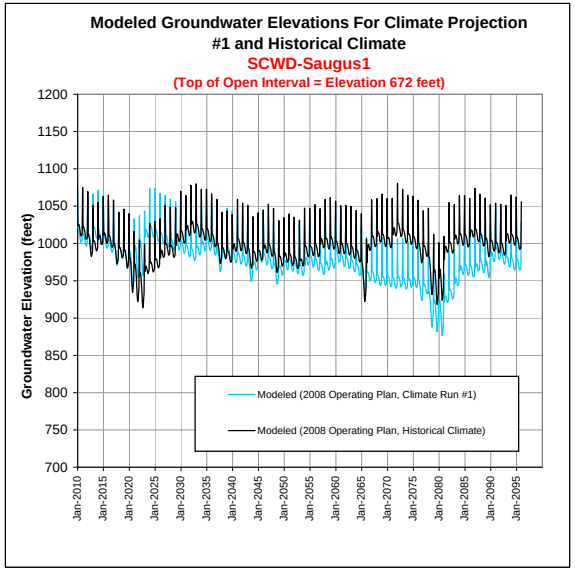
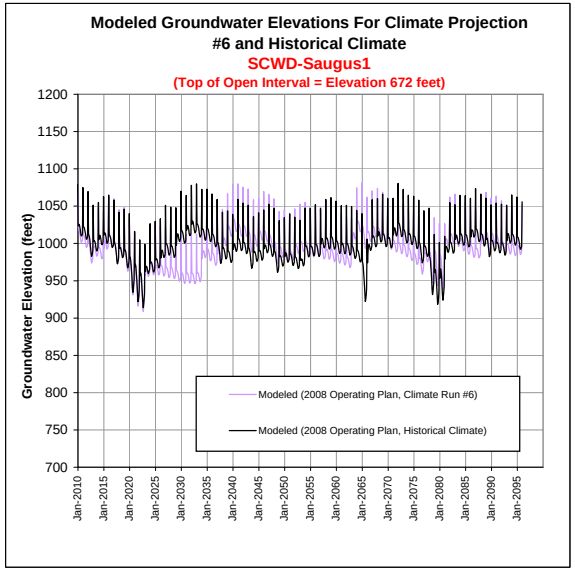


Figure 5-10: Groundwater Elevation Trends at SCWD-Saugus1 for the 2008 Operating Plan Under Historical Climate and Climate Projections #1, #6, and #9





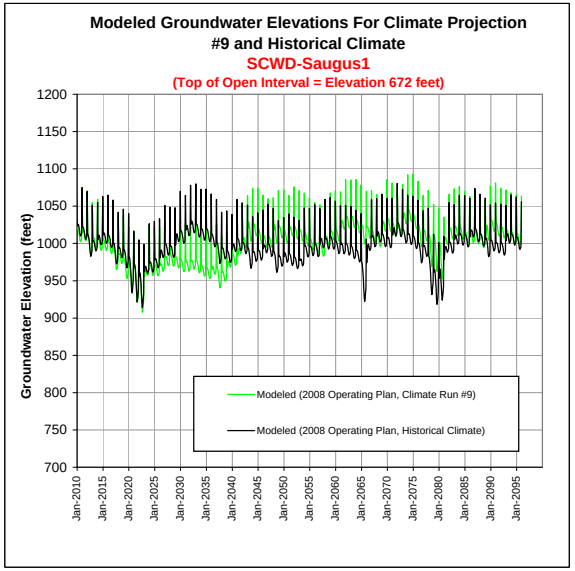
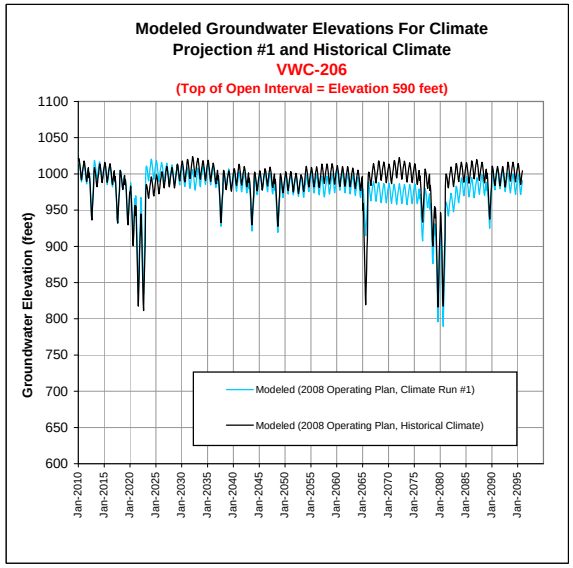
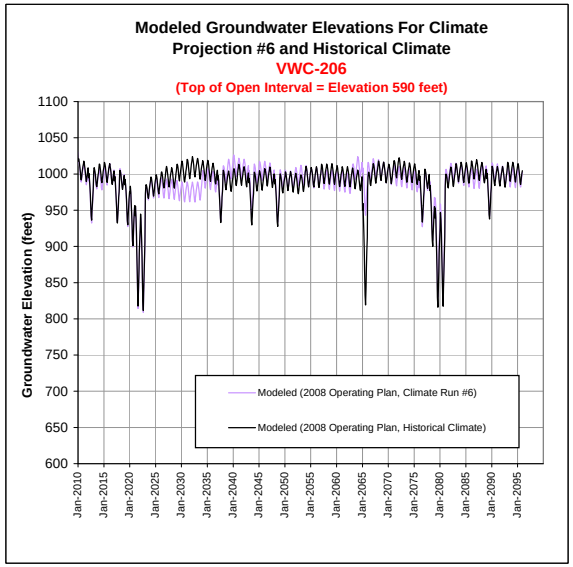


Figure 5-11: Groundwater Elevation Trends at VWC-206 for the 2008 Operating Plan Under Historical Climate and Climate Projections #1, #6, and #9





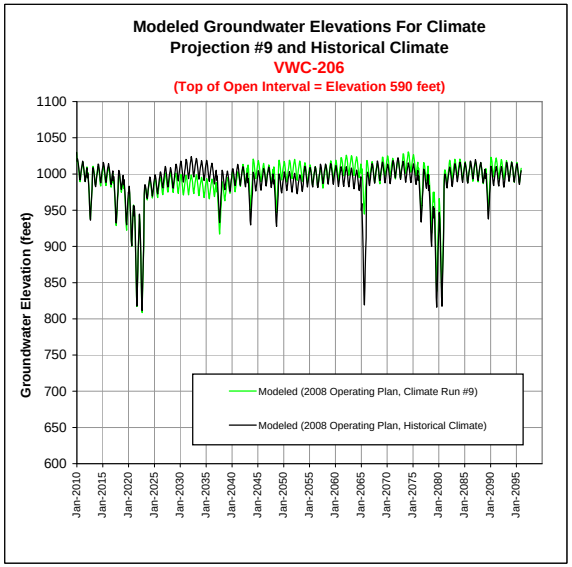
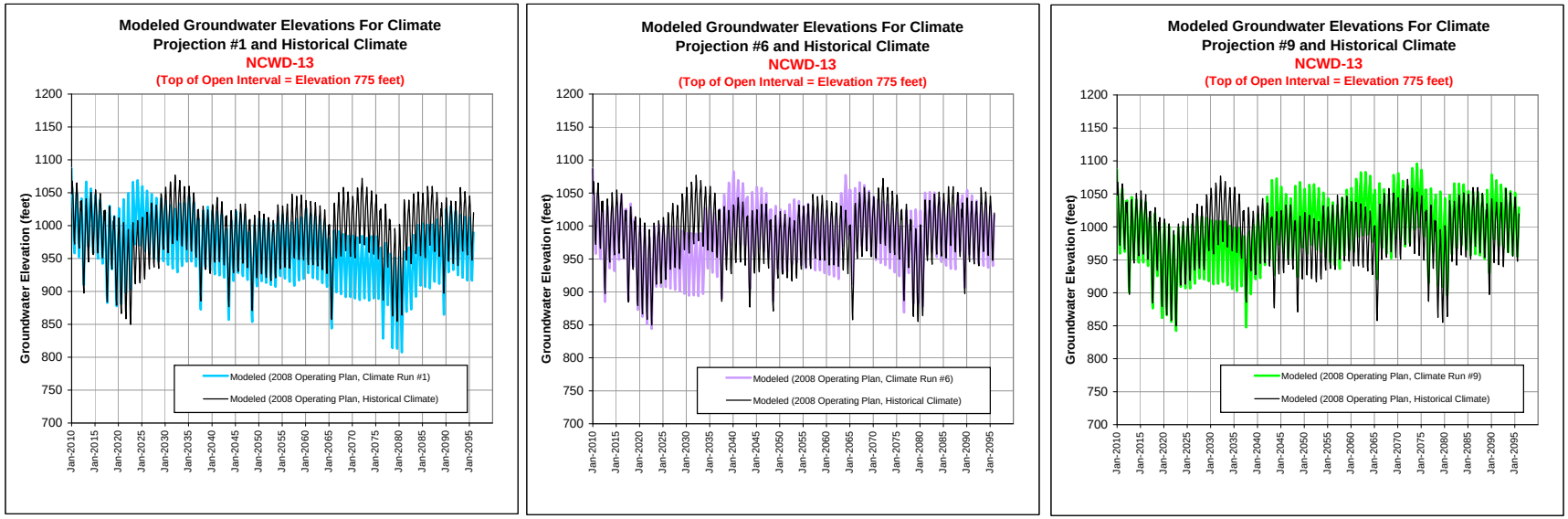


Figure 5-12: Groundwater Elevation Trends at NCWD-13 for the 2008 Operating Plan Under Historical Climate and Climate Projections #1, #6, and #9



VI. Local Artificial Recharge Projects

6.1 Los Angeles County Flood Control District Study

The Los Angeles County Flood Control District (LACFCD) prepared an unpublished water conservation plan that proposes constructing thirteen separate artificial recharge projects in the upper Santa Clara River Watershed. The focus of the plan is to capture or impede stormwater runoff to promote percolation to groundwater, specifically to the Alluvium located along the Santa Clara River. Although the plan acknowledged that there is a lack of runoff data to accurately predict the water conservation benefits of the projects, LACFCD estimated that, on average, a given year could be expected to have three storms that would be capable of producing enough stormwater runoff to fill the estimated storage capacities of each of the thirteen proposed projects. Therefore, to estimate the total water conservation benefit, LACFCD multiplied the total storage capacity of the thirteen projects by three. The total storage capacity and water conservation benefit of the thirteen projects combined were thus estimated to be 1,816 acre feet and 5,455 acre feet per year, respectively.

The plan subdivided the thirteen projects into three separate areas of the basin (Figure 6-1):

- six projects on the south fork of the Santa Clara River
- two projects in San Francisquito Canyon
- five projects on the main Santa Clara River System

Table 6-1 lists each project by subarea along with the LACFCD estimate of project capacity and water conservation benefit. The project locations relative to the Alluvial aquifer system by subarea are described below.

6.2 Project Locations Relative to Aquifer System

The six projects that would be located along the south fork of the Santa Clara River, as illustrated in Figure 6-1, consist of three rubber dam projects; two projects that divert water into spreading grounds; and a project that backs up flows behind a rubber dam for diversion into adjoining spreading grounds. The total capacity and estimated water conservation benefit of these six facilities are 496 acre feet and 1,475 acre feet per year, respectively. The riverbed of the south fork of the Santa Clara River lies along the eastern margin of the alluvial valley that the river occupies. In this area, the alluvium is thin and the Saugus Formation outcrops in the hills adjoining the river valley. Projects 1 through 5 are located in areas where groundwater pumping occurs from the Saugus Formation, but no Alluvial production wells are present because of the limited saturated thickness of the alluvium throughout this area. Project no. 6 is the furthest north (or downgradient) of the south fork projects and is located south of VWC's N7 and N8 Alluvial production wells in an area where the saturated thickness of the alluvium is much greater than further upstream where the other projects are located.

The two projects (no. 7 and 8 on Figure 6-1) proposed by LACFCD in San Francisquito Canyon would consist of spreading grounds along the unnamed ephemeral stream, tributary to the Santa

Clara River. The total capacity of the spreading grounds would be about 420 acre feet with a combined estimated water conservation benefit of 1,270 acre feet per year. The locations of the two spreading grounds are along the margins of the Alluvium north of Decoro Drive and Cooper Hill Drive where the alluvium is thin.

The five projects (no. 9 through 13 on Figure 6-1) proposed by LACFCD along the Santa Clara River extend from near the Saugus wastewater treatment plant eastward to areas just east of Newhall County Water District's Pinetree wells. These projects would include one rubber dam and four spreading grounds that are located along the margins of the Alluvium near outcrops of Saugus and bedrock formations in the hills adjoining the alluvial river valley. The five projects would have combined capacity of about 900 acre feet and an estimated total annual water conservation benefit of about 2,710 acre feet per year.

6.3 Conceptual Project Operation and Impacts

The purpose of the planned projects would be to capture stormwater runoff using inflatable rubber dams and to divert excess runoff into spreading grounds in order to recharge groundwater in the Alluvium in the immediate vicinity of each project site. The ability and related impact of the projects to effectively increase groundwater recharge in the Alluvium rather than to simply redistribute groundwater recharge is discussed in further detail below.

- **South Fork of the Santa Clara River.** Recharge projects in the South Fork of the Santa Clara River would be located primarily along the margins of the river valley where the Alluvium where this unit is thin. These project locations (nos. 1 through 5 on Figure 6-1) may not have sufficient alluvial thickness and available storage capacity during storm events to allow excess runoff captured by these projects to recharge groundwater at each project location. As a result, the excess stormwater runoff may not readily recharge groundwater and may be rejected due to the lack of available storage capacity in the vicinity of each project. Excess runoff captured by these projects would likely recharge groundwater elsewhere in the south fork of the Santa Clara River or near its mouth. Project locations 1 through 5 are proposed to be located in areas where groundwater production wells pump groundwater from the underlying Saugus Formation, rather than from the Alluvium. Consequently, even if some additional water were introduced to storage, little if any of the benefit would be able to be pumped at those project locations (again, there are no existing Alluvial production wells in the area and there is no likelihood of new production wells being constructed, all due to the lack of sufficient thickness of the Alluvium). Project location no. 6, the northernmost project in this area may have the potential to provide additional recharge to groundwater. However, due to the low storage capacity and estimated water conservation benefit, it would be difficult to differentiate between recharge from this project as compared to recharge under existing conditions, which already maintains sustainable groundwater conditions.

- **San Francisquito Canyon.** Project locations in San Francisquito Canyon would intercept stormwater runoff that would likely continue to recharge the Alluvium further downstream of the project locations; in essence, the projects would potentially

only redistribute stormwater recharge that currently has recharged the Alluvial aquifer in areas upstream of the Valencia waste water treatment plant (again, existing recharge already supports sustainable groundwater conditions in San Francisquito Canyon and immediately downstream in the main River area).

- **Santa Clara River** The project locations in the Santa Clara River area are very spread out with the easternmost project (no. 12) having the largest estimated capacity. However, Project no. 12 is located more than a mile east of Newhall County Water Districts Pinetree wells, and any stormwater runoff captured by this project would likely result in two different outcomes. One outcome is that the project would likely recharge groundwater in an area which currently has no production wells, and the water that is recharged would likely have recharged groundwater further downstream in the absence of the project. The second outcome is that the available storage in the alluvium in the area of the project would fill rapidly during a large stormwater runoff event, thereby limiting the amount of infiltration that can occur afterwards from the stormwater runoff captured by the project's spreading grounds. Three of the other four remaining projects (no. 10, 11, and 13) will likely encounter similar obstacles to Project no. 12 because of the similar surface and groundwater conditions that are present along the Santa Clara River between the Bouquet Canyon Bridge and the Lang gage (the eastern margin of the watershed). Project no. 9 (at the Bouquet Canyon Bridge) is similar in nature to Project no. 6 described above in that any benefit derived from the project might not be discernible from the conditions that would otherwise occur naturally in the absence of this and the other projects that are proposed along the Santa Clara River.

The overarching consideration with regard to the planned artificial recharge projects is that they might capture and "artificially recharge" water that already recharges the Alluvial aquifer system where it is of sufficient thickness to be developed as a groundwater supply. As evident from empirical observations and the simulations reported herein, the system "naturally" recharges to the point of sustaining groundwater pumping and, in the westerly end of the basin, to the point that stream recharge is rejected (and groundwater discharges to the stream). The small volumes of the various planned artificial recharge projects, and the arbitrarily estimated filling of those three times per year, do not represent "new" recharge; they likely represent some potential minor relocation of existing recharge.

Even if it were desirable to purposely relocate some existing recharge to one or more of the planned (LACFCD) locations, it would be difficult (possible but challenging) to redistribute the small amount of stream recharge and to then track the corresponding small effect of intercepting that water and removing it as a source of recharge as now occurs downstream. The results of the rest of the work reported herein, most notably that dealing with achievability of the 2008 Operating Plan, clearly suggest that artificial recharge could locally benefit certain areas, notably at and above Mint Canyon. However, such benefits would more logically develop from other water sources that would supplement natural recharge rather than simply redistribute it. The model used to simulate the basin response to the operating plans, under historic and potential climate change conditions, can readily simulate the effects and benefits of artificial recharge at selected locations using supplemental water.

Table 6-1

Los Angeles County Flood Control District
Stormwater Runoff Recharge Projects

Recharge Project	Storage Capacity (acre-feet)	Annual Water Conservation Benefit (acre-feet/year)
Santa Clara River South Fork		
1	109	330
2	75	220
3	5	75
4	112	330
5	60	180
6	115	340
Subtotal	496	1,475
San Francisquito Canyon		
7	230	700
8	190	570
Subtotal	420	1,270
Santa Clara River		
9	80	230
10	180	550
11	220	670
12	70	220
13	350	1040
Subtotal	900	2,710
Grand Total	1,816	5,455

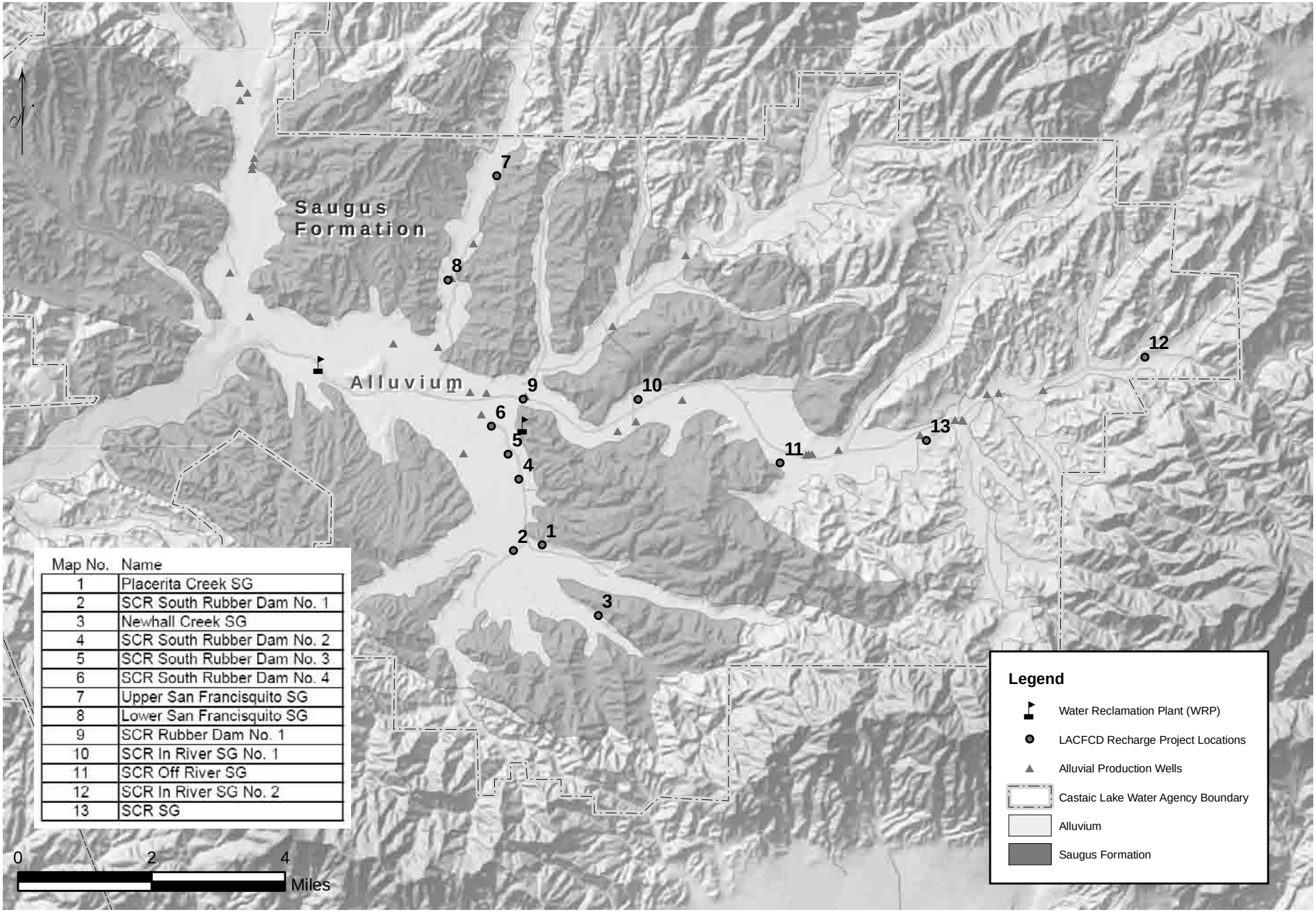


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Figure 6-1
Locations of LACFCD Planned Recharge Projects
Upper Santa Clara River Valley Groundwater Basin, East Subbasin

VII. Conclusions

The primary objective of the updated analysis of groundwater basin yield in the Santa Clarita Valley was to evaluate the planned utilization of groundwater by the Purveyors, after their consideration of potential impacts on traditional supplemental water supplies from the State Water Project (SWP), and with recognition of ongoing pumping by others for agricultural and other private water supply, for sustainability of the groundwater resource and for physical ability to extract groundwater at desired rates. As has previously been utilized in this basin, consistent with groundwater management in other settings, sustainability is defined in terms of renewability (recharge) of groundwater as reflected by the following indicators:

- lack of chronic, or sustained, depletion of groundwater storage, as indicated by projected groundwater levels, over a reasonable range of wet, normal, and dry hydrologic conditions

- maintenance of surface water flows in the western portion of the basin (which are partially maintained by groundwater discharge) and surface water outflow to downstream basins over the same range of hydrologic conditions

Regarding maintenance of surface water flows, although the development and use of groundwater in a sustainable manner necessitates the inducement of recharge from surface water, sustainability in this case does not rely on inducing groundwater recharge by eliminating surface water flows. Rather, sustainability retains surface water outflows and may even increase them with the importation of supplemental water when contrasted to pre-SWP conditions. Regarding both indicators of sustainability, the range of analyzed hydrologic conditions is a long-term period that includes anticipated occurrences of the types of years and groups of year types that have historically occurred in the basin.

A second objective of the updated groundwater basin yield analysis was to investigate and describe potential impacts of expected climate change on the groundwater basin and its yield. A third objective was to consider potential augmentation of basin yield via potential artificial groundwater recharge using storm water runoff in selected areas of the basin as being planned by the Los Angeles County Flood Control District.

The primary objective was investigated by analyzing, with the numerical groundwater flow model of the basin, two groundwater operating plans: a 2008 Operating Plan to reflect currently envisioned pumping rates and distribution throughout the Valley, including fluctuations through wet/normal and dry years, to achieve a desired amount of water supply that, in combination with anticipated supplemental water supplies, can meet existing and projected water requirements in the Valley; and a Potential Operating Plan that envisions potentially increased utilization of groundwater during both wet/normal and dry years.

With regard to the respective operating plans, a first conclusion is that the 2008 Operating Plan will not cause detrimental short- or long-term effects to the groundwater and surface water resources in the Valley and is, therefore, sustainable. Consistent with actual operating experience and empirical observations of historical basin response to groundwater pumping, the

2008 Operating Plan can be expected to have local difficulty, in the Alluvium at the eastern end of the basin during locally dry periods, with achievement of all the Alluvial pumping in the 2008 Operating Plan. This condition is particularly evident if several decades of predominantly below-normal rainfall years were to occur in the future such as occurred during much of the five decades from the mid-1920s through the mid-1970s. In other words, while the basin as a whole can sustain the pumping embedded in the 2008 Operating Plan, local conditions in the Alluvium in the eastern end of the basin can be expected to repeat historical groundwater level declines during dry periods, necessitating a reduction in desired Alluvial aquifer pumping due to decreased well yield and associated actual pumping capacity. The modeling analysis conducted to date suggests that those reductions in pumping from the Alluvial aquifer can be made up by an equivalent amount of increased pumping in other parts of the basin without disrupting basin-wide sustainability or local pumping capacity in those other areas. For the Saugus Formation, the modeling analysis indicates that this aquifer can sustain the pumping from this unit that is imbedded the 2008 Operating Plan.

Simulation of the 2008 Operating Plan with Pumping Redistribution indicates that westerly redistribution of 1,600 afy of alluvial pumping from the eastern end of the basin would help, but not eliminate, the lack of achievability. The residual unachievable pumping in the east end of the basin, about 4,500 afy, could be redistributed to other areas of the basin with minimal impact on groundwater levels. In this case, total Alluvial pumping in the basin could remain near the upper end of the 2008 Operating Plan range of 30,000 to 35,000 afy. Conversely, absent any additional efforts to redistribute pumping, the total Alluvial pumping capacity during extended dry periods would likely shrink toward the lower end of the 2008 Operating Plan range, toward 30,000 afy.

Another conclusion with regard to the respective operating plans is that the Potential Operating Plan would result in lower groundwater levels, failure of the basin to fully recover (during wet hydrologic cycles) from depressed storage that occurs during dry periods, and generally declining trends in groundwater levels and storage. This conclusion is strongly suggested for the Alluvial aquifer by the modeling results, but the model also indicates that long-term lowering of groundwater levels could also occur in the Saugus Formation, with only partial water level recovery occurring in the Saugus. Thus, the Potential Operating Plan would not be sustainable over a long-term period. The simulated combination of lower and declining groundwater levels under the Potential Operating Plan also leads to a conclusion that such an operating plan could not be physically achieved in several areas within the basin.

Conclusions with regard to another of the objectives of the updated groundwater basin yield analysis include a recognition that the runoff conservation/groundwater recharge projects being planned by the Los Angeles County Flood Control District are a combination of individually small projects that are not yet fully analyzed in terms of potential new yield, are but unlikely to provide any substantial recharge that does not already occur. Additionally, these proposed projects are mostly located in areas of the basin where the alluvial aquifer is of insufficient thickness and storage (and is thus not developed for water supply) or where the alluvial aquifer already fully recharges when stream flows are naturally present.

Final conclusions related to the overall objectives of the updated groundwater basin yield analysis all relate to the potential impacts of climate change on the yield of the basin and the

related groundwater supply from the basin. While “conclusions” would probably be an inappropriate term to describe future conditions that cannot be projected with any degree of certainty, the results of simulating basin response to the 2008 Operating Plan, under a range of potential climate change result in two important observations.

- for the broad range of climate change possibilities that was analyzed, the 2008 Operating Plan would appear to be both sustainable and, with the same physical constraints to full pumping in the eastern part of the basin as have otherwise been experienced, achievable through the shorter term horizon associated with UWMP planning.

- the range of potential climate change impacts extends from a possible wet trend to a possible dry trend over the long term. The trends that range from an approximate continuation of historical average precipitation, to something wetter than that, would appear to result in continued sustainability of the 2008 Operating Plan, again with intermittent constraints on full pumping in the eastern part of the basin. The potential long-term dry trend arising out of climate change would be expected to decrease local recharge to the point that lower and declining groundwater levels would render the 2008 Operating Plan unsustainable.

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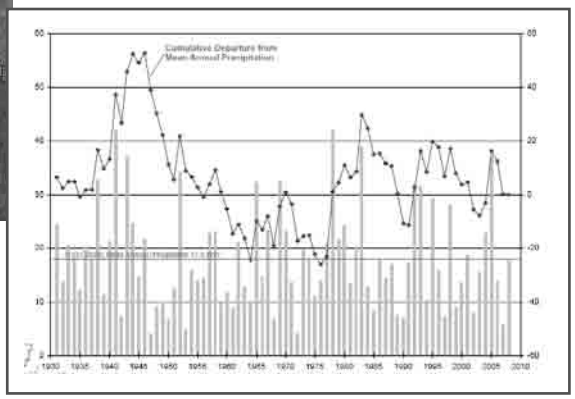
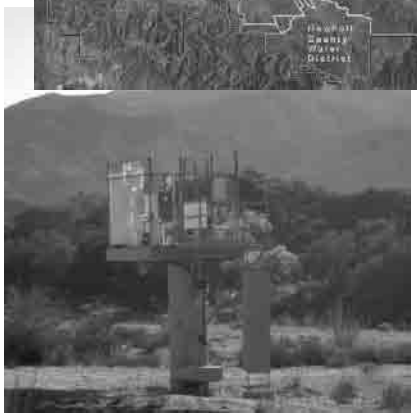
2008
Santa Clarita Valley Water Report

Castaic Lake Water Agency (CLWA)
CLWA Santa Clarita Water Division
Los Angeles County Waterworks District 36
Newhall County Water District
Valencia Water Company

April 2009





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Executive Summary

This annual report, which is the eleventh in a series that began to describe water supply conditions in 1998, provides current information about the water requirements and water supplies of the Santa Clarita Valley. The report was prepared for the imported water wholesaler, Castaic Lake Water Agency (CLWA), and for the four local retail water Purveyors that serve the Valley: CLWA Santa Clarita Water Division, Los Angeles County Waterworks District 36, Newhall County Water District, and Valencia Water Company. These entities and representatives from the City of Santa Clarita and the County of Los Angeles Department of Regional Planning meet as required to coordinate the management of imported water with local groundwater and recycled water to meet water requirements in the Valley.

This report provides information about local groundwater resources, State Water Project (SWP) and other imported water supplies, water conservation, and recycled water. The report reviews the sufficiency and reliability of supplies in the context of existing water demand, with focus on actual conditions in 2008, and it provides a short-term outlook of water supply and demand for 2009.

ES.1 2008 Water Requirements and Supplies

In 2008, total water requirements in the Santa Clarita Valley were about 90,700 acre-feet (af), of which about 75,900 af (84 percent) were for municipal use and the remainder (14,800 af) was for agricultural and other (miscellaneous) uses, including individual domestic uses. Total demand in 2008 was about two percent lower than in 2007, less than what was estimated in the 2007 Water Report, and water requirements in 2008 were also lower than the average projection in the 2005 Urban Water Management Plan (UWMP). Total water requirements in 2008 were met by a combination of about 48,700 af from local groundwater resources (about 33,900 af for municipal and about 14,800 af for agricultural and other uses), about 41,700 af of SWP and other imported water, and about 300 af of recycled water.

Of the 48,700 af of total groundwater pumping in the Valley in 2008, about 41,750 af were pumped from the Alluvium and about 6,950 af were pumped from the underlying, deeper Saugus Formation. Alluvial pumping represented about a 2,950 af increase from 2007, and Saugus pumping was slightly lower than in 2007, by about 750 af. Neither pumping volume resulted in any notable overall change in groundwater conditions (water levels, water quality, etc.) in either

aquifer system. Imported water deliveries to the Purveyors decreased by about 3,600 af from the previous year. Water uses and supplies in 2008 are summarized in the following Table ES-1.

Table ES-1
Santa Clarita Valley
Summary of 2008 Water Supplies and Uses
(acre-feet)

Municipal		
SWP and other Imported		41,705
Groundwater (Total)		33,884
Alluvium	*27,919*	
Saugus	*5,965*	
Recycled Water		311
Subtotal		**75,900**
Agriculture/Miscellaneous		
SWP and other Imported		-
Groundwater (Total)		14,750
Alluvium	*13,797*	
Saugus	*953*	
Subtotal		**14,750**
Total		***90,650***

In accordance with the California Urban Water Management Planning Act, the Valley-wide UWMP was updated in 2005 to extend projected water demands through 2030, and to describe the combination of local groundwater, imported water supplies from the State Water Project and other sources, local recycled water supplies, and other water supplies planned to meet those existing and projected water demands in the Valley. The 2005 UWMP describes the reliability of local groundwater resources and the adequacy of groundwater supplies to meet groundwater demand, including consideration of the impacts of perchlorate contamination on several municipal water supply wells. The 2005 UWMP also describes the plans and ongoing work for integrated control of perchlorate migration and full restoration of perchlorate-impacted groundwater supply.

Notable details about each component of water supply in the Valley, and about the water supply outlook for 2009, include the following.

ES.2 Alluvial Aquifer

The groundwater operating plan in the 2005 UWMP includes Alluvial pumping in the range of 30,000 to 40,000 acre-feet per year (afy) following average/normal years, and slightly reduced pumping (30,000 to 35,000 afy) following dry years. Pumping from the Alluvium in 2008 was 41,750 af, which is slightly above the operating plan range for the Alluvium but did not adversely affect groundwater levels and storage in the basin. On average, pumping from the Alluvium has been about 32,000 afy since supplemental imported water became available in 1980. That average rate remains near the lower end of the range of operational yield.

On a long-term basis, continuing through 2008, there is no evidence of any historic or recent trend toward permanent water level or storage decline. In general, throughout a large part of the basin, Alluvial groundwater levels have generally remained near historic highs during the last 30 years. Above average precipitation in late 2004 and 2005 resulted in significant water level recovery in the eastern part of the basin, continuing the overall trend of fluctuating groundwater levels within a generally constant range over the last 30 years. These ongoing data indicate that the Alluvium remains in good operating condition and can continue to support pumping in the operating range included in the 2005 UWMP, or slightly higher, without adverse results (e.g., long-term water level decline or degradation of groundwater quality.)

Based on an integration of water quality records from multiple wells completed in the Alluvium, there have been historical fluctuations in groundwater quality, typically associated with variations in precipitation and streamflow. However, like groundwater levels, there has been no long-term trend toward groundwater quality degradation; groundwater produced from the Alluvial aquifer remains a viable municipal and agricultural water supply.

In 2002, as part of ongoing monitoring of wells for perchlorate contamination, perchlorate was detected in one Alluvial well (the SCWD Stadium Well) located near the former Whittaker-Bermite facility. The detected concentration was slightly below the then-applicable Notification Level for perchlorate (6 µg/l, which was subsequently established as the Maximum Contaminant Level for perchlorate in October 2007), and the well has been inactivated for municipal water supply since the detection of perchlorate. In early 2005, perchlorate was detected in a second Alluvial well, VWC's Well Q2. After an interim period of wellhead treatment, that well has now been returned to regular water supply service. All other Alluvial wells operated by the Purveyors continue to be used for municipal water supply service; those wells near the Whittaker-Bermite property are sampled in accordance with drinking water regulations and perchlorate has not been detected. As detailed in the 2005 UWMP, the ongoing inactivation of one Alluvial well due to

perchlorate contamination does not limit the Purveyors' ability to produce groundwater from the Alluvium in accordance with the groundwater operating plan in the 2005 UWMP.

The ongoing characterization and plan for control and cleanup of perchlorate in the Valley has focused on the Saugus Formation. In addition, however, on-site cleanup and control activities that began in 2006, and continued through 2008, include continuation of soil cleanup on the Whittaker-Bermite site, and continuation of pumping and treatment in the Northern Alluvium on the Whittaker-Bermite site. Expanded pumping and treatment, intended to effect perchlorate containment in the Northern Alluvium, became operational in October 2007.

ES.3 Saugus Formation

The groundwater operating plan in the 2005 UWMP includes pumping from the Saugus in the range of 7,500 to 15,000 afy in average/normal years; it also includes planned dry-year pumping from the Saugus of 21,000 to 35,000 afy for one to three consecutive dry years. The 2005 UWMP recognizes the results of basin yield analyses in 2004 and 2005 which found that such short-term pumping can be recharged during subsequent wet/normal years to allow groundwater levels and storage to recover, as it has in historical periods.

Pumping from the Saugus Formation was about 6,950 af in 2008; on average, Saugus pumping has been about 6,800 afy since 1980. Both rates remain near the lower end of the range included in the UWMP. As a result of long-term relatively low pumping from the Saugus Formation, groundwater levels in that aquifer have remained generally constant to slightly increasing over the last 35 to 40 years; those trends continued in 2008.

In 1997, ammonium perchlorate was discovered in four wells completed in the Saugus Formation in the vicinity of the former Whittaker-Bermite facility located generally toward the east, on the south side of the basin. All four of those impacted wells remain out of active supply service; one of them has been permanently sealed and destroyed. In 2006, a very low level of perchlorate was detected in another Saugus municipal well (NCWD's Well NC-13). That low level detection has been interpreted to not indicate anything new about the migration of perchlorate; however, it has also prompted additional monitoring well installation and a focused study of the Saugus Formation in that area. Results are being integrated with other groundwater remediation efforts and reviewed by the State Department of Toxic Substances Control (DTSC). All other Saugus wells owned and operated by the Purveyors are available for municipal water supply service. As part of regular operation, those wells are sampled in accordance with drinking water regulations and perchlorate has not been detected. Despite the inactivated Saugus

wells, the Purveyors still have sufficient pumping capacity in other wells to meet the planned normal range of Saugus pumping in the 2005 UWMP.

Work toward the ultimate remediation of perchlorate contamination, including the restoration of impacted groundwater supply continued to progress in 2008, with focus on construction of facilities to implement a jointly developed plan to "pump and treat" contaminated water from two of the originally impacted wells to stop migration of the contaminant plume, and to deliver treated water to partially replace impacted well capacity. Environmental review of the project was completed with adoption of a Mitigated Negative Declaration in September 2005. The Final Interim Remedial Action Plan was completed and approved by DTSC in January 2006. Construction of facilities and pipelines necessary to implement the pump and treat program and to also restore inactivated well capacity began in November 2007. Construction is scheduled to be completed in summer 2009, followed by operational start-up.

ES.4 Imported Water

Historically comprised of only its SWP Table A Amount, CLWA's imported water supplies now consist of a combination of SWP water and water acquired from the Buena Vista Water Storage District in Kern County. CLWA's contractual Table A Amount is 95,200 af of water from the SWP. Under the 2007 Water Acquisition Agreement with the Buena Vista Water Storage District (Buena Vista) and the Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo), Buena Vista's high flow Kern River entitlements (and other acquired waters that may become available) are captured and recharged within the Rosedale-Rio Bravo's service area on an ongoing basis. CLWA will receive 11,000 af of these supplies annually through either exchange of Buena Vista's and Rosedale-Rio Bravo's SWP supplies or through direct delivery of water to the California Aqueduct via the Cross Valley Canal.

CLWA's final allocation of SWP water for 2008 was 35 percent of its Table A Amount, or 33,320 af. The total available imported water supply in 2008 was 57,488 af, comprised of the 33,320 af of Table A supply, 11,000 af purchased from Buena Vista/Rosedale Rio Bravo, 12,146 af of 2007 carryover delivered in early 2008, and 1,022 af through the Yuba Accord. CLWA deliveries were 41,705 af to the Purveyors; the remaining 14,610 af of 2008 Table A Amount represent carryover available for 2009 water supply. No additional banking of imported water occurred in 2008.

CLWA has two groundwater banking agreements with the Semitropic Water Storage District in Kern County. In accordance with those agreements, over a ten-year period (until 2012/13),

CLWA can withdraw up to 50,870 af of its Table A water that was stored in 2002 and 2003 to meet future Valley demands when needed. Following the planned utilization of 4,950 af of banked water in 2009 from the Semitropic Account, that balance will be 45,920 af. In addition to the banking in Semitropic, CLWA finalized an agreement with the Rosedale-Rio Bravo Water Storage District in 2005 and can now bank up to 20,000 afy of surplus Table A Amount in that District's Water Banking and Exchange Program. In addition to 20,000 af previously banked in both 2005 and 2006, CLWA banked 8,200 af of water in 2007. In accordance with the provisions of that agreement, CLWA can withdraw up to a total of 42,900 af of that water, at a rate up to 20,000 afy, to meet Valley water demands when needed. Additionally, as part of the Buena Vista Water Acquisition Agreement, CLWA is entitled to 22,000 af of water that was stored in the Rosedale Rio-Bravo Water Banking and Exchange Program in 2005 and 2006 on CLWA's behalf. As of 2009, CLWA maintains a recoverable total of 64,900 af in the Rosedale Rio-Bravo Water Banking and Exchange Program.

Since SWP water deliveries are subject to reduction when dry conditions occur in Northern California, the UWMP includes programs, like the Semitropic and Rosedale-Rio Bravo programs, for enhancing water supply reliability during such occurrences. A capital improvement program funded by CLWA has been established to provide facilities and additional water supplies needed to firm up SWP water supplies during times of drought.

ES.5 Recycled Water

Recycled water service was initiated in July 2003 in accordance with CLWA's Draft Reclaimed Water System Master Plan (2002). The amount of recycled water used for irrigation purposes, at a golf course and in roadway median strips, was approximately 310 af in 2008. CLWA completed programmatic CEQA analysis in early 2007 for full implementation of the recycled water system as outlined in the Master Plan. CLWA is preparing the design of the second phase of the Recycled Water Master Plan that will take water from the Saugus Water Reclamation plant and distribute it to identified users to the north, across the Santa Clara River and then to the west and the east, which will include service to Santa Clarita Central Park.

ES.6 2009 Water Supply Outlook

In 2009, total water demands are expected to be about 91,000 af, comparable to actual water use over the last two years, and below the water demand projections in the 2005 UWMP. It is expected that water demands in 2009 will continue to be met with a generally similar mix of

water supplies comprised of local groundwater, supplemental SWP and other imported water, and recycled water.

As of April 15, 2009, the allocation of water from the SWP is 30 percent of CLWA's Table A Amount, or 28,560 af. Combined with local groundwater from the two aquifer systems (48,000 af), total Flexible Storage Account (6,060 af), net carryover of SWP Table A allocation from 2008 (14,610 af), annual acquisition through the Buena Vista Water/Rosedale Rio-Bravo Water Acquisition Agreement (11,000 af), acquisition of water through the Yuba Accord (800 af), recovery and delivery of some water previously stored in the Semitropic Groundwater Storage Bank (4,950 af), and recycled water (500 af), the total available water supplies for 2009 are nearly 115,000 af. As a result, CLWA and the Purveyors anticipate having more than adequate supplies to meet all water demands in 2009.

In August 2007, a federal court ruled that certain operational changes were required of the SWP in order to protect the endangered Delta smelt. Thereafter, DWR prepared an update to its 2005 SWP Delivery Reliability Report, which is issued biennially to indicate how much SWP water is available during varying hydrologic scenarios (i.e., normal and dry years). The SWP Delivery Reliability Report 2007, issued in August 2008, by DWR, reduced the long-term reliability of SWP supply from 77 percent to a range of 66 to 69 percent. The discussion of SWP supply should be tempered, though, by noting that while the Draft SWP Delivery Reliability Report 2007 represents a reasonable scenario with respect to long-term reliability, recent reductions in supply close the gap between the available supply and demand in the future, thereby making the CLWA service area more subject to shortages in certain dry years. Accordingly, the reduction in SWP supply reinforces the need to continue diligent efforts to conserve potable water and increase the use of recycled water, both to meet the goals in the 2005 UWMP and to maximize utilization of potable water supplies. Additionally, as part of the court order, the US Fish and Wildlife Service (USFWS) was required to issue a Biological Opinion (BO) with mitigation measures to protect the Delta smelt. The USFWS issued the BO in December 2008 and the mitigation requirements may force additional pumping restrictions of the operation of the State Water Project.

CLWA and the retail water Purveyors are working with Los Angeles County and the City of Santa Clarita in preparing a water conservation ordinance and the enforcement mechanisms to aggressively implement water use efficiency in the CLWA service area. In terms of short-term water supply availability, CLWA has determined that, while current operational changes of the SWP are in effect, there are sufficient supplemental water supplies, including SWP water, to augment local groundwater and other water supplies such that overall water supplies will be

sufficient to meet projected 2009 water requirements as reflected herein, without the need for mandatory rationing though the summer of 2009. CLWA, the Purveyors, the City of Santa Clarita and Los Angeles County have reconvened the Santa Clarita Valley Drought Committee to determine, in part, if measures greater than voluntary conservation will be required later in the year if dry conditions persist

In any given year, SWP supplies may be reduced due to dry weather conditions or regulatory factors. During such an occurrence, the remaining water demands are planned to be met by a combination of alternate supplies such as returning water from CLWA's accounts in the Semitropic Groundwater Storage Program and the Rosedale-Rio Bravo Water Banking and Exchange Program, deliveries from CLWA's flexible storage account in Castaic Lake Reservoir, local groundwater pumping, short-term water exchanges, and participation in DWR dry-year water purchase programs in accordance with the 2005 Urban Water Management Plan. The banked excess 2002 and 2003 SWP Table A water in Semitropic represents nearly 51,000 af of recoverable water for drought water supply; as noted above, recovery of 4,950 af of that stored water is planned as part of 2009 imported water supplies. The banked excess SWP Table A water in 2005 and 2006, augmented by banked water acquired through the Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement in 2005, 2006 and 2007, represent a total of 64,900 af of recoverable water for drought water supply from the Rosedale-Rio Bravo Banking and Exchange Program.

Drought periods may affect available water supplies in any single year and for a duration usually not longer than three consecutive years. It is important to note that hydrologic conditions vary from region to region throughout the state. Dry conditions in Northern California affecting SWP supply may not affect local groundwater and other supplies in Southern California, and the reverse situation can also occur (as it did in 2002 and 2003). For this reason, CLWA and the Purveyors have emphasized developing a water supply portfolio that is diverse, especially in dry years. Diversity of supply is considered a key element of reliability, giving Valley water Purveyors the ability to draw on multiple sources of supply to ensure reliable service during dry years, as well as during normal and wet years.

1. Introduction

1.1 Background

For most residents of the Santa Clarita Valley (Valley), domestic water service is provided by four retail water Purveyors: Castaic Lake Water Agency's Santa Clarita Water Division (SCWD), Los Angeles County Waterworks District 36 (LAWWD36), Newhall County Water District (NCWD), and Valencia Water Company (VWC). Together, the Purveyors provide water to nearly 70,000 service connections. Castaic Lake Water Agency (CLWA) contracts for State Water Project water delivered from Castaic Lake where it is treated, filtered, and disinfected at two treatment plants before distribution to the Purveyors. Staff of these entities meet regularly to coordinate the supply of water in the Valley. Their respective service areas are shown in Figure 1-1.

While municipal water supply has grown to become the largest category of water use in the Valley, there remains an agricultural and other small private water demand that is predominately dependent on local groundwater for its water supply. Accordingly, ongoing agricultural water requirements and the use of local groundwater to meet those requirements are considered in analyses of water requirements and supplies such as reported herein. In addition to municipal and agricultural water uses in the Valley, water supply for a small fraction of Valley residents is provided by individual private water supply wells. The locations, construction details, annual pumping and other information about these private wells are not currently available. CLWA has been working with private well owners to receive information about their wells for incorporation in future reports and for planning purposes. Pumping as reported herein includes an estimate of groundwater pumped from private wells; it is expected that this estimate will be refined in the future as more information about the private wells is obtained.

For more than 20 years, CLWA and the Purveyors have reviewed and reported on the availability of water supplies to meet all water requirements in the Valley. Those reports have also addressed local water resources, most notably groundwater, in the region. Past studies have assessed the condition of local groundwater aquifers, their hydrogeologic characteristics, aquifer storage capacity, operational yield and recharge rate, groundwater quality and contamination, and the ongoing conjunctive use of groundwater and imported water resources.

Other efforts have included developing drought contingency plans, coordinating emergency response procedures and implementing Valley-wide conservation programs. In 1985, the

Purveyors prepared the area's first Urban Water Management Plan (UWMP.) Information in the plan was coordinated among CLWA and the Purveyors to provide accurate, comprehensive and consistent water supply and demand information for long term planning purposes. In accordance with the California Urban Water Management Planning Act, the Valley-wide UWMP was most recently updated in 2005 to extend water demand projections through 2030, and to describe the combination of local groundwater, imported water supplies from the State Water Project, local recycled water supplies, and planned other water supplies to meet the existing and projected water demands in the Valley. The 2005 UWMP also describes the reliability of local groundwater resources and the adequacy of groundwater supplies to meet that component of overall water supply; and it also describes the impacts of perchlorate contamination on several municipal water supply wells, and the plans and ongoing work for integrated control of perchlorate migration and full restoration of perchlorate-impacted groundwater supply.

1.2 Purpose and Scope of the Report

The purpose of this report, which is the eleventh in a series of annual water reports that began to describe water supply conditions in 1998, is to provide current information about the available water supplies and demands of the Santa Clarita Valley. CLWA and the Purveyors began preparation of this series of reports in response to a request made by the Los Angeles County Board of Supervisors in 1998. Over the last few years, this series of reports has also served as an annual summary of groundwater conditions in the Valley in fulfillment of the commitment in the Santa Clarita Valley Groundwater Management Plan, adopted in 2003, to regularly report on implementation of that Plan. This report was prepared for Castaic Lake Water Agency, for CLWA's Santa Clarita Water Division, for Los Angeles County Waterworks District 36, for Newhall County Water District, and for Valencia Water Company. It continues a format for providing information regarding water uses and the availability of water supplies on an annual basis. It is intended to be a helpful resource for use by water planners and local land use planning agencies. This report is complemented by the more detailed Urban Water Management Plan for the area, which provides longer-term water supply planning over a 25-year period, and by a number of other technical reports, some of which are specifically referenced herein.

1.3 Santa Clarita Valley Water Purveyors

As introduced above, four retail water Purveyors provide water service to most residents of the Santa Clarita Valley. Brief summary descriptions of those four Purveyors are as follows.

Castaic Lake Water Agency Santa Clarita Water Division has a service area that includes a portion of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Saugus, Canyon Country, and Newhall. Water is supplied from both groundwater and CLWA turnouts to about 28,500 service connections.

Los Angeles County Waterworks District 36 has a service area that encompasses approximately 7,635 acres in the Hasley Canyon area and the unincorporated community of Val Verde. LAWWD 36 has nearly 1,400 service connections. The District has traditionally obtained its full water supply from a connection to the CLWA's Castaic Conduit and continued to do so in 2008.

Newhall County Water District's service area includes portions of the City of Santa Clarita and unincorporated portions of Los Angeles County in the communities of Newhall, Canyon Country, Valencia, and Castaic. NCWD supplies water from both groundwater and CLWA turnouts to approximately 9,500 service connections.

Valencia Water Company's service area serves nearly 30,000 service connections in a portion of the City of Santa Clarita and in the unincorporated communities of Castaic, Newhall, Saugus, Stevenson Ranch, and Valencia. VWC supplies water from both groundwater and CLWA turnouts; VWC also delivers recycled water for a small amount of non-potable use.

1.4 The Upper Santa Clara River Hydrologic Area and East Groundwater Subbasin

The Upper Santa Clara River Hydrologic Area (HA), as defined by the California Department of Water Resources (DWR), is located almost entirely in northwestern Los Angeles County. The area encompasses about 654 square miles comprised of flat valley land (about 6 percent of the total area) and hills and mountains (about 94 percent of the total area) that border the valley area. The mountains include the Santa Susana and San Gabriel Mountains to the south and the Sierra Pelona and Leibre-Sawmill Mountains to the north. Elevations range from about 800 feet on the valley floor to about 6,500 feet in the San Gabriel Mountains. The headwaters of the Santa Clara River are at an elevation of about 3,200 feet at the divide separating this hydrologic area from the Mojave Desert.

The Santa Clara River and its tributaries flow intermittently from Lang Station westward about 35 miles to Blue Cut, just west of the Los Angeles-Ventura County line, where it forms the outlet for the Upper Santa Clara River Hydrologic Area. The principal tributaries of the River in the

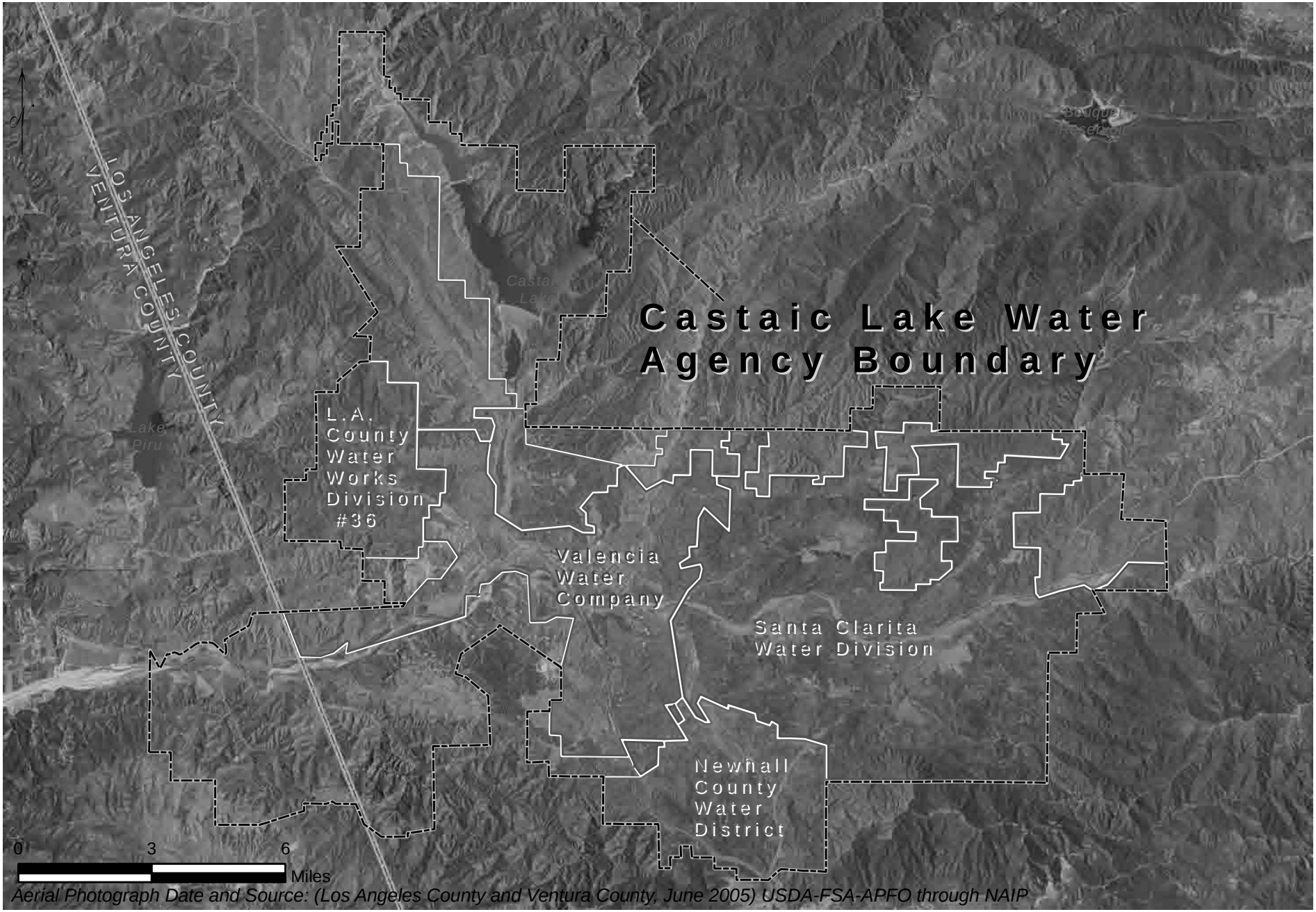
Santa Clarita Valley are Castaic Creek, San Francisquito Creek, Bouquet Creek, and the South Fork of the Santa Clara River. In the Santa Clarita Valley, the Santa Clara River receives treated wastewater discharge from the Saugus and Valencia Water Reclamation Plants, which are operated by the Sanitation Districts of Los Angeles County.

The Santa Clara River Valley East Groundwater Subbasin, beneath the Santa Clarita Valley in the Upper Santa Clara River HA, is the source of essentially all local groundwater used for water supply in the Santa Clarita Valley. Below Blue Cut, the Santa Clara River continues westward through Ventura County to its mouth near Oxnard. Along that route, the River traverses all or parts of six groundwater basins in Ventura County (Piru, Fillmore, Santa Paula, Oxnard Forebay, Oxnard Plain and Mound) as shown in Figure 1-2.

There are two primary precipitation gages in the Santa Clarita Valley, the Newhall-Soledad 32c gage and the Newhall County Water District gage (Figure 1-3). The National Climatic Data Center (NCDC) and Los Angeles County Department of Public Works (LADPW) have maintained records for the Newhall-Soledad 32c gage since 1931. Newhall County Water District has maintained records for the NCWD gage since 1979. The cumulative records from these two gages correlate very closely, with the NCWD gage recording approximately 25 percent more precipitation than the Newhall-Soledad 32c gage. This is likely due to the location of the NCWD gage, which is at the base of the mountains rimming the southern edge of the Santa Clarita Valley.

The Santa Clarita Valley is characterized as having an arid climate. Historically, intermittent periods of less-than-average precipitation have typically been followed by periods of greater-than-average precipitation in a cyclical pattern, with each wetter or drier period typically lasting from one to five years. The longer-term precipitation records for the Newhall-Soledad 32c gage are illustrated in Figure 1-3. Long-term average precipitation at that gage is 17.9 inches (1931-2008). Figure 1-3 also shows the cumulative departure from mean annual precipitation. In general, periods of less-than-average precipitation have been longer and more moderate than periods of greater-than-average precipitation. Recently, the periods from 1971 to 1976, 1984 to 1991 and 1999 to 2003 have been drier than average; the periods from 1977 to 1983 and 1992 to 1996 have been wetter than average. More recently, wet conditions that began in late 2004, continued into early 2005, ultimately resulting in about 37 inches of measured precipitation, or slightly more than 200 percent of long-term average precipitation, in that year. Those significantly wet conditions contributed to substantial groundwater recharge and decreased water demand that year. Subsequently, total precipitation in 2006 and 2007 was slightly to significantly lower, 14 inches and 6 inches, respectively, but water requirements were still close

to those projected in the 2005 UWMP in both of those years, and there were no dramatic changes in groundwater conditions. 2008 was an average year, with 17.9 inches of precipitation. Water demand in 2008 was below that estimated for average conditions in the 2005 UWMP, and below the short-term projection in the 2007 Water Report. Early year precipitation in 2009 has been approximately 5.8 inches, or about 50 percent of the normal January through March period. Combined with other water supply considerations, discussed in Chapter 4, those conditions are expected to result in 2009 water requirements being comparable to water use in 2008.



Aerial Photograph Date and Source: (Los Angeles County and Ventura County, June 2005) USDA-FSA-APFO through NAIP

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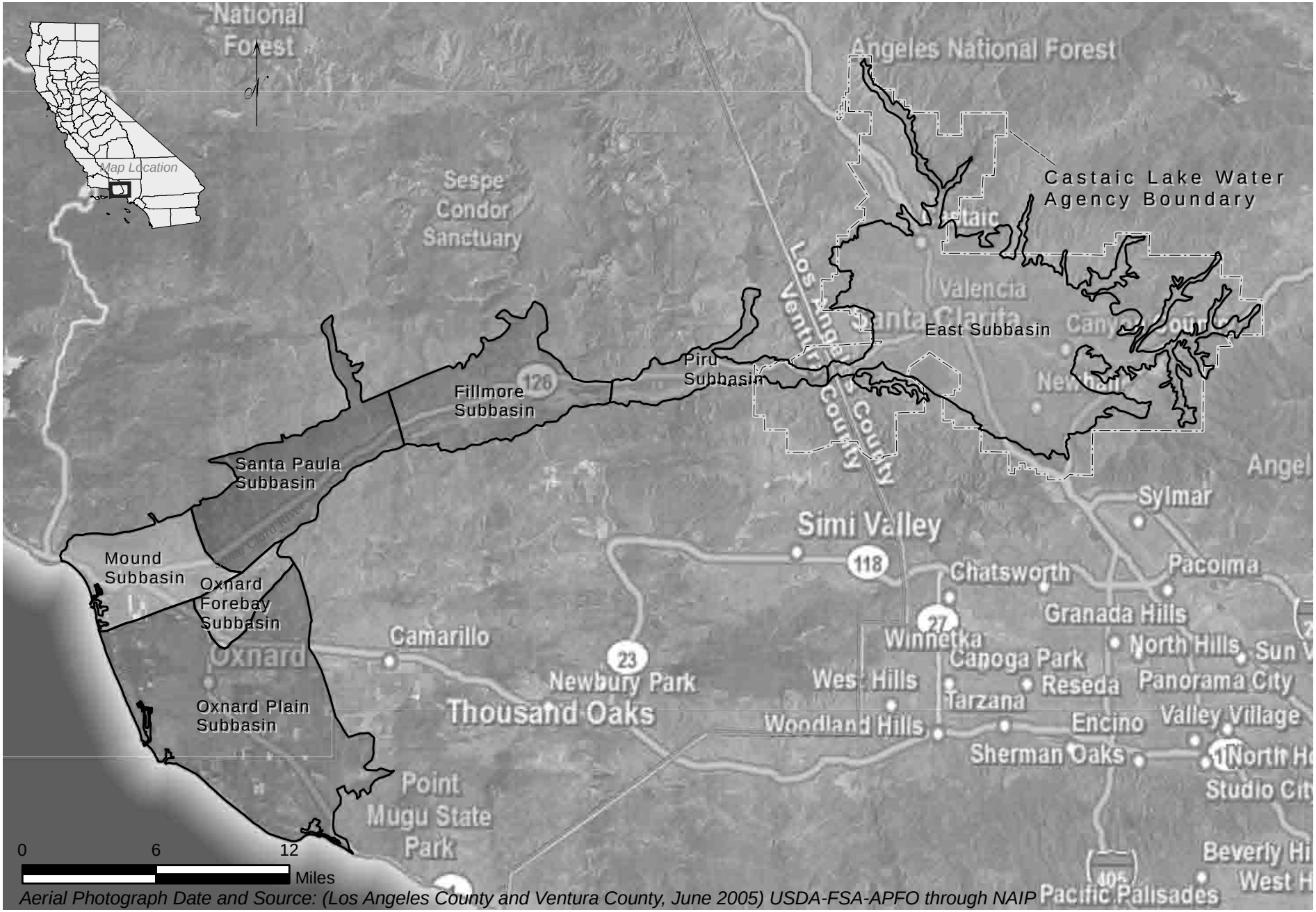
Figure 1-1
CLWA and Purveyor Service Areas



Aerial Photograph Date and Source: (Los Angeles County and Ventura County, June 2005) USDA-FSA-APFO through NAIP

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Figure 1-2
Santa Clara River Groundwater Subbasins

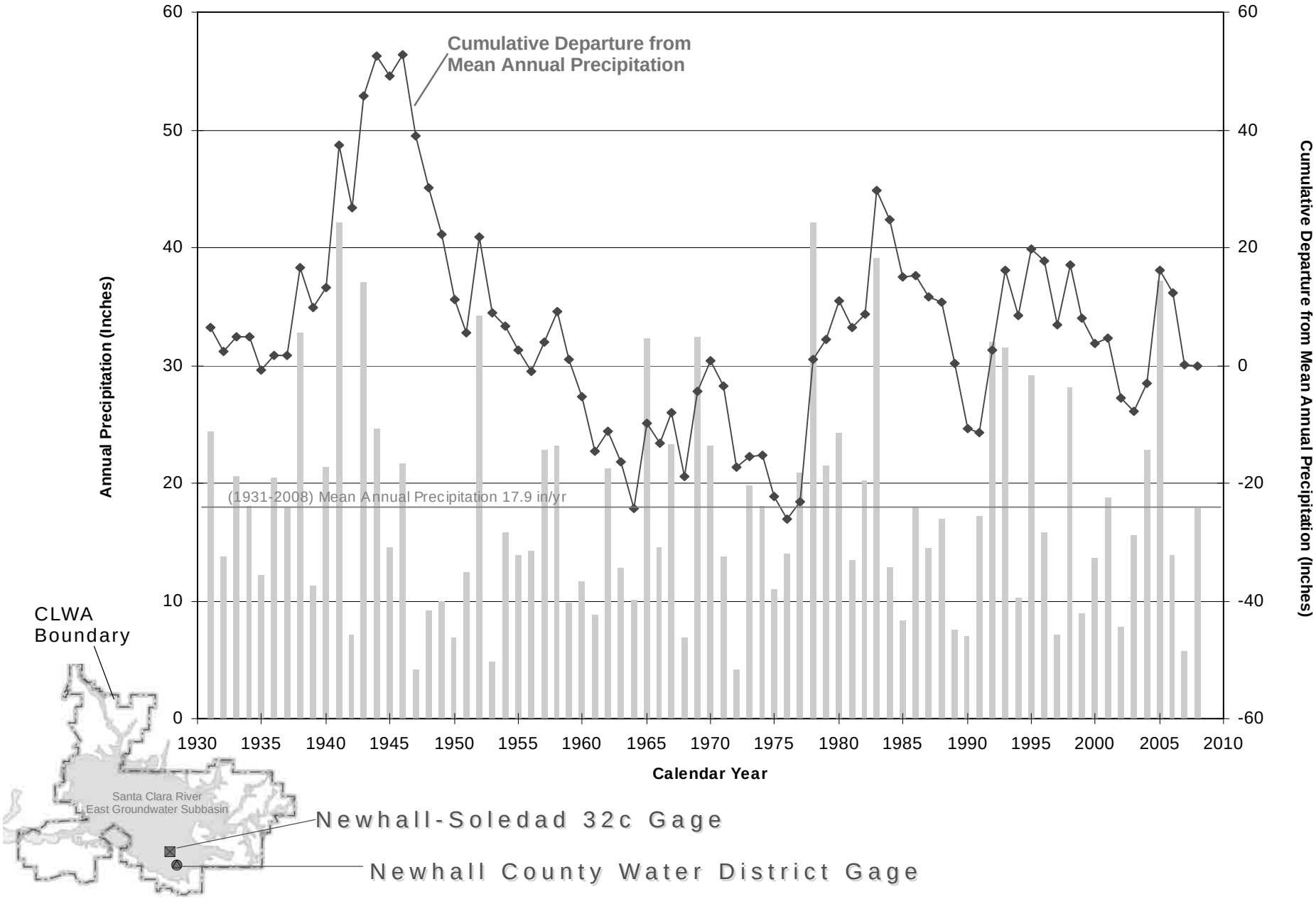

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Figure 1-3
Annual Precipitation and Cumulative Departure from Mean Annual Precipitation at Newhall-Soledad 32c Gage

2. 2008 Water Requirements and Supplies

In 2008, total water use in the Santa Clarita Valley was 90,700 af, a decrease of 1,600 af from the previous year. Of the total water demand, 75,900 af (84 percent) were for municipal use and the remaining 14,800 af (16 percent) were for agricultural and other (miscellaneous) uses, including estimated individual domestic uses. These total water demands were met by a combination of about 48,700 af from local groundwater resources (about 33,900 af for municipal supply and about 14,800 af for agricultural and other uses), about 41,700 af of SWP and other imported water, and about 300 af of recycled water.

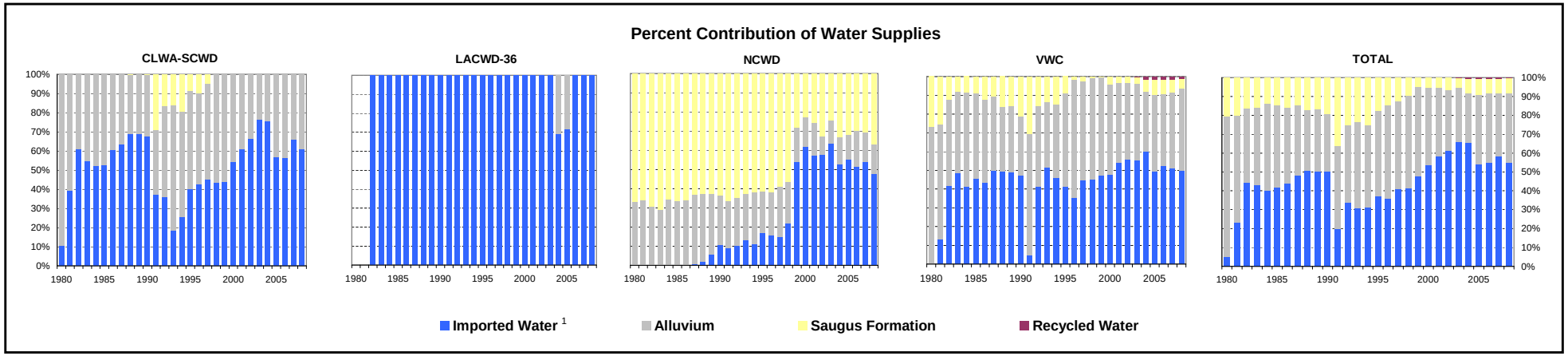
Compared to the previous year, total water demand in the Santa Clarita Valley decreased by almost two percent in 2008. Actual water use in 2008 was less than the short-term projected water requirement presented in last year's Water Report. The decrease in water use in 2008 is attributed to slowed growth in the number of new service connections and continued water conservation awareness. Recently, water usage is less consistently following weather-related trends and more consistently following the recent economic conditions of slowing growth. As reflected by the numbers of service connections in each Purveyor service area, growth in 2008 remained comparable to each of the preceding two years, with additions of about 1,000 new services connections each year, but in notable contrast to the predominant growth rate nearly three times higher from the late 1990's through 2004. In addition, the Purveyors and the local community were aware of the Governor's Alert in June 2008 with regard to drought conditions and potential water supply shortages. The widespread awareness of dry conditions throughout the state and the decrease in local growth are prime factors causing total water demand in 2008 to be slightly less than each of the preceding two years, and well below the demand projections in the 2005 UWMP.

The uses of local and imported water supplies to meet municipal water requirements since 1980, when the importation of SWP water began, are summarized in Table 2-1. Notable with regard to municipal water requirements is that, through 2008, total municipal demand (75,900 af) continues to be below (by about 5,000 af in 2008) the projections in the 2005 UWMP.

Water supply utilization for all agricultural and other non-municipal uses is summarized in Table 2-2. The category of Small Private Domestic, Irrigation and Golf Course Uses in Table 2-2 includes an estimated 500 af of small private pumping from the Alluvium.

Table 2-1
Water Supply Utilization by Municipal Purveyors
(Acre-Feet)

Year	CLWA Santa Clarita Water Division				Los Angeles County Waterworks District 36				Newhall County Water District				Valencia Water Company					All Municipal Purveyors				
	Imported Water [1]	*Alluvium*	*Saugus Formation*	**Total**	*Imported Water* [1]	*Alluvium*	*Saugus Formation*	**Total**	*Imported Water* [1]	*Alluvium*	*Saugus Formation*	**Total**	*Imported Water* [1]	*Alluvium*	*Saugus Formation*	*Recycled Water*	**Total**	*Imported Water* [1]	*Alluvium*	*Saugus Formation*	*Recycled Water*	**Total**
1980	1,125	9,460	0	**10,585**	0	-	-	**0**	0	1,170	2,363	**3,533**	0	5,995	2,206	-	**8,201**	1,125	16,625	4,569	-	**22,319**
1981	4,602	7,109	0	**11,711**	0	-	-	**0**	0	1,350	2,621	**3,971**	1,214	5,597	2,329	-	**9,140**	5,816	14,056	4,950	-	**24,822**
1982	6,454	4,091	0	**10,545**	145	-	-	**145**	0	1,178	2,672	**3,850**	3,060	3,415	897	-	**7,372**	9,659	8,684	3,569	-	**21,912**
1983	5,214	4,269	0	**9,483**	207	-	-	**207**	0	1,147	2,787	**3,934**	3,764	3,387	611	-	**7,762**	9,185	8,803	3,398	-	**21,386**
1984	6,616	6,057	0	**12,673**	240	-	-	**240**	0	1,549	2,955	**4,504**	4,140	4,975	854	-	**9,969**	10,996	12,581	3,809	-	**27,386**
1985	6,910	6,242	0	**13,152**	272	-	-	**272**	0	1,644	3,255	**4,899**	4,641	4,633	885	-	**10,159**	11,823	12,519	4,140	-	**28,482**
1986	8,366	5,409	0	**13,775**	342	-	-	**342**	0	1,842	3,548	**5,390**	5,051	5,167	1,427	-	**11,645**	13,759	12,418	4,975	-	**31,152**
1987	9,712	5,582	0	**15,294**	361	-	-	**361**	22	2,127	3,657	**5,806**	6,190	4,921	1,305	-	**12,416**	16,285	12,630	4,962	-	**33,877**
1988	11,430	5,079	63	**16,572**	434	-	-	**434**	142	2,283	4,041	**6,466**	7,027	4,835	2,300	-	**14,162**	19,033	12,197	6,404	-	**37,634**
1989	12,790	5,785	0	**18,575**	457	-	-	**457**	428	2,367	4,688	**7,483**	7,943	5,826	2,529	-	**16,298**	21,618	13,978	7,217	-	**42,813**
1990	12,480	5,983	40	**18,503**	513	-	-	**513**	796	1,936	4,746	**7,478**	7,824	5,232	3,516	-	**16,572**	21,613	13,151	8,302	-	**43,066**
1991	6,158	5,593	4,781	**16,532**	435	-	-	**435**	675	1,864	4,994	**7,533**	700	9,951	4,642	-	**15,293**	7,968	17,408	14,417	-	**39,793**
1992	6,350	8,288	2,913	**17,551**	421	-	-	**421**	802	1,994	5,160	**7,956**	6,338	6,615	2,385	-	**15,338**	13,911	16,897	10,458	-	**41,266**
1993	3,429	12,016	2,901	**18,346**	465	-	-	**465**	1,075	1,977	5,068	**8,120**	8,424	5,815	2,182	-	**16,421**	13,393	19,808	10,151	-	**43,352**
1994	5,052	10,996	3,863	**19,911**	453	-	-	**453**	906	2,225	5,103	**8,234**	7,978	6,847	2,565	-	**17,390**	14,389	20,068	11,531	-	**45,988**
1995	7,955	10,217	1,726	**19,898**	477	-	-	**477**	1,305	1,675	4,775	**7,755**	7,259	8,698	1,586	-	**17,543**	16,996	20,590	8,087	-	**45,673**
1996	9,385	10,445	2,176	**22,006**	533	-	-	**533**	1,213	1,803	4,871	**7,887**	6,962	12,433	326	-	**19,721**	18,093	24,681	7,373	-	**50,147**
1997	10,120	11,268	1,068	**22,456**	785	-	-	**785**	1,324	2,309	5,168	**8,801**	9,919	11,696	516	-	**22,131**	22,148	25,273	6,752	-	**54,173**
1998	8,893	11,426	0	**20,319**	578	-	-	**578**	1,769	1,761	4,557	**8,087**	9,014	10,711	149	-	**19,874**	20,254	23,898	4,706	-	**48,858**
1999	10,772	13,741	0	**24,513**	654	-	-	**654**	5,050	1,676	2,622	**9,348**	10,806	11,823	106	-	**22,735**	27,282	27,240	2,728	-	**57,250**
2000	13,751	11,529	0	**25,280**	800	-	-	**800**	6,024	1,508	2,186	**9,718**	12,004	12,179	1,007	-	**25,190**	32,579	25,216	3,193	-	**60,988**
2001	15,648	9,896	0	**25,544**	907	-	-	**907**	5,452	1,641	2,432	**9,525**	13,362	10,518	835	-	**24,715**	35,369	22,055	3,267	-	**60,691**
2002	18,921	9,513	0	**28,434**	1,069	-	-	**1,069**	5,986	981	3,395	**10,362**	15,792	11,603	965	-	**28,360**	41,768	22,097	4,360	-	**68,225**
2003	20,668	6,424	0	**27,092**	1,175	-	-	**1,175**	6,572	1,266	2,513	**10,351**	16,004	11,707	1,068	50	**28,829**	44,419	19,397	3,581	50	**67,447**
2004	22,045	7,146	0	**29,191**	854	380	-	**1,234**	5,896	1,582	3,739	**11,217**	18,410	9,862	1,962	420	**30,654**	47,205	18,590	5,701	420	**71,916**
2005	16,513	12,408	0	**28,921**	857	343	-	**1,200**	5,932	1,389	3,435	**10,756**	14,732	12,228	2,513	418	**29,891**	38,034	26,025	5,948	418	**70,425**
2006	17,146	13,156	0	**30,302**	1,289	-	-	**1,289**	5,898	2,149	3,423	**11,470**	16,313	11,884	2,449	419	**31,065**	40,646	27,189	5,872	419	**74,126**
2007	20,669	10,686	0	**31,355**	1,406	-	-	**1,406**	6,478	1,806	3,691	**11,975**	16,779	13,140	2,367	470	**32,756**	45,332	25,632	6,058	470	**77,492**
2008	18,598	11,878	0	**30,476**	1,354	-	-	**1,354**	5,428	1,717	4,195	**11,340**	16,325	14,324	1,770	311	**32,730**	41,705	27,919	5,965	311	**75,900**

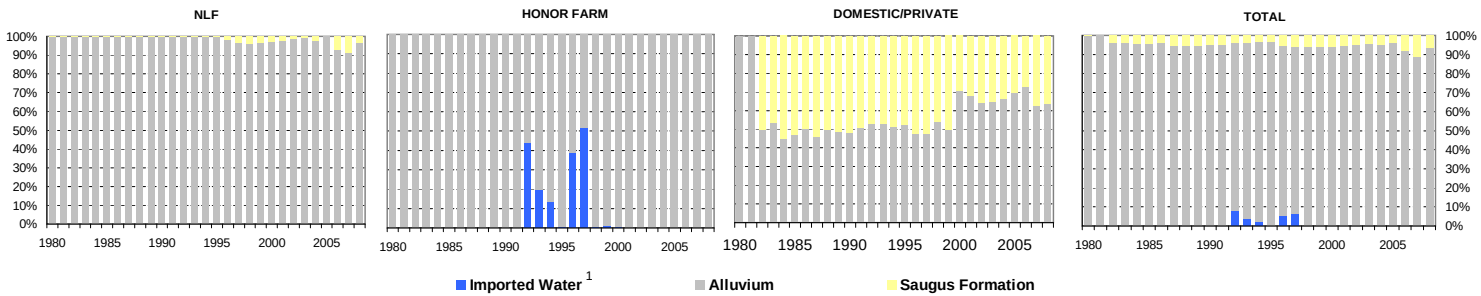


1. Reflects State Water Project through 2006; includes imported water from State Water Project and Buena Vista WSD Agreement beginning in 2007.

Table 2-2
Individual Water Supply Utilization by Agricultural and Other Users
(Acre-Feet)

	Newhall Land and Farming			Los Angeles County Honor Farm			Small Private Domestic, Irrigation and Golf Courses Uses			All Agricultural and Other Users			
Year	*Alluvium*	*Saugus Formation*	**Total**	*Alluvium*	*Imported Water*[1]	**Total**	*Alluvium*[2]	*Saugus Formation*[3]	**Total**	*Imported Water*[1]	*Alluvium*	*Saugus Formation*	**Total**
1980	11,331	20	**11,351**	3,000	0	**3,000**	500	0	**500**	0	14,831	20	**14,851**
1981	13,237	20	**13,257**	3,000	0	**3,000**	500	0	**500**	0	16,737	20	**16,757**
1982	9,684	20	**9,704**	3,000	0	**3,000**	500	501	**1,001**	0	13,184	521	**13,705**
1983	7,983	20	**8,003**	3,000	0	**3,000**	500	434	**934**	0	11,483	454	**11,937**
1984	11,237	20	**11,257**	3,000	0	**3,000**	500	620	**1,120**	0	14,737	640	**15,377**
1985	9,328	20	**9,348**	3,000	0	**3,000**	500	555	**1,055**	0	12,828	575	**13,403**
1986	8,287	20	**8,307**	3,000	0	**3,000**	500	490	**990**	0	11,787	510	**12,297**
1987	6,512	20	**6,532**	3,000	0	**3,000**	500	579	**1,079**	0	10,012	599	**10,611**
1988	5,951	20	**5,971**	3,000	0	**3,000**	500	504	**1,004**	0	9,451	524	**9,975**
1989	6,243	20	**6,263**	3,000	0	**3,000**	500	522	**1,022**	0	9,743	542	**10,285**
1990	8,225	20	**8,245**	2,000	0	**2,000**	500	539	**1,039**	0	10,725	559	**11,284**
1991	7,039	20	**7,059**	2,240	0	**2,240**	500	480	**980**	0	9,779	500	**10,279**
1992	8,938	20	**8,958**	1,256	987	**2,243**	500	446	**946**	987	10,694	466	**12,147**
1993	8,020	20	**8,040**	1,798	443	**2,241**	500	439	**939**	443	10,318	459	**11,220**
1994	10,606	20	**10,626**	1,959	311	**2,270**	500	474	**974**	311	13,065	494	**13,870**
1995	11,174	20	**11,194**	2,200	6	**2,206**	500	453	**953**	6	13,874	473	**14,353**
1996	12,020	266	**12,286**	1,237	780	**2,017**	500	547	**1,047**	780	13,757	813	**15,350**
1997	12,826	445	**13,271**	1,000	1,067	**2,067**	500	548	**1,048**	1,067	14,326	993	**16,386**
1998	10,250	426	**10,676**	2,000	12	**2,012**	500	423	**923**	12	12,750	849	**13,611**
1999	13,824	479	**14,303**	1,842	20	**1,862**	500	509	**1,009**	20	16,166	988	**17,174**
2000	11,857	374	**12,231**	1,644	3	**1,647**	1,220	513	**1,733**	3	14,721	887	**15,611**
2001	12,661	300	**12,961**	1,604	0	**1,604**	1,224	573	**1,797**	0	15,489	873	**16,362**
2002	13,514	211	**13,725**	1,602	0	**1,602**	1,063	589	**1,652**	0	16,179	800	**16,979**
2003	10,999	122	**11,121**	2,273	0	**2,273**	931	504	**1,435**	0	14,203	626	**14,829**
2004	10,991	268	**11,259**	2,725	0	**2,725**	1,071	535	**1,606**	0	14,787	803	**15,590**
2005	8,648	6	**8,654**	2,499	0	**2,499**	1,133	499	**1,632**	0	12,280	505	**12,785**
2006	11,477	934	**12,411**	3,026	0	**3,026**	1,369	506	**1,875**	0	15,872	1,440	**17,312**
2007	9,968	971	**10,939**	2,085	0	**2,085**	1,088	656	**1,744**	0	13,141	1,627	**14,768**
2008	9,191	330	**9,521**	3,506	0	**3,506**	1,100	623	**1,723**	0	13,797	953	**14,750**

Percent Contribution of Water Supplies

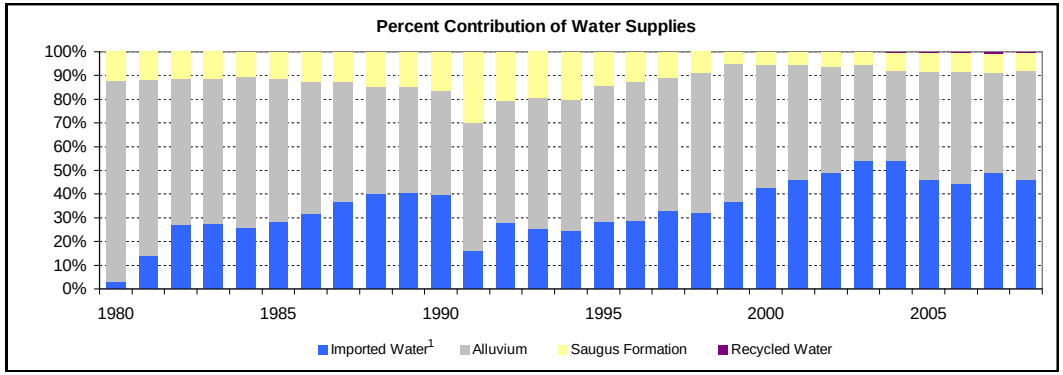


1. *Reflects State Water Project through 2006; includes imported water from State Water Project and Buena Vista WSD Agreement beginning in 2007.*
2. *Robinson Ranch Golf Course irrigation and estimated private pumping.*
3. *Valencia Country Club and Vista Valencia Golf Course irrigation.*

Water supply utilization for all uses in the Santa Clarita Valley, again for the period 1980 to present, is summarized in Table 2-3. The trends in utilization of local groundwater and imported water, complemented by the recent addition of recycled water, are graphically illustrated in Figure 2-1. As can be seen by inspection of Table 2-2 and Figure 2-1, total water use in the Valley has nearly linearly increased since the early 1980's, with some weather-related fluctuations in certain years. The resultant increase in total water demand, since the inception of supplemental SWP importation, has been from about 37,000 acre-feet in 1980 to the mid-80,000 acre-feet per year range through 2000-2005, to a recent leveling off at the low-90,000 acre-feet per year range in 2006 through 2008. As can also be seen by inspection of Table 2-2 and Figure 2-1, most of that increase in water demand has been met with generally increasing importation of SWP water, most recently complemented by other imported water as discussed herein. Since the early 1990's, following a decade of decreased groundwater use during the initial period of SWP importation, total groundwater pumping has fluctuated from year to year, but has remained within a range between about 38,000 and 50,000 acre-feet per year through 2008.

Table 2-3
Total Water Supply Utilization for Municipal, Agricultural and Other Uses
(Acre-Feet)

Year	*Imported Water* [1]	*Alluvium*	*Saugus Formation*	*Recycled Water*	**Total**
1980	1,125	31,456	4,589	-	**37,170**
1981	5,816	30,793	4,970	-	**41,579**
1982	9,659	21,868	4,090	-	**35,617**
1983	9,185	20,286	3,852	-	**33,323**
1984	10,996	27,318	4,449	-	**42,763**
1985	11,823	25,347	4,715	-	**41,885**
1986	13,759	24,205	5,485	-	**43,449**
1987	16,285	22,642	5,561	-	**44,488**
1988	19,033	21,648	6,928	-	**47,609**
1989	21,618	23,721	7,759	-	**53,098**
1990	21,613	23,876	8,861	-	**54,350**
1991	7,968	27,187	14,917	-	**50,072**
1992	14,898	27,591	10,924	-	**53,413**
1993	13,836	30,126	10,610	-	**54,572**
1994	14,700	33,133	12,025	-	**59,858**
1995	17,002	34,464	8,560	-	**60,026**
1996	18,873	38,438	8,186	-	**65,497**
1997	23,215	39,599	7,745	-	**70,559**
1998	20,266	36,648	5,555	-	**62,469**
1999	27,302	43,406	3,716	-	**74,424**
2000	32,582	39,937	4,080	-	**76,599**
2001	35,369	37,544	4,140	-	**77,053**
2002	41,768	38,276	5,160	-	**85,204**
2003	44,419	33,599	4,207	50	**82,276**
2004	47,205	33,377	6,503	420	**87,505**
2005	38,034	38,305	6,453	418	**83,210**
2006	40,646	43,061	7,312	419	**91,438**
2007	45,332	38,773	7,684	470	**92,260**
2008	41,705	41,716	6,918	311	**90,650**



1. Reflects State Water Project through 2006; includes imported water from State Water Project and Buena Vista WSD Agreement beginning in 2007.

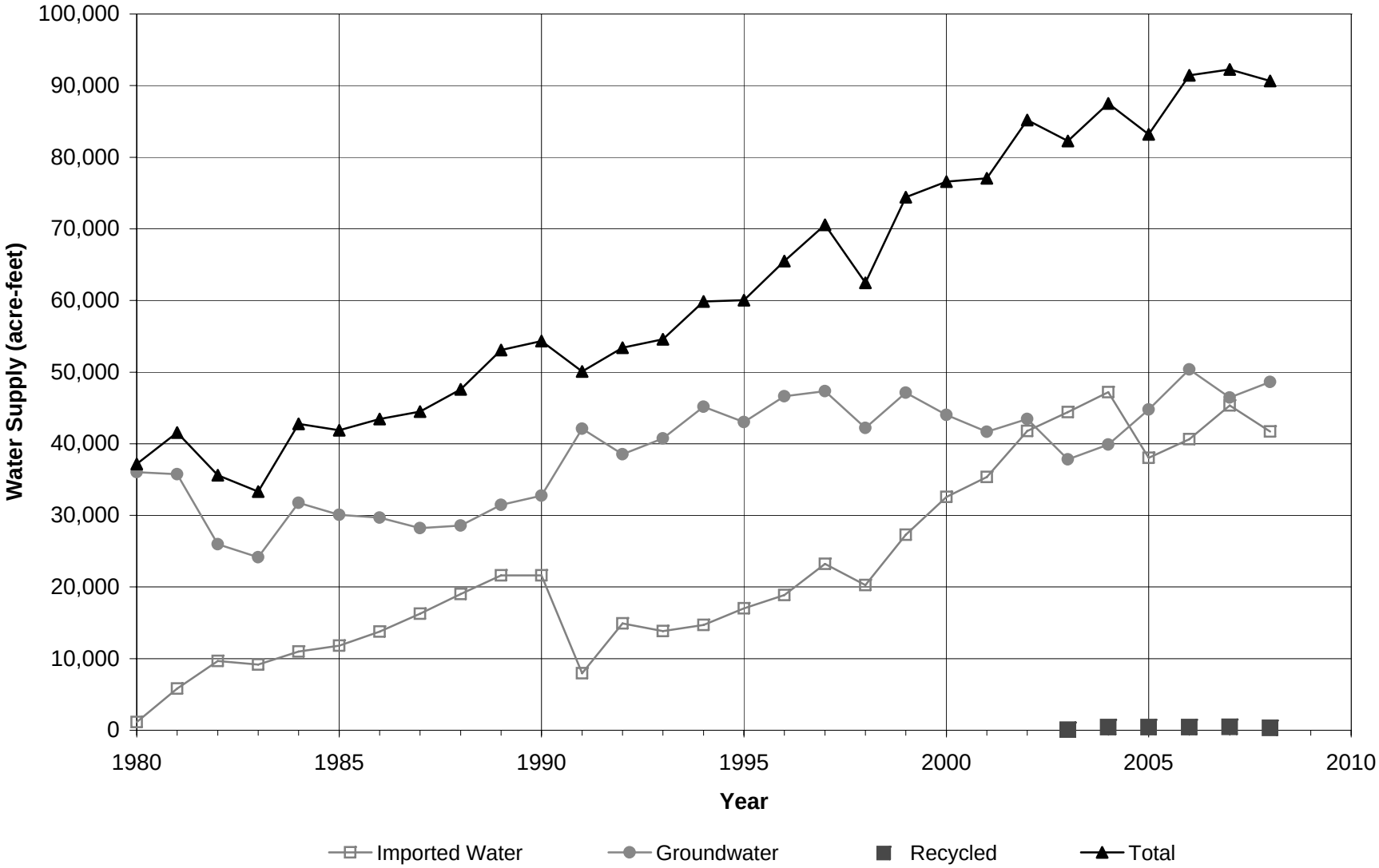


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Figure 2-1
Total Water Supply Utilization
Santa Clarita Valley

3. Water Supplies

Prior to 1980, local groundwater extracted from the Alluvium and the Saugus Formation was the sole source of water supply in the Santa Clarita Valley. Since 1980, local groundwater supplies have been supplemented with imported SWP water supplies, augmented in 2007 by acquisition of additional supplemental water from the Buena Vista Water Storage District. Those water supplies have also been slightly augmented by deliveries from CLWA's recycled water program since 2003. This section describes the groundwater resources of the Santa Clarita Valley, SWP and other imported water supplies, and CLWA's recycled water program.

3.1 Groundwater Basin Yield

The groundwater basin generally beneath the Santa Clarita Valley, identified in the State Department of Water Resources' Bulletin 118 as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin No. 4-4.07), is comprised of two aquifer systems. The Alluvium generally underlies the Santa Clara River and its several tributaries, and the Saugus Formation underlies practically the entire Upper Santa Clara River area. The mapped extent of the Santa Clara River Valley East Subbasin in DWR Bulletin 118 and its relationship to the extent of the CLWA service area are illustrated in Figure 3-1. The subbasin boundary approximately coincides with the outer extent of the Alluvium and Saugus Formation.

A 2001 Update Report on both the Alluvium and Saugus Formation Aquifers (Slade, 2002), which updated analyses and interpretation of hydrogeologic conditions from earlier reports (Slade, 1986 and 1988), included extensive detail on major aspects of the groundwater basin. Notable parts of the Update Report relative to groundwater supply included findings that:

- Analysis of historical groundwater levels and production indicates that there have been no conditions that would be illustrative of groundwater overdraft.

- Utilization of operational yield (as opposed to perennial yield) as a basis for managing groundwater production would be more applicable in this basin to reflect fluctuating utilization of groundwater in conjunction with imported SWP water.

- Operational yield of the Alluvium would typically be 30,000 to 40,000 afy for wet and normal rainfall years, with an expected reduction into the range of 30,000 to 35,000 afy in dry years.

- Operational yield of the Saugus Formation would typically be in the range of 7,500 to 15,000 afy on a long-term basis, with possible short-term increases during dry periods into a range of 15,000 to 25,000 afy, and to 35,000 afy if dry conditions continue.

Following on the 2001 Update Report, the groundwater component of overall water supply in the Valley derives from a groundwater operating plan to meet water requirements (municipal, agricultural, small domestic) while maintaining the basin in a sustainable condition (i.e., no long-term depletion of groundwater or interrelated surface water). This operating plan also addresses groundwater contamination issues in the basin, all consistent with the adopted Groundwater Management Plan. The groundwater operating plan is based on the concept that pumping can vary from year to year to generally rely on increased groundwater use in dry periods and increased recharge during wet periods, and to collectively assure that the groundwater basin is adequately replenished through various wet/dry cycles.

The groundwater operating plan, summarized in Table 3-1, is as follows:

Alluvium – Pumping from the Alluvial Aquifer in a given year is related to local hydrologic conditions in the eastern Santa Clara River watershed. Pumping is expected to typically range between 30,000 and 40,000 afy following normal and above-normal rainfall years. Due to hydrogeologic constraints in the eastern part of the basin, pumping is expected to be typically reduced to between 30,000 and 35,000 afy following locally dry years.

Saugus Formation – Pumping from the Saugus Formation in a given year is related to the availability of other water supplies, particularly from the SWP. During average-year conditions within the SWP system, Saugus pumping is expected to typically range between 7,500 and 15,000 afy. Planned dry-year pumping from the Saugus Formation is expected to range between 15,000 and 25,000 afy during a drought year and can increase to between 21,000 and 25,000 afy if SWP deliveries are reduced for two consecutive years, and between 21,000 and 35,000 afy if SWP deliveries are reduced for three consecutive years. Such high pumping is expected to typically be followed by periods of reduced (average-year) pumping, at rates between 7,500 and 15,000 afy, to further enhance the effectiveness of natural recharge processes that would recover water levels and groundwater storage volumes after the higher pumping during dry years.

Table 3-1
Groundwater Operating Plan for the Santa Clarita Valley

Aquifer	Groundwater Production (af)			
	Normal Years	**Dry Year 1**	**Dry Year 2**	**Dry Year 3**
Alluvium	30,000 to 40,000	30,000 to 35,000	30,000 to 35,000	30,000 to 35,000
Saugus	7,500 to 15,000	15,000 to 25,000	21,000 to 25,000	21,000 to 35,000
Total	**37,500 to 55,000**	**45,000 to 60,000**	**51,000 to 60,000**	**51,000 to 70,000**

In 2004, as part of analyzing the restoration of perchlorate-impacted groundwater supply in the Valley, a numerical groundwater flow model was developed and calibrated for use in analyzing the response of the groundwater basin to long-term operation at the operational yields noted above, with focus on perchlorate extraction and the control of perchlorate migration in the basin. That groundwater flow model was then utilized in 2005 to specifically analyze the sustainability of groundwater supplies in both the Alluvium and the Saugus Formation through a long-term (78 year) hydrologic period that was selected to examine groundwater basin response to variations in pumping in accordance with the operating plan. Resultant projections of groundwater levels, groundwater storage, and surface water flows showed the basin to respond in a long-term sustainable manner, with no chronic depletion of groundwater levels, storage, or stream flows. The analysis of groundwater sustainability was summarized in a Basin Yield Report (CH2M Hill and LSCE, 2005), which included the following findings:

- The groundwater basin has historically been, and continues to be, in good operating condition and not in overdraft conditions, as indicated by historical data.

- The groundwater plan is sustainable over varying hydrologic conditions, because it is feasible to intermittently exceed a long-term average yield for one or more years without creating long-term adverse impacts to the groundwater system and the Santa Clara River.

- The groundwater operating plan for the Alluvium and the Saugus Formation can be used for long-term water supply planning purposes. In particular, although increased pumping from the Saugus Formation during dry periods can be expected to cause short-term declines in groundwater levels, it is not projected to cause permanent declines in groundwater discharges or streamflow. Saugus groundwater levels can be expected to recover to pre-drought conditions when pumping is reduced in subsequent wet to normal years.

- The strategy around which the groundwater operating plan was designed (maximizing the use of Alluvial Aquifer and imported water during years of normal or above-normal availability of these supplies, while limiting the use of the Saugus Formation during these periods, then temporarily increasing Saugus pumping during years when SWP supplies are significantly reduced because of drought conditions) is viable on a long-term basis.

- The historical observations of basin conditions and the model simulations together support the historical and ongoing confidence that groundwater can continue to be a sustainable source of water supply under the groundwater operating plan.

In 2008, partly in preparation for the next UWMP in 2010, and in part because of recent events that can be expected to impact the future reliability of the supplemental water supply from the State Water Project, the Purveyors initiated an updated analysis to further assess groundwater development potential and possible augmentation of the groundwater operating plan. A further consideration in conducting an updated analysis of the basin is that global climate change could alter local rainfall and associated recharge patterns, thus affecting local groundwater supplies, i.e. the yield of the basin. Finally, the Los Angeles County Flood Control District (LACFCD) is planning a number of small flood control projects in the Santa Clarita Valley; estimated amounts of conservation/groundwater recharge potential are being included for each of the individual projects in the overall LACFCD planning, and the Purveyors have interest in whether that potential could appreciably augment the yield of the basin.

In light of the above, the scope of the updated basin yield analysis includes the following:

- Consider the potential increased utilization of groundwater for regular (wet/normal) and/or dry-year water supply, including distribution of the yield by reach of the Santa Clara River alluvium and its various tributaries.

- Consider potential augmentation of basin yield via initiation of artificial groundwater recharge using stormwater runoff in selected areas of the basin.

- Quantitatively or qualitatively, depending on the availability of technical reference material, describe general impacts of climate change on the groundwater basin and its yield.

The results of the updated basin yield analysis are scheduled to be completed in early 2009.

3.2 Alluvium – General

The spatial extent of the aquifers used for groundwater supply in the Valley, the Alluvium and the Saugus Formation, are illustrated in Figure 3-1. Geologic descriptions and hydrogeologic details related to both aquifers are included in several technical reports including Slade (1986, 1988 & 2002), CH2M Hill (2005) and LSCE (2005), and in the 2005 Urban Water Management Plan.

Consistent with the 2001 Update Report (Slade), the 2005 Basin Yield Report (CH2M Hill and LSCE), and the 2005 UWMP, the management practice of the Purveyors continues to be to rely on groundwater from the Alluvium for part of the overall municipal water supply, whereby total pumping from the Alluvium (by municipal, agricultural, and small private pumpers) is in accordance with the groundwater operating plan, 30,000 to 40,000 afy following wet and normal years, with possible reduction to 30,000 to 35,000 afy following dry years. Such operation will maximize use of the Alluvium because of the aquifer's ability to store and produce good quality water on a sustainable basis, and because the Alluvium is capable of rapid recovery of groundwater storage in wet periods. As with many groundwater basins, it is possible to intermittently exceed a long-term average yield for one or more years without long-term adverse effects. Higher pumping for short periods may temporarily lower groundwater storage and related water levels, as has been the case in the Alluvium several times since the 1930's. However, subsequent decreases in pumping limit the amount of water level decline. Normal to wet-period recharge results in a rapid return of groundwater levels to historic highs. Historical groundwater data collected from the Alluvium over numerous hydrologic cycles continue to provide assurance that groundwater elevations, if locally lowered during dry periods, recover in subsequent average or wet years. Such water level response to rainfall is a significant characteristic of permeable, porous, alluvial aquifer systems that occur within large watersheds. In light of these historical observations, complemented by the long-term sustainability analysis using the numerical groundwater flow model, there is ongoing confidence that groundwater will continue to be a sustainable source of water supply at the rates of pumping described in the Basin Yield Report, now incorporated in the 2005 UWMP.

Long-term adverse impacts to the Alluvium could occur if the amount of water extracted from the aquifer were to exceed the amount of water that recharges the aquifer over an extended period. However, the quantity and quality of water in the Alluvium and all significant pumping from the Alluvium are routinely monitored, and no long-term adverse impacts have ever been evident. Ultimately, the Purveyors have identified cooperative measures to be taken, if needed, to ensure sustained use of the aquifer. Such measures include but are not limited to the continuation of conjunctive use of SWP and other imported surface water with local groundwater, artificial recharge of the aquifer with local runoff or other surface water supplies,

financial incentives discouraging extractions above a selected limit, expanded use of other water supplies such as recycled water, and expanded implementation of demand-side management, including conservation.

3.2.1 Alluvium – Historical and Current Conditions

Total pumping from the Alluvium in 2008 was about 41,750 af, an increase of 2,950 af from the preceding year. Total Alluvium pumping was slightly above the groundwater operating plan range. Of the total Alluvial pumping in 2008, about 27,950 af (67 percent) was for municipal water supply, and the balance, about 13,800 af (33 percent), was for agriculture and other smaller uses, including individual domestic uses. In a longer-term context, there has been a change in municipal/agricultural pumping distribution since SWP deliveries began in 1980, toward a higher fraction for municipal water supply (from about 50 percent to more than 65 percent of Alluvial pumpage), which reflects the general land use changes in the area. Ultimately, on a long-term average basis since the beginning of imported water deliveries from the SWP, total Alluvial pumping has been about 32,000 afy, which is at the lower end of the range of operational yield of the Alluvium. That average has been higher over the last decade, about 38,800 afy, which remains within the range of operational yield of the Alluvium. The overall historic record of Alluvial pumping is illustrated in Figure 3-2.

Groundwater levels in various parts of the basin have historically exhibited different responses to both pumpage and climatic fluctuations. During the last 20 to 30 years, depending on location, Alluvial groundwater levels have remained nearly constant (generally toward the western end of the basin), or have fluctuated from near the ground surface when the basin is full, to as much as 100 feet lower during intermittent dry periods of reduced recharge (generally toward the eastern end of the basin). For illustration of the various groundwater level conditions in the basin, the Alluvial wells have been grouped into areas with similar groundwater level patterns, as shown in Figure 3-3. The groundwater level records have been organized into hydrograph form (groundwater elevation vs. time) as illustrated in Figures 3-4 and 3-5. Also shown on these plots is an annual marker indicating whether the year had a below average amount of rainfall. The wells shown on these plots are representative of the areas, showing the range of values (highest to lowest elevation) through the area, and containing a sufficiently long-term record to illustrate trends over time.

Situated along the eastern upstream end of the Santa Clara River Channel, the ‘Mint Canyon’ area, located at the far eastern end of the groundwater basin, and the nearby ‘Above Saugus WRP’ areas generally exhibit similar groundwater level responses (Figure 3-4) to hydrologic and pumping conditions. As shown in Figure 3-6, the Purveyors decreased total Alluvial pumping

from the ‘Mint Canyon’ area steadily from 2000 through 2003, and correspondingly increased pumping in the ‘Below Saugus WRP’, and ‘Below Valencia WRP’ areas. In spite of a continued period of below-average precipitation from 1999 to 2003, that progressive decrease in pumping resulted in a cessation of groundwater level decline in the ‘Mint Canyon Area’. Subsequent wet conditions in late 2004, continuing into 2005, resulted in full recovery of groundwater storage. With such high groundwater levels, pumping in the ‘Mint Canyon’ area was increased in 2005 and 2006, with no significant change in groundwater levels in 2005 and a slight decrease in 2006. Partly in response to decreased pumping in ‘Mint Canyon’ and ‘Above Saugus WRP’ areas in 2007 and 2008, groundwater levels slowed their decrease, leveled off, or increased in late 2008 with the onset of seasonal precipitation. These parts of the Valley have historically experienced a number of alternating wet and dry hydrologic conditions (Figure 3-4) during which groundwater level declines have been followed by returns to high or mid-range historic levels. This trend has continued over the last 3 years where average hydrologic conditions in 2008 followed two dry years, and groundwater levels remain within mid-range levels.

In the ‘Bouquet Canyon’ area, pumping has remained relatively constant for the last ten years, and water levels have fluctuated with consecutive wet or dry years. During and since the most recent wet conditions of 2004 and 2005, water levels returned to within historic mid-range levels. This groundwater level response to wet/dry years and pumping is typical for these areas of the basin. When water levels are low, well yields and pumping capacities in these areas can be impacted. The affected Purveyors typically respond by increasing use of Saugus Formation and imported (SWP) supplies, as shown in Table 2-3. The Purveyors also shift a fraction of the Alluvial pumping that would normally be supplied by these eastern areas to areas further west, where well yields and pumping capacities remain fairly constant because of smaller groundwater level fluctuations.

In the western parts and lower elevations of the Alluvium, groundwater levels respond to pumping and precipitation in a similar manner, but to an attenuated or limited extent of those situated in the eastern, higher elevations areas. As shown in the western group of hydrographs in Figure 3-5, groundwater level fluctuations become more subtle moving westward and lower in the Valley. The ‘Below Saugus WRP’ area, along the Santa Clara River immediately downstream of the Saugus Water Reclamation Plant, and the ‘San Francisquito Canyon’ area generally exhibit similar groundwater level trends. In this middle part of the basin, historical groundwater levels were lower in the 1950's and 60's than current levels. Groundwater levels in this area notably recovered as pumping declined through the 1960's and 1970's. They have subsequently sustained generally high levels for much of the last 30 years, with three dry-period exceptions: mid-1970's, late 1980's to early 1990's, and the late 1990’s to early 2000’s. Recoveries to previous high groundwater levels followed both of the short dry-period declines in

the 1970's and 1990's. More recently, groundwater levels recovered significantly in both areas, to historic highs, following a wetter-than-average year in 2004 and significantly wet 2005. Since 2005, pumping has been increasing in the 'Below Saugus WRP' area, while 'San Francisquito Canyon' area pumping approximately doubled in 2005, but has since progressively declined. Coupled with the dry 2006-2007 period, water levels had seen varying degrees of decline until they leveled off with the onset of a 'near-normal' amount of seasonal precipitation in 2008. By the end of 2008, water levels remained in mid-range to high historical range.

The 'Castaic Valley' area is located along Castaic Creek below Castaic Lake. Below that and along the Santa Clara River, downstream of the Valencia Water Reclamation Plant, is the 'Below Valencia WRP' area, where discharges of treated effluent from the Valencia WRP to the Santa Clara River contribute to groundwater recharge. In the 'Castaic Valley' area, groundwater levels continue to remain fairly constant, with slight responses to climatic and other fluctuations, since the 1950's (Figure 3-5). Small changes in groundwater levels in 2007 and 2008 were consistent with other short-term historical fluctuations. The long-term, generally constant trend remained through 2008. The 'Below Valencia WRP' area groundwater levels exhibit slight, if any, response to climatic fluctuations, and have remained fairly constant since the 1950's despite, over the last 20 years, a notable increase in pumping that continued through 2008 in that area (Figure 3-5 and 3-6).

In summary, depending on the period of available data, all the history of groundwater levels in the Alluvium shows the same general picture: recent (last 30 years) groundwater levels have exhibited historic highs; in some locations, there are intermittent dry-period declines (resulting from use of some groundwater from storage) followed by wet-period recoveries (and associated refilling of storage space). On a long-term basis, whether over the last 28 years since importation of supplemental SWP water, or over the last 40 to 50 years (since the 1950's - 60's), the Alluvium shows no signs of water level-related overdraft, i.e., no trend toward decreasing water levels and storage. Consequently, pumping from the Alluvium has been and continues to be sustainable, well within the operational yield of that aquifer on a long-term average basis, and also within the operating yield in almost every individual year.

3.3 Saugus Formation – General

Saugus wells operated by the Purveyors are located in the southern portion of the basin south of the Santa Clara River (Figure 3-7). Consistent with the 2001 Update Report (Slade) and the 2005 Basin Yield Report (CH2M Hill and LSCE), the Purveyors utilize the Saugus in accordance with the groundwater operating plan, in the range of 7,500 to 15,000 afy in average/normal years, with planned dry-year pumping of 15,000 to 35,000 afy for one to three

consecutive dry years, when shortages to CLWA's SWP water supplies could occur. Such high pumping would be followed by periods of lower pumping (7,500 to 15,000 afy in average/normal years as noted above) in order to allow recharge to recover water levels and storage in the Saugus. Maintaining the substantial volume of water in the Saugus Formation is an important strategy to help maintain water supplies in the Santa Clarita Valley during drought periods.

3.3.1 Saugus Formation – Historical and Current Conditions

Total pumping from the Saugus in 2008 was about 6,950 af, or about 750 af less than in the preceding year. Of the total Saugus pumping in 2008, most (about 5,950 af) was for municipal water supply, and the balance (1,000 af) was for agricultural and other irrigation uses. Historically, groundwater pumping from the Saugus peaked in the early 1990's and then steadily declined through the remainder of that decade. Since then, Saugus pumping had been in the range of about 4,000 to 6,500 afy, with the increase to almost 7,700 af in 2007. Over the last five years, the municipal use of Saugus water has been relatively unchanged; almost all of the relatively small fluctuations from year to year have been related to non-municipal usage. On a long-term average basis since the importation of SWP water, total pumping from the Saugus Formation has ranged between a low of about 3,700 afy (in 1999) and a high of nearly 15,000 afy (in 1991); average pumping from 1980 to present has been about 6,800 afy. These pumping rates remain well within, and generally at the lower end of the range of operational yield of the Saugus Formation. The overall historic record of Saugus pumping is illustrated in Figure 3-8.

Unlike the Alluvium, which has an abundance of wells with extensive water level records, the water level data for the Saugus Formation are limited by both the distribution of the wells in that Formation and the periods of water level records. The wells that do have water level records extending back to the mid-1960's indicate that groundwater levels in the Saugus Formation were highest in the mid-1980's and are currently higher than they were in the mid-1960's (Figure 3-9). Based on these data, there is no evidence of any historic or recent trend toward permanent water level or storage decline. There continue to be seasonal fluctuations in groundwater levels but the prevalent longer-term trend is one of general stability.

Consistent with the 2001 Update Report (Slade), the 2005 Basin Yield Report (CH2M Hill and LSCE), and the 2005 UWMP, the Purveyors continue to maintain groundwater storage and associated water levels in the Saugus Formation so that supply is available during drought periods, when Alluvial pumping might be reduced and/or SWP supplies also decreased. The period of increased pumping during the early 1990's is a good example of this management strategy. Most notably, in 1991, when SWP deliveries were substantially reduced, increased

pumping from the Saugus made up almost half of the decrease in SWP deliveries. The increased Saugus pumping over several consecutive dry years (1991-1994) resulted in short-term declining groundwater levels, reflecting the use of water from storage. However, groundwater levels subsequently recovered when pumping declined, reflecting recovery of groundwater storage in the Saugus Formation.

3.4 Imported Water

CLWA obtains water supplies from the State Water Project (SWP), which is owned and operated by the California Department of Water Resources (DWR). CLWA is one of 29 contractors holding long-term SWP contracts with DWR. SWP water originates as rainfall and snowmelt in northern and central California. Runoff is stored in Lake Oroville, which is the project's largest storage facility. The water is then released from Lake Oroville down the Feather River to the Sacramento River and through the Sacramento-San Joaquin Delta. Water is diverted from the Delta into the Clifton Court Forebay, and then pumped into the 444-mile long California Aqueduct. SWP water is temporarily stored in San Luis Reservoir, which is jointly operated by DWR and the U.S. Bureau of Reclamation. Prior to delivery to CLWA, SWP supplies are stored in Castaic Lake, located at the end of the West Branch of the California Aqueduct.

CLWA's service area covers approximately 195 square miles (124,800 acres), including the City of Santa Clarita and surrounding unincorporated communities. CLWA obtains SWP water from a SWP terminal reservoir, Castaic Lake. The water is treated, filtered and disinfected at CLWA's Earl Schmidt Filtration Plant and Rio Vista Water Treatment Plant, which have a combined treatment capacity of 86 million gallons per day. Treated water is delivered from the treatment plants by gravity flow to each of the four Purveyors through a distribution network of pipelines and turnouts. At present, CLWA delivers water to the four Purveyors through 25 potable turnouts as schematically illustrated in Figure 3-10.

In 2008, CLWA fulfilled the following major accomplishments in order to enhance, preserve, and strengthen the quality and reliability of existing and future supplies:

- continued participation in a long-term water banking programs with Rosedale-Rio Bravo Water Storage District and the Semitropic Water Storage District, although water was not withdrawn despite a second year of drought,
- continued implementation of the AB 3030 Groundwater Management Plan,
- continued implementation of the water conservation Best Management Practices,
- reconvened the Santa Clarita Valley Drought Committee,

- continued construction of treatment and distribution facilities for restoration of municipal well capacity impacted by perchlorate contamination,
- continued cooperative effort with the U.S. Army Corps of Engineers for characterization studies of the former Whittaker-Bermite site and in a task force effort with the City of Santa Clarita, local legislators, and state agencies to effect the cleanup and remediation of all aspects of the former Whittaker-Bermite site, including perchlorate contamination of local groundwater,
- completed final design of the expansion of the Rio Vista Water Treatment Plant from 30 mgd to 60 mgd, and
- continued recycled water service.

3.4.1 State Water Project Table A Supplies

Each SWP contractor has a specified water supply amount shown in Table A of its contract that currently totals approximately 4.1 million af. The term of the CLWA contract is through 2038 and is renewable after that year. Although the SWP has not been fully completed, the SWP can deliver all 4.1 million af of Table A Amounts during certain wet years.

CLWA has a contractual Table A Amount of 95,200 af per year of water from SWP.[1] On November 21, 2007, the initial allocation for 2008 was announced as 25 percent; the allocation was increased to 35 percent on January 31, 2008; the allocation was not subsequently changed. CLWA's final allocation of Table A Amount for 2008 was thus 35 percent, or 33,320 af.

In addition to its Table A Amount, CLWA has access to 4,684 af of "flexible storage" in Castaic Lake. In 2005, CLWA negotiated an agreement with the Ventura County SWP contractors to allow CLWA to utilize their flexible storage account of 1,376 af. In combination, this provides

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[1] Of CLWA's 95,200 af annual Table A Amount, 41,000 afy was permanently transferred to CLWA in 1999 by Wheeler Ridge-Maricopa Water Storage District, a member unit of the Kern County Water Agency. CLWA's EIR prepared in connection with the 41,000 afy water transfer was challenged in Friends of the Santa Clara River v. Castaic Lake Water Agency (Los Angeles County Superior Court) ("Friends"). On appeal, the Court of Appeal held that since the 41,000 afy EIR tiered off the Monterey Agreement EIR that was later decertified, CLWA would also have to decertify its EIR as well and prepare a revised EIR. CLWA was not prevented from using any water that is part of the 41,000 afy transfer. Under the jurisdiction of the Los Angeles County Superior Court, CLWA prepared and circulated a revised Draft EIR for the transfer. CLWA approved the revised EIR in late 2004 ("2004 EIR") and lodged the EIR with the Los Angeles Superior Court. Thereafter, the case was dismissed with prejudice (i.e., permanently). .

In January 2005, two new challenges to CLWA's 2004 EIR were filed in the Ventura County Superior Court by the Planning and Conservation League ("PCL") and by the California Water Impact Network ("CWIN"); these cases were consolidated and transferred to Los Angeles County Superior Court, Planning and Conservation League v. Castaic Lake Water Agency (Los Angeles County Superior Court,) ("PCL Action"). In May 2007, a final Statement of Decision was filed by the trial court in the PCL Action. It included a determination that the transfer is valid and cannot be terminated or unwound. The trial court did find one defect in the 2004 EIR, requiring Judgment to be entered against CLWA. The defect, however, did not relate to the environmental conclusions reached in the 2004 EIR. CLWA has been ordered to set aside its certification of the 2004 EIR, correct the defect and report back to the Court. The Writ issued by the Court as part of the Judgment specifically states that the Judgment does not call for CLWA to set aside the transfer. In July 2007, Petitioners filed a Partial Notice of Appeal and CLWA subsequently filed a Notice of Cross Appeal. The matter is currently pending before the Second District Court of Appeal, Division Four. All briefing is completed and oral argument is expected to be set by the appellate court in the spring of 2009.

total flexible storage of 6,060 af, which is maintained in Castaic Lake for use in a future dry period or an emergency. This amount was available in 2008, but was not utilized due to other available supplies.

Also in 2005, CLWA completed an agreement to participate in a long-term water banking program with Rosedale-Rio Bravo Water Storage District in Kern County. CLWA delivered 20,000 af of its excess Table A water into storage in both 2005 and 2006. CLWA delivered another 8,200 af into that storage account in 2007 but did not contribute to or withdraw SWP water from the bank in 2008. This long-term program will allow the storage of 100,000 af at any one time, and will provide significant dry year reliability for the Santa Clarita Valley.

As delineated in Table 3-2, with the 35 percent Table A allocation and other imported water supplies, including 12,146 af of carryover from 2007, CLWA had total available supply of 57,488 af in 2008, most of which was delivered to the Purveyors (41,705 af), leaving 14,610 af of Table A Amount available for carryover to 2009.

3.4.2 Other Imported Water Supplies

In early 2007, CLWA finalized a Water Acquisition Agreement with the Buena Vista Water Storage District (Buena Vista) and the Rosedale-Rio Bravo Water Storage District (Rosedale-Rio Bravo) in Kern County. Under this Program, Buena Vista's high flow Kern River entitlements (and other acquired waters that may become available) are captured and recharged within Rosedale-Rio Bravo's service area on an ongoing basis.[2] CLWA will receive 11,000 af of these supplies annually through either exchange of Buena Vista's and Rosedale-Rio Bravo's SWP supplies or through direct delivery of water to the California Aqueduct via the Cross Valley Canal.

In 2008, CLWA entered into the Yuba Accord Agreement, which allows for the purchase of water from the Yuba County Water Agency through the Department of Water Resources to 21 State Water Project contractors (including CLWA) and the San Luis and Delta-Mendota Water Authority. CLWA may purchase up to approximately 1,000 af per year and in 2008 received 1,022 af as part of the Agreement.

3.4.3 Imported Water Supply Reliability

[2] A CEQA action was filed by California Water Impact Network (CWIN) in November 2006 challenging the adequacy of CLWA's EIR on the acquisition of 11,000 af from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District. In November 2007, a Los Angeles Superior Court ruled in favor of CLWA on all points. In January 2008, CWIN filed a notice of appeal. The case was argued before the appellate court March 2, 2009. On April 20, 2009, the Court of Appeal issued an opinion affirming the Superior Court's judgement.

Table 3-2
2008 CLWA Imported Water Supply and Disposition
(acre-feet)

Supply		
Net 2007 SWP Carryover to 2008 [1]		12,146
Buena Vista/Rosedale Rio-Bravo		11,000
Yuba County Accord Water		1,022
2008 Final SWP Allocation [2]		33,320
Total 2008 Imported Water Supply		**57,488**
Disposition		
Purveyor Deliveries (Total)		41,705
CLWA SCWD	*18,598*	
Valencia Water Company	*16,325*	
Newhall County Water District	*5,428*	
Los Angeles County WWD 36	*1,354*	
CLWA/DWR/Purveyor Metering[3]		1,173
Rosedale – Rio Bravo Water Banking and Exchange Program		0
2008 Table A Carryover to 2009[4]		14,610
Total 2008 Imported Water Disposition		**57,488**

1. Amount used by CLWA, based on final DWR delivery accounting; total 2008 carryover was 12,146 af.

2. Final 2008 allocation was 35% of contractual Table A amount of 95,200 acre-feet, which was an increase from the initial allocation:

Initial allocation, November 21, 2007	25%
Final allocation, January 31, 2008	35%

3. Reflects meter reading differences.

4. Total 2008 Table A carryover to 2009.

The Department of Water Resources issued its Draft State Water Project Delivery Reliability Report 2007 in August 2008. This report is intended to assist SWP contractors in assessing the adequacy of the SWP component of their overall supplies. The report is updated with new information and calculations of delivery reliability every two years. The Draft addresses the effect of interim remedies ordered by a federal court to protect the endangered Delta smelt under the federal Endangered Species Act and potential climate change. The court order resulted in the preparation of a new Biological Opinion (BO) requiring DWR to implement mitigation requirements; however, impacts on SWP water supply reliability are uncertain at this point and may require yet another revision in the Reliability Report in the future. The current Reliability Report, which has not been revised for the specific impacts of the BO, projects long-term reliability of 66 to 69 percent during normal year hydrology. In 2007, CLWA staff assessed the impact of the current Reliability Report on the CLWA reliability analysis contained in the Agency's 2005 UWMP. It concluded that current and anticipated supplies are available to meet anticipated water supply needs. When a revision to the Reliability Report is completed, or if DWR updates the reliability figures in the existing report, CLWA will adjust its current reliability assessment as appropriate.

Groundwater banking and conjunctive use offer significant opportunities to improve water supply reliability for CLWA. Groundwater banking is the process of storing available supplies of water in groundwater basins during wet years or when supplemental water is otherwise available. During dry periods, or when imported water supply availability is reduced, banked water can be recovered from groundwater storage to replace, or firm up, the imported water supply deliveries.

As described herein, CLWA has entered into two groundwater banking programs and now has, in aggregate, over 115,000 acre-feet of recoverable water in banked groundwater storage outside the local groundwater basin. The first component of CLWA's overall groundwater banking program is the result of two 10-year agreements between CLWA and Semitropic Water Storage District whereby, over the terms of the two agreements, CLWA can withdraw up to 50,870 af of SWP Table A water that it stored in Semitropic to meet Valley demands when needed in dry years. The second component of the program, the long-term Rosedale-Rio Bravo Water Banking and Exchange Program in Kern County, has a recoverable total of 64,900 acre-feet in storage (i.e., 75,200 af originally banked less contractual losses).

Conjunctive use is the purposeful integrated use of surface water and groundwater supplies to maximize water supply from the two sources. CLWA and the Purveyors have been conjunctively utilizing local groundwater and imported surface water since the initial importation of SWP water in 1980. The groundwater banking programs described above allow CLWA to

firm up the imported water component of conjunctive use in the Valley by storing surplus SWP and other water, in wet years, in groundwater basins outside the Valley. This allows recovery and importation of that water as needed in dry years to maintain a greater overall amount of imported surface water to be used conjunctively with local groundwater, further supporting the sustainable use of local groundwater at the rates in the groundwater operating plan.

3.5 Water Quality – General

Water delivered by the Purveyors consistently meets drinking water standards set by the Environmental Protection Agency (EPA) and the California Department of Public Health (DPH). An annual Water Quality Report is provided to all Santa Clarita Valley residents who receive water from one of the four water retailers. There is detailed information in that report about the results of quality testing of the groundwater and treated SWP water supplied to the residents of the Santa Clarita Valley during 2008. Several constituents of particular local interest are discussed in more detail below.

Total Trihalomethanes

In 2002, the United States Environmental Protection Agency implemented the new Disinfectants and Disinfection Byproducts Rule. In part, this rule established a new MCL of 80 µg/l (based on an annual running average) for Total Trihalomethanes (TTHM). TTHMs are byproducts created when chlorine is used as a means for disinfection. CLWA and the Purveyors implemented an alternative method of disinfection, chloramination, in 2005 to maintain compliance with the new rule and future regulations relating to disinfection byproducts. TTHM concentrations have remained significantly below the MCL since implementation of alternative disinfection.

Perchlorate

Perchlorate has been a water quality concern in the Valley since 1997 when it was originally detected in four wells operated by the Purveyors in the eastern part of the Saugus Formation, near the former Whittaker-Bermite facility. In late 2002, perchlorate was detected in a fifth municipal well, in this case an Alluvial well (SCWD's Stadium Well) also located near the former Whittaker-Bermite site. In early 2005, perchlorate was detected in a second Alluvial well (VWC's Well Q2) near the former Whittaker-Bermite site. In 2006, a very low concentration of perchlorate was detected in another Saugus well (NCWD's Well NC-13), near one of the originally impacted wells. However, that detection has been interpreted to not be an indication of continued perchlorate migration in a westerly direction. Subsequent monitoring well installation has been completed and a focused study of the Saugus Formation have ultimately been incorporated into the overall groundwater remediation and removal actions submitted by

Whittaker-Bermite and reviewed by the State Department of Toxic Substances Control (DTSC) as discussed below.

Wells with perchlorate concentrations exceeding the then-applicable Action Level (18 µg/l) or, more recently, the then-applicable Notification Level (6 µg/l)[3] were removed from active water supply service. One of the Alluvial wells was returned to active water supply service, with treatment, in late 2005 as discussed below; the other impacted wells remain out of service. The 2005 UWMP specifically addressed the adequacy of groundwater supply in light of the inactivation of the impacted Alluvial and Saugus wells; and it addressed the plan and schedule for restoration of perchlorate-impacted wells, including the protection of existing non-impacted wells. As summarized in the 2005 UWMP, the inactivation of the impacted wells does not constrain the ability to meet the groundwater component of total water supply in the Valley.

In 2000, CLWA and the impacted Purveyors filed a lawsuit against Whittaker Corporation (the former owner of the contaminated property) and Santa Clarita LLC and Remediation Financial, Inc. (the owners of record at that time). The lawsuit sought to have defendants pay all necessary costs of response, removal of the contaminant, remedial actions, and any liabilities or damages associated with the contamination. An Interim Settlement and Funding Agreement was reached in 2003. Although that Agreement expired in January 2005, the parties, under DTSC oversight, jointly developed a plan to "pump and treat" contaminated water from two of the Purveyors' impacted wells to stop migration of the contaminant plume and to partially restore the municipal well capacity that has been impacted by perchlorate. The parties also continued negotiations intended to achieve a long term settlement to the litigation through 2006, and a final settlement was completed and executed in April 2007.

In 2007, the impacted Purveyors (SCWD, NCWD, and VWC) and CLWA continued working toward implementation of a jointly developed plan that will combine pumping from two of the impacted wells and a water treatment process to restore the impacted pumping capacity and control the migration of contamination in the aquifer. The development and implementation of a cleanup plan for the Whittaker-Bermite site and the impacted groundwater is being coordinated among CLWA, the impacted Purveyors, the State DTSC, and U.S. Army Corps of Engineers. DTSC is the lead agency responsible for regulatory oversight of the Whittaker-Bermite site.

In February 2003, DTSC and the impacted Purveyors entered into a voluntary cleanup agreement entitled *Environmental Oversight Agreement*. Under the Agreement, DTSC is providing review and oversight of the response activities being undertaken by the Purveyors related to the

[3] The Maximum Contaminant Level (MCL) for perchlorate was set at 6 µg/l by the State Department of Public Health in October 2007.

detection of perchlorate in the impacted wells. Under the Agreement's Scope of Work, the impacted Purveyors have prepared a Work Plan for sampling the production wells, a report on the results and findings of the production well sampling, a draft Human Health Risk Assessment, a draft Remedial Action Workplan, an evaluation of treatment technologies and an analysis showing the integrated effectiveness of a project to restore impacted pumping capacity, extract perchlorate for treatment, and control the migration of perchlorate in the Saugus Formation. Environmental review of that project was completed in 2005 with adoption of a mitigated Negative Declaration. The Final Interim Remedial Action Plan for containment and extraction of perchlorate was completed and approved by DTSC in January 2006. Design of the treatment facilities and related pipelines is complete. Construction of those facilities and pipelines to implement the pump and treat program and to also restore inactivated municipal well capacity began in November 2007 and is scheduled to be completed, followed by operational startup, in summer 2009.

On the Whittaker-Bermite site, soil remediation activities in operating unit subareas started in 2005. Groundwater "pump and treat" operations in the Northern Alluvium, which also started in 2005, continued through 2008. Expanded pumping, intended to effect perchlorate containment as well as to treat 'hot spots' in the Northern Alluvium, became operational in October 2007. Also on the Whittaker-Bermite site, remediation work in the Saugus Formation is underway. Additional objectives of this project include the reduction of further transport of contaminants to regional groundwater and reduction of the size of the contaminant mass in deep/perched zones.

As noted above, perchlorate was detected in a second Alluvial well, VWC's Well Q2, in early 2005. In response, Valencia removed the well from active service, and commissioned the preparation of an analysis and report assessing the impact of, and response to, the perchlorate contamination of that well. Valencia's response for Well Q2 was to obtain permitting for installation of wellhead treatment, followed by installation of treatment facilities and returning the well to water supply service in October 2005. After nearly two years of operation with wellhead treatment, including regular monitoring specified by the State Department of Public Health (DPH), all of which resulted in no detection of perchlorate in Well Q2, Valencia requested that DPH allow treatment to be discontinued. DPH approved that request in August 2007, and treatment was subsequently discontinued. DPH-specified monthly monitoring for perchlorate continues at Well Q2; there has been no detection of perchlorate since discontinuation of wellhead treatment.

Hardness

In September, the Valencia Water Company began a demonstration project delivering pre-softened groundwater from one of its wells to approximately 420 residents located in

the Copperhill Community of Valencia. Hard water is the number one complaint from Valencia customers and it is estimated that more than 50 percent have installed individual water softening units at their homes. In addition to having high operating costs, many of these units are designed to discharge a brine (salt) solution to the sanitary sewer system that is eventually discharged to the Santa Clara River, or is part of the recycled water supply. The environmental impact of such discharges is the subject of an on-going Chloride Total Maximum Daily Load regulation by the Los Angeles Regional Water Quality Control Board. Valencia's project is aimed at improving the quality of water for its customers to eliminate the need for home softening devices and to achieve the environmental benefits of reduced chloride discharge to the river.

The demonstration project utilizes pellet softening technology that removes calcium and produces small calcium carbonate pellets which can be reused in a variety of industries. The demonstration project is scheduled to operate for up to one year and will provide the water company with sufficient customer feedback and technical/financial information to determine if expanding the treatment to other well sites is feasible.

3.5.1 Groundwater Quality – Alluvium

Groundwater quality is, of course, a key factor in assessing the Alluvial aquifer as a municipal and agricultural water supply. Groundwater quality details and long-term conditions, examined by integration of individual records from several wells completed in the same aquifer materials and in close proximity to each other, have been discussed in previous annual Water Reports and in the 2005 UWMP. There were no changes in groundwater quality in 2008 that would change any of the fluctuations, trends, or other groundwater quality conditions as illustrated in Figures 3-11 and 3-12. In summary, those conditions include: no long-term overall trend and, most notably, no long-term decline in Alluvial groundwater quality; a general groundwater quality "gradient" from east to west, with lowest dissolved mineral content to the east, increasing in a westerly direction; and periodic fluctuations in some parts of the basin, where groundwater quality has inversely varied with precipitation and stream flow. Those variations are typically characterized by increased mineral concentrations through dry periods of lower stream flow and lower groundwater recharge, followed by lower mineral concentrations through wetter periods of higher stream flow and higher groundwater recharge.

The presence of long-term consistent water quality patterns, although intermittently affected by wet and dry cycles, supports the conclusion that the Alluvial aquifer remains a viable ongoing water supply source in terms of groundwater quality.

3.5.2 Groundwater Quality – Saugus Formation

As discussed above for the Alluvium, groundwater quality is a key factor in also assessing the Saugus Formation as a municipal and agricultural water supply. As with groundwater level data, long-term Saugus groundwater quality data are not sufficiently extensive to permit any sort of basin-wide analysis or assessment of pumping-related impacts on quality. However, integration of individual records from several wells has been used to examine general water quality trends. Based on those records, water quality in the Saugus Formation has not historically exhibited the precipitation-related fluctuations seen in the Alluvium. Based on available data over the last 50 years, groundwater quality in the Saugus has exhibited a slight overall increase in dissolved mineral content as illustrated in Figure 3-13. More recently, several wells within the Saugus Formation have exhibited an additional increase in dissolved mineral content, similar to short-term changes in the Alluvium, possibly as a result of recharge to the Saugus Formation from the Alluvium. Dissolved mineral concentrations in the Saugus Formation remain below the Secondary (aesthetic) Upper Maximum Contaminant Level. Groundwater quality within the Saugus will continue to be monitored to ensure that degradation to the long-term viability of the Saugus as a component of overall water supply does not occur.

3.5.3 Imported Water Quality

CLWA operates two water treatment plants, the Earl Schmidt Filtration Plant located near Castaic Lake and the Rio Vista Water Treatment Plant located in Saugus. CLWA produces water that meets drinking water standards set by the U.S. EPA and DPH. SWP water has different aesthetic characteristics than groundwater with lower dissolved mineral concentrations (total dissolved solids) of approximately 250 to 360 mg/l, and lower hardness (as calcium carbonate) of about 105 to 135 mg/l.

3.6 Recycled Water

Recycled water is available from two water reclamation plants operated by the Sanitation Districts of Los Angeles County. In 1993, CLWA prepared a draft Reclaimed Water System Master Plan that outlined a multi-phase program to deliver recycled water in the Valley. CLWA previously completed environmental review on the construction of Phase I of the project, which will deliver 1,700 afy of water. Deliveries of recycled water began in 2003 for irrigation water supply at a golf course and in roadway median strips. In 2008, recycled water deliveries were 311 af.

Surveys conducted by CLWA indicate an interest for recycled water by existing water users as well as by future development as recycled water becomes available. In 2002, CLWA produced an updated Draft Recycled Water Master Plan. Overall, the program is expected to ultimately recycle up to 17,400 af of treated (tertiary) wastewater suitable for reuse on golf courses, landscaping and other non-potable uses, as set forth in the UWMP.

In 2007, CLWA completed California Environmental Quality Act (CEQA) analysis of the Recycled Water Master Plan (2002). This analysis consisted of a Program Environmental Impact Report (PEIR) covering the various options for a recycled water system as outlined in the Master Plan. The PEIR was certified by the CLWA Board in March 2007.

CLWA is preparing the design of the second phase of the Recycled Water Master Plan that will take water from the Saugus Water Reclamation plant and distribute it to identified users to the north, across the Santa Clara River and then to the west and the east, which will include service to Santa Clarita Central Park.

3.7 Santa Clara River

The Memorandum of Understanding (MOU) between the Santa Clarita Valley Purveyors and the United Water Conservation District, which manages surface and groundwater resources in seven groundwater basins in the Lower Santa Clara River Valley Area, was a significant accomplishment when it was prepared and executed in 2001. The MOU initiated a collaborative and integrated approach to data collection; database management; groundwater flow modeling; assessment of groundwater basin conditions, including determination of basin yield amounts; and preparation and presentation of reports, including continued annual reports such as this one for current planning and consideration of development proposals, and also including more technically detailed reports on geologic and hydrologic aspects of the overall stream-aquifer system. Meetings of the MOU participants have continued, and integration of the Upper (Santa Clarita Valley) and Lower (United WCD) Santa Clara River databases has been accomplished. As discussed above, a numerical groundwater flow model of the entire Santa Clarita groundwater basin was developed and calibrated in 2002-2004. Subsequent to its initial use in 2004 for assessing the effectiveness of various operating scenarios to restore pumping capacity impacted by perchlorate contamination (by pumping and treating groundwater for water supply while simultaneously controlling the migration of contaminated groundwater), the model was used in 2005 for evaluation of basin yield under varying management actions and hydrologic conditions. The results completed the determination of sustainable operating yield values for both the Alluvium and the Saugus Formation, which are now incorporated in the 2005 UWMP. As

described in Section 3.1 above, an updated analysis of basin yield was initiated in 2008 and results of that work are expected to be completed in early 2009.

On occasion, issues have been raised about whether use and management of groundwater in the Santa Clarita Valley have adversely impacted surface water flows into Ventura County. Part of the groundwater modeling work has addressed the surface water flow question as well as groundwater levels and storage. While the sustainability of groundwater has logically derived primarily from projected long-term stability of groundwater levels and storage, it has also derived in part from modeled simulations of surface water flows and the lack of streamflow depletion by groundwater pumping. In addition, the long-term history of groundwater levels in the western and central part of the basin, as illustrated in Figures 3-4 and 3-5, supports the modeled analysis and suggests that groundwater has not been lowered in such a way as to induce infiltration from the river and thus impact surface water flows.

Historical annual average of daily mean streamflow in the Santa Clara River, into and out of the Santa Clarita Valley, is shown on Figure 3-14. The upstream gage at Lang Station was reinstated in 2002 and shows a wide range of average annual inflow over the last five years. The downstream gage was moved in 1996 to its present location near Piru, about two miles downriver from the former County Line Gage. The combined record of these two downstream gages indicates an average daily streamflow of about 65 cfs. These data gaged near the County line show notably higher flows from the Santa Clarita Valley into the uppermost downstream basin, the Piru Basin, over the last 30 to 35 years.

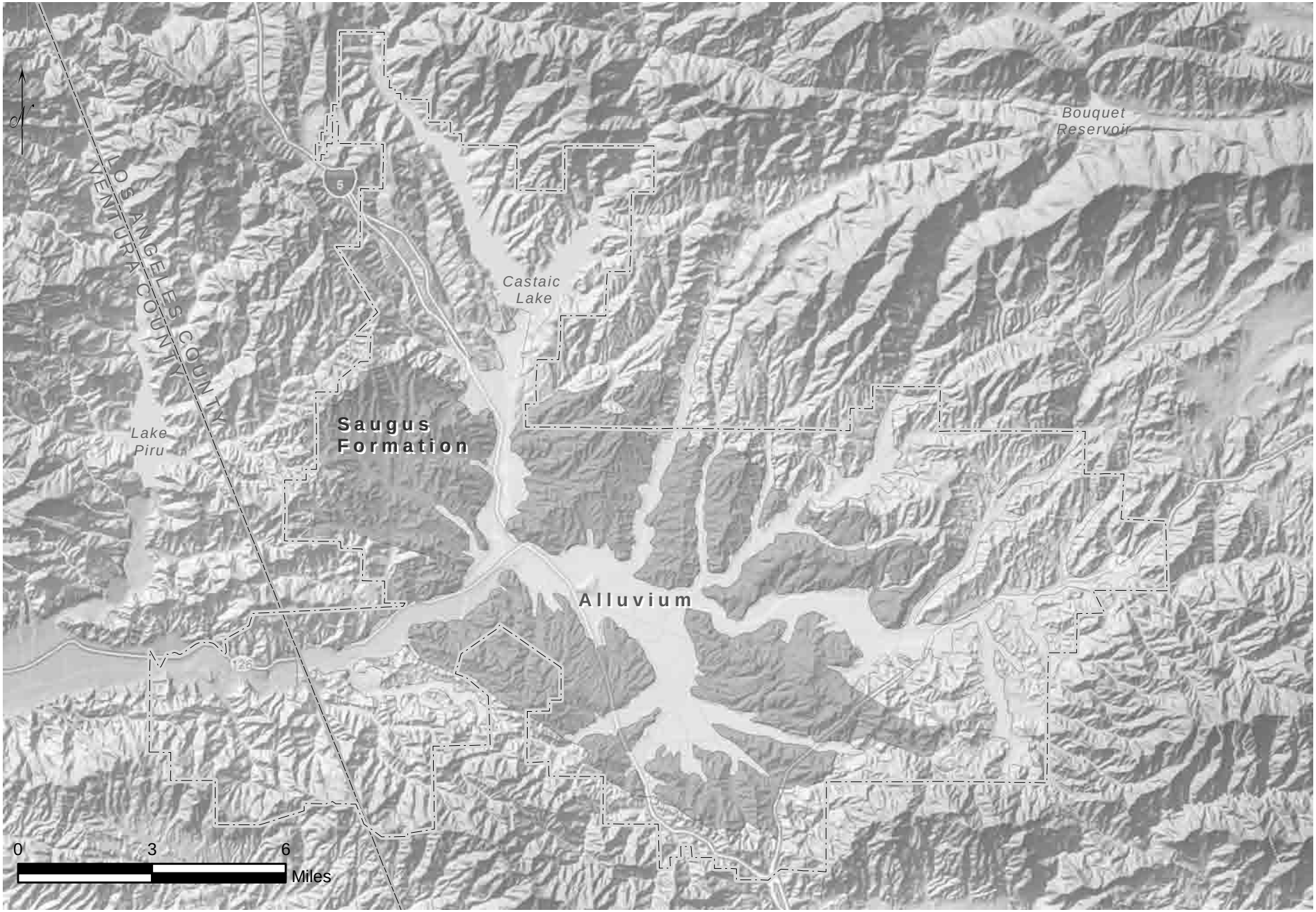

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Figure 3-1
Alluvium and Saugus Formation
Santa Clara River Valley, East Groundwater Subbasin

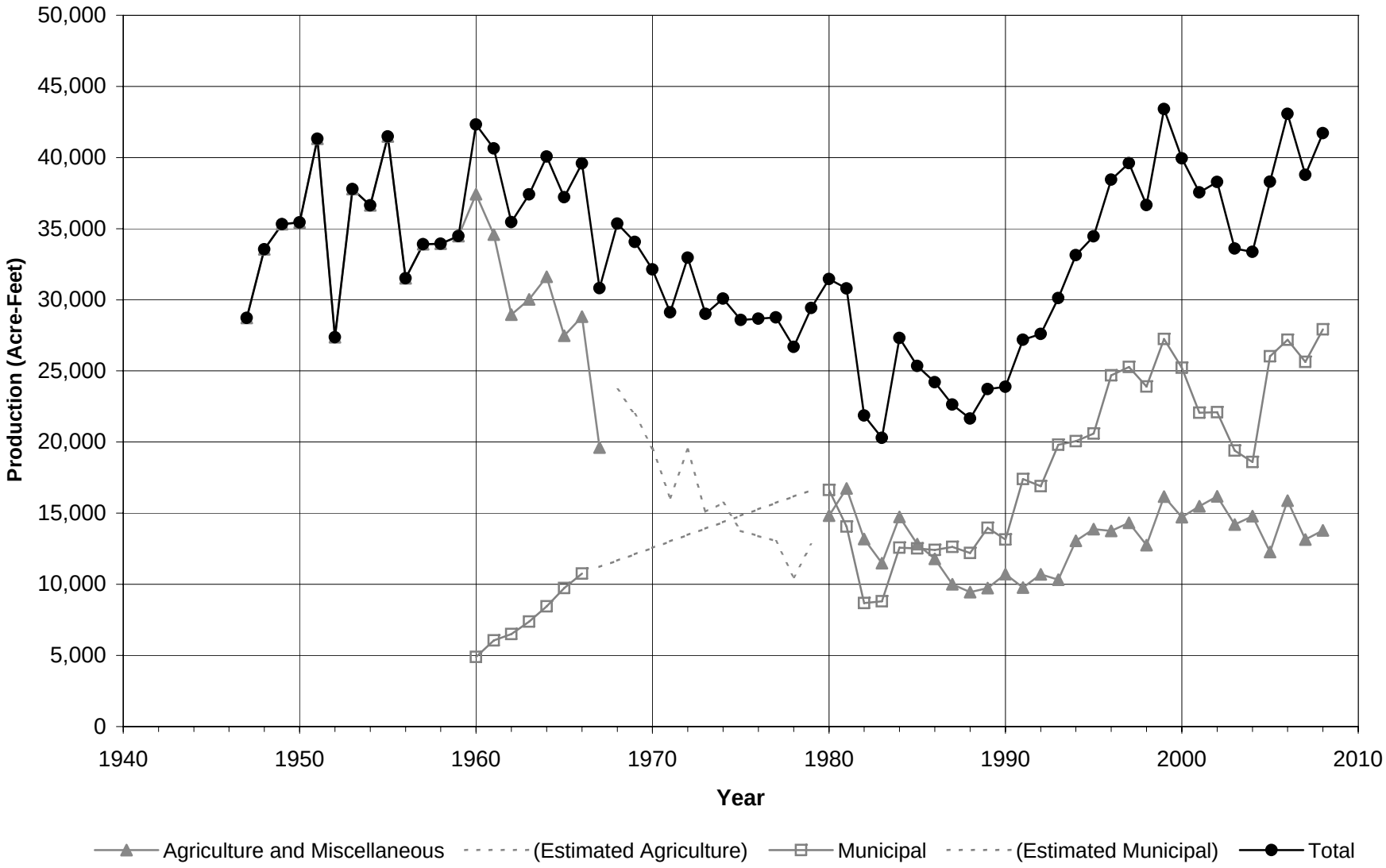

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Figure 3-2
Groundwater Production - Alluvium
Santa Clara River Valley, East Groundwater Subbasin

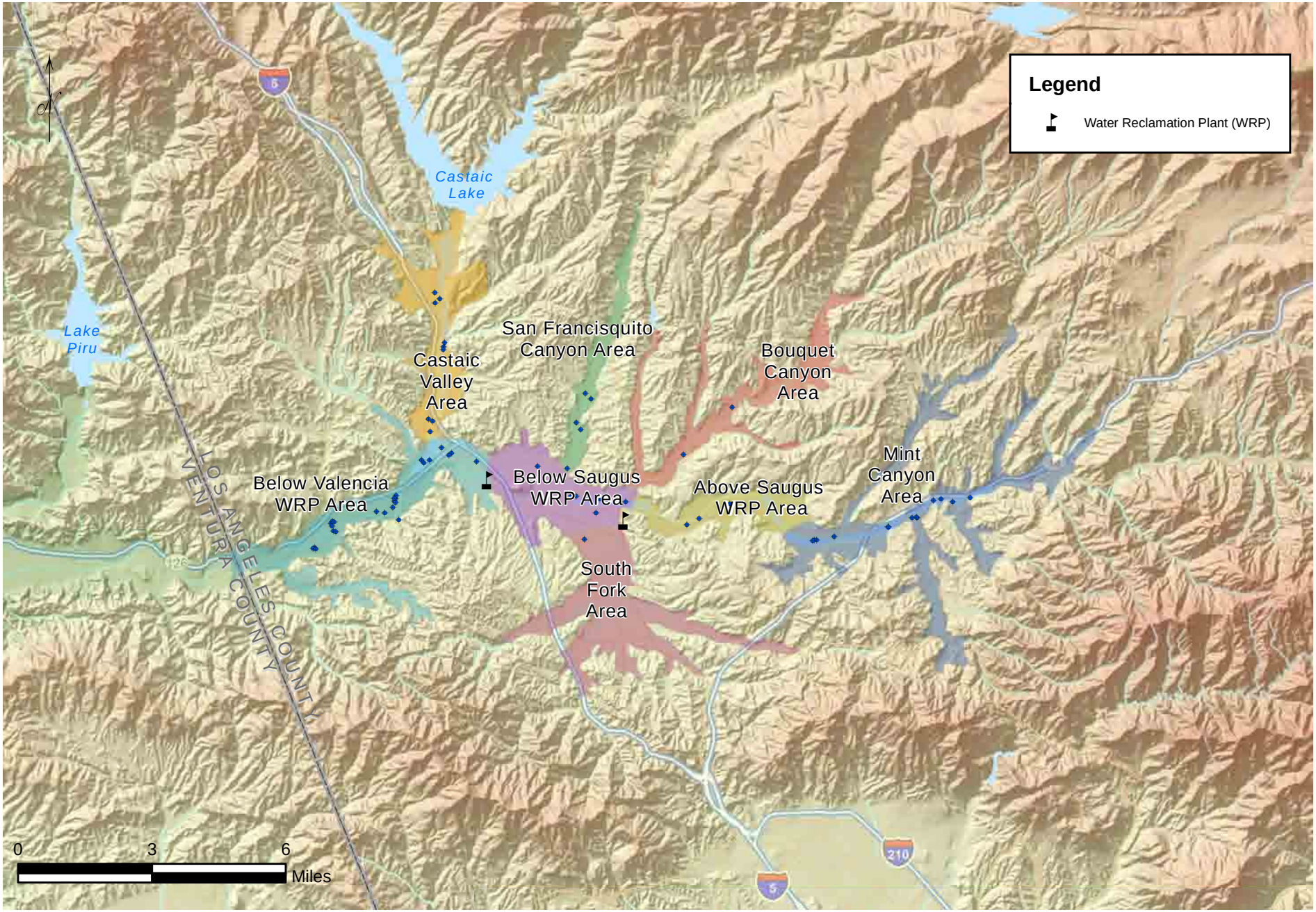

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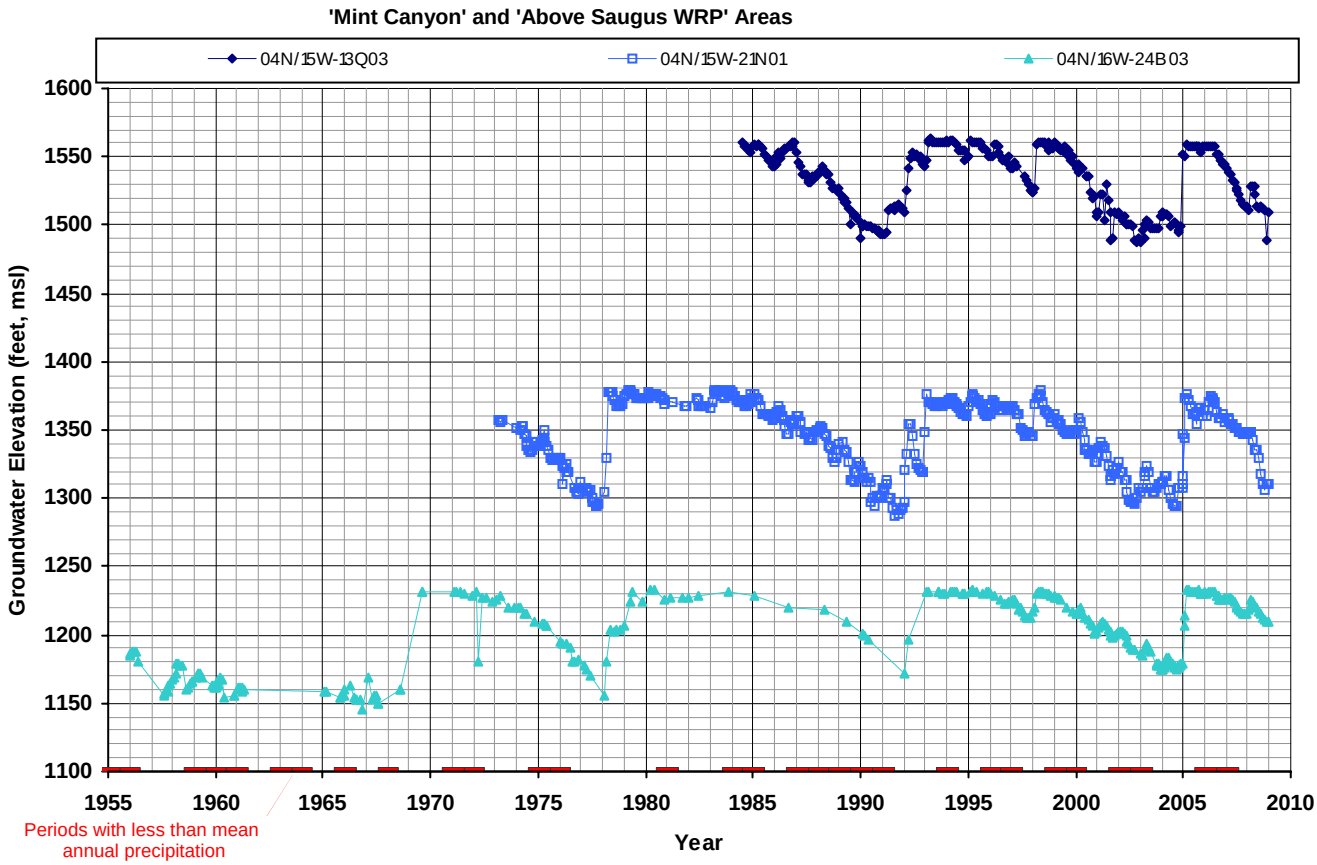
Figure 3-3
Alluvial Well Locations By Area
Santa Clara River Valley, East Groundwater Subbasin



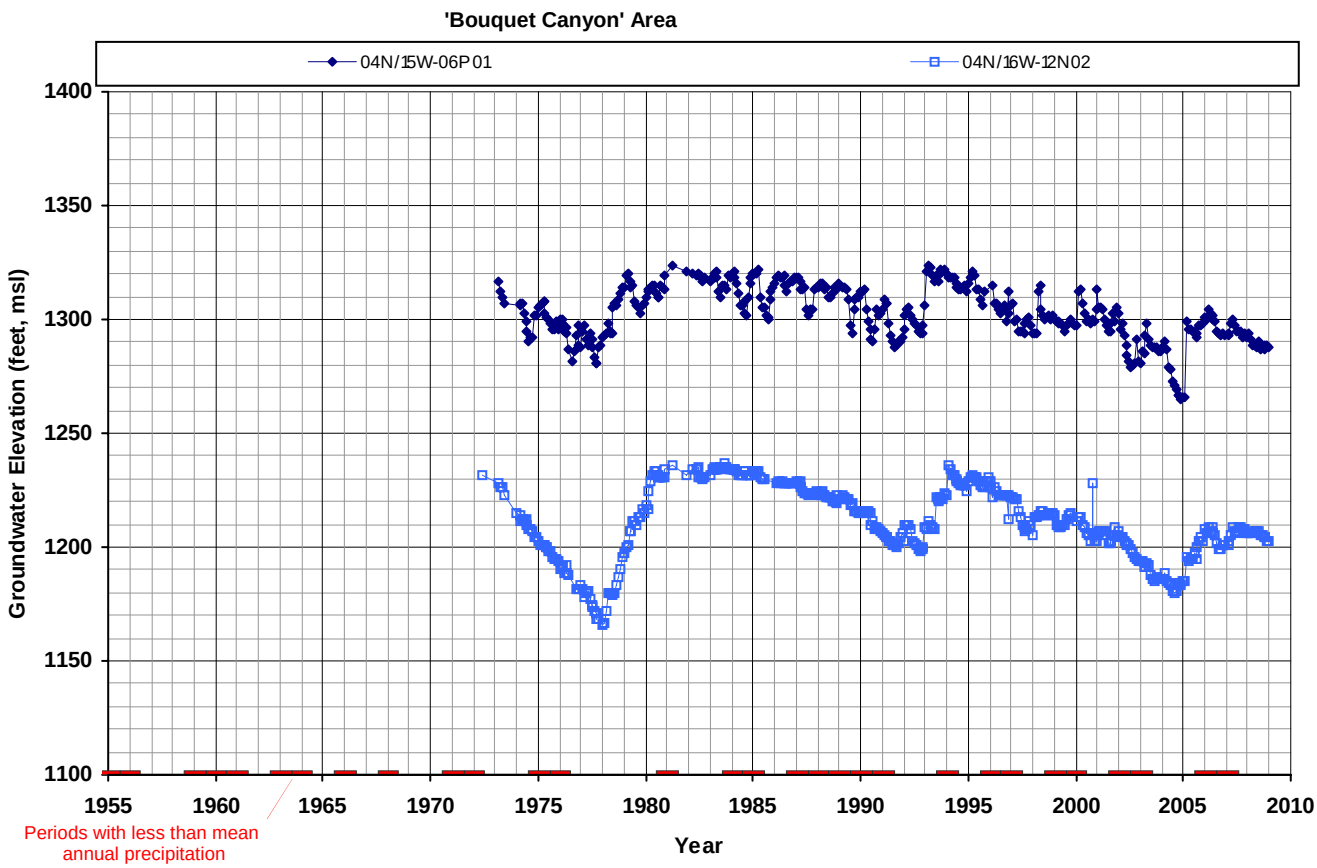


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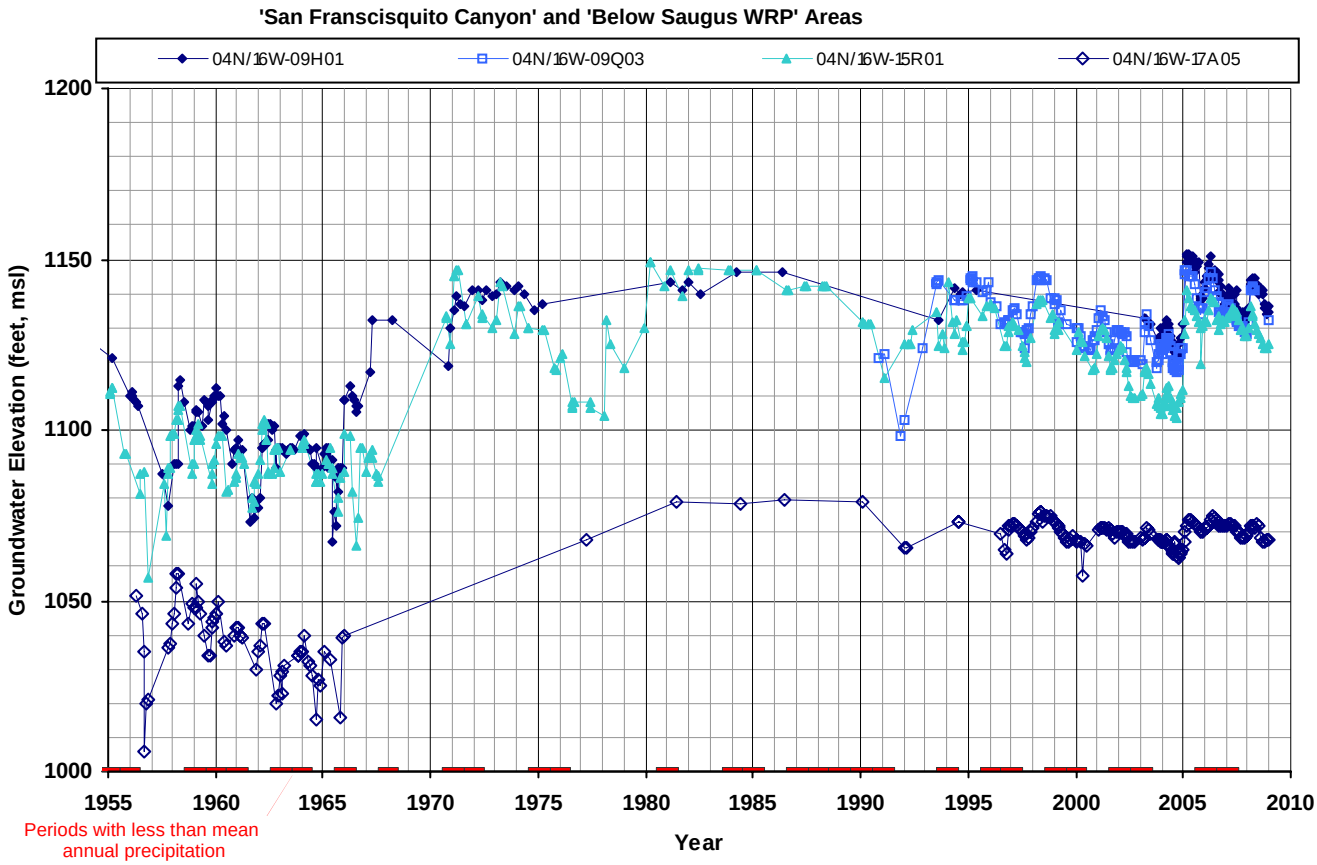
Figure 3-4
Groundwater Elevations in
Eastern Santa Clarita Valley Alluvial Wells



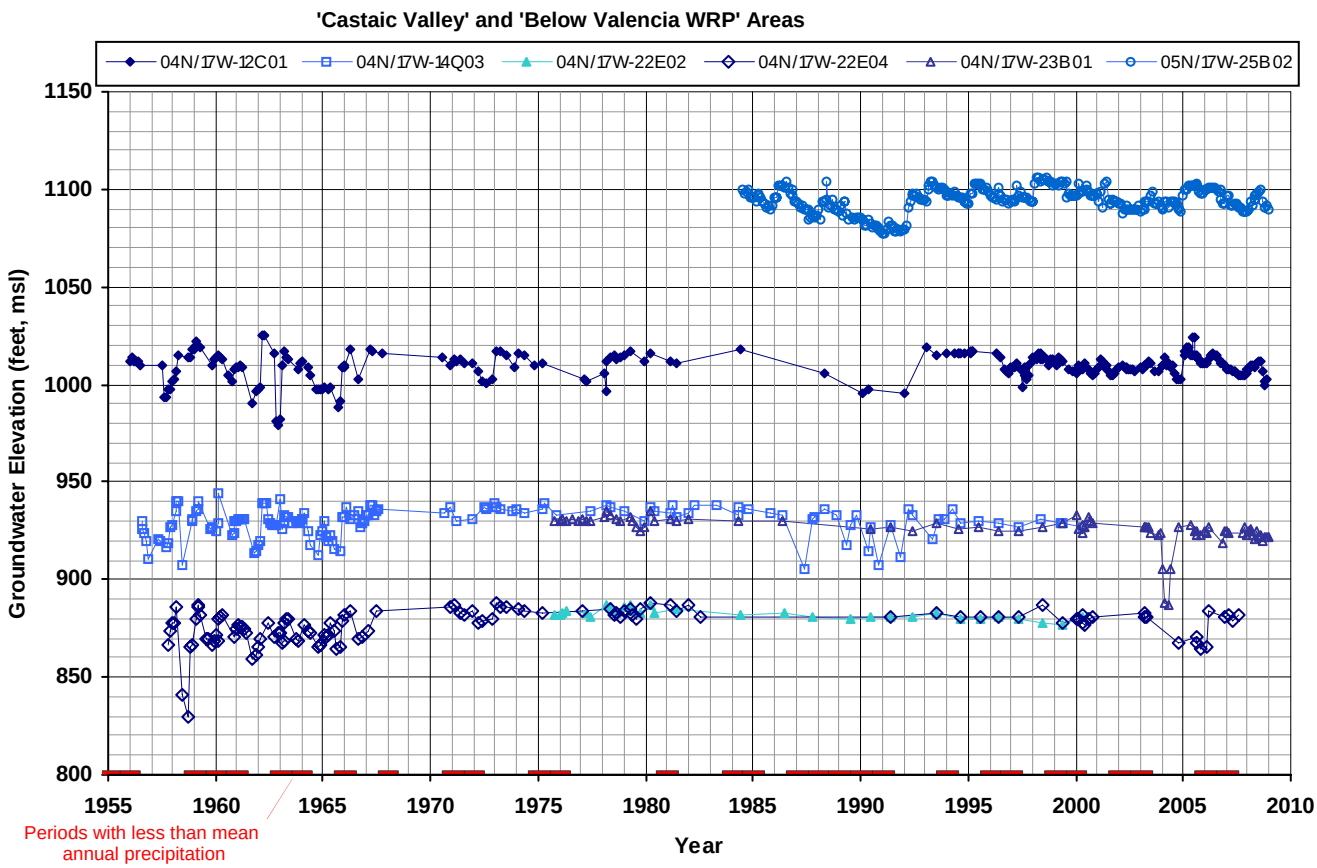


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Figure 3-5
Groundwater Elevations in Western Santa Clarita Valley Alluvial Wells

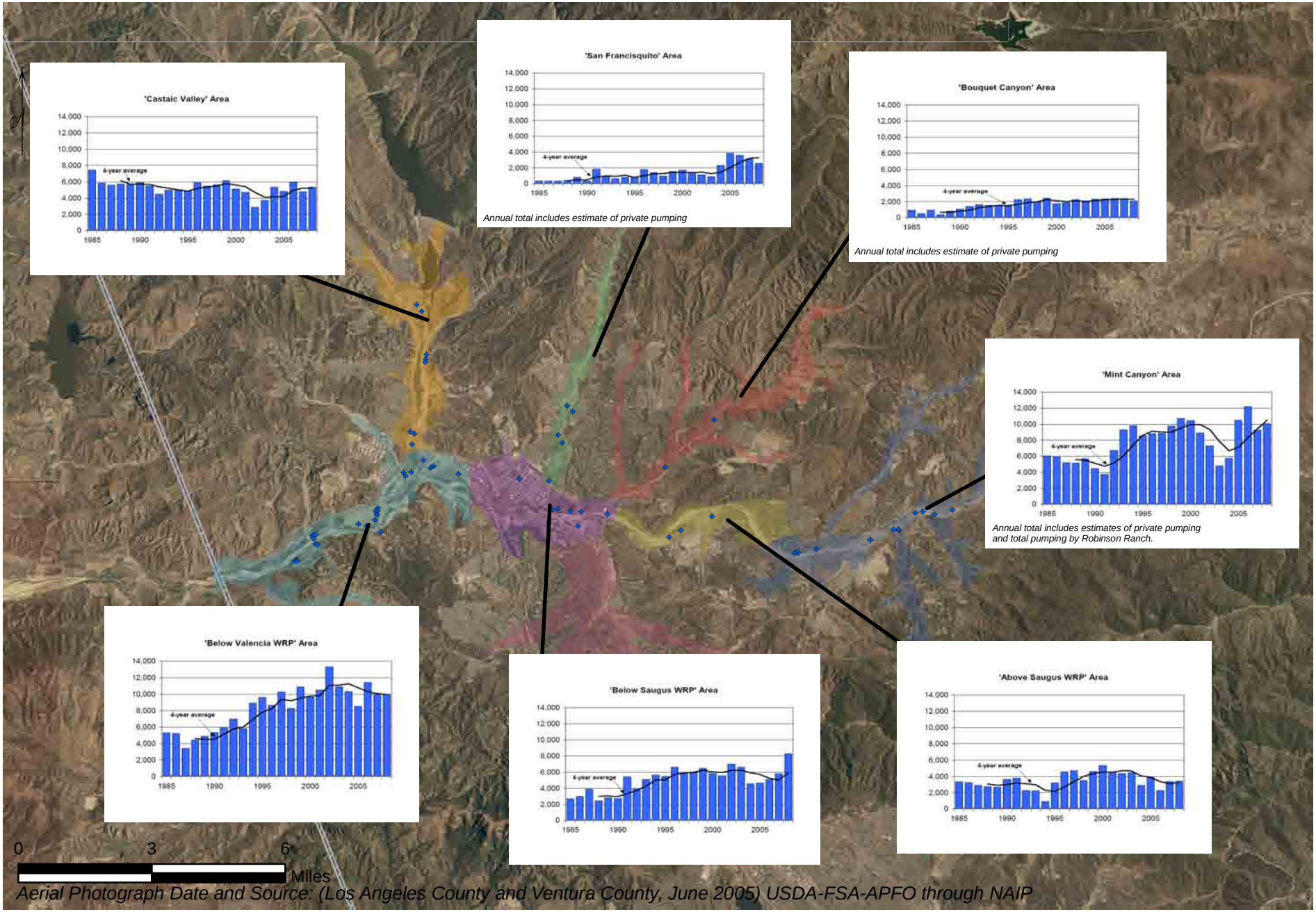

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Figure 3-6
Annual Groundwater Production from Alluvium by Area (Acre-feet)
Santa Clara River Valley, East Groundwater Subbasin

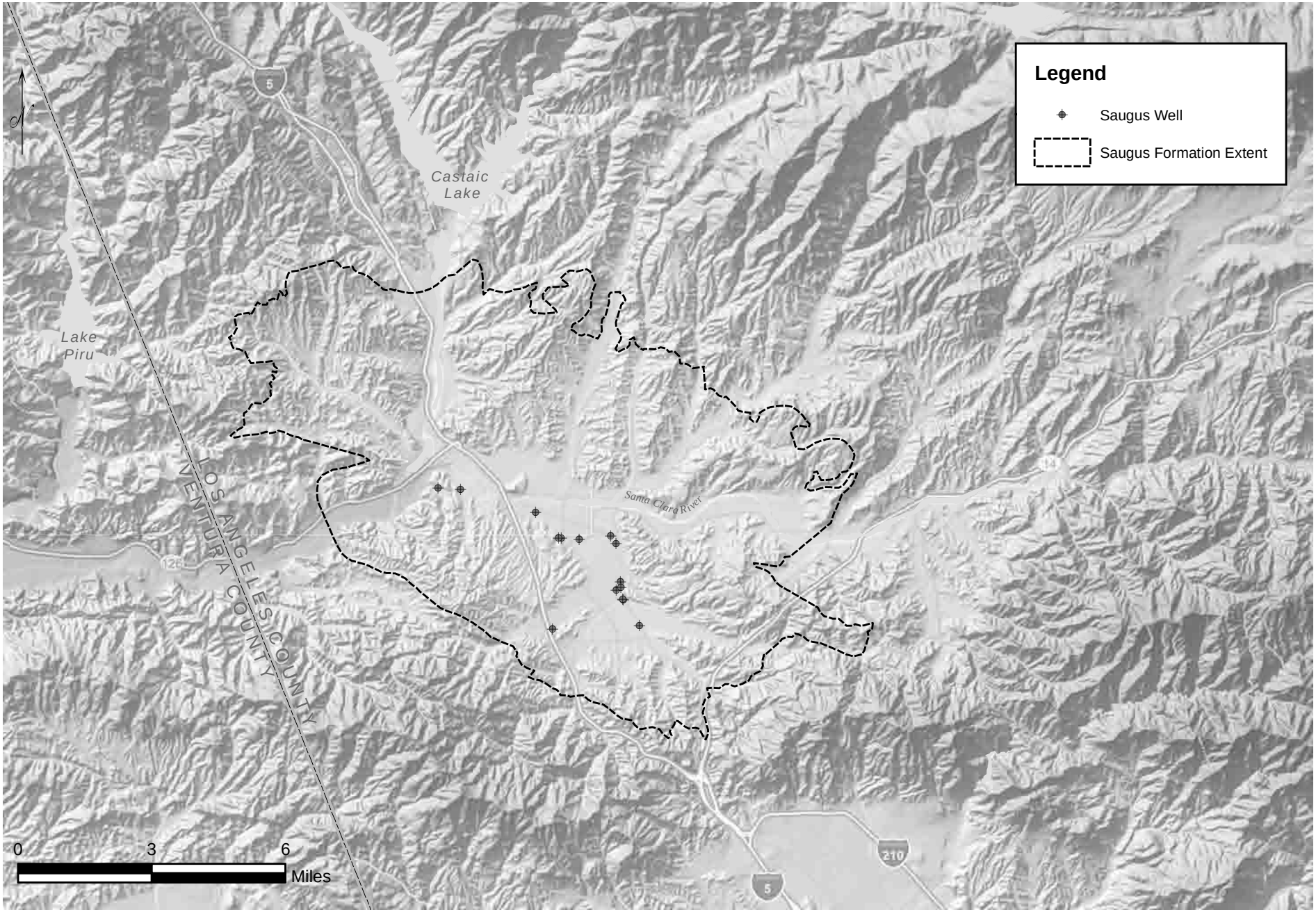

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Figure 3-7
Saugus Well Locations
Santa Clara River Valley, East Groundwater Subbasin

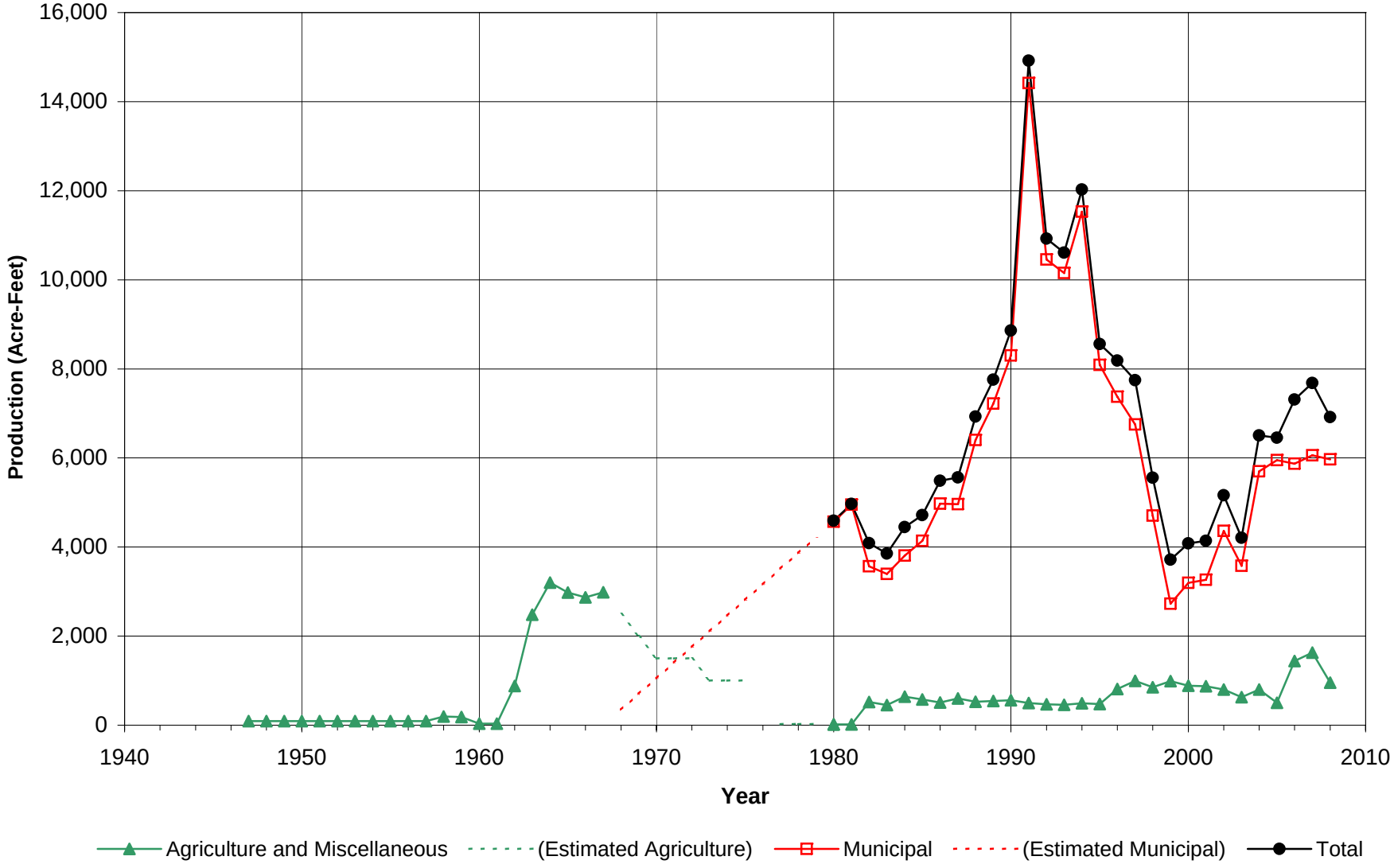

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Figure 3-8
Groundwater Production - Saugus Formation
Santa Clara River Valley, East Groundwater Subbasin

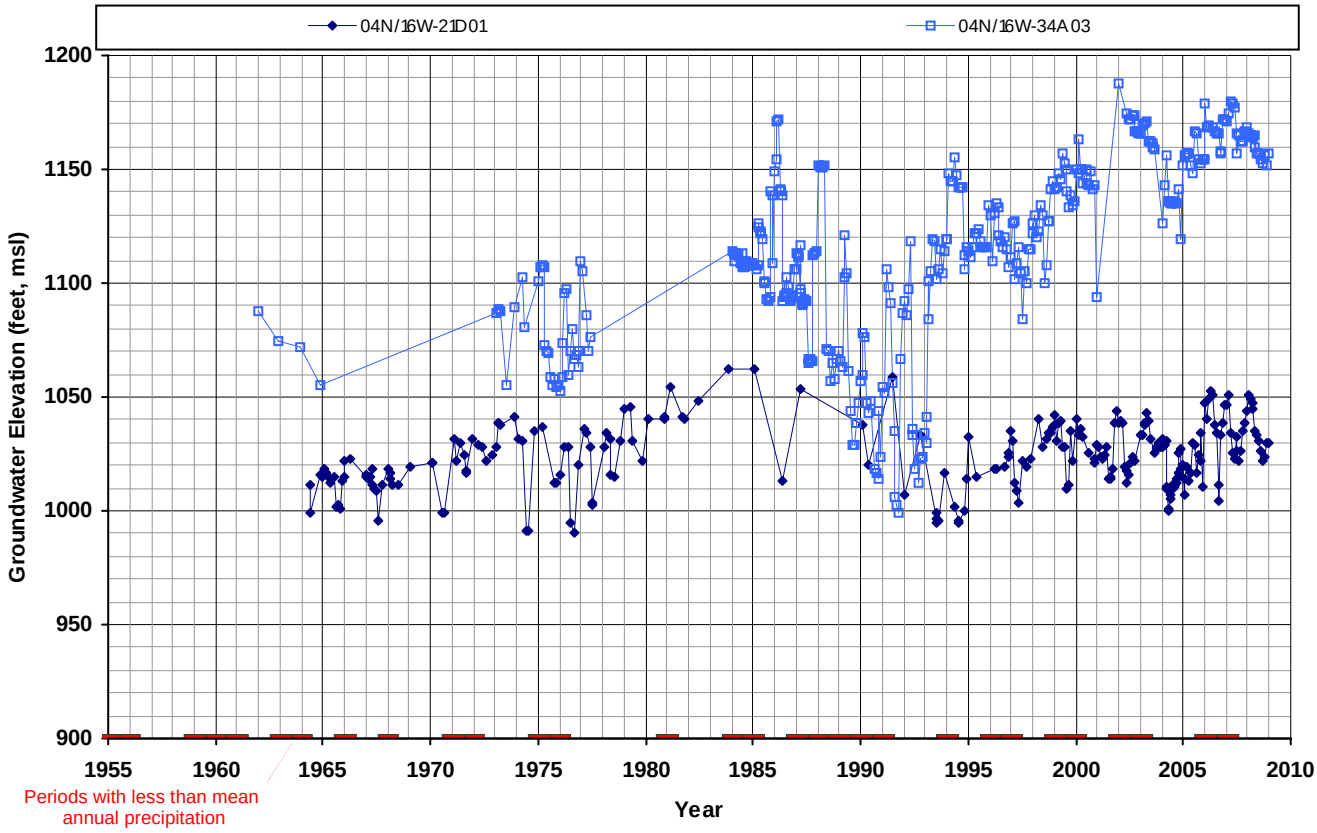

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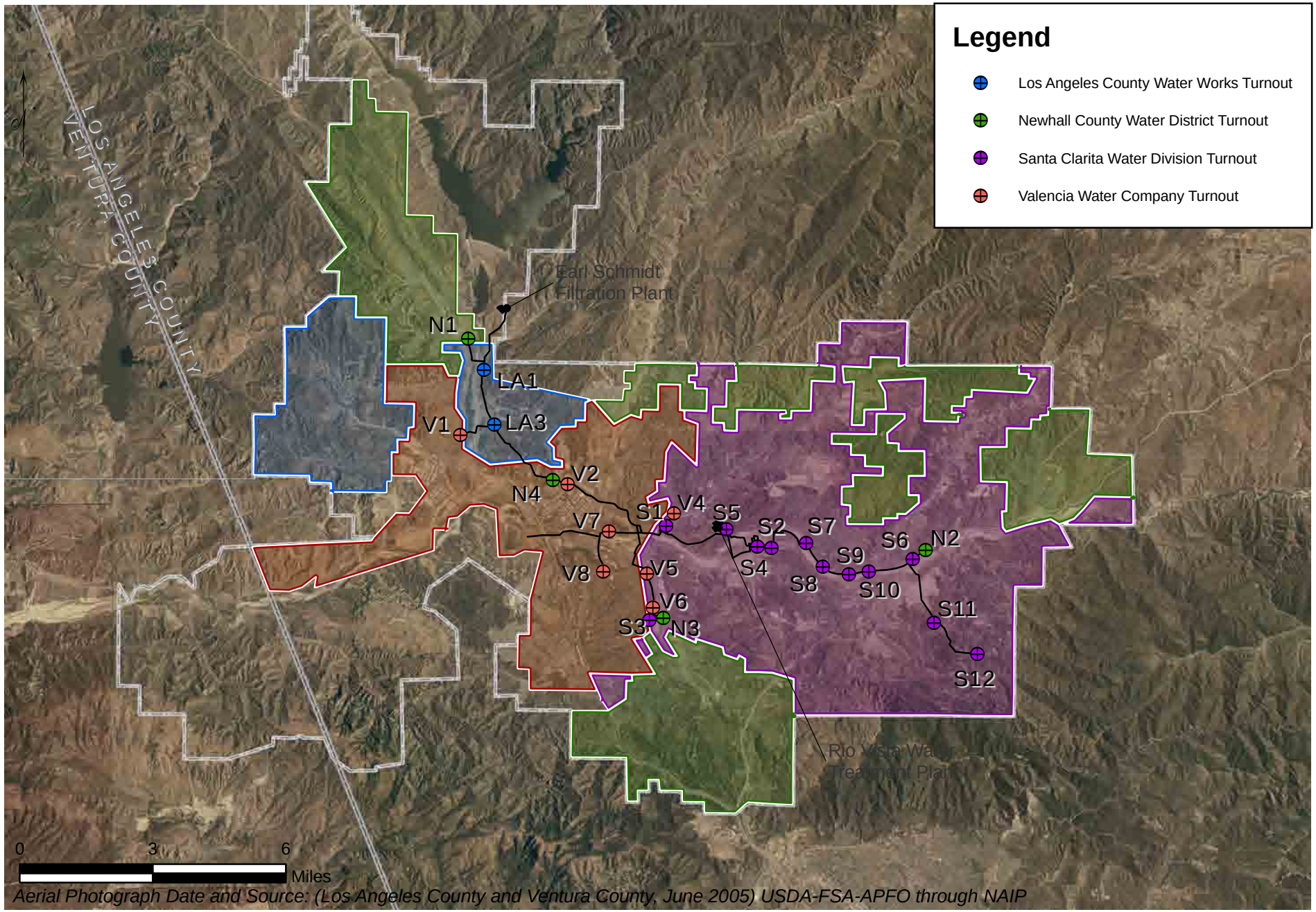
Figure 3-9
Groundwater Elevations in Saugus Wells



Aerial Photograph Date and Source: (Los Angeles County and Ventura County, June 2005) USDA-FSA-APFO through NAIP

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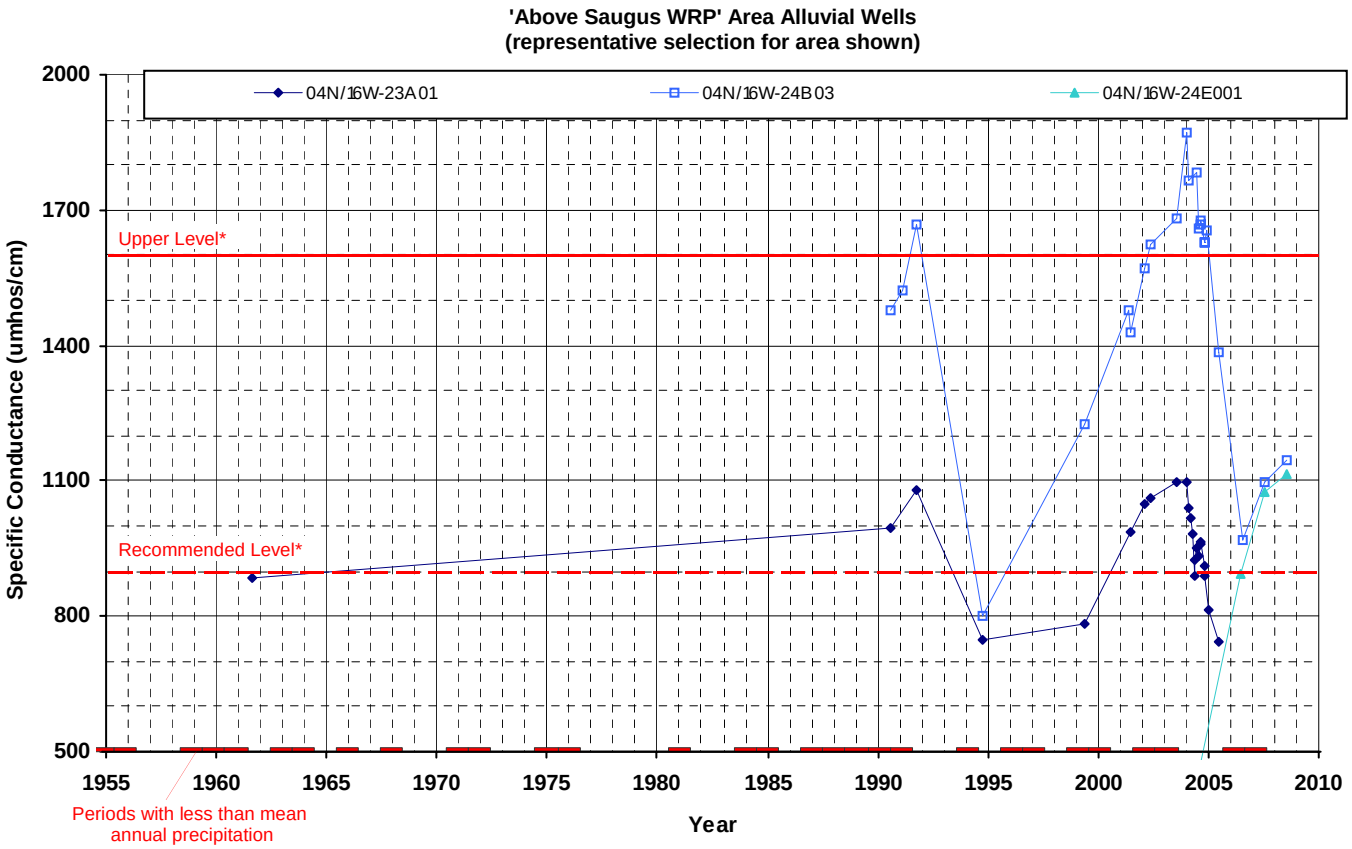
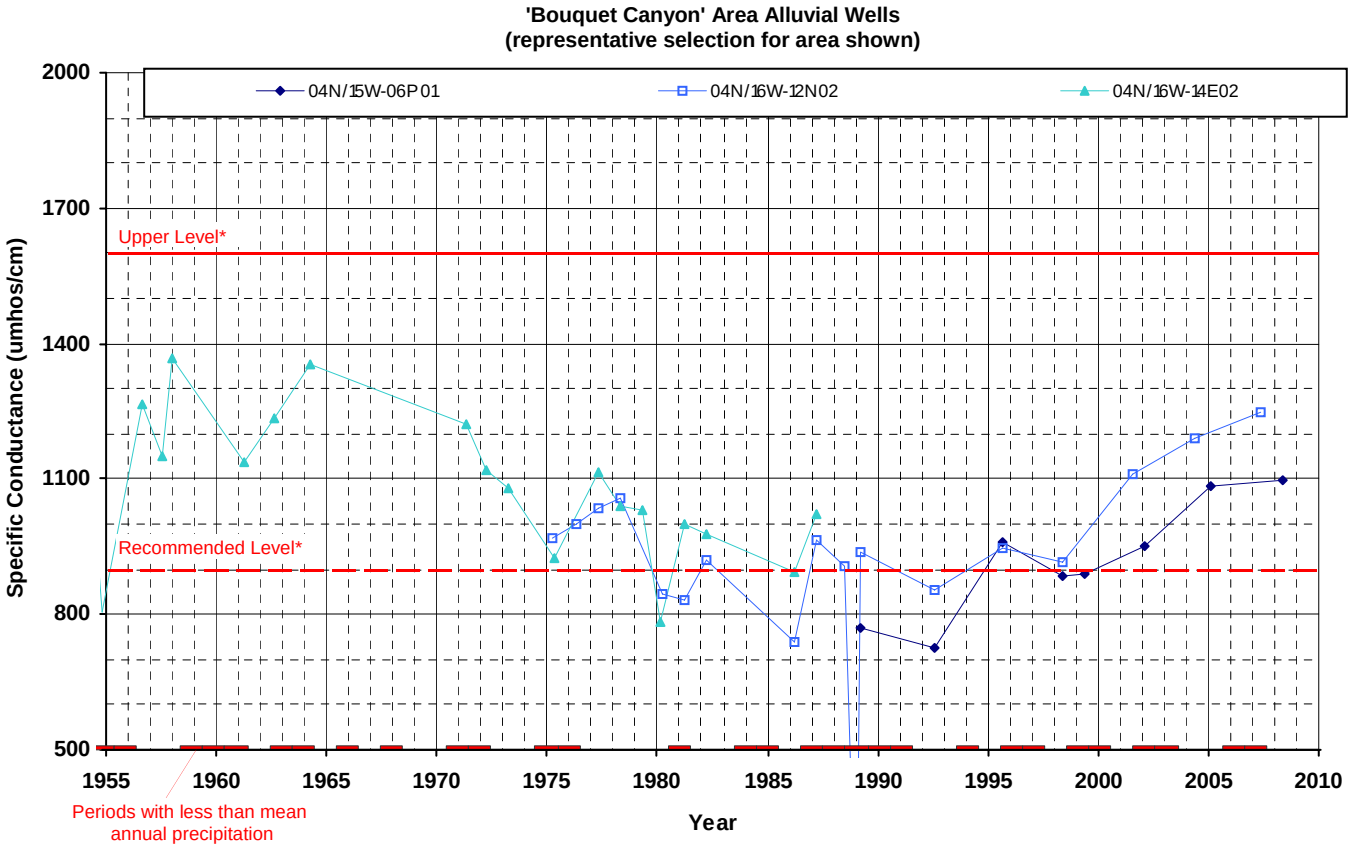
Figure 3-10
Treated Water Distribution System
Castaic Lake Water Agency





*California Department of Public Health Secondary Maximum Contaminant Level

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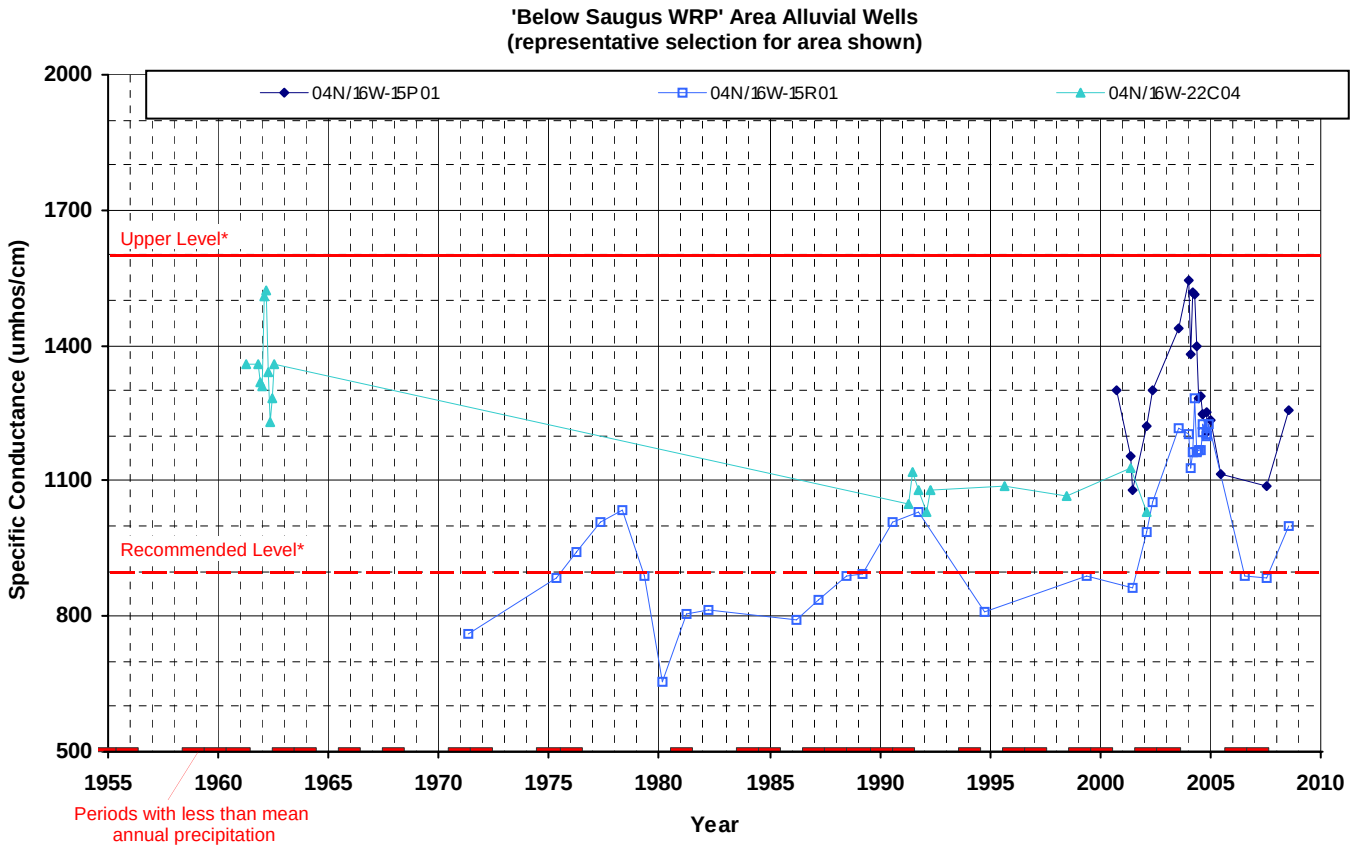
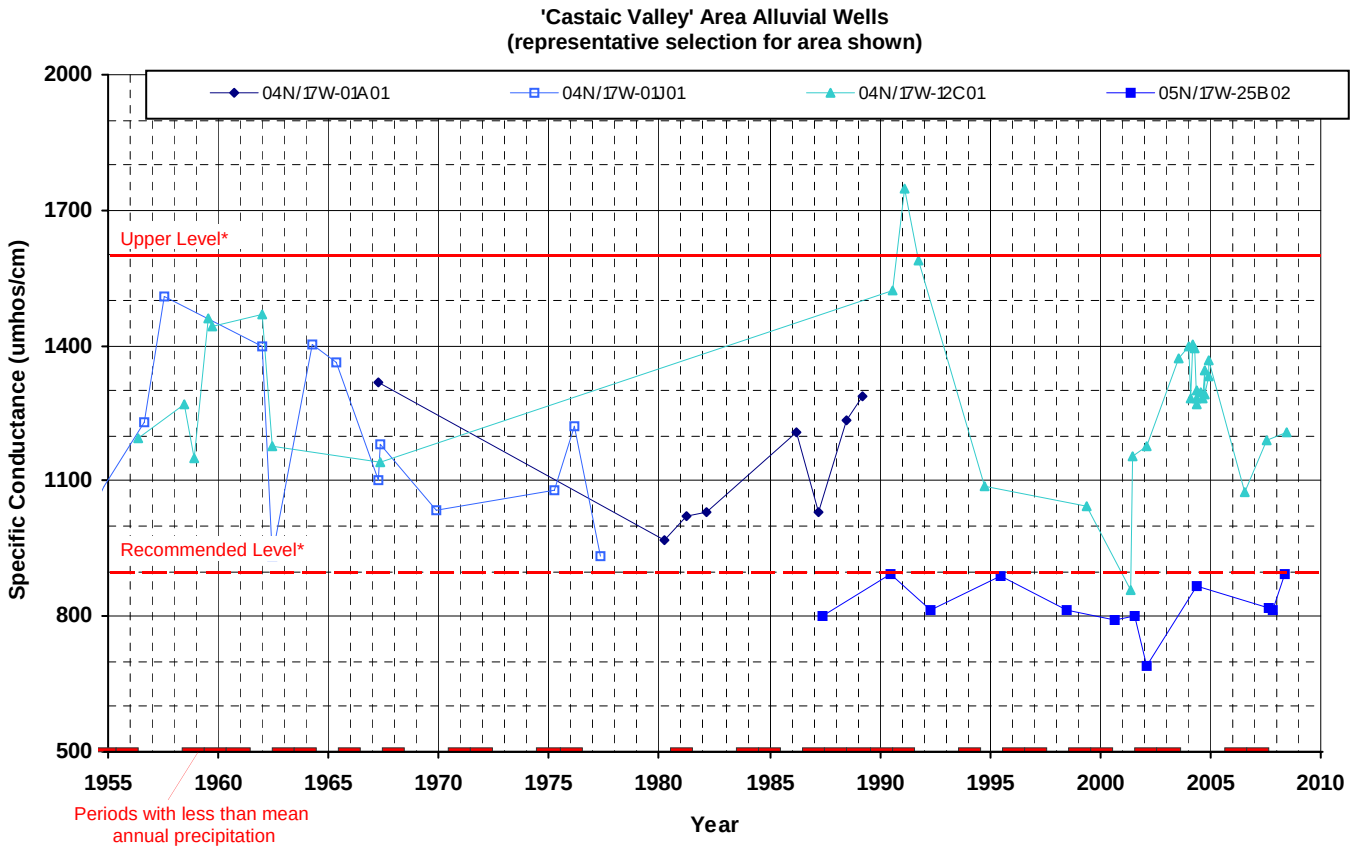
Figure 3-11
Groundwater Quality in
Eastern Santa Clarita Valley Alluvial Wells





*California Department of Public Health Secondary Maximum Contaminant Level

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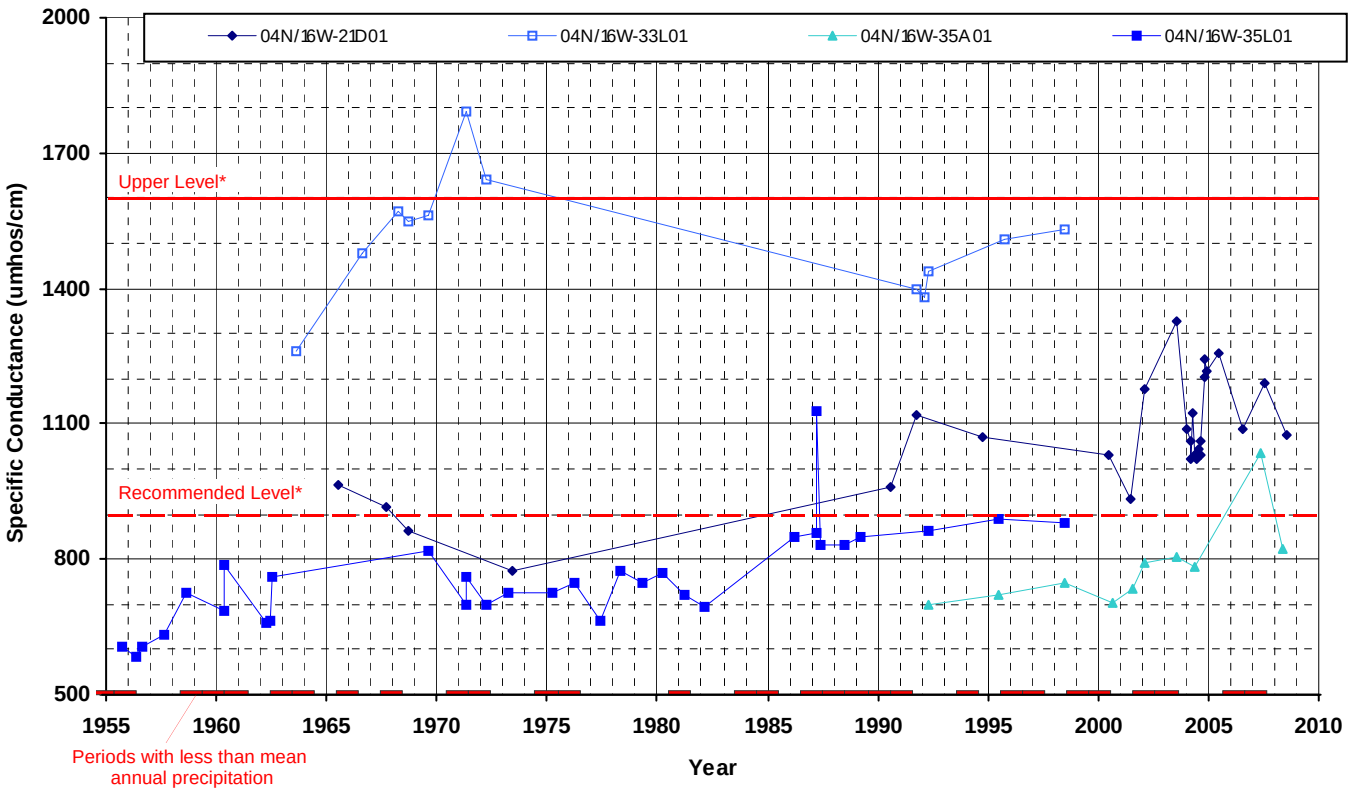
Figure 3-12
Groundwater Quality in Western Santa Clarita Valley Alluvial Wells



*California Department of Public Health Secondary Maximum Contaminant Level

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Figure 3-13
Groundwater Quality in Saugus Wells

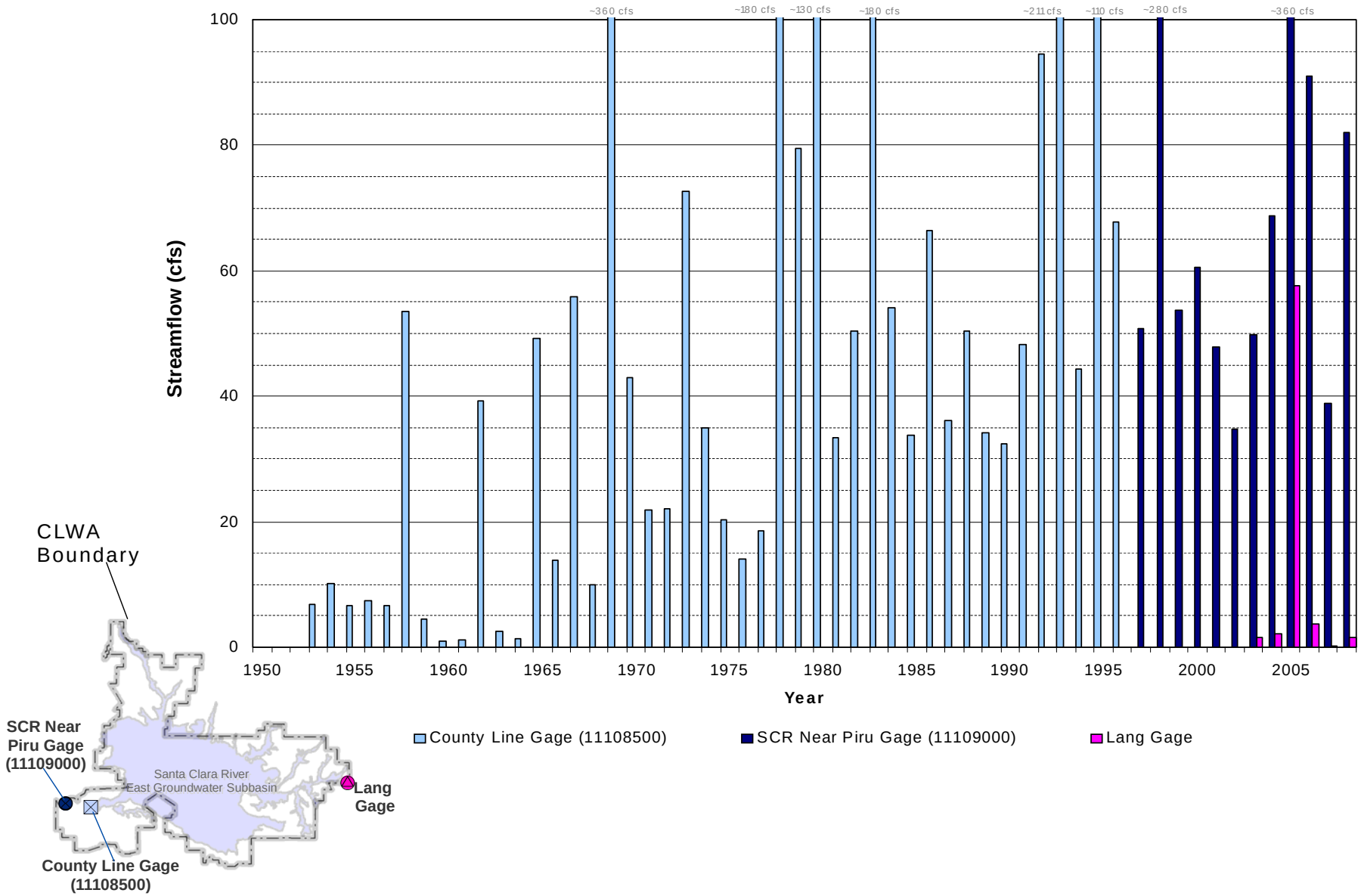

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Figure 3-14
Annual Average of Daily Mean Streamflow
Santa Clara River

4. Summary of 2008 Water Supply and 2009 Outlook

As discussed in the preceding chapters, total water demands in the Santa Clarita Valley were 90,700 af in 2008. This represented a decrease of nearly two percent from total demand in 2007 and continues a basically flat trend in total water demand over the last three years. Of the total demand in 2008, nearly 76,000 af were for municipal water supply, and the balance (14,800 af) was for agricultural and other uses, including estimated individual domestic uses. As detailed in Chapter 2, the total demand in 2008 was met by a combination of local groundwater, SWP and other imported water, and a small amount of recycled water.

The water demand in 2008 was notably lower than the average projection in the 2005 UWMP, and also lower than the short-term projected demand that was estimated in the 2007 Water Report. For illustration, historical water use from 1980 through 2008 is plotted in Figure 4-1; also shown with that historical record are the projected total water demands in the 2005 UWMP through 2030. As discussed in the 2005 UWMP, year-to-year fluctuations in historical water demand have ranged from about ten percent below to about nine percent above the average or "normal" projection that would describe the long-term historical trend in the Valley's total water demand. The primary factor causing the year-to-year fluctuations is weather. In the short term, wetter years have typically resulted in decreased water demand, and drier years have typically resulted in higher water demand. Extended drier periods, however, have resulted in decreases in demand due to conservation and water shortage awareness. The decline in water demand toward the end of the 1987-92 drought is a good example of such reduced demand. A good recent example of wet-year effects on water demand was 2005, where extremely wet conditions resulted in total water requirements about six percent below the average projection in the 2005 UWMP.

Adding to the types of demand fluctuations described in the 2005 UWMP are the recently-observed effects of broad economic conditions on growth. As reflected by the numbers of service connections in each Purveyor service area, growth in 2008 remained comparable to each of the preceding two years, with additions of about 1,000 new service connections each year, but in notable contrast to the predominant growth rate nearly three times higher from the late 1990's through 2004. In addition, the Purveyors were informed by, and have conveyed to the local community, the Governor's Alert in June 2008 regarding drought conditions and potential water supply shortages, and the Governor's subsequent Drought Emergency Declaration in February, 2009. The widespread awareness of dry conditions throughout the state, aggressive conservation messaging, and the decrease in local growth are prime factors causing total water demand in 2008 to be slightly less than each of the preceding two years, and well below the earlier

estimated demand in the 2005 UWMP. Those factors are expected to have a continuing effect in 2009, resulting in estimated water demand about the same as the last three years. Consequently, for those reasons, that estimated demand, 91,000 af, is well below the 97,900 af demand projected for 2009 in the 2005 UWMP.

It is expected that both municipal and agricultural water demands in 2009 will be met with a generally similar mix of water supplies as in previous years, notably local groundwater and imported SWP water, complemented by recycled water that will continue to supply a small fraction of total water demand.

As of April 15, 2009, the allocation of water from the SWP in 2009 is 30 percent of CLWA's Table A Amount, or 28,560 af. Combined with local groundwater from the two aquifer systems (48,000 af), total Flexible Storage Account water (6,060 af), net carryover SWP water from 2008 (14,610 af), annual acquisition from Buena Vista Water/Rosedale-Rio Bravo Water Storage Districts (11,000 af), acquisition of water through the Yuba Accord (800 af), recovery and delivery of some water previously stored in the Semitropic Groundwater Storage Bank (4,950 af), and recycled water (500 af), the total available water supplies for 2009 are nearly 115,000 af. Consequently, CLWA and the Purveyors anticipate having more than adequate supplies to meet all water demands in 2009. Projected 2009 water supplies and demand are summarized in Table 4-1.

In August 2007, a federal court ruled that certain operational changes were required of the SWP in order to protect the endangered Delta smelt. Thereafter, DWR prepared an update to its 2005 Reliability Report, which is issued biennially to indicate how much SWP water is available during varying hydrologic scenarios (i.e., normal and dry years). The SWP Delivery Reliability Report 2007, issued in August 2008 by DWR, reduced the long term reliability of SWP supply from 77 percent to a range of 66 to 69 percent. The discussion of SWP supply should be tempered, though, by noting that while the SWP Reliability Report represents a reasonable scenario with respect to long term reliability, recent reductions in supply reduce the difference between available supply and demand in the future, thereby making the CLWA service area more subject to shortages in certain dry years. Accordingly, the reduction in SWP supply reinforces the need to continue diligent efforts to conserve potable water and increase the use of recycled water, both to meet the goals in the 2005 UWMP and to maximize utilization of potable water supplies. Additionally, as part of the court order, the US Fish and Wildlife Service (USFWS) was required to issue a Biological Opinion (BO) with mitigation measures to protect the Delta smelt. The USFWS issued the BO in December 2008 and the mitigation requirements may force additional pumping restrictions of the operation of the State Water Project.

Table 4-1
2009 Water Supply and Demand
(acre-feet)

Projected 2009 Demand [1]		**91,000**
Available 2009 Water Supplies		
Local Groundwater		48,000
Alluvium [2]	*39,000*	
Saugus Formation [3]	*9,000*	
Imported Water		65,980
Table A Amount [4]	*28,560*	
Net Carryover from 2008 [5]	*14,610*	
Buena Vista/Rosedale-Rio Bravo[6]	*11,000*	
Flexible Storage Account (CLWA) [7]	*4,684*	
Flexible Storage Account (Ventura County) [7]	*1,376*	
Yuba Accord[8]	*800*	
Recovery of Banked Water		
Semitropic 2002 Account	*4,950*	
Recycled Water		500
Total Available 2009 Supplies		**114,480**
Additional Dry Year Supplies [9]		
Semitropic Groundwater Storage Bank		45,920
2002 Account[10]	*16,650*	
2003 Account[10]	*29,270*	
Rosedale-Rio Bravo Water Banking and Exchange Program		64,898
2005 and 2006 Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement[11]	*22,000*	
2005 Banking of Table A[12]	*17,800*	
2006 Banking of Table A[12]	*17,800*	
2007 Rosedale Rio-Bravo Banking[12]	*7,298*	
Total Additional Dry Year Supplies		**110,818**

1. Decreased from 2005 UWMP projections to reflect recent three-year trend and economy-driven decrease in growth.

2. The Alluvium represents 30,000 – 40,000 afy of available supply under local wet-normal conditions, and 30,000 – 35,000 afy under local dry conditions. Available supply in 2009 is shown to be upper-range for average/wet conditions based on actual Alluvium conditions.

3. The Saugus Formation represents 7,500 – 15,000 afy of available water supply under non-drought conditions, and up to 35,000 afy under increasingly dry conditions. Available supply in 2009 is shown to be below mid-range for average/wet conditions; no short-term increase in Saugus Formation pumping is required or shown for 2009 water supply.

4. CLWA's SWP Table A amount is 95,200 af. The initial 2009 allocation was 15 percent (14,820 af). On March 17, 2009, the allocation was increased to 20 percent (19,040 af). On April 15, 2009, the allocation was increased to 30 percent (28,560 af).

5. Net amount used by CLWA in 2009; total carryover was 14,610 af.

6. 2009 annual supply from Buena Vista / Rosedale-Rio Bravo Water Acquisition Agreement.

7. CLWA can directly utilize up to 4,684 af of storage capacity in Castaic Lake. By agreement in 2005, CLWA can also utilize 1,376 af of Ventura County SWP contractors' flexible storage capacity in Castaic Lake.

8. Up to 850 af of non-SWP water supply is available to CLWA in critically dry years as a result of agreements among DWR, Yuba County Water Agency, and the U.S. Bureau of Reclamation regarding settlement of water rights issues on the Lower Yuba River (Yuba Accord). 800 af are expected to be available to CLWA in 2009.

9. Does not include other reliability measures available to CLWA and the retail water Purveyors. These measures include short-term exchanges, participation in DWR's dry-year water purchase programs, local dry-year supply programs and other future groundwater storage programs.

10. Net recoverable water after banking 24,000 af and 32,522 af in 2002 and 2003, respectively and recovering 4,950 af in 2009.

11. Water stored in Rosedale-Rio Bravo Water Banking and Exchange Program pursuant to the Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement.

12. Net recoverable water after banking 20,000 af in 2005 and 2006, and banking 8,200 af in 2007.

As discussed in Chapter 5, CLWA and the retail water purveyors have worked with Los Angeles County and the City of Santa Clarita in preparing a water conservation ordinance and the enforcement mechanisms to aggressively implement water conservation in the CLWA service area. In terms of short-term water supply availability, however, CLWA and the Purveyors have determined that, while current operational changes of the SWP are in effect, there are sufficient supplemental water supplies, including SWP water, to augment local groundwater and other water supplies such that overall water supplies will be sufficient to meet projected water requirements, as reflected herein, without the need for mandatory rationing though the summer of 2009. CLWA, the Purveyors, the City of Santa Clarita and Los Angeles County have reconvened the Santa Clarita Valley Drought Committee to determine, in part, if measures greater than voluntary conservation will be required later in the year if dry conditions persist.

In addition to the regular and previously banked water supplies described above to meet projected demand in 2009, a residual of nearly 46,000 af of recoverable water will remain stored in the Semitropic Groundwater Storage Bank in Kern County. Nearly 64,900 af of recoverable water have also been stored in the long-term Rosedale-Rio Bravo Water Banking and Exchange Program, also in Kern County. After recovery of nearly 5,000 af of banked water for use in 2009, remaining recoverable water in Kern County storage banks will slightly exceed 110,000 af. That component of overall water supply is separately reflected in Table 4-1 because it is intended for future dry-year supply and will not be used for 2009 water supply.

CLWA and the Purveyors have implemented a number of projects that are part of an overall program to provide facilities needed to firm up imported water supplies during times of drought. These involve water conservation, surface and groundwater storage, water transfers and exchanges, water recycling, additional short-term pumping from the Saugus Formation, and increasing CLWA's imported supply. This overall strategy is designed to meet increasing water demands while assuring a reasonable degree of supply reliability.

Part of the overall water supply strategy is to provide a blend of groundwater and imported water to area residents to ensure consistent quality and reliability of service. The actual blend of imported water and groundwater in any given year and location in the Valley is an operational decision and varies over time due to source availability and operational capacity of Purveyor and CLWA facilities. The goal is to conjunctively use the available water resources so that the overall reliability of water supply is maximized while utilizing local groundwater at a sustainable rate.

For long-term planning purposes, water supplies and facilities are added on an incremental basis and ahead of need. It would be economically unsound to immediately, or in the short term, acquire all the facilities and water supplies needed for the next twenty to thirty years. This would unfairly burden existing customers with costs that should be borne by future customers. There are numerous ongoing efforts to produce an adequate and reliable supply of good quality water for Valley residents. Water consumers expect that their needs will continue to be met with a high degree of reliability and quality of service. To that end, CLWA's and the Purveyors' stated reliability goal is to deliver a reliable and high quality water supply for their customers, even during dry periods. Based on conservative water supply and demand assumptions contained in the 2005 UWMP for a planning horizon over the next 25 years, in combination with conservation of non-essential demand during certain dry years, CLWA and the Purveyors believe implementing their water plan will successfully achieve this goal.

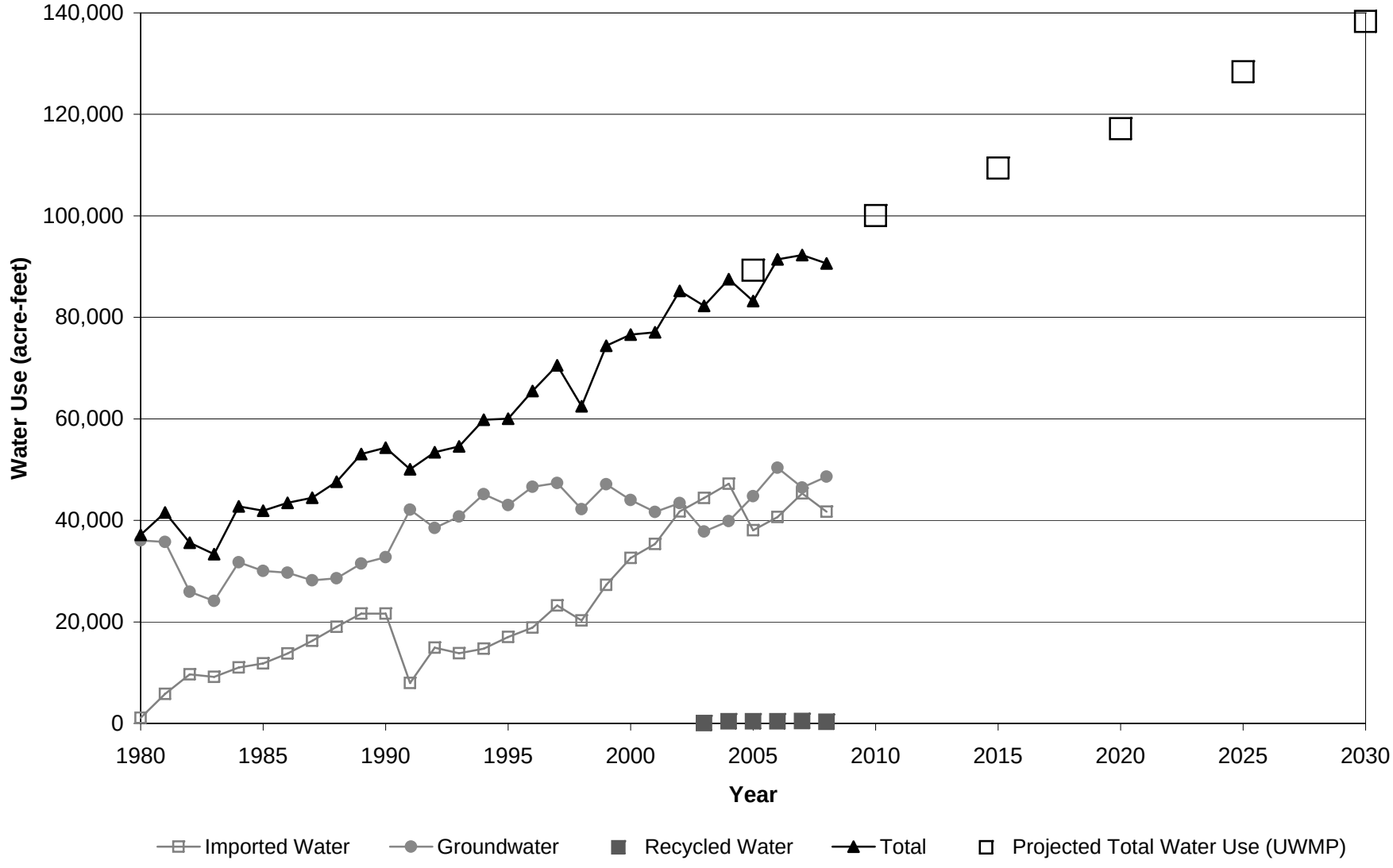

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Figure 4-1
Historical and Projected Water Use
Santa Clarita Valley

5. Water Conservation

The California Urban Water Conservation Council (CUWCC) was formed in 1991 through the Memorandum of Understanding (MOU) Regarding Urban Water Conservation in California. The urban water conservation Best Management Practices (BMPs) included in the MOU are intended to reduce California's long-term urban water demands. While the BMPs are currently implemented by the MOU signatories on a voluntary basis, they are specified as part of the Demand Management Measures section of the Urban Water Management Planning Act. Water conservation can achieve a number of goals, such as:

- meeting legal mandates
- reducing average annual potable water demands
- reducing sewer flows
- reducing demands during peak seasons
- meeting drought restrictions
- reducing carbon footprint, waste water flows and urban runoff.

CLWA signed the urban MOU in 2001 on behalf of its wholesale service area, and pledged to implement several BMPs at a wholesale support level (listed below). NCWD signed the MOU in 2002 and VWC signed the MOU in 2006, on behalf of their respective retail service areas. As separate MOU signatories and in their respective roles as retailers, NCWD and VWC are committed to implementing all BMPs that are feasible and applicable in their service areas. Efforts are made to coordinate with CLWA and the other Purveyors wherever possible to maximize efficiency and ensure the cost effectiveness of NCWD's and VWC's conservation program.

In coordination with the Purveyors, CLWA has been implementing the following BMPs (which pertain to wholesalers) for several years (some prior to signing the MOU in 2001):

BMP 3	System Water Audits, Leak Detection and Repair
BMP 7	Public Information Programs
BMP 8	School Education Programs
BMP 10	Wholesale Agency Programs
BMP 12	Water Conservation Coordinator

CLWA and the Purveyors have been implementing these BMPs valley-wide. Since 2001,

CLWA has also instituted implementation of BMP 2 (Residential Plumbing Retrofits) and BMP 14 (Residential ULFT and HET Replacement Programs) on behalf of the Purveyors.
In addition to these efforts, in September 2006 CLWA installed a weather station at its headquarters adjacent to the Rio Vista Water Treatment Plant. This station became part a network of over 120 automated weather stations in the state of California that make up the California Irrigation Management Information System (CIMIS). The Department of Water Resources (DWR) manages the system which has a primary purpose of making available to the public, free of charge, information useful in estimating crop water use for irrigation scheduling.

NCWD, SCWD and VWC have initiated implementation of the remaining BMPs that are specific to retail water suppliers:

BMP 1	Water survey programs for single-family residential and multi-family residential customers
BMP 2	Residential plumbing retrofits (including Weather Based Irrigation Controllers)
BMP 3	System water audits, leak detection and repair
BMP 4	Metering with commodity rates for all new connections and retrofit of existing connections
BMP 5	Large landscape conservation programs and incentives
BMP 6	High-efficiency clothes washing machine financial incentive programs
BMP 7	Public Information Programs
BMP 8	School Education Programs
BMP 9	Conservation programs for commercial, industrial, and institutional (CII) accounts
BMP 11	Conservation pricing
BMP 12	Conservation coordinator
BMP 13	Water waste prohibition
BMP 14	Residential High Efficiency Toilet (HET) Replacement Program

Reports to the CUWCC on BMP implementation by CLWA and the Purveyors were included in the 2005 UWMP and have been reported to the CUWCC for 2007 and 2008..

Additional savings are occurring Valley-wide due to state interior plumbing code requirements that have been in effect since 1992, as well as due to changes in lot size and reduction in exterior square footage of new housing and commercial developments. The City of Santa Clarita and County of Los Angeles have also taken a more active conservation role and have begun implementing water efficient devices and practices on the properties they own and manage. All

of these efforts have begun to impact overall demand in the Valley. The Valley's water suppliers continue to monitor water demand trends through time to assess those factors that are accounting for the reduction, and to attempt to quantify them.

Most recently with regard to water conservation, CLWA and the retail water Purveyors entered into an MOU in 2007 to prepare a Santa Clarita Valley Water Conservation Strategic Plan (the Plan). The purpose of the plan is to prepare a comprehensive long-term conservation plan for the Santa Clarita Valley by adopting objectives, policies and programs designed to promote proven and cost effective conservation practices. A consultant was hired to prepare the Plan which will include significant input from stakeholders and the community at large. The plan provides a detailed study of existing residential and commercial water use and recommends programs designed to reduce the overall valley wide water demand by 10 percent by 2030. The programs are designed to provide Valley residents with the tools and education to use water more efficiently. The six programs identified in the Plan are:

- High Efficiency Toilet Rebate Program
- CII Audits & Customized Incentive Program
- Large Landscape Audits & Customized Incentive Program
- Landscape Contractor Certification and Weather Based Irrigation Controller Program
- High Efficiency Washer Rebate Program
- Public Information and Education Programs

In addition to the six programs designed for existing customers, the Plan also identifies three other key factors that will help reduce the valley's overall water demand; passive conservation, inflation and new more water efficient building ordinances.

Finally, the Plan includes an Appendix with more aggressive water use efficiency measures designed to meet a potential 20 percent reduction in water use by 2020. This includes funding more active conservation programs, retrofit on resale legislation, water rate reform, water budget based rates and a more aggressive recycled water program.

CLWA and the water purveyors will be implementing the majority of the programs identified in the Plan in 2009.

In addition to this effort, the water Purveyors are working with City and County agencies to develop a landscape irrigation ordinance for the Santa Clarita Valley. This ordinance will focus primarily on new construction aimed at reducing overall water demands by requiring efficient

landscape design and delivery systems. Implementation of the ordinance is expected in 2010, depending on review and adoption by the City and County.

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PREPARED FOR: The Santa Clarita Valley Water Purveyors

PREPARED BY: John Porcello/CH2M HILL
Nate Brown, P.G./CH2M HILL

DATE: August 2005

PROJECT NUMBER: 178973.A4.02

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Introduction

The Santa Clarita Valley Regional Groundwater Flow Model (hereafter referred to as the Regional Model) is a three-dimensional, numerical model of groundwater flow in the Santa Clara River Valley Groundwater Basin, East Subbasin, which is located in the northwestern portion of Los Angeles County, California. As shown on Figure 1, the Regional Model simulates groundwater flow for the area occupied by the local groundwater aquifers, which consist of the shallow Alluvial Aquifer and the deeper Saugus Formation (tables and figures are located at the end of this technical memorandum). The Regional Model was developed as part of the work scope contained in an August 2001 Memorandum of Understanding that was entered into by the Upper Basin Water Purveyors (hereafter referred to as the Purveyors[1]) and the United Water Conservation District, located downstream in Ventura County.

The construction and calibration of the Regional Model are described in detail in the *Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California* (CH2M HILL, 2004a). As discussed in that report, calibration of the Regional Model was performed for the period 1980 through 1999. This technical memorandum describes a recent extension of the model to simulate observed conditions in the basin during the period from January 2000 through February 2005. The purpose of the simulations was to update and test the model's calibration against an independent data set consisting of the recently observed hydrologic and pumping conditions in the basin. Following are discussions of the design of the simulation for this extended period and the findings.

[1]The Upper Basin Water Purveyors consist of the Castaic Lake Water Agency (CLWA), the Santa Clarita Water Division of CLWA (formerly called the Santa Clarita Water Company [SCWC]), the Newhall County Water District (NCWD), and the Valencia Water Company (VWC).

Simulation Design

The calibration update process consisted of transient modeling that simulated monthly variations in pumping from, and recharge to, the Alluvial Aquifer and the Saugus Formation during the period January 2000 through February 2005. As with the original calibration effort, simulation results were compared to measured fluctuations in groundwater elevations and streamflows in the Santa Clara River.

Hydrologic input data for the calibration update simulation were as follows:

1. Groundwater pumping data were provided by the Purveyors for each production well. Tables 1 and 2 show annual pumping for the Alluvial Aquifer and Saugus Formation, respectively, from 1980 through 2004. As with the initial model calibration effort, the monthly distribution of pumping was defined from information on the monthly distribution of urban and agricultural water demands, as listed in Table 3.

2. Groundwater recharge was defined using a Surface Water Routing Model (SWRM) that was written specifically for the Regional Model during the original model development effort (see Appendix C of CH2M HILL, 2004a). The SWRM defined recharge from applied water use (i.e., irrigation)[2]; direct precipitation within the model domain (see Table 4); Santa Clara River flows into the valley as measured at the Lang stream gage (see Table 5); SWRM-estimated stormwater inflows into the model domain along ephemeral streams that are tributaries to the Santa Clara River; measured volumes of treated water discharge into the Santa Clara River from two Los Angeles County Sanitation District water reclamation plants (WRP) (see Tables 6 and 7); and water released from Castaic Lagoon into Castaic Creek by the California Department of Water Resources (see Table 8).

As discussed in two recent reports (CH2M HILL, 2004b and 2005) that were prepared after the model development report (CH2M HILL, 2004a) was completed, the boundary condition in the Alluvial Aquifer at the Lang gage was converted to a constant-head boundary shortly after completion of the model development report. This change was made based on field reconnaissance that was performed in April and May 2004, when the Santa Clara River was dry at the Lang gage. At that time, groundwater was locally discharging from the bed of the Santa Clara River in isolated locations where the riverbed intersects the water table, then seeping back into the riverbed nearby. Significant phreatophyte growth was also present along the riverbed in this same area (just downstream of the Lang gage). Additionally, water was present and actively flowing in the river east (upstream) of the Santa Clarita Valley, in the area between the Santa Clarita Valley and the upstream Acton Basin. Based on these observations, a specified groundwater elevation of 1,746 feet was established in the Alluvial Aquifer at the eastern boundary of the Regional Model to simulate subsurface flow beneath the channel of the Santa Clara River at the Lang gage. This specified elevation was held constant throughout the simulation period. Because of this change to the Regional Model, the simulation was performed for the entire calibration period (January 1980 through February 2005).

[2]Infiltration of applied water was simulated in the same locations as in the original model calibration effort, and at the 1999 rates described in the model development report (CH2M HILL, 2004a). These rates were 24.7 inches per year (in/yr) for irrigated agricultural land, 2.2 in/yr for residential areas, and 1.0 in/yr for retail/industrial lands and golf courses.

The simulation results were compared with hydrographs of measured groundwater elevations at production wells and other wells with long-term groundwater elevation data; measured flows in the Santa Clara River at the west end of the basin (at the County Line gage; see Table 9); and estimated volumes of groundwater discharge to the Santa Clara River (see Table 10). These comparisons are discussed in the following section.

Simulated and Measured Groundwater Elevations Trends

Simulated groundwater elevation trends were compared with data collected at specific Alluvial Aquifer wells (see Figure 2) and Saugus Formation wells (see Figure 3) where long-term records of groundwater elevations were available. These wells are referred to herein as target wells. As discussed in the model development report (CH2M HILL, 2004a), the calibration goal at target wells was to simulate groundwater elevations that were higher than the pumping elevations and as close as possible to the static elevations. Therefore, the hydrographs show the model-simulated groundwater elevations, the measured static groundwater elevations, and, for production wells, the measured pumping groundwater elevations. Additionally, the comparison of time-varying simulated and measured groundwater elevations was equally focused on the slopes of the hydrographs, not just the absolute values of the groundwater elevations at any given time.

Figures 4 through 8 show simulated and measured groundwater elevation hydrographs at target wells in specific geographic areas where the Alluvial Aquifer is present. The hydrographs and principal observations about the calibration quality in each area are as follows:

1. Along the Santa Clara River, west of Interstate 5, Figure 4 shows that simulated groundwater elevations were generally stable in this area during both the original calibration period (1980 through 1999) and the calibration update period (January 2000 through February 2005). However, few groundwater elevation measurements are available in this area for evaluating calibration quality during the latter period.

2. Along the Santa Clara River between Interstate 5 and Soledad Canyon, Figure 5 shows that the Regional Model closely simulates the trends at the three wells where data were collected before and after January 2000 (wells VWC-I, VWC-N, and VWC-Q2). This includes the general decline in groundwater elevations from 1998 through 2003, the more stable elevations in late 2003 and much of 2004, and the steep rise in elevations that began at the end of 2004.

3. Along the Santa Clara River in Soledad Canyon, Figure 6 shows that in the western portion of the canyon, the Regional Model simulates somewhat less decline in water levels during 2003 and 2004 than was observed at three wells (SCWC-Stadium, SCWC-Honby, and VWC-T2). However, the Regional Model simulates the steep declines seen elsewhere in the canyon in most of the production wells (such as SCWC-Mitchell and SCWC-Lost Canyon 2), including at the production wells where pumping has historically been reduced when groundwater elevations decreased during local drought periods. At these wells, the hydrographs show that the Regional Model closely simulates the slopes in the groundwater elevation hydrographs during dry and wet periods, and does not overestimate groundwater elevations during droughts.

4. Along Castaic Creek, Figure 7 shows that the Regional Model simulates groundwater elevations that are too high in early 2001 at three wells located in the upper reaches of the valley (production well NWCD-Castaic3 and other wells 6980E and 6981D). However, the subsequent declines in simulated groundwater elevations at these wells are similar to observed declines. In the lower reach of the valley, the simulated groundwater elevations and elevation trends at well VWC-D closely match the measured data.

5. In other tributary canyons to the Santa Clara River, Figure 8 shows a good match between simulated and measured groundwater elevations at well VWC-W6 in San Francisquito Canyon through May 2002, when data collection ended at this well. In Bouquet Canyon, the simulated groundwater elevations are too high in production well SCWC-Clark beginning in 1997, but agree more closely with observations at well 7066D, located farther downstream in the canyon. Farther east, well 7188A in Sand Canyon shows agreement between simulated and measured groundwater elevations and elevation trends.

In the Saugus Formation, the target wells are located along the South Fork Santa Clara River, as shown on Figure 3. Figure 9 shows the simulated and measured hydrographs for the Saugus Formation target wells. In general, the Regional Model simulates the trends in groundwater elevations quite well at each Saugus production and monitoring well. The trends (hydrograph slopes) are particularly close in the NCWD wellfield at observation well 5851 and NCWD production wells 10 through 13. Farther downgradient, the Regional Model tends to slightly over-predict groundwater elevations in the VWC and SCWC production wells (VWC-157, VWC-201, SCWC-Saugus1, and SCWC-Saugus2). However, the Regional Model closely simulates the groundwater elevation trends at each of these locations, which is the primary consideration for evaluating the quality of the transient calibration process in the Saugus Formation.

Simulated and Measured Flows in the Santa Clara River

Figure 10 compares the simulated and measured total flows of the Santa Clara River at the County Line gage. The figure contains both a linear and a semi-logarithmic plot to better illustrate how the simulated and measured flows compare during low-flow periods in the river. The figure shows that the Regional Model adequately replicates seasonal cycles of low and high river flows during the calibration update period (January 2000 through February 2005), as it did for the original calibration period (1980 through 1999), although seasonal low flows during the summer months are slightly over-predicted.

Figure 11 compares the model-simulated groundwater discharges to the river with the discharges that have been estimated from hydrograph separation techniques (see Section 2.6.2.5 of the model development report [CH2M HILL, 2004a]). Because of uncertainty in the amount of treated water that infiltrates the streambed, Figure 11 displays a range for the estimated values, varying according to how much treated Saugus WRP water is estimated to infiltrate to groundwater as it travels down the Santa Clara River. As with the analysis in the model development report, it was estimated that the infiltration could be negligible (blue line) and would be unlikely to exceed 75 percent of the Saugus WRP discharge (green line). As shown on Figure 11, the Regional Model predicts higher rates of

groundwater discharge during the driest months of the year than those estimated from the County Line gage data. However, the Regional Model simulated the predominantly low total river flow (Figure 10) and groundwater discharge (Figure 11) that occurred from mid-1998 through most of 2004. As discussed in the model development report, it is likely that differences between modeled and measured total river flows and measured versus estimated groundwater discharges result from uncertainties in both the Regional Model and the gage data at the County Line during periods of low river flows.

Water Budget

Table 11 summarizes the groundwater budget for each year of the 25-year transient model simulation period (1980 through 2004). Figures 12 and 13 show the annual groundwater recharge and groundwater discharge rates, respectively. Figure 14 shows the change in groundwater storage each year, and Figure 15 shows the cumulative change in groundwater storage during the simulation period. The plots show that groundwater recharge from rainfall and stream leakage were generally less during the calibration update period than during the mid-1980s and several years during the 1990s. Year-to-year fluctuations in groundwater discharge continued to be less variable than year-to-year fluctuations in groundwater recharge. The volume of groundwater in storage generally declined from mid-1998 through 2004 because of the below-normal rainfall that occurred during this period.

Conclusions

The Regional Model calibration was extended an additional 62 months (from January 2000 through February 2005) to update and test the model's calibration against an independent data set consisting of recently observed hydrologic and pumping conditions in the basin. Additionally, the simulation was repeated for the initial calibration period (January 1980 through December 1999) because of a change in the boundary condition at the east end of the basin in the Alluvial Aquifer.

Examination of groundwater elevation hydrographs for the Alluvial Aquifer and the Saugus Formation indicates that the Regional Model has a similar overall ability to simulate conditions during the calibration update period as for the preceding 20-year period to which it was originally calibrated. Specifically, the transient model simulates trends in groundwater elevations and Santa Clara River flows that are generally well matched with observed trends. In Soledad Canyon, where local droughts have sometimes affected the Upper Basin Water Purveyors' ability to pump groundwater from the Alluvial Aquifer, the Regional Model simulates the trends in groundwater elevations particularly well and does not over-predict groundwater elevations. In the Saugus Formation, the groundwater elevations and elevation trends are closely matched at most wells where data are available. Consequently, the process of updating the Regional Model's calibration for the most recent 5-year period has confirmed that the model is suitable for its intended applications, which are evaluating groundwater management strategies, groundwater sustainability, artificial recharge options, and restoration of contaminated water supplies.

References

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Tables

TABLE 1
Annual Groundwater Pumping from the Alluvial Aquifer
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Owner	Well Name	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
NCWD	Castaic1	244	257	253	189	251	274	295	450	520	478	444	561	515	458	496	401	385	535	166	426	118	345	385	561	456
	Castaic2	124	48	0	0	0	0	380	535	324	678	0	0	0	477	518	380	327	268	257	331	289	166	0	123	403
	Castaic3	0	108	136	172	240	301	0	0	324	0	660	532	488	0	0	0	0	0	0	0	0	0	0	0	0
	Castaic4	0	0	0	0	0	0	0	0	0	39	0	0	0	0	0	0	0	95	57	6	7	100	47	56	80
	Pinetree1	346	326	355	242	148	273	8	0	2	152	0	47	16	247	154	79	64	89	227	403	245	164	0	0	0
	Pinetree2	58	84	209	112	154	113	206	309	351	348	31	0	283	326	218	165	70	0	0	0	0	0	0	0	0
	Pinetree3	398	527	225	432	753	655	719	756	758	672	801	724	682	450	607	595	624	812	716	505	494	566	544	525	643
	Pinetree4	0	0	0	0	3	28	234	77	4	0	0	0	10	19	232	55	333	510	338	5	355	300	5	0	0
NLF	161	317	370	271	223	314	220	170	0	0	0	120	82	401	753	791	0	0	0	0	123	328	496	485	2,021	1,834
	B10	0	0	0	0	0	0	0	0	0	0	0	291	1,225	452	1,406	894	1,045	930	1,244	1,155	1,446	1,240	534	344	589
	B11	186	217	159	133	184	138	60	0	0	127	445	311	0	136	51	127	151	30	250	212	87	205	232	271	338
	B5	1,218	1,423	1,041	858	1,208	772	1,178	1,002	1,481	1,928	1,893	1,880	860	989	1,950	1,921	1,649	1,756	1,273	1,748	2,008	1,680	2,280	1,582	2,166
	B6	858	1,002	733	604	850	543	946	788	165	96	137	263	615	283	808	1,359	1,421	1,602	1,572	2,133	870	1,312	2,175	1,766	1,356
	B7	0	0	0	0	0	0	60	0	0	127	0	0	400	180	581	373	56	286	176	444	461	474	584	402	71
	C	723	845	618	510	717	575	660	387	418	557	338	226	756	1,024	417	1,324	715	1,126	598	716	1,034	1,319	1,720	1,373	1,202
	C3	196	229	168	138	195	140	254	63	130	71	134	48	197	259	582	333	397	355	378	619	441	93	192	186	59
	C4	260	304	222	183	258	196	137	25	30	7	213	225	166	12	108	150	293	483	609	819	1,078	1,028	809	764	274
	C5	459	536	392	323	455	359	328	191	198	154	147	250	428	414	394	472	676	894	628	685	605	680	850	622	649
	C6	203	237	174	143	201	166	161	103	117	77	59	123	0	0	0	360	229	226	128	154	164	231	241	108	119
	C7	575	671	491	405	570	354	195	192	318	337	339	220	427	279	625	778	582	779	779	1,167	503	741	866	443	369
	C8	0	0	0	0	0	0	0	0	0	0	0	0	126	254	166	199	458	432	179	236	241	286	593	408	390
	E	2,067	2,416	1,767	1,457	2,051	3,342	1,842	1,180	812	624	965	498	1,325	1,513	1,022	1,366	2,542	1,949	1,522	2,506	2,084	1,691	16	28	0
	E2	174	203	149	123	173	138	103	0	0	251	1,284	830	560	584	555	115	669	525	426	138	125	141	55	14	463
	E3	0	0	0	0	0	0	0	0	0	0	0	0	0	15	138	0	0	0	0	0	0	0	0	0	0
	E4	1,011	1,181	864	712	1,003	639	716	83	566	392	553	284	376	16	0	381	140	339	80	281	66	0	0	0	0
	E5	0	0	0	0	0	0	0	0	0	0	0	0	65	274	0	142	514	598	42	0	47	172	679	537	284
	E7	0	0	0	0	0	0	0	0	0	0	0	0	116	80	105	88	79	2	0	0	0	0	0	0	0
	E9	96	113	82	68	96	78	117	288	476	411	339	596	252	187	435	319	12	142	170	42	38	238	814	47	609
	G45	324	378	277	228	321	179	153	98	123	99	143	146	165	82	144	137	159	180	144	231	197	291	283	60	0
	Q	441	515	377	311	438	159	360	382	312	185	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	R	0	0	0	0	0	0	0	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	R2	159	186	136	112	158	71	104	47	0	0	0	87	0	0	0	0	0	0	0	0	0	0	0	0	0
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S2	293	342	250	206	290	95	0	958	0	0	503	0	0	0	0	0	0	0	0	276	237	0	0	0	0
	S3	655	765	560	461	649	327	124	0	0	0	29	37	52	99	87	109	97	55	10	3	0	0	0	0	0
	Topco 1	0	0	0	0	0	0	0	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0
	Topco 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	W4	303	354	259	213	300	138	60	1	0	300	157	252	1	0	36	5	128	29	20	3	0	46	1	0	0
	W5	553	646	472	389	548	191	315	205	308	192	0	175	0	0	0	0	0	0	0	21	17	276	104	23	0
	X3	260	304	222	183	258	508	244	314	497	308	412	215	350	135	205	222	8	108	22	112	10	12	0	0	6
SCWC	Clark	303	228	131	137	194	200	208	342	248	301	407	542	662	635	572	662	1,027	873	697	878	747	696	782	712	728
	Guida	1,058	795	457	477	677	698	221	569	158	530	676	801	978	895	942	744	1,252	1,479	1,274	1,556	853	1,047	1,320	1,230	1,432
	Honby	594	447	257	268	381	392	193	391	462	216	930	893	731	1,393	476	553	352	814	532	1,162	815	721	696	874	707
	Lost Canyon 2	1,083	814	468	489	693	714	765	923	787	588	601	404	465	692	669	773	678	792	757	946	708	741	730	644	785
	Lost Canyon 2A	0	0	0	0	0	0	0	0	0	0	293	832	1,284	1,080	1,383	1,230	1,370	1,055	973	890	998	1,034	905	593	756
	Methodist	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mitchell	1,189	893	515	537	761	785	444	582	485	435	264	3	474	663	564	610	598	633	482	913	439	407	293	19	54
	N.Oaks Central	488	367	211	220	313	322	304	361	153	329	525	704	701	1,403	1,313	965	851	870	1,490	1,682	1,145	822	1,646	1,641	669
	N.Oaks East	601	451	260	271	385	396	863	972	776	914	454	194	588	1,233	1,473	1,295	900	1,033	1,407	695	1,483	1,234	448	485	595
	N.Oaks West	643	483	278	290	412	424	874	465	842	413	275	78	634	866	972	795	663	952	934	1,894	1,663	898	1,123	31	858
	Sand Canyon	721	542	312	325	461	477	514	466	498	1,115	458	49	661	918	781	842	1,211	1,533	1,622	1,629	1,317	930	705	195	562
	Sierra	2,780	2,089	1,202	1,255	1,780	1,834	856	220	459	730	772	719	1,050	1,413	1,433	1,092	1,034	597	814	1,158	640	846	87	0	0
	Stadium	0	0	0	0	0	0	167	291	211	214	328	374	60	825	418	656	509	637	444	338	721	565	778	0	0

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Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Owner	Well Name	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
VWC	D	289	269	164	163	240	41	0	305	588	614	510	680	239	173	494	403	454	1,134	1,209	921	880	646	772	687	833
	I	214	200	122	121	177	181	95	0	91	132	73	108	1	0	1	0	0	0	0	0	0	0	0	0	0
	K2	0	0	0	0	0	0	0	0	0	0	0	982	1,134	1,708	2,089	1,155	1,305	1,076	1,489	1,420	861	669	954	364	0
	L2	9	8	5	5	7	91	0	0	0	0	0	838	526	996	1,236	818	961	308	190	532	494	349	490	71	0
	N	1,475	1,376	840	833	1,223	1,093	1,472	1,420	1,473	1,177	792	976	697	66	0	24	263	808	768	1,036	935	591	700	622	587
	N3	0	0	0	0	0	0	0	0	0	0	0	10	999	1,536	29	943	1,325	1,034	1,093	1,057	778	226	857	255	0
	N4	5	5	3	3	4	65	0	0	0	0	0	847	248	133	911	1,329	1,328	1,185	772	894	710	458	909	248	0
	N7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Q2	440	411	251	248	367	461	838	893	512	1,483	1,398	1,783	335	548	1,348	1,126	1,385	1,462	1,655	1,288	1,387	923	1,167	1,451	1,096
	S6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	515	1,490	1,320	2,134	2,301
	S7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	564	419	1,095	471
	S8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	327	190	409	153
	T2	621	580	354	351	515	704	894	913	1,007	1,030	643	662	379	0	3	280	733	837	941	726	984	700	696	1,014	822
	T4	160	150	91	91	133	54	167	0	0	0	0	163	687	3	1	975	1,258	804	523	892	625	690	831	799	747
	U3	1,476	1,378	841	834	1,225	1,278	1,033	638	323	823	1,254	1,199	369	1	2	765	987	851	560	702	1,126	956	572	823	0
	U4	1,306	1,220	744	738	1,084	665	668	606	696	567	551	584	42	3	2	7	742	789	529	828	1,073	942	796	934	625
	W6	0	0	0	0	0	0	0	146	145	0	0	217	260	204	224	365	615	493	355	416	445	182	0	0	0
	W9	0	0	0	0	0	0	0	0	0	0	11	902	699	444	507	508	1,077	915	627	1,111	1,176	806	939	764	566
	W10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	1,537
	W11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	123
WHR	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,842	1,229	1,376	772	1,104	1,204	1,352	760	614	1,229	1,131	1,010	1,000	1,000	1,000	2,000
	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	15	137	137	137	137	137	137	137	137	137	137	91	102	57	82	89	100	56	46	91	84	75	74	72	173	74
	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	17	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	1,021	680	762	427	612	666	748	421	340	680	627	559	530	530	1,100	1,031
	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Pumping (NCWD)		1,170	1,350	1,178	1,147	1,549	1,644	1,842	2,127	2,283	2,367	1,936	1,864	1,994	1,977	2,225	1,675	1,803	2,309	1,761	1,676	1,508	1,641	981	1,265	1,582
Total Pumping (SCWC)		9,460	7,109	4,091	4,269	6,057	6,242	5,409	5,582	5,079	5,785	5,983	5,593	8,288	12,016	10,996	10,217	10,445	11,268	11,426	13,741	11,529	9,941	9,513	6,424	7,146
Total Pumping (VWC)		5,995	5,597	3,415	3,387	4,975	4,633	5,167	4,921	4,835	5,826	5,232	9,951	6,615	5,815	6,847	8,698	12,433	11,696	10,711	11,823	12,179	10,519	11,612	11,706	9,861
Total Pumping (All Purveyors)		16,625	14,056	8,684	8,803	12,581	12,519	12,418	12,630	12,197	13,978	13,151	17,408	16,897	19,808	20,068	20,590	24,681	25,273	23,898	27,240	25,216	22,101	22,106	19,395	18,589
Total Pumping (NLF)		11,331	13,237	9,684	7,983	11,237	9,328	8,287	6,512	5,951	6,243	8,225	7,039	8,938	8,020	10,606	11,174	12,020	12,826	10,250	13,824	12,087	12,652	13,513	10,999	10,778
Total Pumping (WHR)		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	2,000	2,240	1,256	1,798	1,959	2,200	1,237	1,000	2,000	1,842	1,644	1,604	1,602	2,273	3,105
Total Pumping (Others)		500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	932	932	932	932	953	890	909	1,071
Total Alluvial Aquifer Pumping		31,456	30,793	21,868	20,286	27,318	25,347	24,205	22,642	21,648	23,721	23,876	27,187	27,591	30,126	33,133	34,464	38,438	40,031	37,080	43,838	39,879	37,310	38,111	33,576	33,543

Notes:

All pumping volumes are listed in acre-feet and are from records maintained by the Upper Basin Water Purveyors.

N. = north

WHR = Wayside Honor Rancho, owned by the Los Angeles County Waterworks District

TABLE 2

Annual Groundwater Pumping from the Saugus Formation

Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Owner	Well Name	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
NCWD	7	404	396	350	348	355	384	271	260	332	242	242	274	180	268	321	364	332	288	280	172	0	0	0	0	0
	4	440	449	319	385	315	369	222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	0	119	227	115	138	1	0	5	1	1	0	4	1	1	0	1	0	0	0	0	0	0
	10	790	906	1,287	1,300	1,007	997	731	888	613	453	644	343	351	61	0	1	0	0	2	0	0	0	0	0	0
	11	729	870	716	754	1,159	1,278	2,209	2,371	1,265	1,280	1,252	1,034	428	730	614	522	353	81	14	0	0	0	0	0	0
	12	0	0	0	0	0	0	0	0	1,830	2,713	2,603	3,342	2,807	1,956	1,918	2,264	2,140	1,798	1,909	1,155	1,767	1,242	1,758	1,013	1,833
	13	0	0	0	0	0	0	0	0	0	0	0	0	1,393	2,053	2,246	1,623	2,045	3,001	2,351	1,295	419	1,190	1,637	1,500	1,906
NLF	156	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	266	445	426	479	374	300	211	122	268
SCWC	Saugus1	0	0	0	0	0	0	0	0	31	0	0	1,690	437	1,226	1,333	0	410	451	0	0	0	0	0	0	0
	Saugus2	0	0	0	0	0	0	0	0	32	0	40	3,091	2,476	1,675	2,530	1,726	1,766	617	0	0	0	0	0	0	0
VWC	157	635	604	529	239	387	314	581	483	1,223	1,146	635	1,005	570	436	616	403	46	80	0	0	0	0	0	0	0
	159	0	0	0	0	0	0	0	0	0	0	3	63	65	74	147	68	3	0	0	0	0	91	0	30	9
	160	1,571	1,725	368	372	467	571	846	822	1,077	1,326	839	1,325	580	920	957	585	206	401	133	95	1,332	707	347	864	1,526
	201	0	0	0	0	0	0	0	0	0	57	2,039	2,249	1,170	752	845	530	71	35	16	11	295	128	495	168	148
	205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101	0	123	511	813
	206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Pumping (NCWD)		2,363	2,621	2,672	2,787	2,955	3,255	3,548	3,657	4,041	4,688	4,746	4,994	5,160	5,068	5,103	4,775	4,871	5,168	4,557	2,622	2,186	2,432	3,395	2,513	3,739
Total Pumping (SCWC)		0	0	0	0	0	0	0	0	63	0	40	4,781	2,913	2,901	3,863	1,726	2,176	1,068	0	0	0	0	0	0	0
Total Pumping (VWC)		2,206	2,329	897	611	854	885	1,427	1,305	2,300	2,529	3,516	4,642	2,385	2,182	2,565	1,586	326	516	149	106	1,728	926	965	1,573	2,496
Total Pumping (All Purveyors)		4,569	4,950	3,569	3,398	3,809	4,140	4,975	4,962	6,404	7,217	8,302	14,417	10,458	10,151	11,531	8,087	7,373	6,752	4,706	2,728	3,914	3,358	4,360	4,086	6,235
Total Pumping (NLF)		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	266	445	426	479	374	300	211	122	268
Total Pumping (Others)		0	0	501	434	620	555	490	579	504	522	539	480	446	439	474	453	547	548	423	509	513	513	513	513	513
Total Saugus Formation Pumping		4,589	4,970	4,090	3,852	4,449	4,715	5,485	5,561	6,928	7,759	8,861	14,917	10,924	10,610	12,025	8,560	8,186	7,745	5,555	3,716	4,801	4,171	5,084	4,721	7,016

Note:

All pumping volumes are listed in acre-feet and are from records maintained by the Upper Basin Water Purveyors.

TABLE 3

Allocation of Pumping, by Month, for Agricultural and Urban Production Wells

Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Month	% of Annual Water Use, Agricultural	% of Annual Water Use, Urban	% of May through October Water Use, Urban
January	3.8	5.2	
February	5.1	3.7	
March	6.6	5.2	
April	9.1	6.6	
May	10.6	8.7	13.2
June	11.4	10.4	15.8
July	14.1	13.0	19.7
August	12.9	13.6	20.6
September	10.2	10.9	16.5
October	7.5	9.3	14.1
November	5.0	7.1	
December	3.8	6.3	
Total	**100.0**	**100.0**	**100.0**

TABLE 4
Monthly Precipitation Measured at the Newhall County Water District Rain Gage
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1980	10.36	14.63	4.84	0.36	0.40	0.00	0.00	0.00	0.00	0.00	0.00	1.36	31.95
1981	4.76	1.66	5.50	0.46	0.00	0.00	0.00	0.00	0.00	0.58	3.62	0.22	16.80
1982	3.33	1.21	9.50	1.09	0.13	0.00	0.00	0.00	1.02	0.25	5.34	2.95	24.82
1983	8.67	6.85	13.07	4.61	0.20	0.00	0.00	1.17	1.85	1.74	5.04	5.13	48.33
1984	0.00	0.00	0.27	0.07	0.00	0.00	0.00	0.00	0.05	0.16	3.87	8.13	12.55
1985	0.78	1.20	1.04	0.14	0.07	0.00	0.06	0.00	0.12	0.54	5.11	0.70	9.76
1986	5.84	6.65	5.39	0.88	0.00	0.00	0.05	0.00	1.78	0.68	1.55	0.24	23.06
1987	2.10	0.61	1.69	0.14	0.00	0.00	0.09	0.02	0.00	3.47	3.84	4.80	16.76
1988	3.27	3.39	1.16	3.98	0.09	0.00	0.00	0.00	0.10	0.00	0.92	7.14	20.05
1989	0.89	4.13	1.30	0.30	0.00	0.00	0.00	0.00	0.62	0.86	0.37	0.00	8.47
1990	2.89	4.23	0.22	0.48	0.88	0.00	0.00	0.00	0.00	0.00	0.63	0.01	9.34
1991	1.11	5.72	11.33	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	5.95	24.61
1992	3.28	16.64	9.73	0.15	0.34	0.00	0.30	0.00	0.00	1.55	0.00	7.25	39.24
1993	17.11	11.73	4.27	0.00	0.00	0.65	0.00	0.00	0.00	0.57	0.75	1.00	36.08
1994	0.48	5.31	2.33	0.42	0.00	0.00	0.00	0.00	0.00	0.78	0.71	1.94	11.97
1995	21.98	1.93	8.30	0.72	0.26	0.76	0.00	0.00	0.00	0.00	0.00	2.33	36.28
1996	2.97	6.73	2.08	0.13	0.68	0.00	0.00	0.00	0.00	1.30	1.06	8.70	23.65
1997	6.67	0.23	0.00	0.00	0.00	0.00	0.05	0.00	0.53	0.00	3.73	6.72	17.93
1998	3.49	22.00	3.98	2.28	5.50	0.06	0.00	0.00	0.21	0.33	1.36	1.39	40.60
1999	2.08	0.65	3.00	3.78	0.00	0.48	0.00	0.00	0.01	0.00	0.00	0.05	10.05
2000	1.21	9.43	3.15	2.10	0.00	0.00	0.00	0.31	0.00	1.13	0.00	0.00	17.33
2001	5.84	10.76	3.38	2.56	0.00	0.00	0.00	0.00	0.00	0.22	3.18	1.30	27.24
2002	1.55	0.51	0.38	0.05	0.12	0.01	0.00	0.00	0.02	0.00	3.01	5.85	11.50
2003	0.00	9.03	2.38	2.35	1.70	0.00	0.02	0.00	0.00	1.10	0.63	2.57	19.78
2004	0.65	8.07	0.37	0.20	0.00	0.00	0.00	0.00	0.00	4.79	0.64	8.54	23.26
2005	17.06	16.69											

Note:

All precipitation values are measured in inches.

TABLE 5
Monthly Streamflows Measured in the Santa Clara River at the Lang Gage
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1980	1,310	7,449	1,213	568	218	78	6	0	37	274	467	553	12,175
1981	594	98	339	240	107	18	18	12	338	321	258	394	2,739
1982	333	1,420	785	283	238	0	0	0	0	95	178	855	4,188
1983	1,922	16,971	2,755	2,576	958	523	639	512	0	0	0	0	26,855
1984	0	596	405	240	143	166	228	411	154	220	904	578	4,044
1985	483	461	274	215	77	0	0	0	12	179	221	301	2,224
1986	483	1,138	488	283	107	6	0	12	6	12	80	129	2,744
1987	117	117	65	31	12	0	0	0	0	0	258	516	1,116
1988	222	209	506	117	77	68	0	0	0	0	12	25	1,236
1989	50	111	60	25	6	0	0	0	102	94	***34***	***18***	***499***
1990	***212***	***276***	***230***	***46***	***46***	***5***	***0***	***0***	***0***	***27***	***36***	***147***	***1,025***
1991	***162***	***775***	***879***	***736***	***145***	***142***	***14***	***0***	***45***	***69***	***62***	***263***	***3,291***
1992	***336***	***534***	***429***	***398***	***117***	***84***	***16***	***5***	***108***	***144***	***498***	***1,446***	***4,115***
1993	***14,709***	***5,336***	***1,194***	***530***	***239***	***110***	***54***	***10***	***64***	***145***	***264***	***281***	***22,937***
1994	***388***	***493***	***497***	***319***	***163***	***80***	***20***	***7***	***37***	***102***	***193***	***941***	***3,239***
1995	***1,211***	***1,421***	***954***	***802***	***268***	***156***	***62***	***8***	***6***	***1***	***27***	***189***	***5,104***
1996	***666***	***896***	***730***	***315***	***151***	***46***	***7***	***0***	***54***	***154***	***307***	***510***	***3,836***
1997	***517***	***346***	***140***	***85***	***33***	***5***	***4***	***50***	***66***	***240***	***566***	***809***	***2,859***
1998	***18,997***	***8,508***	***3,837***	***961***	***667***	***347***	***81***	***91***	***70***	***139***	***190***	***186***	***34,074***
1999	***92***	***85***	***204***	***224***	***197***	***107***	***80***	***46***	***52***	***54***	***31***	***80***	***1,252***
2000	***117***	***117***	***65***	***31***	***12***	***0***	***0***	***0***	***0***	***0***	***258***	***516***	***1,116***
2001	***333***	***1,420***	***785***	***283***	***238***	***0***	***0***	***0***	***0***	***95***	***178***	***855***	***4187***
2002	***50***	***111***	***60***	***25***	***6***	***0***	***0***	***0***	***102***	***94***	***34***	***18***	***500***
2003	***666***	***896***	***730***	***315***	109	0	0	0	0	0	0	0	2,716
2004	0	30	0	0	0	0	0	0	0	23	0	1,849	1,902
2005	***26,052***	***20,243***											

Note:

All monthly streamflows are measured in acre-feet. Values in bold italicized font are estimated from regression techniques, because (1) the Lang gage was out of service from November 1989 through April 2003 and (2) the gage was flooded during several days in January 2005 and February 2005.

TABLE 6
Monthly Treated Water Discharge Measured at the Valencia Water Reclamation Plant
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1980	266	258	257	239	247	212	219	219	212	228	239	247	2,844
1981	248	220	249	235	244	237	253	255	248	263	285	270	3,006
1982	275	247	284	271	277	269	275	268	254	266	271	284	3,241
1983	286	261	301	288	296	277	287	296	282	286	276	295	3,432
1984	303	281	304	294	321	315	320	317	314	322	315	319	3,723
1985	309	283	316	316	333	331	354	359	348	361	357	341	4,006
1986	350	341	374	359	377	380	415	454	446	440	421	445	4,801
1987	455	415	472	489	550	567	603	594	579	633	600	624	6,582
1988	622	557	588	587	603	537	575	606	587	608	600	602	7,072
1989	622	593	695	666	671	708	714	731	668	678	673	676	8,095
1990	698	644	725	695	666	693	725	714	692	700	658	680	8,290
1991	715	662	702	627	668	646	647	691	709	743	717	748	8,276
1992	777	777	819	813	824	800	853	869	818	828	811	786	9,775
1993	778	733	863	858	869	925	910	846	816	834	818	858	10,107
1994	722	729	809	776	802	761	771	764	739	763	735	760	9,132
1995	889	777	935	887	884	848	853	814	826	834	823	855	10,225
1996	893	838	935	890	902	876	903	891	886	817	810	816	10,456
1997	815	713	866	829	852	879	860	851	824	826	778	775	9,867
1998	778	787	955	955	984	965	1,136	1,139	1,020	993	911	906	11,529
1999	930	868	962	953	985	968	1,003	1,018	961	1,020	1,040	987	11,695
2000	1,010	956	1,027	1,015	1,066	1,076	1,149	1,140	1,009	1,076	1,033	1,011	12,568
2001	964	916	1,044	1,013	1,082	1,049	1,120	1,105	1,059	1,107	1,053	1,064	12,576
2002	1,107	1,001	1,120	1,100	1,186	1,164	1,211	1,246	1,213	1,200	1,141	1,154	13,843
2003	1,159	1,083	1,205	1,311	1,367	1,339	1,416	1,423	1,374	1,346	1,316	1,321	15,660
2004	1,315	1,263	1,345	1,296	1,343	1,331	1,371	1,414	1,284	1,416	1,371	1,397	16,146
2005	1,519	1,468											

Note:

All monthly releases are measured in acre-feet.

TABLE 7
Monthly Treated Water Discharge Measured at the Saugus Water Reclamation Plant
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1980	362	365	419	414	419	387	362	362	350	362	359	371	4,529
1981	382	337	390	398	444	412	417	429	431	434	412	460	4,945
1982	445	399	456	444	446	434	434	421	415	434	431	438	5,196
1983	460	421	514	541	562	545	520	477	458	481	477	534	5,990
1984	558	505	499	485	476	443	458	456	451	467	474	519	5,791
1985	503	461	505	458	448	444	452	459	452	470	460	498	5,610
1986	498	475	528	501	499	483	481	476	500	511	518	552	6,023
1987	524	475	542	487	425	383	391	403	395	397	411	430	5,264
1988	443	411	439	434	440	430	445	457	435	464	436	460	5,294
1989	462	410	441	450	464	436	476	479	462	471	451	466	5,468
1990	463	403	432	426	483	492	513	504	489	493	508	512	5,718
1991	495	423	479	427	491	516	557	525	486	474	470	493	5,835
1992	488	507	530	472	489	476	493	521	492	498	452	514	5,931
1993	595	534	616	581	615	587	622	604	578	609	567	567	7,075
1994	601	606	694	677	687	644	642	645	619	663	655	685	7,817
1995	657	578	676	705	699	631	641	635	617	613	568	581	7,602
1996	532	504	525	501	517	506	511	525	532	579	558	583	6,375
1997	564	516	515	461	469	417	442	474	475	503	521	553	5,911
1998	529	541	544	511	617	587	426	399	457	501	521	533	6,166
1999	542	485	551	391	544	512	547	532	521	527	487	514	6,153
2000	493	487	501	490	503	467	457	509	585	555	514	596	6,157
2001	592	531	572	510	500	490	485	519	510	527	553	560	6,349
2002	520	459	518	493	491	526	564	551	518	552	556	567	6,315
2003	551	500	528	343	352	332	328	335	325	326	325	352	4,597
2004	360	360	384	373	376	362	378	374	397	406	371	396	4,537
2005	409	359											

Note:

All monthly discharges are measured in acre-feet.

TABLE 8
Monthly Releases of Water from Castaic Lagoon to Castaic Creek
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1980	0	0	0	0	0	834	1,052	919	0	0	0	0	2,805
1981	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641
1982	0	0	0	0	0	667	842	735	0	0	0	0	2,244
1983	0	0	0	0	0	1,168	1,473	1,287	0	0	0	0	3,928
1984	0	0	0	0	0	0	0	0	0	0	0	0	0
1985	0	0	0	0	0	0	0	0	0	0	0	0	0
1986	105	0	0	1,490	46	0	0	0	0	0	0	0	1,641
1987	105	0	0	1,490	46	0	0	0	0	0	212	0	1,853
1988	0	0	809	341	900	0	0	0	0	0	0	0	2,050
1989	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	0	0	0	0	0	0	0	0	0	0	0	66	66
1992	0	0	580	3,052	667	127	24	0	0	0	0	0	4,450
1993	0	140	186	3,031	1,901	635	341	337	813	0	0	341	7,725
1994	210	0	0	2,979	93	0	0	0	0	0	0	0	3,282
1995	0	0	0	0	0	1,668	2,104	1,839	0	0	0	0	5,611
1996	0	0	0	4,961	671	0	0	0	0	0	0	0	5,632
1997	0	0	8701	873	0	0	0	0	0	0	0	310	9,884
1998	1,186	19,545	10,747	4,566	7,561	47	1,370	436	464	302	652	926	47,802
1999	612	691	0	3,187	1,191	149	0	0	0	0	0	0	5,830
2000	0	660	855	0	2,087	3,484	0	0	0	0	0	0	7,086
2001	0	389	1,218	0	0	0	0	0	0	0	0	0	1,607
2002	0	0	0	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	2,286	418	315	0	0	0	0	0	0	3,019
2004	0	59	1,004	0	0	0	0	0	0	0	0	60	1,123
2005	32,391	37,514											

Note:

All monthly releases are measured in acre-feet.

TABLE 9
Monthly Streamflows Measured in the Santa Clara River at the County Line Gage
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1980	8,428	43,565	18,125	8,551	3,792	3,963	1,202	1,111	1,668	1,470	1,452	1,884	95,211
1981	3,376	1,533	5,415	1,815	1,662	1,279	942	906	1,139	1,488	2,138	2,539	24,232
1982	2,826	2,358	5,572	7,091	3,909	1,749	1,694	1,392	1,597	1,621	3,449	3,229	36,488
1983	7,787	9,122	67,712	11,240	10,320	3,828	2,102	2,678	2,053	3,443	5,040	5,911	131,236
1984	5,691	3,931	4,084	4,530	2,309	1,607	1,224	1,511	1,464	1,624	3,237	8,067	39,279
1985	3,116	2,561	2,852	1,974	1,694	1,365	1,178	1,365	1,551	1,880	2,102	2,828	24,466
1986	3,955	13,991	10,616	3,328	2,612	1,622	1,454	1,482	1,870	1,896	2,606	2,590	48,024
1987	2,485	2,325	2,575	1,841	1,908	1,710	1,650	1,470	1,412	2,309	2,057	4,457	26,198
1988	3,421	2,981	3,025	3,172	2,636	2,231	1,734	1,494	1,605	1,904	2,027	10,381	36,611
1989	2,644	3,340	2,584	2,055	1,740	1,920	1,732	1,345	1,535	2,146	1,964	1,795	24,799
1990	2,709	3,247	2,269	1,898	1,730	1,545	1,478	1,751	1,668	1,660	1,924	1,593	23,472
1991	2,051	3,219	15,981	1,837	1,519	1,113	1,144	831	912	948	1,014	4,332	34,901
1992	3,737	37,636	9,576	4,439	1,964	1,533	1,377	1,085	1,129	1,329	1,496	3,277	68,577
1993	47,199	44,749	25,738	9,459	4,860	3,324	2,797	2,771	2,949	3,005	2,686	3,247	152,783
1994	3,281	3,437	3,501	3,533	3,519	2,200	1,640	1,400	1,192	1,855	2,263	4,219	32,039
1995	31,125	3,828	19,662	8,452	3,901	2,527	1,843	2,192	1,855	1,716	2,075	3,235	82,409
1996	3,604	10,669	7,678	6,073	3,584	1,678	1,640	1,579	1,509	2,625	1,590	5,701	47,930
1997	5,375	3,913	7,884	3,370	1,680	1,240	1,571	1,371	1,230	1,662	2,636	4,848	36,780
1998	5,875	104,388	25,377	9,378	34,992	5,312	3,935	3,537	2,579	2,450	2,890	4,427	205,139
1999	4,328	4,128	4,322	6,526	4,760	3,590	1,125	1,439	2,164	1,888	2,243	2,434	32,382
2000	2,470	12,210	6,400	2,910	3,610	5,250	1,890	1,490	1,560	1,950	1,890	2,290	43,920
2001	3,680	5,430	7,370	2,970	2,650	1,890	1,520	1,100	970	1,510	2,310	3,220	34,620
2002	2,980	2,060	2,610	2,390	1,730	1,680	1,600	772	1,010	1,440	2,490	4,330	25,092
2003	2,690	5,540	3,910	5,470	2,810	2,150	1,670	1,280	1,600	2,491	2,688	3,816	36,115
2004	4,046	7,204	4,262	2,003	1,851	1,853	1,339	1,646	1,438				
2005													

Note:

All monthly streamflows are measured in acre-feet. Because reported flows appear highly uncertain beginning in October 2004, they are not listed in this table.

TABLE 10
Estimated Annual Groundwater Discharge to the Santa Clara River
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Flow in Castaic Creek (acre-feet)	Flow at County Line (acre-feet)	Estimated Non-Storm Flow at County Line (acre-feet)	WRP Flows (acre-feet)	Estimated Groundwater Discharge to River (acre-feet)
1980	16,785	95,211	57,593	7,372	50,221
1981	6,519	24,232	21,172	7,949	13,223
1982	9,102	36,488	32,531	8,436	24,095
1983	67,058	131,236	55,878	9,420	46,458
1984	13,787	39,279	35,215	9,512	25,703
1985	2,619	24,466	24,089	9,614	14,475
1986	4,945	48,024	31,327	10,822	20,505
1987	911	26,198	23,663	11,844	11,819
1988	2,415	36,611	24,934	12,363	12,571
1989	Unavailable	24,799	23,453	13,560	9,893
1990	0	23,472	21,772	14,006	7,766
1991	65	34,901	18,702	14,108	4,594
1992	4,450	68,577	23,601	15,703	7,898
1993	7,725	152,783	65,054	17,179	47,875
1994	Unavailable	32,039	31,239	16,946	14,293
1995	5,611	82,409	51,001	17,824	33,177
1996	5,632	47,930	36,366	16,831	19,535
1997	9,885	36,780	27,521	15,778	11,743
1998	47,803	205,139	81,744	17,695	64,049
1999	5,830	32,382	27,176	17,847	9,329
2000	7,007	43,920	30,131	18,721	11,410
2001	1,607	34,620	27,900	18,925	8,975
2002	0	25,092	23,243	20,158	3,085
2003	3,019	36,115	28,835	20,257	8,578
2004[a]					

[a]Annual volumes of groundwater discharge could not be calculated because of uncertainties in streamflow data at the County Line stream gage in late 2004.

TABLE 11

Annual Water Budgets Calculated by the Calibrated Regional Model for 1980 through 2004

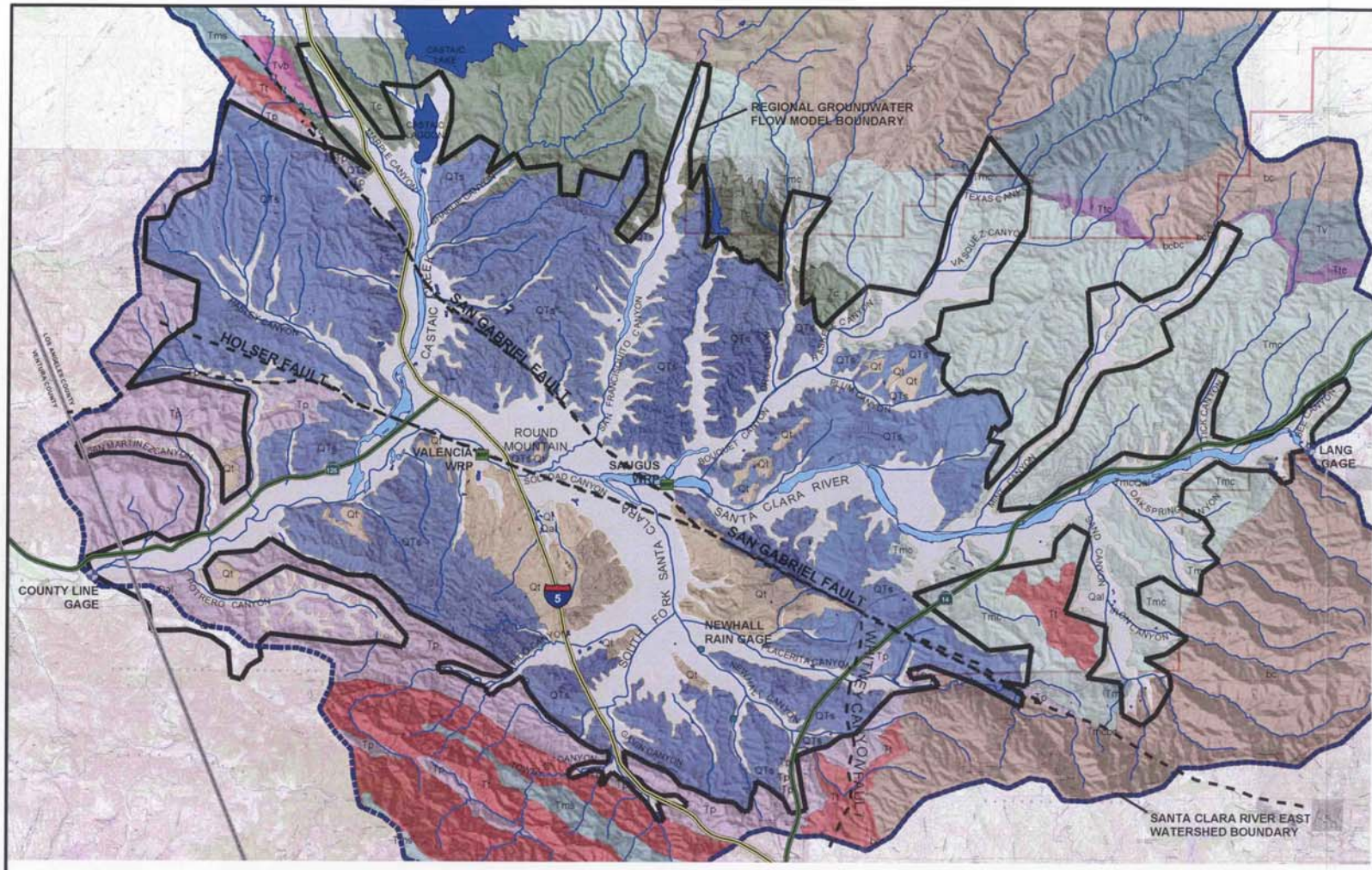
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita Valley, Santa Clarita, California

Calendar Year	Precipitation Infiltration	Infiltration of Applied Water	Streambed Infiltration	Castaic Dam Underflow	Subsurface Inflow from Acton Basin	Total Recharge	Pumping	Groundwater Discharge to Streams	ET	Subsurface Outflow at County Line	Total Discharge	Change in Groundwater Storage	Cumulative Change in Groundwater Storage
1980 to 1981	35,608	3,375	46,386	1,705	16,122	103,197	35,542	32,667	16,722	18,362	103,293	-96	-96
1981 to 1982	9,454	3,871	15,958	1,700	16,513	47,497	35,209	22,673	10,589	18,115	86,586	-39,089	-39,185
1982 to 1983	46,064	3,022	46,009	1,700	16,279	113,073	24,918	26,469	13,072	18,367	82,827	30,247	-8,938
1983 to 1984	168,155	2,657	83,635	1,700	15,437	271,584	23,169	56,932	29,067	18,802	127,969	143,615	134,677
1984 to 1985	959	3,606	10,778	1,705	16,281	33,328	30,645	33,670	21,482	18,198	103,995	-70,667	64,010
1985 to 1986	0	3,279	9,123	1,700	16,607	30,709	28,963	25,845	11,466	18,059	84,333	-53,624	10,386
1986 to 1987	37,673	3,211	36,076	1,700	16,398	95,057	28,658	28,066	13,770	18,335	88,828	6,229	16,615
1987 to 1988	9,288	2,991	12,575	1,700	16,947	43,501	27,085	24,232	9,896	18,115	79,327	-35,826	-19,211
1988 to 1989	23,720	3,075	23,369	1,705	16,892	68,761	27,571	23,426	10,431	18,315	79,743	-10,982	-30,193
1989 to 1990	0	3,393	7,925	1,700	17,340	30,358	30,415	20,932	7,499	18,125	76,970	-46,612	-76,805
1990 to 1991	0	3,787	9,073	1,700	17,592	32,152	31,652	18,242	5,055	18,141	73,090	-40,937	-117,742
1991 to 1992	45,055	3,397	36,390	1,700	16,884	103,427	41,067	19,864	7,434	18,238	86,603	16,824	-100,918
1992 to 1993	119,272	3,850	67,935	1,705	16,009	208,772	37,567	30,452	15,003	18,558	101,580	107,192	6,274
1993 to 1994	102,692	3,773	61,563	1,700	15,751	185,479	39,741	45,991	24,538	18,564	128,834	56,645	62,919
1994 to 1995	554	4,415	12,629	1,700	16,466	35,763	44,120	22,265	13,478	18,072	97,935	-62,172	747
1995 to 1996	103,734	4,517	61,628	1,700	15,935	187,514	42,009	38,348	21,081	18,567	120,006	67,507	68,254
1996 to 1997	40,468	5,205	37,922	1,705	16,303	101,602	45,574	26,784	17,501	18,474	108,334	-6,732	61,523
1997 to 1998	14,265	5,267	20,537	1,700	16,547	58,316	47,051	21,205	13,598	18,237	100,091	-41,775	19,748
1998 to 1999	126,481	4,758	86,384	1,700	15,692	235,014	42,043	45,379	26,261	18,678	132,360	102,654	122,402
1999 to 2000	4	5,343	13,716	1,700	16,446	37,209	46,867	24,011	15,442	18,101	104,420	-67,211	55,191
2000 to 2001	692	5,343	17,472	1,705	17,158	42,369	43,664	19,733	10,284	18,247	91,927	-49,558	5,633
2001 to 2002	57,816	5,343	51,538	1,700	16,359	132,755	40,406	23,390	14,233	18,410	96,439	36,317	41,950
2002 to 2003	305	5,343	9,900	1,700	16,969	34,216	42,120	17,517	9,380	18,128	87,144	-52,928	-10,979
2003 to 2004	22,496	5,343	24,812	1,700	17,072	71,423	37,229	19,022	9,214	18,369	83,834	-12,411	-23,390
2004 to 2005	38,619	5,343	38,288	1,705	17,449	101,403	39,545	19,319	10,125	18,523	87,512	13,891	-9,499
Minimum	0	2,657	7,925	1,700	15,437	30,358	23,169	17,517	5,055	18,059	73,090	-70,667	-117,742
Maximum	168,155	5,343	86,384	1,705	17,592	271,584	47,051	56,932	29,067	18,802	132,360	143,615	134,677
Average	40,135	4,140	33,665	1,701	16,538	96,179	36,513	27,457	14,265	18,324	96,559	-380	9,335
Median	23,720	3,850	24,812	1,700	16,466	71,423	37,567	24,011	13,478	18,315	91,927	-10,982	5,633

Note:

All flow volumes are listed in AF/yr.

Figures



LEGEND

GEOLOGY

- UNDIFFERENTIATED ALLUVIUM (Qal)
- TERRACE DEPOSITS (Qt)
- SAUGUS FORMATION (QTs)
- PICO FORMATION (Tp)
- TOWSLEY FORMATION (Tt)
- MODELO FORMATION (Tms)
- CASTAIC FORMATION (Tc)
- VIOLIN BRECCIA (Tvb)
- MINT CANYON FORMATION (Tmc)
- TICK CANYON FORMATION (Ttc)
- VASQUEZ FORMATION (Tv)
- UNDIFFERENTIATED BASEMENT COMPLEX (bc)

HYDROGRAPHY

- LAKE
- STREAM
- STREAM GAGE

MAJOR ROAD

- INTERSTATE
- STATE HIGHWAY

FIGURE 1
BASIN GEOLOGIC MAP
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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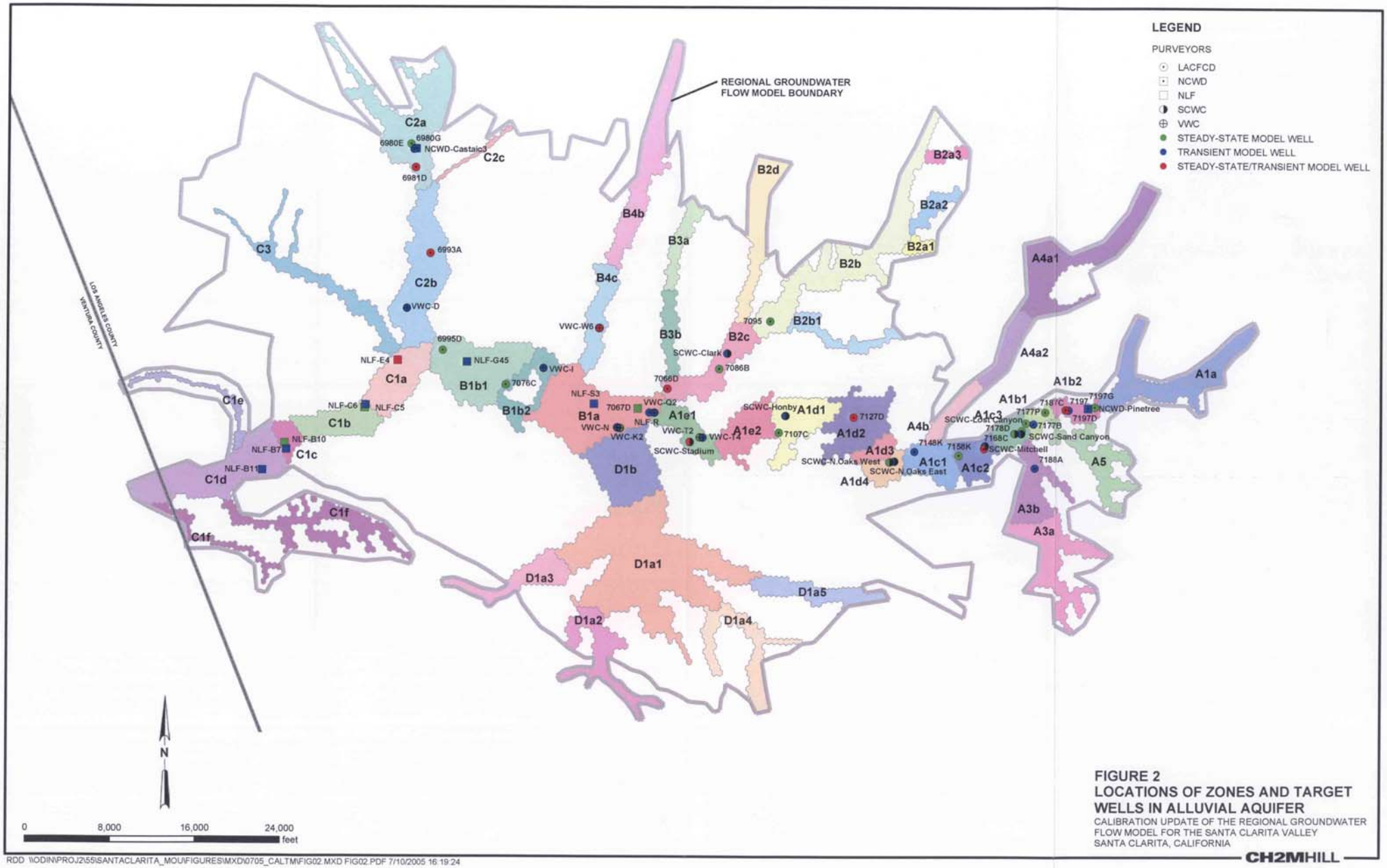

FIGURE 2
LOCATIONS OF ZONES AND TARGET WELLS IN ALLUVIAL AQUIFER
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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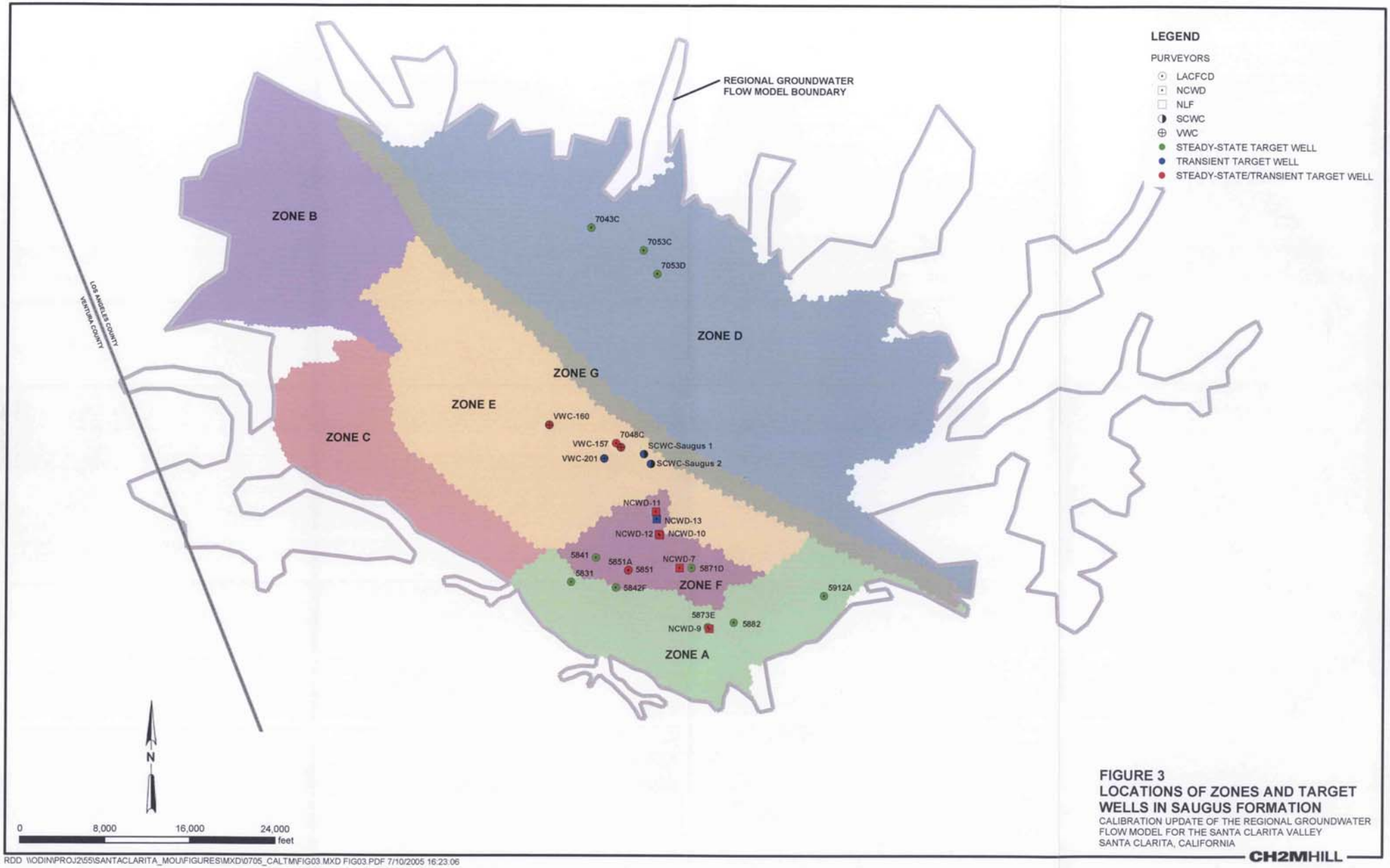

FIGURE 3
LOCATIONS OF ZONES AND TARGET WELLS IN SAUGUS FORMATION
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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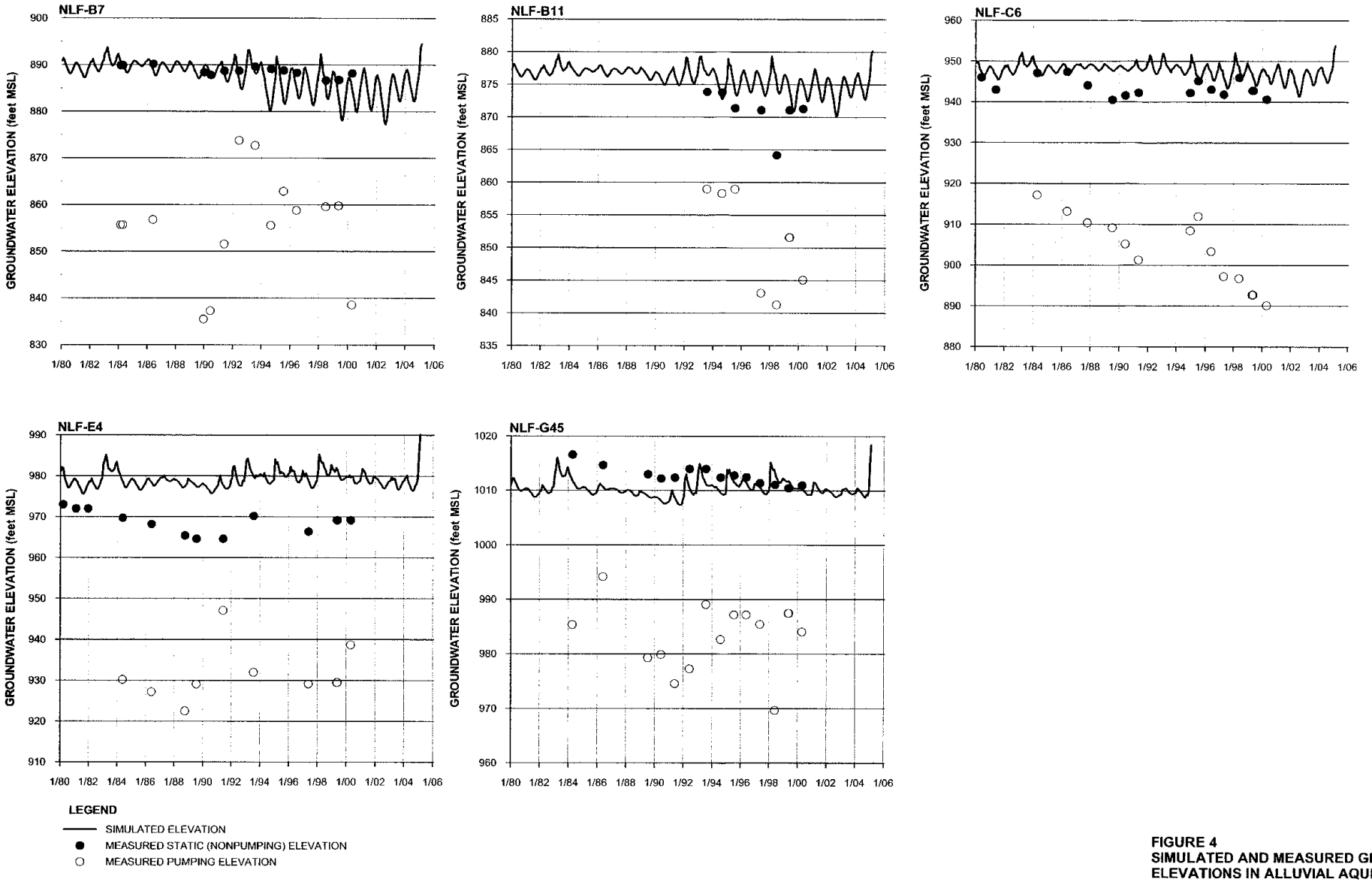

FIGURE 4
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN ALLUVIAL AQUIFER WELLS WEST OF INTERSTATE 5
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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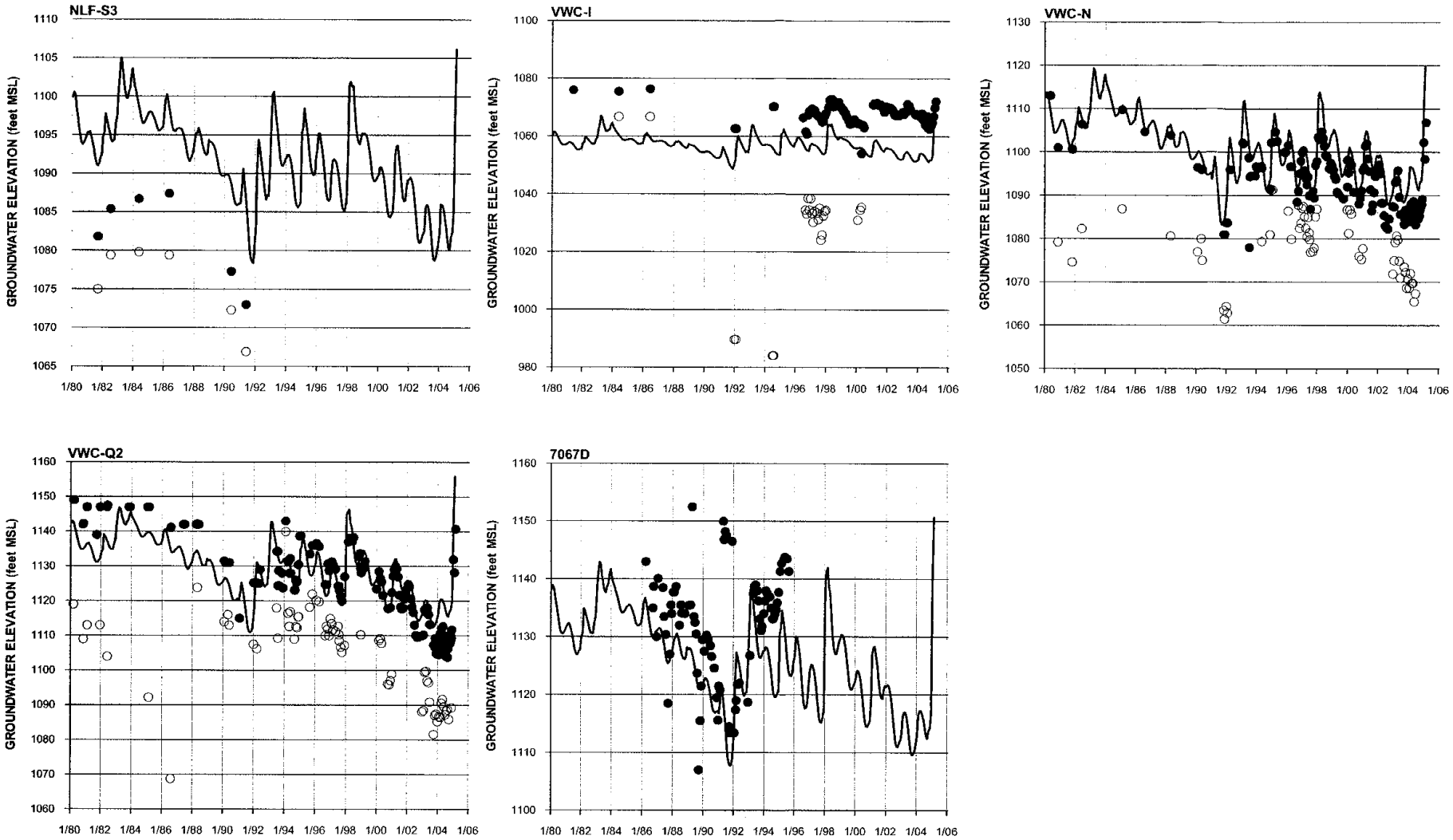

LEGEND

- SIMULATED ELEVATION
- ● MEASURED STATIC (NONPUMPING) ELEVATION
- ○ MEASURED PUMPING ELEVATION

FIGURE 5
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN ALLUVIAL AQUIFER WELLS BETWEEN INTERSTATE 5 AND SOLEDAD CANYON
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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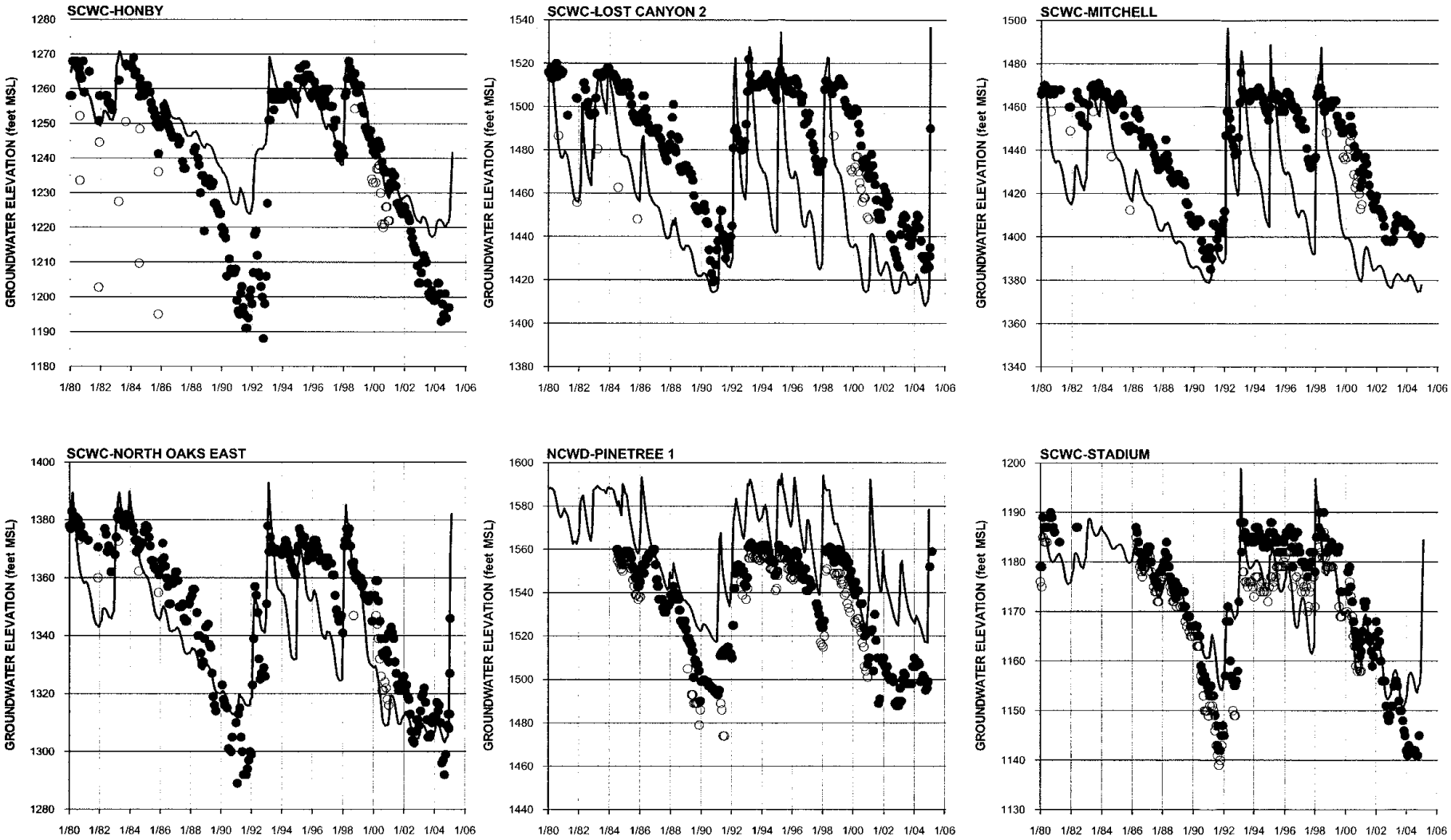

LEGEND

- SIMULATED ELEVATION
- ● MEASURED STATIC (NONPUMPING) ELEVATION
- ○ MEASURED PUMPING ELEVATION

FIGURE 6
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN ALLUVIAL AQUIFER WELLS IN SOLEDAD CANYON (PAGE 1 OF 2)
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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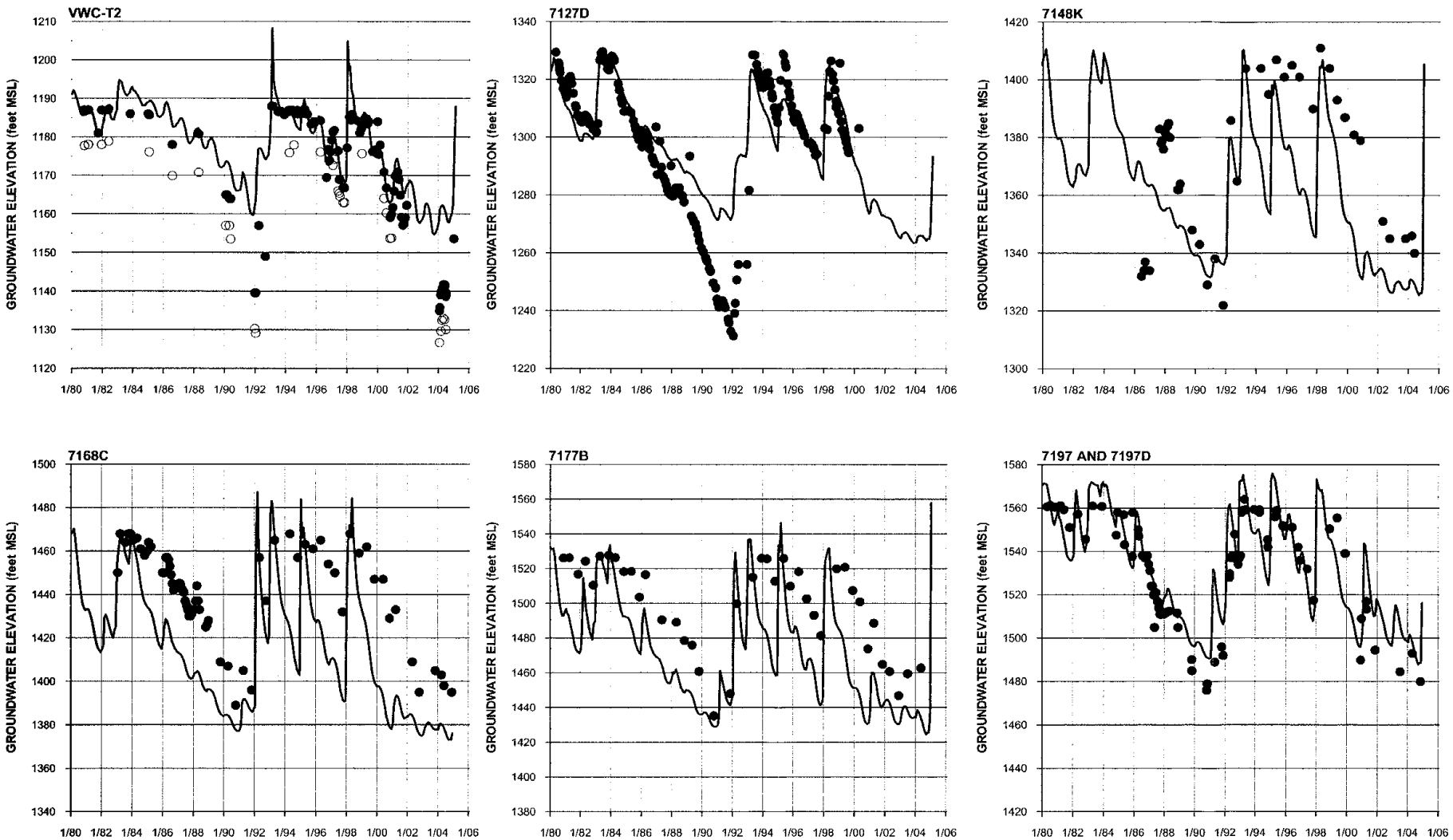

LEGEND

- SIMULATED ELEVATION
- ● MEASURED STATIC (NONPUMPING) ELEVATION
- ○ MEASURED PUMPING ELEVATION

FIGURE 6
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN ALLUVIAL AQUIFER WELLS IN SOLEDAD CANYON (PAGE 2 OF 2)
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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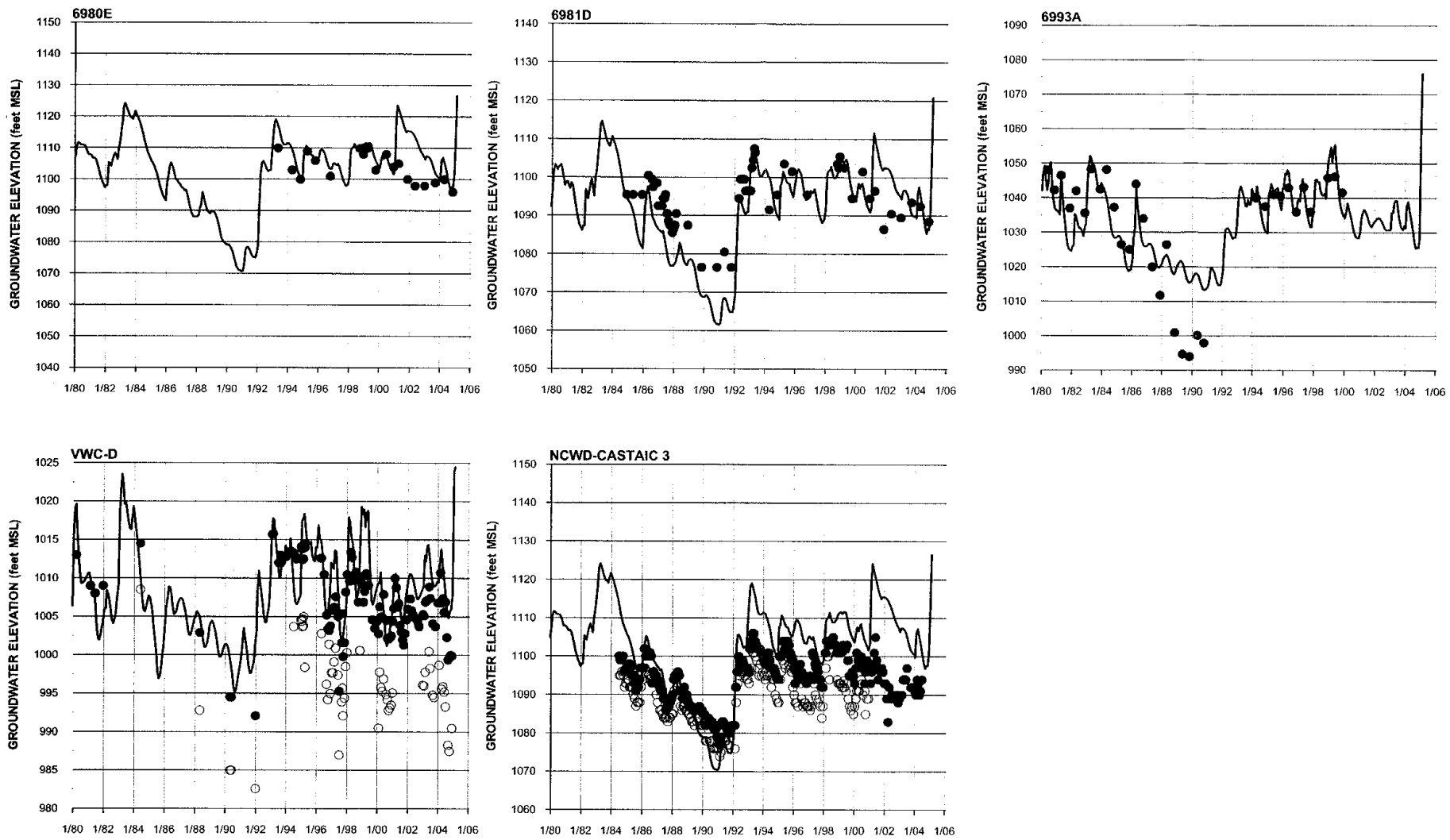

LEGEND

- SIMULATED ELEVATION
- ● MEASURED STATIC (NONPUMPING) ELEVATION
- ○ MEASURED PUMPING ELEVATION

FIGURE 7
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN ALLUVIAL AQUIFER WELLS ALONG CASTAIC CREEK
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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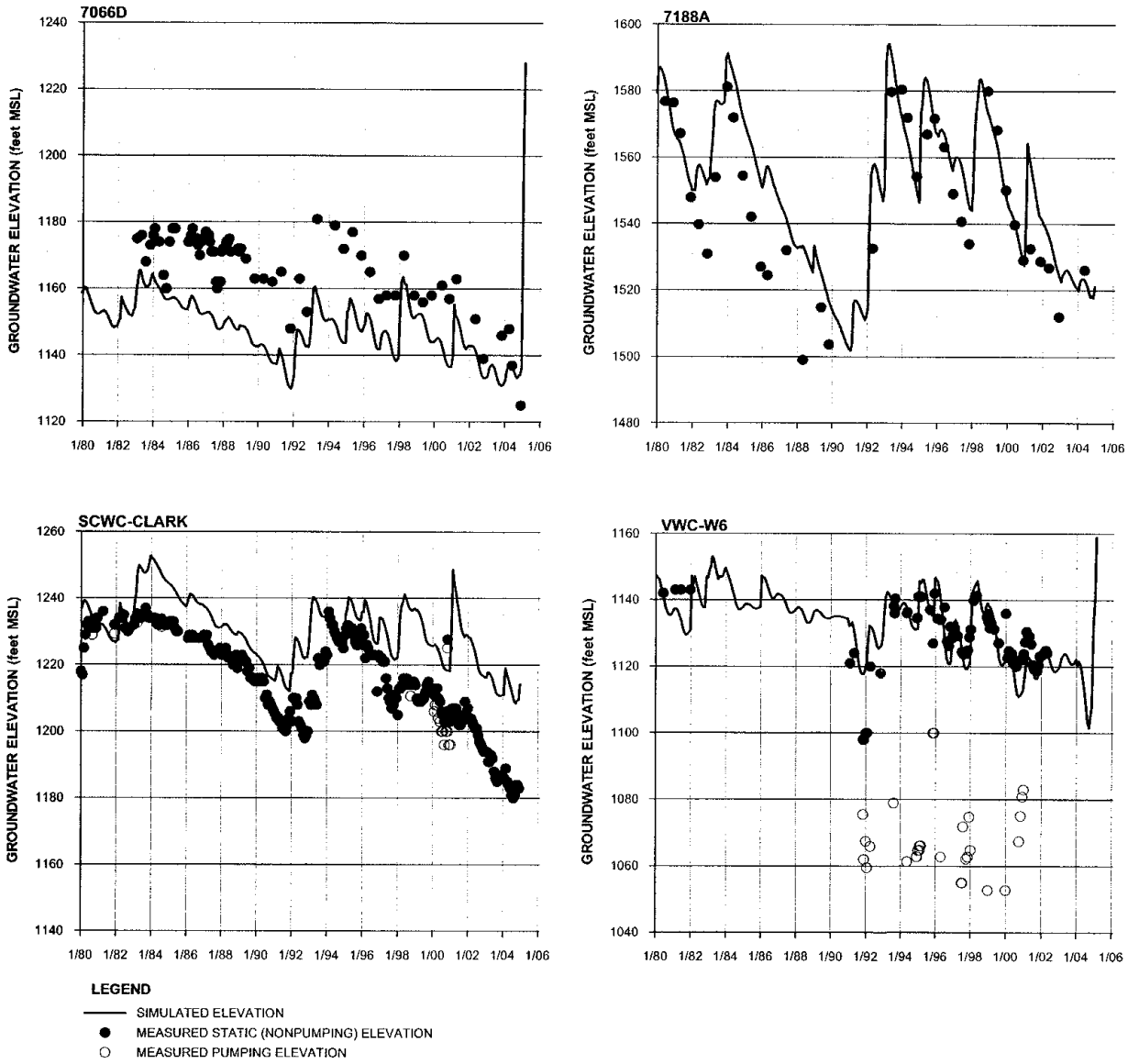

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FIGURE 8
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN ALLUVIAL AQUIFER WELLS IN OTHER TRIBUTARY CANYONS TO THE SANTA CLARA RIVER
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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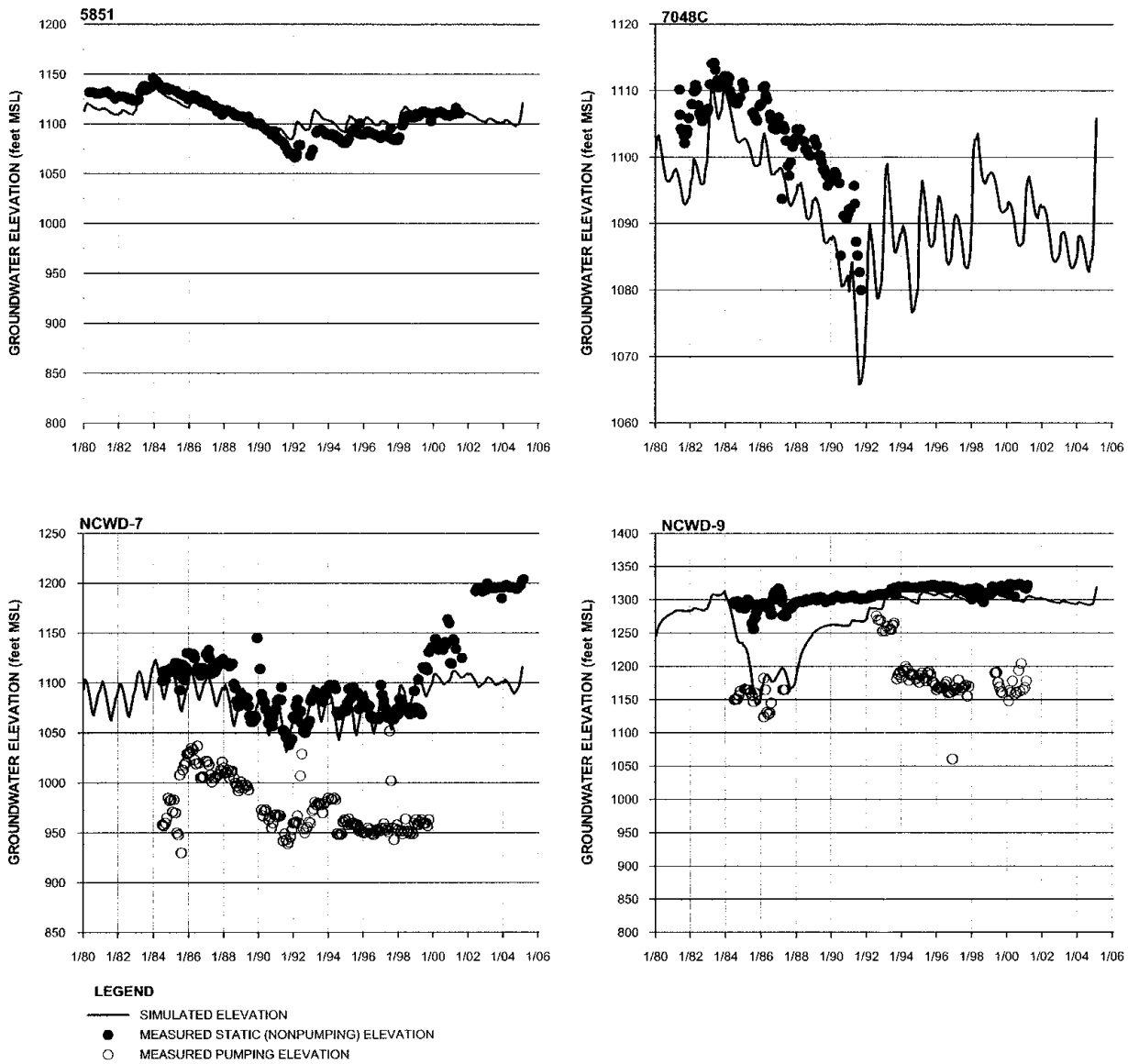

FIGURE 9
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN SAUGUS FORMATION WELLS (PAGE 1 OF 3)
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

178973-384.GRF

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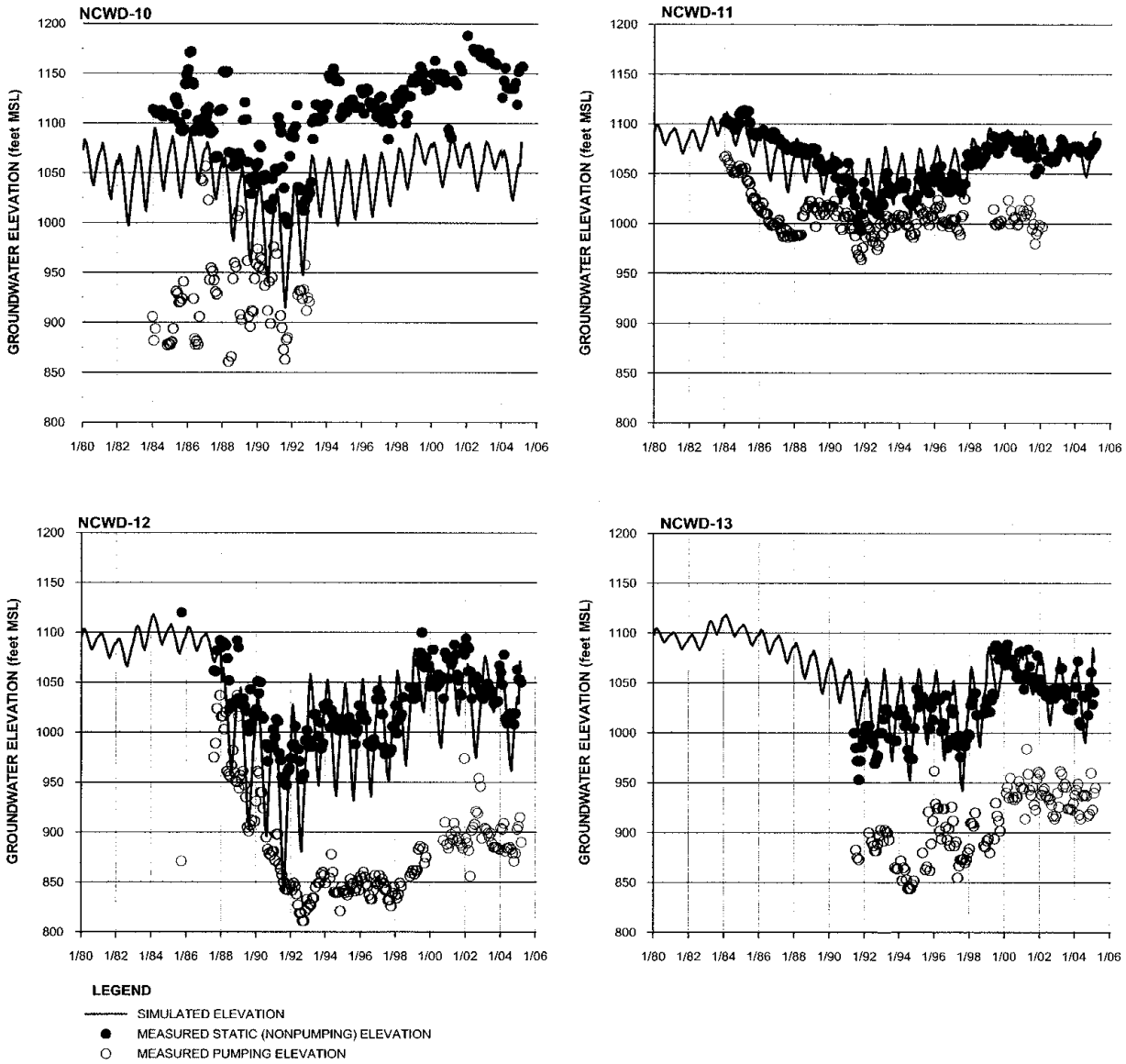

FIGURE 9
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN SAUGUS FORMATION WELLS (PAGE 2 OF 3)
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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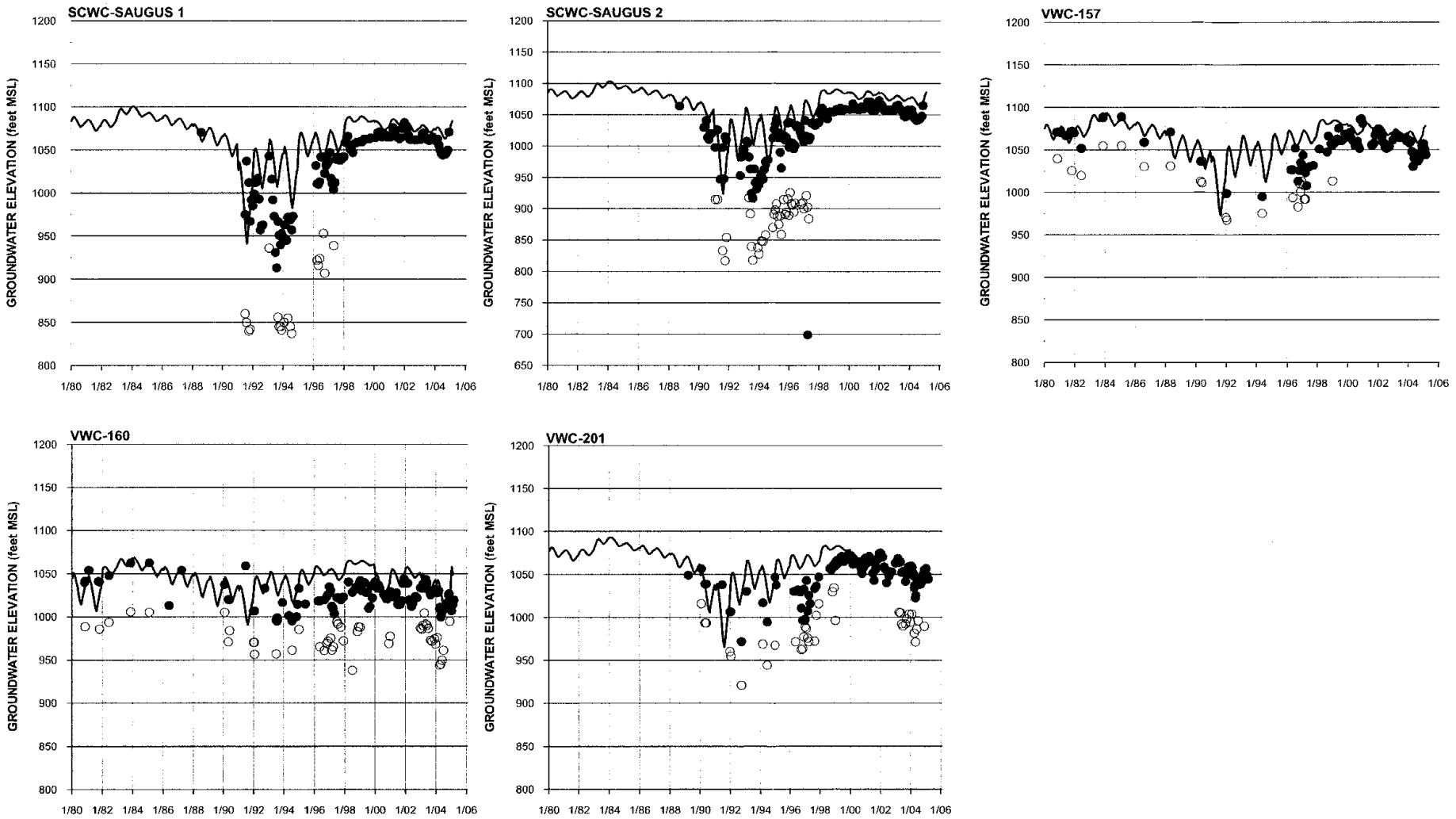

LEGEND

- SIMULATED ELEVATION
- ● MEASURED STATIC (NONPUMPING) ELEVATION
- ○ MEASURED PUMPING ELEVATION

FIGURE 9
SIMULATED AND MEASURED GROUNDWATER ELEVATIONS IN SAUGUS FORMATION WELLS (PAGE 3 OF 3)
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

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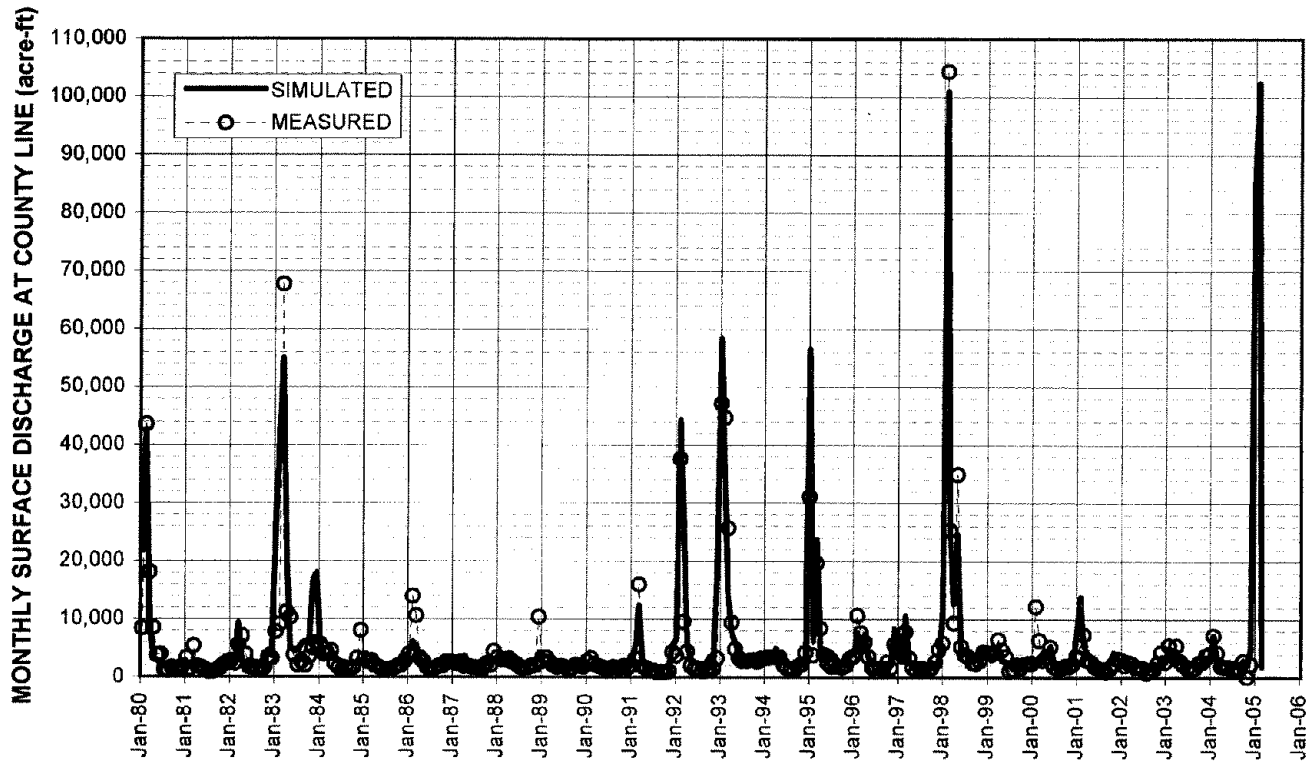

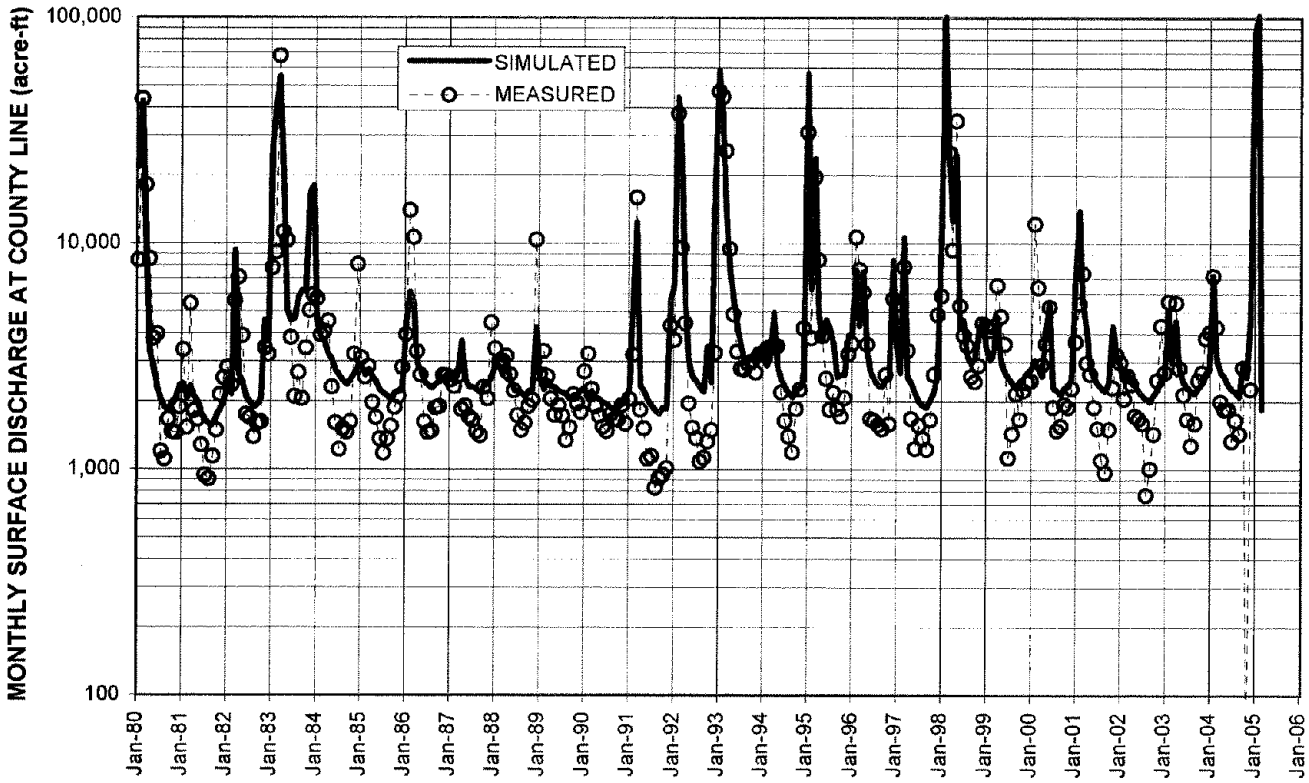

FIGURE 10
SIMULATED VERSUS MEASURED HYDROGRAPHS OF SANTA CLARA RIVER FLOW AT COUNTY LINE

CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

CH2MHILL

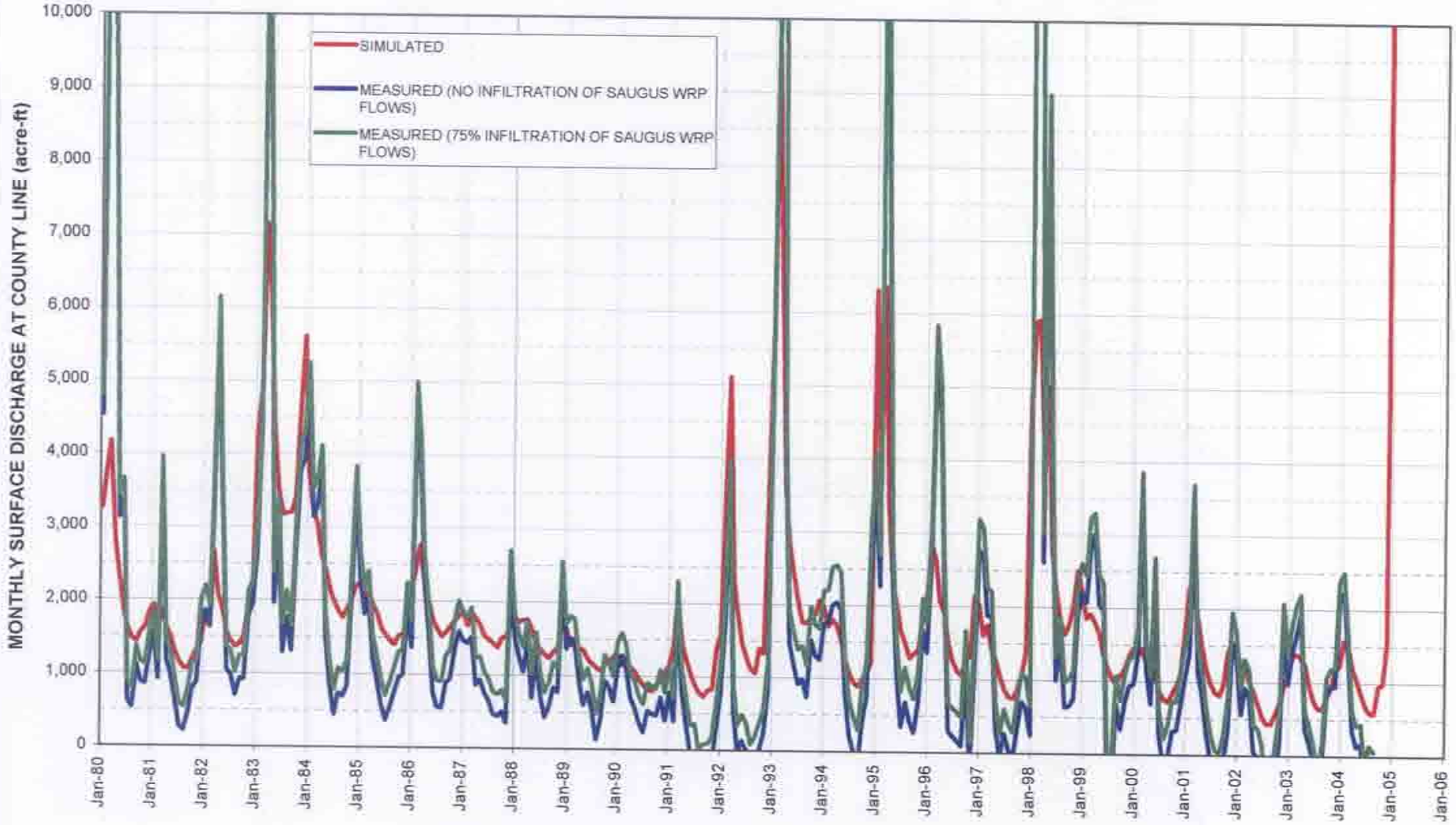

FIGURE 11
SIMULATED VERSUS MEASURED HYDROGRAPH OF GROUNDWATER DISCHARGE TO SANTA CLARA RIVER
CALIBRATION UPDATE OF THE REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

CH2MHILL

178973-416.xls\FIG11

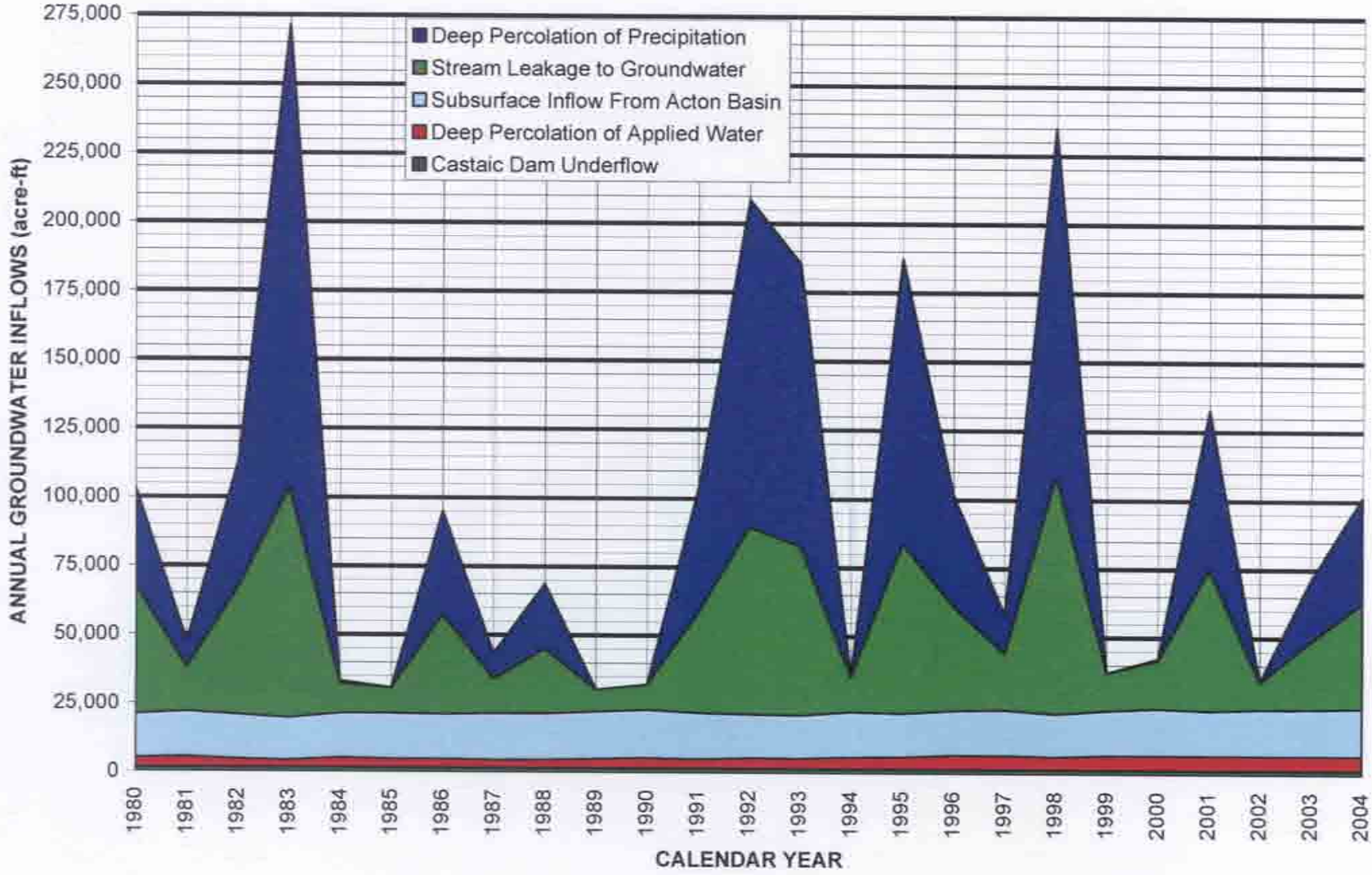

FIGURE 12
SIMULATED ANNUAL GROUNDWATER INFLOWS
CALIBRATION UPDATE OF REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY

178973-417.xls/Fig 12

CH2MHILL

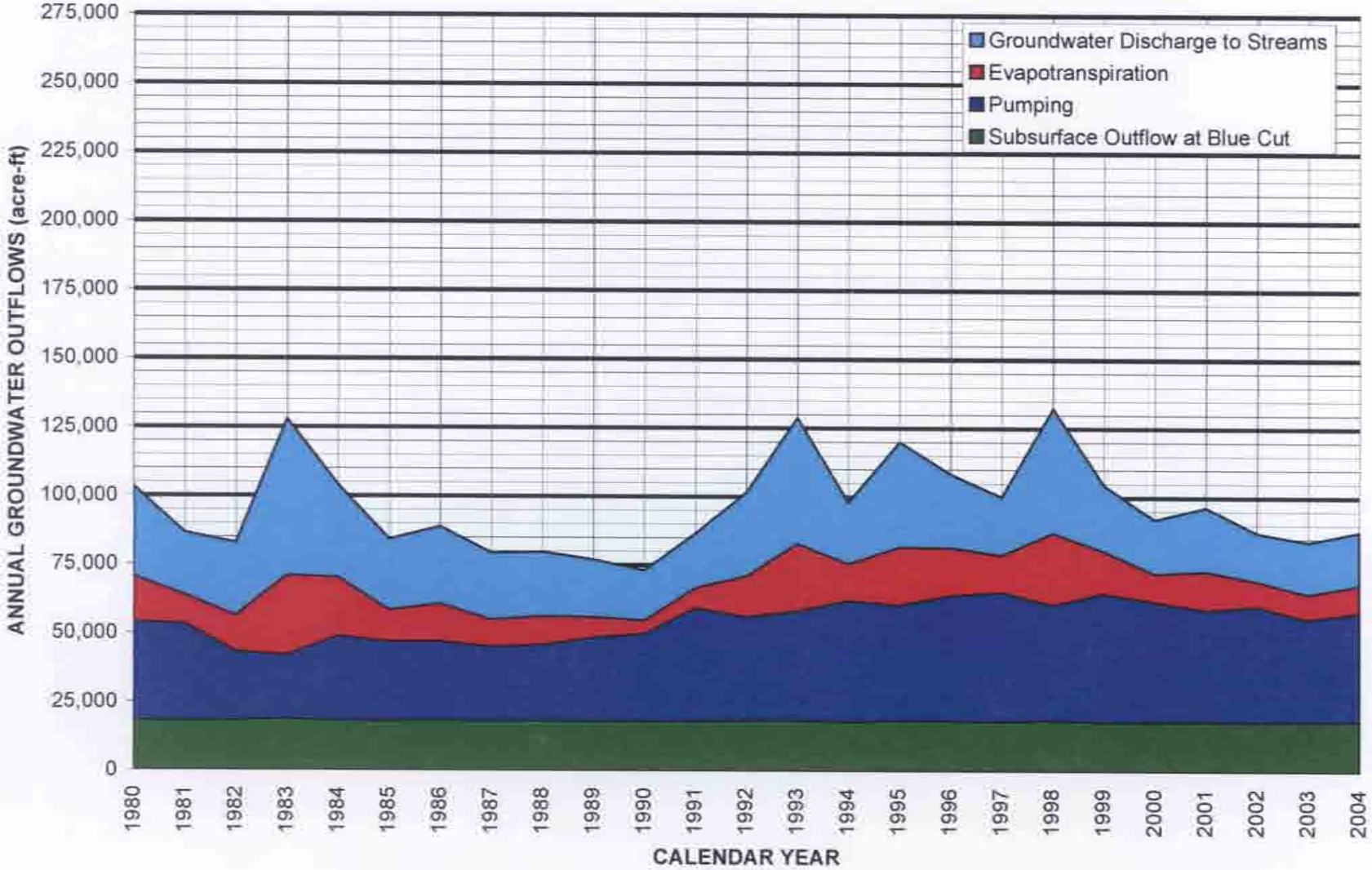

FIGURE 13
SIMULATED ANNUAL GROUNDWATER OUTFLOWS
CALIBRATION UPDATE OF REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

178973-417.xls/Fig 13

CH2MHILL

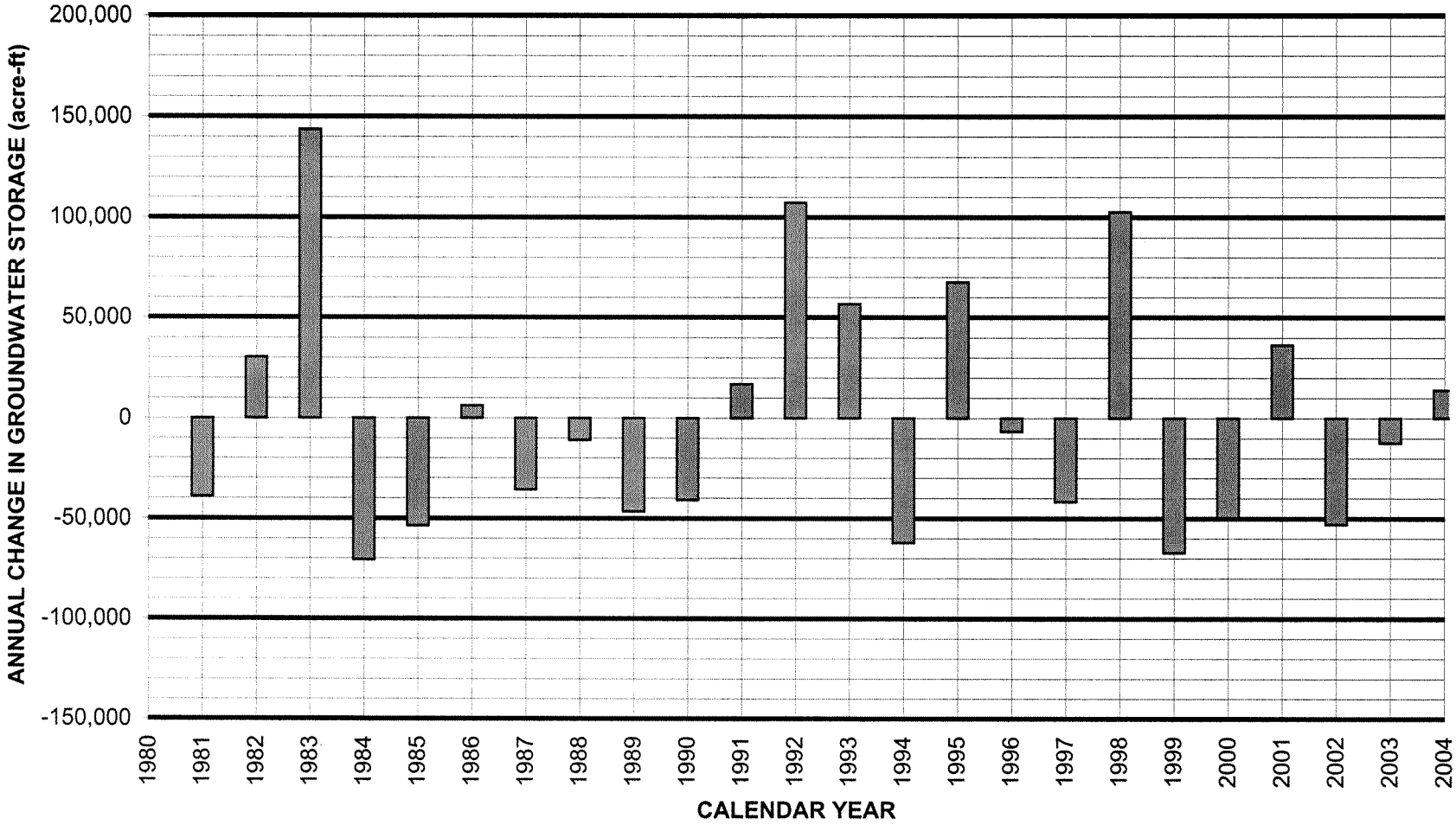

FIGURE 14
ANNUAL CHANGE IN SIMULATED GROUNDWATER STORAGE
CALIBRATION UPDATE OF REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

178973-417.xls/Fig 14

CH2MHILL

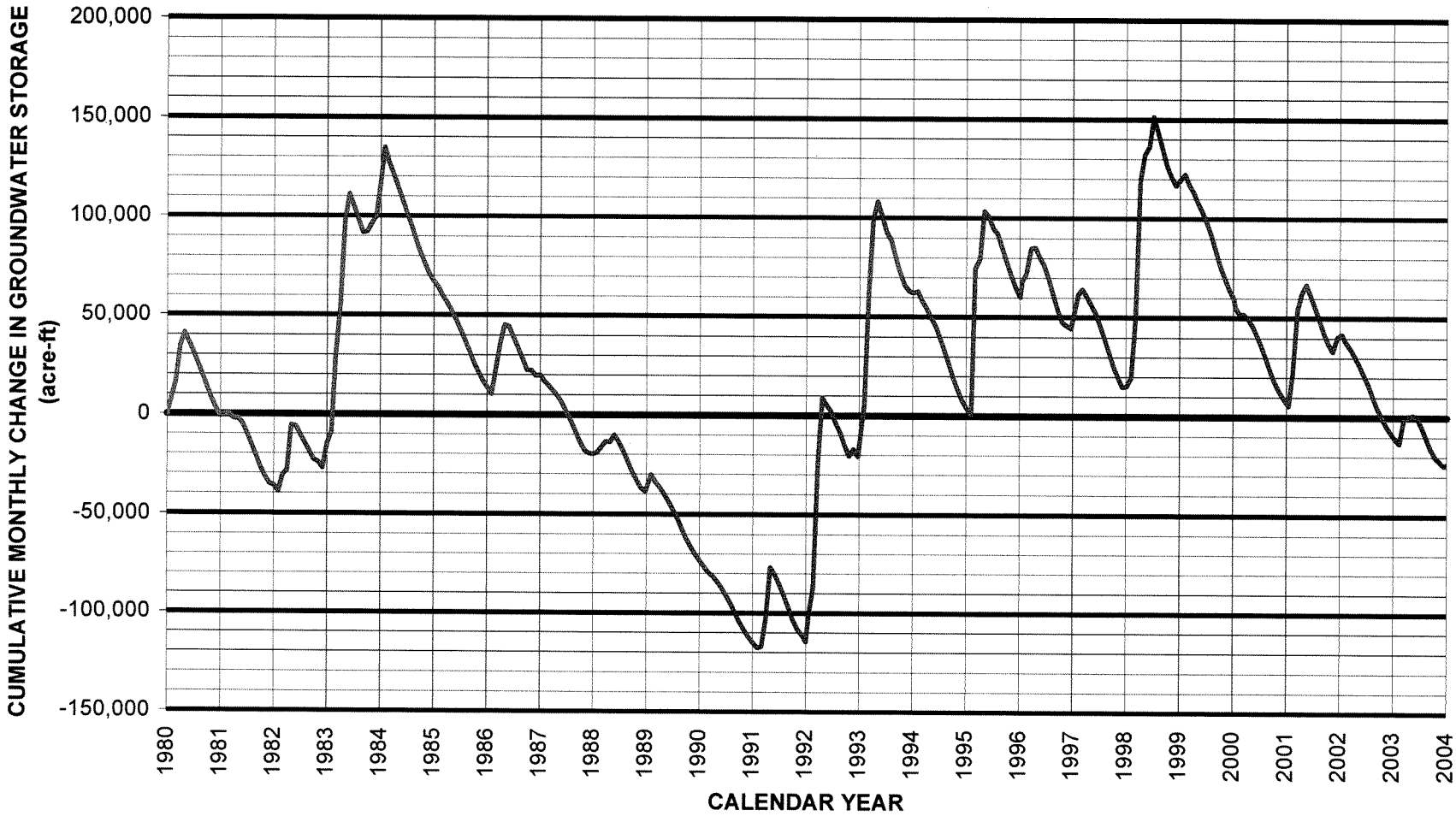

FIGURE 15
CUMULATIVE CHANGE IN SIMULATED GROUNDWATER STORAGE
CALIBRATION UPDATE OF REGIONAL GROUNDWATER FLOW MODEL FOR THE SANTA CLARITA VALLEY
SANTA CLARITA, CALIFORNIA

178973-417.xls/Fig 15

CH2MHILL

Friends of the Santa Clara River v. Castaic Lake Water Agency (2002)
95 Cal.App.4th 1373

H

FRIENDS OF THE SANTA CLARA RIVER, Plaintiff and Appellant, v. CASTAIC LAKE WATER AGENCY, Defendant and Respondent.
Cal.App.2.Dist.

FRIENDS OF THE SANTA CLARA RIVER,
Plaintiff and Appellant,
v.
CASTAIC LAKE WATER AGENCY, Defendant and Respondent.
No. B145283.

Court of Appeal, Second District, Division 4, California.
Jan. 10, 2002.

SUMMARY

A nonprofit environmental group filed a petition for a writ of mandate challenging a water agency's certification of an environmental impact report (EIR) as inadequate under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The project analyzed in defendant's EIR was its purchase of entitlement to 41,000 acre-feet per year of state water from a water storage district. Defendant's EIR was tiered on an earlier EIR, which had been prepared in conjunction with a statewide agreement that equalized allocations of entitlements to water from the state water project between agricultural and urban contractors. The trial court entered judgment denying plaintiff's petition. (Superior Court of Los Angeles County, No. BS05694, David P. Yaffe, Judge.)

The Court of Appeal reversed, directing the trial court to issue a writ of mandate vacating the certification of defendant's EIR, and ordering the trial court to retain jurisdiction until defendant certified an EIR complying with CEQA. The court held that decertification of defendant's EIR was required, since another appellate court had found that the previous EIR, on which defendant's EIR was tiered, was inadequate and had decertified it. Pub. Resources Code, § 21094, subd. (a), authorizes tiering when the previous EIR has been certified. Defendant's EIR had a defect, since the previous EIR had been decertified. The court further held that defendant's tiering on the decertified EIR was prejudicial error, since defendant had not in its EIR addressed the environmental effects of its project absent the protections for agricultural contractors provided for in the statewide agreement that had been the subject of the decertified EIR. (Opinion by Vogel (C. S.), P. J., with Hastings and Curry, JJ., concurring.)

HEADNOTES

Classified to California Digest of Official Reports

(1a, 1b) Pollution and Conservation Laws § 2.3--California Environmental Quality Act--Environmental Impact Reports--Tiering--***1374** Effect of Decertification of Previous EIR.
The trial court erred in denying a nonprofit environmental group's mandamus challenge to a water agency's environmental impact report (EIR) on the ground it was inadequate under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The project analyzed in defendant's EIR was its purchase of entitlement to 41,000 acre-feet per year of state water from a water storage district. Defendant's EIR was tiered on an earlier EIR, which had been prepared in conjunction with a statewide agreement that equalized allocations of entitlements to water from the state water project between agricultural and urban contractors. Decertification of defendant's EIR was required, since an appellate court had found that the previous EIR, on which defendant's EIR was tiered, was inadequate and had decertified it. Pub. Resources Code, § 21094, subd. (a), authorizes tiering when the previous EIR has been certified. Hence, defendant's EIR had a defect, since the previous EIR had been decertified. In addition, defendant's tiering on the decertified EIR was prejudicial error, since defendant had not in its EIR addressed the environmental effects of its project absent the protections for agricultural contractors provided for in the statewide agreement that had been the subject of the decertified EIR.
[See 4 Witkin, Summary of Cal. Law (9th ed. 1987) Real Property, § 59 et seq.; West's Key Digest System, Health and Environment k. 25.10(6.5).]
(2) Pollution and Conservation Laws § 2.3--California Environmental Quality Act--Environmental Impact Reports--Tiering.
The tiering provisions (Pub. Resources Code, § §

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21068.5, 21093, 21094) of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) enable a public agency to incorporate by reference and utilize a prior environmental impact report. Tiering is favored by the Legislature to streamline the regulatory process and avoid wasteful duplication of effort. Under CEQA Guidelines, the later EIR should state that the lead agency is using the tiering concept and that it is being tiered with the earlier EIR.

COUNSEL
Brandt-Hawley & Zoia and Susan Brandt-Hawley for Plaintiff and Appellant.
Robert H. Clark; Kane, Ballmer & Berkman and R. Bruce Tepper, Jr., for Defendant and Respondent.
***1375 VOGEL (C. S.), P. J.**

Introduction

In 1995, the California State Department of Water Resources (DWR) and water contractors of the State Water Project (SWP) reached a historic agreement, known as the Monterey Agreement, changing the allocations between agricultural and urban contractors of entitlements to SWP water. A major component of the Monterey Agreement was the transfer of entitlements up to 130,000 acre-feet per year from agricultural contractors to urban contractors, on a willing buyer-willing seller basis. Pursuant to the Monterey Agreement, respondent Castaic Lake Water Agency (respondent) purchased from the Kern County Water Agency (KCWA) and its member district the Wheeler Ridge-Maricopa Water Storage District (WRMWSD) entitlement to 41,000 acre-feet per year of SWP water.

Respondent approved this transfer after certifying a project environmental impact report (EIR) pursuant to the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq. [FN1] In the present case appellant Friends of the Santa Clara River (appellant), a nonprofit California corporation, challenges the sufficiency of respondent's EIR.

FN1 All further statutory references are to the Public Resources Code unless otherwise indicated. All references to "Guidelines" are to the CEQA regulations in title 14, California Code of Regulations.

Previously, the Central Coast Water Authority (CCWA) as lead agency prepared an EIR on the environmental effects statewide of implementing the Monterey Agreement (the Monterey Agreement EIR). Then the Belridge Water Storage District, one of the member districts of KCWA, as lead agency prepared an EIR on the environmental effects in Kern County of selling up to 130,000 acre-feet of SWP entitlements to then unidentified purchasers (the Belridge EIR). Then respondent's EIR "tiered" on the Monterey Agreement EIR and the Belridge EIR.

Appellant unsuccessfully petitioned the trial court in the present case for a writ of mandate compelling respondent to set aside the certification of respondent's EIR and approval of this project, on various grounds of alleged failure to comply with CEQA. Appellant appealed the judgment denying its petition for a writ of mandate.

While the present appeal was pending, the Court of Appeal for the Third Appellate District found the Monterey Agreement EIR inadequate and ordered it decertified. (***1376***Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892 [100 Cal.Rptr.2d 173], review den. Dec. 13, 2000, hereafter cited as *PCL*.) We conclude this requires decertifying respondent's tiered EIR.

Factual and Procedural Background

The Monterey Agreement

The SWP was constructed in the 1960's. It is a complex system of reservoirs, dams, power plants, pumping plants, canals, and aqueducts for storage and delivery of water. DWR manages the SWP. DWR has contracts with water contractors to deliver water to the contractors. Each such contract sets forth a maximum annual entitlement. DWR has historically delivered less water than the entitlements. The reliability of delivery is approximately 50 percent of entitlements.

Before the Monterey Agreement, shortfalls in deliveries due to prolonged droughts and other factors led to friction among the contractors over obtaining the available SWP water. Urban and agricultural contractors each believed the other was receiving preferential treatment. This friction was exacerbated by a provision in the SWP contracts that in years when shortfalls occurred, required agricultural contractors to incur the first delivery cutbacks. [FN2] Because contractors pay certain fixed costs to finance the SWP regardless of actual

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deliveries, agricultural contractors suffered severe delivery reductions with little relief from their financial obligations. Litigation was threatened. DWR, agricultural and urban water contractors met and negotiated the Monterey Agreement to avoid litigation and to increase the reliability of supply to all contractors. (*PCL, supra*, 83 Cal.App.4th at pp. 901-902.)

FN2 Under article 18(a) of then existing contracts, deliveries to agricultural contractors were reduced by 50 percent in any one year or a total of 100 percent in seven consecutive years, before deliveries were reduced to other contractors. (*PCL, supra*, 83 Cal.App.4th at p. 899.)

Under the Monterey Agreement, all future allocations of SWP water are based on entitlements; when supply is insufficient to meet requests, deliveries to all contractors will be reduced in proportion to their entitlements; no longer will agricultural contractors be required to absorb the first reductions. This increases the reliability of supply to agricultural contractors.

Inferably in return, under the Monterey Agreement, agricultural contractors "will make available for permanent transfer to Urban Contractors on a willing buyer-willing seller basis 130,000 acre-feet of annual entitlements, ***1377** with [KCWA] being responsible for any portion of this amount not made available by other Ag Contractors." This will allow urban contractors to obtain additional entitlements, thereby slightly increasing their overall deliveries even in times of shortage.

In addition, the Kern Fan Element, a property acquired by DWR for water banking, will be transferred to agricultural contractors, 45,000 acre-feet of agricultural contractors' entitlements will be retired, and various operational changes will be made to improve efficiency and flexibility of the system.

The Monterey Agreement EIR

The parties to the Monterey Agreement determined that its implementation could have potential environmental consequences and therefore an EIR was required. They designated CCWA, one of the SWP contractors, as lead agency to prepare the Monterey Agreement EIR. CCWA prepared the draft and final EIR's on implementation of the Monterey Agreement in May and October 1995.

The introduction to the draft Monterey Agreement EIR stated it is a "program" EIR. Reiterating the criteria for a program EIR found in Guideline section 15168, it stated: "The purpose of a Program EIR is to document a series of actions so related that they can be characterized as one project. The actions may be related in one or more of the following ways: by geographical proximity; as logical parts in a chain of contemplated actions; in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways. The proposal to implement the Monterey Agreement fulfills both the second and third criteria above, i.e., logical parts in a chain of contemplated actions, and a series of actions related to the issuance of rules, regulations, plans, and other general criteria to govern the conduct of a continuing program." Again reiterating matter in Guideline 15168, it stated the advantages of a program EIR are that it may: "provide an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action; ensure consideration of cumulative actions that might be slighted in a case-by-case analysis; avoid duplicative reconsideration of basic policy considerations; allow the Lead Agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts; and allow reduction in paperwork." ***1378**

The Monterey Agreement EIR identified five major components of the Monterey Agreement with potential environmental effects: (1) revision of the methodology used to allocate water among contractors, (2) retirement of 45,000 acre-feet of agricultural entitlement, (3) transfer by sale between willing sellers and willing buyers of 130,000 acre-feet of entitlements from agricultural to urban contractors, (4) changes in the Kern Fan Element of the Kern Water Bank, and (5) changes in the manner Castaic Lake and Lake Perris terminal reservoirs may be operated. In general, the Monterey Agreement EIR determined the environmental effects that were capable of quantification at that time were negligible.

With regard to the change in the method of allocating entitlements, it summarized, "Changes in the method of allocating water become relevant only in years

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when demand exceeds available supply. During such years, following enactment of the principles contained in the Monterey Agreement, shortages will be shared proportionately by all contractors rather than be borne primarily by Agricultural Contractors as is the current practice. Thus, during future deficit years Agricultural Contractors can anticipate larger deliveries of water and Urban Contractors can expect smaller quantities of water than would have been the case in the past. These changes bring about a decrease in the variability of supplies delivered to Agricultural Contractors while increasing slightly that for the Urban Contractors. [¶] Added reliability of deliveries to Agricultural Contractors could increase the continuity of agricultural activities in these service areas. Added variability of water deliveries to Urban Contractors can, however, be offset by their acquisition of additional entitlement offered for sale by Agricultural Contractors as outlined below, and through other measures included in the program for increased water management flexibility."

With regard to the transfers of entitlements, it summarized: "The transfer of 130,000 AF of water entitlement from Agricultural Contractors to Urban Contractors and non-SWP Contractors has the potential to affect activities and land use patterns in those jurisdictions both relinquishing and acquiring the entitlement. Effects in those areas relinquishing water entitlement are likely to be centered on agricultural practices while those in areas acquiring water entitlement may relate to growth accommodation. The location of the eventual sellers and buyers of water entitlements is not known at this time." "SWP operations would not be adversely affected by the shift in deliveries among Contractors."

Belridge EIR

In contemplation of the transfer of up to 130,000 acre-feet of SWP entitlements from KCWA pursuant to the Monterey Agreement, the Belridge ***1379** Water Storage District as lead agency prepared a draft and final EIR in April and June of 1998 evaluating the effects in Kern County of such transfers. It evaluated the effects on the Belridge Water Storage District, the Lost Hills Water District, and the WRMWSD (all member districts of KCWA) of their transfer of SWP entitlements to yet undetermined purchasers.

The Belridge EIR repeatedly described the project being studied as a transfer of up to 130,000 acre-feet of entitlements *under the Monterey Agreement.* It stated: "The entitlement transfer would occur under the Monterey Agreement.... The benefits and impacts of the Monterey Agreement were evaluated in a separate environmental impact report [the Monterey Agreement EIR] which is discussed below and incorporated into this report by reference. However, to understand the potential benefits and impacts of the entitlement transfer, conditions that existed prior to the Monterey Agreement and after the Monterey Agreement are discussed."

The Belridge EIR then summarized how deliveries of SWP water differ before and after the Monterey Agreement. It also summarized in detail the Monterey Agreement EIR, which it incorporated by reference.

The Belridge EIR repeatedly stressed that under the changes made by the Monterey Agreement in allocating water during periods of shortage, agricultural contractors would not disproportionately suffer reduced deliveries, and therefore would enjoy increased reliability of deliveries even in times of shortage.

These assumptions enabled the Belridge EIR to conclude that the transfer of up to 130,000 acre-feet of entitlements from the member districts would not adversely affect at all the irrigated agricultural lands therein, because relinquishment of the entitlements would be compensated, on an average annual basis, by the increased reliability of SWP deliveries pursuant to the Monterey Agreement.

Respondent's EIR

The EIR in dispute in the present case is the EIR prepared by respondent in February 1999 on the proposed transfer to respondent of 41,000 acre-feet per year of SWP entitlement from KCWA and its member district WRMWSD.

The introduction section of respondent's EIR expressly stated, "*This EIR is a Project EIR that tiers from*" (1) a prior 1988 EIR by respondent, "Capital Program and Water Plan Including Acquisition of Supplemental Water and ***1380** of a Proposed Second Plant Site", (2) the Monterey Agreement EIR, and (3) the Belridge EIR. It stated the proposed transfer "is an example of the individual projects envisioned in the Monterey Agreement and evaluated on a programmatic basis in the Monterey Agreement

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EIR."

This introduction stated that "As a result of the recently adopted Monterey Agreement, [respondent] has the opportunity to purchase additional SWP entitlement beyond its current entitlement. The opportunity to acquire additional entitlement under the terms of the Monterey Agreement disappears when the subject entitlement (130,000 AFY) is transferred to [respondent] or other entities. A summary of the Monterey Agreement is presented below, and a more complete discussion of the SWP is included in the Monterey Agreement FEIR." A separate section of the introduction described "the Monterey Agreement/Amendment and its anticipated effect on historic water deliveries." After summarizing the major provisions of the Monterey Agreement, it concluded, "The Monterey Agreement has three primary objectives: (1) to increase the reliability of all SWP Contractors' water supplies; (2) to stabilize the rate structure to improve the financial viability of the SWP; and (3) to increase water management flexibility for all SWP Contractors. A permanent transfer of agricultural entitlement to an area with urban development potential such as that analyzed in this document is one of the ways that these objectives are intended to be met."

Respondent's EIR also discussed the Belridge EIR. It stated, "An independent EIR evaluating the environmental impacts of the sale of SWP entitlement within Kern County was completed by Belridge Water Storage District in June 1998. Issues identified in that EIR are not evaluated further in this EIR. Appropriate sections of the Belridge EIR ... are incorporated herein." It added that the proposed transfer would not significantly decrease water deliveries or irrigated acreage within KCWA or WRMWSD because, with implementation of the Monterey Agreement, "SWP deliveries to agricultural users will not be subject to absorbing the initial deficiencies during droughts and other unreliable delivery scenarios." The project description section acknowledged that this proposed transfer, "assuming it proceeds under the Monterey Agreement, will fulfill part of [KCWA's] commitment [under the Monterey Agreement to transfer up to 130,000 acre feet of entitlements to urban contractors]."

A commenter on respondent's draft EIR, Santa Clarita Organization for Planning the Environment, commented that the draft EIR was deficient in failing to analyze impacts on land in Kern County or on Castaic Lake as a terminal reservoir of the SWP. Respondent responded that those impacts had ***1381** already been evaluated in the Belridge EIR and the Monterey Agreement EIR and therefore were not required to be addressed in respondent's EIR.

Despite these numerous references relying on the Monterey Agreement and the Monterey Agreement EIR, respondent's EIR also asserted the proposed transfer of SWP entitlements could take place without the Monterey Agreement, under pre-Monterey Agreement contract law, with the consent of all parties and DWR. It acknowledged that the Monterey Agreement EIR was challenged in the *PCL* case, had been upheld by the Sacramento Superior Court, but was still challenged in the appeal then pending.

A comment from the Environmental Defense Center on the proposed final EIR complained that the EIR expressly tiers on the Monterey Agreement EIR, the status of which was questionable because it was in litigation in the Court of Appeal for the Third Appellate District; it also asserted the Belridge EIR was inappropriate for tiering. Respondent's consultant replied, "The proposed FEIR identifies that the proposed project may proceed either under the provisions of the Monterey Agreement or under the terms of the Kern County Water Agency Contract before it was modified by the Monterey Amendment .... The proposed final EIR identified the referenced litigation and Superior Court ruling .... [¶] The EIR does not tier from the Belridge ... EIR but incorporates appropriate sections by reference.... The inclusion of the reference to the Belridge 1998 EIR [as having been tiered on, as distinguished from having been incorporated by reference] is an error."

On the present appeal respondent admits that its EIR tiers on the Monterey Agreement EIR. Respondent states its EIR incorporates by reference the Belridge EIR.

Trial Proceedings in the Present Case

Appellant Friends of Santa Clara River filed a petition for a writ of mandate compelling respondent to set aside respondent's certification of its EIR and approval of the project, primarily on the ground respondent failed to comply with CEQA. Appellant alleged various defects in the EIR and respondent's findings. The alleged defects did not involve the Monterey Agreement EIR or the then pending *PCL* appeal. The trial court denied appellant's petition, finding that the EIR was adequate and that appellant's

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other contentions lacked merit. Appellant appealed from the judgment denying the petition. ***1382**

The PCL Case

In September 2000, after the trial court's judgment in the present case, the Court of Appeal for the Third Appellate District held the Monterey Agreement EIR prepared by CCWA was inadequate. (*PCL, supra*, 83 Cal.App.4th 892.) The Court of Appeal found two major defects. (1) The DWR, not CCWA, should have prepared the report as the lead agency; DWR has a statewide perspective and expertise on how allocation of water to another part of the state has implications for distribution throughout the system. (83 Cal.App.4th at pp. 903-907.) (2) The EIR did not adequately address the alternative of "no project"; it should have addressed the environmental implications of invoking article 18(b) of existing contracts, under which entitlements would be permanently reduced to reflect actual delivery patterns. (83 Cal.App.4th at pp. 908-920.) The court commented, "Perhaps the deficiencies in the EIR relate to the provincial experience of the lead agency, a topic we addressed earlier. We conclude the EIR failed to meet the most important purpose of CEQA, to fully inform the decision makers and the public of the environmental impacts of the choices before them. A new EIR must, therefore, be drafted. [¶] In view of our earlier conclusion that DWR must serve as lead agency under CEQA, we need not, as we ordinarily would, address the other alleged deficiencies in this EIR. (Pub. Resources Code, § 21005, subd. (c).) We need not hypothesize on the remaining issues because DWR, with its expertise on the statewide impacts of water transfers, may choose to address those issues in a completely different and more comprehensive manner." (83 Cal.App.4th at p. 920.)

The Court of Appeal reversed the judgment of the Sacramento Superior Court and remanded with directions to "issue a writ of mandate vacating the certification of the EIR," to "consider such orders it deems appropriate under Public Resources Code section 21168.9, subdivision (a)" and to "retain jurisdiction over this action until DWR certifies an EIR in accordance with CEQA standards and procedures that meets the substantive requirements of CEQA." (*PCL, supra*, 83 Cal.App.4th at p. 926.) It noted, "We earlier declined to stay implementation of the Monterey amendments and transfer of the Kern Fan Element. Consequently, the project was permitted to proceed pending disposition of this appeal. The record does not reflect the current status of the project and, in the absence of such information, we shall issue no orders concerning further implementation of the project. The trial court, acting under the authority provided by Public Resources Code section 21168.9, is the more appropriate forum to consider and rule upon requests to enjoin all or portions of the project pending completion of administrative and judicial proceedings necessitated by our opinion." (*Id.* at p. 926, fn. 16.) ***1383**

Expanded Issue on This Appeal

(1a) In its appellant's opening brief on the present appeal, appellant reasserted various arguments that appellant had unsuccessfully raised below concerning respondent's EIR and findings. Appellant's opening brief added, cursorily, that the decision in the *PCL* appeal, during pendency of this appeal, "completely shattered" respondent's EIR that was tiered on the EIR decertified in the *PCL* decision. Appellant more fully developed this argument in its appellant's reply brief. We requested and received supplemental briefs from the parties on this issue.

Legal Background: Tiering of EIR's

(2) Tiering "means the coverage of general matters and environmental effects in an environmental impact report prepared for a policy, plan, program or ordinance followed by narrower or site-specific environmental impact reports which incorporate by reference the discussion in any prior environmental impact report and which concentrate on the environmental effects which (a) are capable of being mitigated, or (b) were not analyzed as significant effects on the environment in the prior environmental impact report." (§ 21068.5; Guidelines, § § 15152, 15385.)

Tiering is favored by the Legislature to streamline the regulatory process and avoid wasteful duplication of effort. (*Stanislaus Natural Heritage Project v. County of Stanislaus* (1996) 48 Cal.App.4th 182, 197-198 [55 Cal.Rptr.2d 625]; § § 21093, 21094; Guideline, § 15152, subd. (b).) "To achieve this purpose, environmental impact reports shall be tiered whenever feasible, as determined by the lead agency." (§ 21093, subd. (b).) "Where a prior environmental impact report has been prepared *and certified* for a program, plan, policy, or ordinance, the lead agency for a later project that meets the requirements of this section shall examine significant

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effects of the later project upon the environment by using a tiered environmental impact report ....” (§ 21094, subd. (a), italics added.) “All public agencies which propose to carry out or approve the later project may utilize the prior environmental impact report and the environmental impact report on the later project to fulfill the requirements of Section 21081 [which concerns findings necessary in order to approve a project if significant environmental effects have been identified]. [¶] When tiering is used pursuant to this section, an environmental impact report prepared for a later project shall refer to the prior environmental impact report and state where a copy of the prior environmental impact report may be examined.” (§ 21094, subds. (d), (e).) “The later EIR ... should state that the lead agency is using the tiering ***1384** concept and that it is being tiered with the earlier EIR.” (Guideline, § 15152, subd. (g).)

Discussion

(1b) Respondent's EIR expressly tiered on the Monterey Agreement EIR. Section 21094, subdivision (a) authorizes tiering where the previous EIR was certified. As a result of the *PCL* decision, the Monterey Agreement EIR is no longer certified. Respondent's EIR therefore has a defect. The question presented for us is whether that error was prejudicial. (§ 21005, subd. (b).)

Respondent contends that although its EIR tiered on the Monterey Agreement EIR, it did not expressly or specifically incorporate any substantive analysis from specific portions of the Monterey Agreement EIR. But respondent's reliance on the Monterey Agreement EIR is implicit in the concept of tiering, even without express reference to portions of the prior EIR's analysis. The express statement that respondent's EIR tiers on the prior EIR may be treated as an admission that respondent relied upon and needed to rely upon the Monterey Agreement EIR. (Guideline, § 15152, subd. (g).)

Aside from a few cursory statements that the present transfer could legally be accomplished under pre-Monterey Agreement contracts, a point we discuss later, respondent's EIR repeatedly referenced this project's part of the overall scheme envisioned by the Monterey Agreement. It stated this EIR was a project EIR tiered on the Monterey Agreement EIR, and that the project may be viewed as one of the projects “evaluated on a programmatic basis in the Monterey Agreement EIR.”

Respondent's EIR also expressly tiered on, or at least expressly incorporated and relied upon, the analysis in the Belridge EIR. Respondent's EIR acknowledged that the transfer would not affect irrigated lands in Kern County because of the increased reliability of deliveries to agricultural contractors under the Monterey Agreement, and that the present transfer would fulfill part of KCWA's commitment in the Monterey Agreement. The Belridge EIR, on which respondent relied, repeatedly stated that the potential transfers of up to 130,000 acre-feet would be made pursuant to the Monterey Agreement and would have no significant effect on the irrigated lands, due to the increased reliability of deliveries under the Monterey Agreement. Respondent's reliance on the Belridge EIR illustrates respondent's implied acknowledgement that the transfer in this case is part of an overall larger scheme, analyzed on a programmatic basis in the Monterey Agreement EIR. The *PCL* decision also emphasizes the importance of the statewide perspective in analyzing the implications of water entitlement transfers for the state ***1385** and SWP as a whole. We therefore find unpersuasive respondent's present argument that respondent did not rely on the Monterey Agreement EIR.

At oral argument respondent offered a variant of this contention. According to respondent: “the project” being analyzed in respondent's EIR was only the transfer of 41,000 acre-feet of entitlements from WRMWSD to respondent; respondent was only required, therefore, to analyze the environmental effects of that narrow project; respondent adequately evaluated the local environmental effects of the subject transfer; respondent was not *required* to analyze the effects of the transfer on irrigated lands in Kern County or on the SWP upstream from Kern County, and to any extent respondent relied on the Belridge EIR and Monterey Agreement EIR to do so, this was surplusage; therefore the tiering on the Monterey Agreement EIR was harmless and does not require setting aside respondent's EIR that was otherwise adequate, viewed as a stand-alone document evaluating the local environmental impacts of this specific project. Appellant answers that respondent was required to review “the whole of the project.” (Guideline, § 15378, subd. (a) [“ 'Project' means the whole of an action.”].)

Respondent's argument is not persuasive. The purpose of an EIR is to inform the public and the decision makers of the environmental effects of a project. Implicit in respondent's argument is an innuendo the public and decision makers in

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respondent's service area do not care about the upstream effects of this project. But in any event, this case does not squarely present that issue. This is not a case where (1) respondent neglectfully failed or deliberately refused to evaluate "upstream" environmental effects and (2) appellant challenged such an EIR as inadequate based on its failure to review upstream effects. Rather, respondent's EIR assumed the public and decision makers would want to know (1) that this project implements the Monterey Agreement, the environmental effects of which were analyzed in the Monterey Agreement EIR and found to be negligible, and (2) that the environmental effects in Kern County were studied in the Belridge EIR and found to be insignificant because of the increased reliability of water deliveries to agricultural contractors under the Monterey Agreement. The *PCL* decision undermined those premises by decertifying the Monterey Agreement EIR.

Respondent next contends the tiering on the Monterey Agreement EIR was not crucial because respondent and KCWA could legally have accomplished the transfer of entitlements under SWP contract law existing prior to the Monterey Agreement. Respondent cites the following portions of its EIR: section 1.3 of the introduction stated, "The SWP entitlement transfer analyzed in this document may proceed either under the provisions of the ***1386** Monterey Amendment [FN3] to KCWA water supply agreement with the DWR (Contract), or under the provisions of KCWA's Contract before it was modified by the Monterey Amendment," and again, "The entitlement transfer that is the subject of this EIR is of the type that falls within the provisions of the Monterey Amendment. However, this water transfer could occur without the Monterey Amendment with the consent of all affected parties." The project description section included, "This water transfer is expected to be subject to the conditions of the Monterey Amendment, but is not necessarily dependent upon the Monterey Amendment. With the cooperation of the participating agencies and the California Department of Water Resources (DWR), the transfer could occur in the absence of the Monterey Amendment." Finally, in response to comments from the Environmental Defense Center that tiering on the Monterey Agreement EIR was questionable in light of the *PCL* litigation, respondent's consultant stated, "The proposed FEIR identifies that the proposed project may proceed either under the provisions of the Monterey Agreement or under the terms of the Kern County Water Agency Contract before it was modified by the Monterey Amendment."

FN3 By the Monterey "Amendment" respondent's EIR meant amendment of the SWP contracts between DWR and the approving contractors, to implement the principles of the Monterey Agreement.

These assertions are based on article 41, a standard provision of state water contracts, stating that "No assignment or transfer of this contract or any part hereof, rights hereunder, or interest herein by the Agency shall be valid unless and until it is approved by the State and made subject to such reasonable terms and conditions as the State may impose."

Respondent's argument is based on a straw man. The issue in this case is not the legal authority of KCWA to sell and of respondent to buy SWP water entitlements, but rather the adequacy of the evaluation of the environmental effects of doing so. The Belridge EIR evaluated those effects in Kern County pursuant to the Monterey Agreement, concluding that selling the entitlements would not have an effect on irrigated lands because, on average, it would be compensated by the increased reliability of deliveries to agricultural contractors under the Monterey Agreement. Neither the Monterey Agreement EIR, nor the Belridge EIR, nor respondent's EIR evaluated the environmental effects on the seller's irrigated lands of selling the entitlements under pre-Monterey-Agreement conditions, with agricultural contractors subject to the first and severest reductions in times of shortage.

Respondent contends this shortcoming is alleviated by the inclusion of discussions in the Belridge EIR and respondent's EIR of a "no project ***1387** alternative." This is incorrect. The no project alternative in the Belridge EIR was: not selling the entitlements. The no project alternative in respondent's EIR was: not buying the entitlements. Neither addressed the environmental effects of transferring the entitlements without the protections for agricultural contractors in the Monterey Agreement.

We conclude respondent's tiering on the now decertified Monterey Agreement EIR was prejudicial error. The judgment must be reversed because the certification of respondent's EIR must be vacated, based on the *PCL*/tiering problem. The question arises whether we should address the *other* alleged defects that were litigated below and raised in

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appellant's opening brief. We asked the parties to address whether these issues were moot if the judgment were reversed based on the *PCL*/tiering problem. Both parties remind us of section 21005, subdivision (c), which provides, "It is further the intent of the Legislature that any court, which finds, or, in the process of reviewing a previous court finding, finds, that a public agency has taken an action without compliance with this division, shall specifically address each of the alleged grounds for noncompliance." A treatise states, "This language, which courts may not treat as mandatory, is apparently intended to avoid situations in which a court, presented with numerous theories as to why a respondent agency purportedly violated CEQA, chooses to issue a writ based solely on one or a handful of theories, leaving the parties to wonder whether or not the unaddressed theories had merit. In such situations, where the respondent agency must conduct a second CEQA process to cure the problems identified by the court, the agency often does not know whether to modify its environmental document (or findings) to address concerns raised by the petitioners but ignored by the court." (Remy et al., Guide to the California Environmental Quality Act (10th ed. 1999) Judicial Review, pp. 646-647.)

Section 21005, subdivision (c) thus requires only that *if we find* other respects in which the EIR was defective we should describe them for the guidance of the parties. We have examined all of appellant's other contentions and find them to be *without merit.* If the *PCL*/tiering problem had not arisen, we would have affirmed the judgment. Section 21005, subdivision (c) does not require us to lengthen this opinion by addressing in detail why we *reject* appellant's other contentions. Appellant's supplemental reply brief so concedes: "The court's discussion of all aspects of CEQA noncompliance is respectfully requested, while areas of compliance are not required to be addressed."

This suggests that respondent may be able to cure the *PCL* problem by awaiting action by the DWR complying with the *PCL* decision, then issuing ***1388** a subsequent EIR, supplement to EIR, or addendum to EIR (Guidelines, § § 15162, 15163, 15164) tiering upon a newly certified Monterey Agreement EIR. Appellant itself so suggests.

Like the court in *PCL, supra,* 83 Cal.App.4th at page 926 and footnote 16, we leave to the trial court's discretion whether to enjoin all or portions of respondent's project pending completion of an adequate EIR. The trial court is in a better position than this court to determine factually the current status of the *PCL* litigation or of a new Monterey Agreement EIR.

Disposition

The judgment is reversed. The trial court shall issue a writ of mandate vacating the certification of the EIR, shall retain jurisdiction until respondent certifies an EIR complying with CEQA consistent with the views expressed in this opinion, and shall consider such orders it deems appropriate under section 21168.9. The parties shall bear their own costs on appeal.

Hastings, J., and Curry, J., concurred.
Respondent's petition for review by the Supreme Court was denied April 17, 2002. Baxter, J., was of the opinion that the petition should be granted. ***1389**

Cal.App.2.Dist.
Friends of Santa Clara River v. Castaic Lake Water Agency
95 Cal.App.4th 1373, 116 Cal.Rptr.2d 54, 02 Cal. Daily Op. Serv. 1246, 2002 Daily Journal D.A.R. 1477

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***Friends of the Santa Clara River v. Castaic Lake Water Agency*, Case No. BS056954, filed October 25, 2002 Judgment Granting Peremptory Writ of Mandate**

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SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE COUNTY OF LOS ANGELES

FRIENDS OF THE SANTA CLARA RIVER,

Petitioner,

v.

CASTAIC LAKE WATER AGENCY,

Respondent.

Case No. BS 056954

JUDGMENT GRANTING PEREMPTORY WRIT OF MANDATE

On Remand from the Court of Appeal

Susan Brandt-Hawley 707-576-0175

The hearing on the merits of the petition for writ of mandate was held on June 12, 2000, before the Honorable David P. Yaffe. Petitioner Friends of the Santa Clara River (Friends) was represented by attorney Susan Brandt-Hawley and respondent Castaic Lake Water Agency (CLWA) was represented by attorneys Robert H. Clark and R. Bruce Tepper. The court considered the briefs filed by the parties, the arguments of counsel, and the administrative record of proceedings, and took the case under submission.

On August 16, 2000, judgment was entered denying the petition in its entirety. An appeal was timely filed on October 16, 2000. The Fourth Division of the Second District Court of Appeal issued a slip opinion in Civil Case Number 145283 on January 10, 2002, and at the request of the National Audubon Society and the American Planning Association certified the opinion for publication on February 6, 2002. (*Friends of the Santa Clara River v. Castaic Lake Water Agency* (2002) 95 Cal.App.4th 1373.) The Court of Appeal reversed the judgment and ordered that "the trial court shall issue a writ of mandate vacating the certification of the EIR, shall retain jurisdiction until respondent certifies an EIR complying with CEQA consistent with the views expressed in this opinion, and shall consider such orders it deems appropriate under [Public Resources Code] section 21168.9."

CLWA filed a petition for review with the California Supreme Court on February 19, 2002, in Case Number S 104550, which was summarily denied on April 17, 2002. The remittitur issued from the Court of Appeal on May 3, 2002.

On September 24, 2002, at 9:30 a.m., the parties' proposed forms of judgment and writ on remand were considered by the Honorable David P. Yaffe. Friends was represented by attorney Susan Brandt-Hawley and CLWA was represented by attorneys Robert H. Clark and R. Bruce Tepper. The court considered the briefs filed by the parties and the arguments of counsel, and,

WHEREFORE, GOOD CAUSE APPEARING,

Susan Brandt-Hawley 707-576-0175

IT IS ORDERED THAT THE TENTATIVE RULING IS ADOPTED:

1. The judgment of this court denying the petition for writ of mandate, signed and filed on August 16, 2000, is vacated.

2. A peremptory writ of mandate shall issue ordering respondent Castaic Lake Water Agency to set aside its certification, made on March 29, 1999, of the Final Environmental Impact Report published in February 1999.

3. The Court retains jurisdiction until respondent Castaic Lake Water Agency certifies an Environmental Impact Report that complies with the California Environmental Quality Act and is consistent with the views expressed by the Court of Appeal Opinion filed January 10, 2002, Case No. B145283.

4. The Court finds that petitioner is the prevailing party in this proceeding.

5. The Court is informed that petitioner and respondent have fully and finally settled the outstanding issue of petitioner's claim for attorney fees and costs incurred in this action to date both in this Court and in the Court of Appeal, pursuant to CCP § 1021.5 and on all other bases whatsoever, for the compromise sum of $215,000.00, and the Court accepts said settlement.

6. Petitioner requests that the Court also prohibit respondent from using any of the 41,000 acre feet of additional water allotted to it from the subject State Water Project. Petitioner contends that the said water will be used to approve new development that will not be able to be reversed if a Final Environmental Impact Report is not certified. Respondent contends that such a prohibition would prevent it from meeting the existing water needs in the area it services. Both contentions appear to be speculative at this time. Respondent will not be prohibited from using the water to which it is entitled, but petitioner may renew its application for such prohibition based upon evidence of the actual use of such additional water for purposes it considers improper.

Approved as to form:

Date: October 7, 2002

Susan Brandt-Hawley
Attorney for Petitioner

Approved as to form:

Date: October 8, 2002

Robert H. Clark
Attorney for Respondent

IT IS SO ORDERED.

Date: OCT 25 2002

David P. Yaffe

Honorable David P. Yaffe
Judge of the Superior Court

Nov 14 02 02:33p Susan Brandt-Hawley 707-576-0175 p.5

Appellate court decision, *Friends of the Santa Clara River v. Castaic Lake Water Agency*, Court of Appeal, Second Appellate District, Division Four, Appellate No. B164027, Filed December 1, 2003

NOT TO BE PUBLISHED IN THE OFFICIAL REPORTS

California Rules of Court, rule 977(a), prohibits courts and parties from citing or relying on opinions not certified for publication or ordered published, except as specified by rule 977(b). This opinion has not been certified for publication or ordered published for purposes of rule 977.

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

SECOND APPELLATE DISTRICT

DIVISION FOUR

FRIENDS OF THE SANTA CLARA RIVER, Plaintiff and Appellant, v. CASTAIC LAKE WATER AGENCY, Defendant and Respondent.	B164027 (Los Angeles County Super. Ct. No. BS056954)

COURT OF APPEAL - SECOND DIST.
FILED
DEC 01 2003
JOSEPH A. LANE Clerk
Deputy Clerk

APPEAL from a judgment of the Superior Court of Los Angeles County, David P. Yaffe, Judge. Affirmed.

Law Office of Alyse M. Lazar and Alyse M. Lazar for Plaintiff and Appellant.

Rossmann and Moore, Antonio Rossmann and Roger B. Moore for Amici Curiae Planning and Conservation League and Citizens Planning Association of Santa Barbara County, Inc., in support of Plaintiff and Appellant.

Horvitz & Levy, Barry R. Levy, William N. Hancock; R. Bruce Tepper; and McCormick, Kidman & Behrens, Russell G. Behrens, H.L. (Mike) McCormick and David D. Boyer for Defendant and Respondent.

INTRODUCTION

This is the second time this case has been before us. On the first appeal we directed the trial court to issue a writ of mandate to set aside certification of respondent Castaic Lake Water Agency's Environmental Impact Report (EIR) because the EIR had been tiered upon a prior EIR that had been found to be infirm by an intervening appellate decision. Upon remand, respondent and appellant Friends of the Santa Clara River agreed a writ of mandate should issue to decertify the EIR but disagreed about whether the trial court should also enjoin the project pending certification of a new EIR. After consideration of documentary evidence and the presentation of written and oral arguments, the trial court rejected appellant's request for an injunction without prejudice to entertaining a renewed request founded on an adequate showing of entitlement to relief. This appeal follows entry of judgment in October 2002.

Appellant attacks the trial court's denial of its request for an injunction on two separate grounds. Appellant first contends the trial court's denial was in derogation of the directions contained in our earlier decision. The contention lacks merit. The clear and unambiguous dispositional language in our opinion granted the trial court the authority to deny in toto the request for an injunction. Appellant next contends the trial court erred on the merits in denying its request. Based upon the record, we find the trial court did not abuse its discretion in implicitly finding

appellant had failed to carry its burden of establishing the predicates for injunctive relief. We therefore affirm the judgment.

FACTUAL AND PROCEDURAL BACKGROUND

Respondent purchased from the Kern County Water Agency entitlement to 41,000 acre-feet per year of water. The purchase followed consummation of the Monterey Agreement which changed the allocation between agricultural and urban contractors of entitlements to State Water Project (SWP) water. Respondent approved this purchase after first certifying an EIR. This EIR was "tiered" upon an earlier EIR approving the Monterey Agreement.[1] The Legislature favors tiering to streamline the regulatory process and to avoid unnecessary duplication of effort.

Appellant filed a petition for a writ of mandate in the superior court to compel respondent to set aside its certification of the EIR for the purchase of 41,000 acre-feet per year of SWP water. Appellant advanced various grounds in support of its petition. The superior court denied the petition. Appellant appealed the adverse judgment to this court.

While that appeal was pending, our colleagues in the Third Appellate District concluded the EIR prepared for the Monterey Agreement was inadequate and therefore ordered it decertified. (*Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, review den. (*PCL*).)

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1 Tiering "means the coverage of general matters and environmental effects in an environmental impact report prepared for a policy, plan, program or ordinance followed by narrower or site-specific environmental impact reports which incorporate by reference the discussion in any prior environmental impact report and which concentrate on the environmental effects which (a) are capable of being mitigated, or (b) were not analyzed as significant effects on the environment in the prior environmental impact report." (Pub. Res. Code, § 21068.5.)

We therefore concluded that in the appeal presented to us *PCL* required decertification of respondent's EIR because it had been tiered on the now-decertified EIR for the Monterey Agreement. (*Friends of the Santa Clara River v. Castaic Lake Water Agency* (2002) 95 Cal.App.4th 1373, 1383-1388, review den. (*Friends I.*) We, however, rejected all of appellant's other challenges to respondent's EIR, finding "them to be *without merit*." (*Id.* at p. 1387.) We noted: "[R]espondent may be able to cure the *PCL* problem by awaiting action by the [Department of Water Resources] complying with the *PCL* decision, then issuing a subsequent EIR, supplement to EIR, or addendum to EIR [citations] tiering upon a newly certified Monterey Agreement EIR." (*Id.* at pp. 1387-1388.)

In regard to further action in the trial court we wrote: "[W]e leave to the trial court's discretion whether to enjoin all or portions of respondent's project pending completion of an adequate EIR. The trial court is in a better position than this court to determine factually the current status of the *PCL* litigation or of a new Monterey Agreement EIR." (*Id.* at p. 1388.)

The dispositional paragraph of our decision read, in relevant part: "The judgment is reversed. The trial court shall issue a writ of mandate vacating the certification of the EIR, shall retain jurisdiction until respondent certifies an EIR complying with CEQA consistent with the views expressed in this opinion, and shall consider such orders it deems appropriate under [Public Resources Code] section 21168.9." (*Id.* at p. 1388.)

Upon remand, the parties agreed the trial court was required to issue a writ of mandate to decertify respondent's EIR. The bone of contention was whether the trial court should also enjoin respondent from proceeding with the project, e.g., the transferring of the entitlement to the 41,000 acre-feet of water per year, pending completion of the new EIR.

Appellant argued: "To allow [respondent] to use any portion of its unstudied 41,000 afy [acre feet per year] entitlement before the EIR analysis is complete will result in **new permanent water connections** that will not be able to be reversed. Once houses are in and the faucets are on, there is no way to turn back. Without the proven need for this water to serve existing users, there is no equitable justification for allowing the use of any portion of the 41,000 afy entitlement in the face of its clear consistency with CEQA policies against pre-approved projects. A fair EIR process requires that project approval not be up and running as a foregone conclusion."

The evidentiary support for this argument is found in a declaration executed in August 2002 by appellant's counsel. The declaration sought to establish respondent would have sufficient water from other sources to supply its existing customers without use of the entitlement. From these factual allegations, appellant argued any use by respondent of the entitlement would necessarily be for new customers and therefore subject to being enjoined. The declaration referenced several attached documents and included allegations grounded upon information and belief. In pertinent part it averred:

> "I am informed that [respondent] has utilized at most 3674 af [acre feet] of the subject 41,000 afy [acre feet per year] water transfer during the past year. Attached is a true copy of CLWA Production Report for 2000, 2001, and half of 2002, and also a DWR Notice to State Water Project Contractors dated May 2002. The reports speak for themselves, and reflect CLWA's use of State Water Project entitlements to its various purveyors. The allocation of SWP water was 65% in the last year, and *petitioner is informed and believes that CLWA expects an even larger allocation in the coming fiscal year to as much as 90%.* The report shows that water use is measured yearly from June to June. It is undisputed that CLWA has a 54,200 afy entitlement to SWP water that is not under any legal cloud and clearly available for use, aside from the 41,000 afy that is the subject of this litigation. Based on a 65% delivery of SWP water, CLWA's

> allocation of its undisputed 54,200 afy totals 35,230 af. The report reflects use of 38,974 af from June 2001 until June 2002; which appears to be only 3674 af more than can be supplied from the 54,200 afy entitlement. It thus appears that CLWA *may have utilized* 3674 af of its allocation from the subject 41,000 af entitlement in the past year. If the SWP allocations increase to 75% or greater, *as is apparently expected,* by doing the math it appears that the 41,000 af water transfer is not needed for existing customers of the CLWA water purveyors while the supplemental environmental review is pending." (Italics added.)

Appellant therefore sought an order enjoining respondent "from any and all use of the 41,000 afy water transfer under the current approvals."

In addition, appellant's counsel averred she had communicated with counsel in the *PCL* case and that as of August 22, 2002, "the *PCL* case remand has not yet been settled or otherwise resolved, and that the Monterey Agreement Implementation Draft EIR to be prepared by the Department of Water Resources (DWR) as required by the *PCL* decision has not yet been published." As for the status of respondent's EIR, the declaration averred that respondent's attorney had informed her "that the agency has not yet published its Draft Supplemental EIR in response to [the Court of Appeal's decision], but that it intends to prepare the EIR itself rather than await the new DWR Monterey Agreement Implementation EIR."

In opposition, respondent asked the trial court to "**issue an order allowing the Transfer of Entitlement to remain intact pending completion of a new EIR.**" In particular, respondent urged that the entitlement was "necessary to satisfy current existing and projected near-term water demand"; that a "decision to set aside the Transfer of Entitlement would cause immediate irreparable harm to the Agency and the water consumers"; and that the Transfer "has been in effect for more than three years, and there is no evidence that the Transfer has resulted in any new or increased significant adverse environmental effects."

Respondent's opposition was supported by a detailed eight-page declaration from Dan Masnada, respondent's general manager. Masnada averred that respondent had already retained consultants to prepare a new EIR and they planned to complete the process by March 2003. A portion of Masnada's declaration directly refuted the allegations made by appellant's counsel about respondent's projected water supply. In pertinent part, Masnada averred:

> "[Counsel's] declaration states that 'CLWA expects an even larger allocation made by DWR in the coming fiscal year to as much as 90%.' . . . *There is no factual basis for this statement.* There have been no indications that CLWA's SWP allocation made by DWR in the coming year will be anywhere near 90%. To the contrary, based on discussions with DWR Operations Control Office Personnel it is likely that the initial 2003 SWP allocation on December 1, 2002 will be approximately 20%, as it was last year. If dry conditions occur next year, the final SWP allocation for 2003 could remain as low as 20%.
>
> [Counsel's] Declaration also states that the CLWA Production Report 'shows that water use is measured yearly from June to June.' . . . This is incorrect. While annual water use can be measured from July to June, available SWP water supply is characterized on a calendar year basis because DWR allocates it on a calendar year basis. *[Her] accounting of water deliveries i[s] flawed.* She has utilized an approach that understates CLWA's current level of demand and projected deliveries to the retail purveyors during 2002. As discussed above, and shown in Exhibit A, CLWA's Final 2001 SWP allocation was 39%. Without the 41,000 AF in 2001, CLWA would have experienced a shortfall of 14,218 AF."

Appellant's reply to respondent's opposition did not include any additional declaration(s). Instead, its reply asserted respondent's "factual information" was "confusingly presented and misleading" and that a portion of Masnada's opinion about SWP allocations for 2003 was "complete conjecture and speculation."

After a hearing in which the parties presented argument and responded to questions from the bench, the trial court issued a writ of mandate ordering respondent to set aside its certification of the 1999 EIR and to certify a new EIR consistent with our opinion in *Friends I*. The trial court rejected appellant's request to enjoin any use of the water entitlement. It ruled: "Petitioner [appellant herein] requests that the Court also prohibit respondent from using any of the 41,000 acre feet of additional water allotted to it from the subject State Water Project. Petitioner contends that the said water will be used to approve new development that will not be able to be reversed if a Final Environmental Impact Report is not certified. Respondent contends that such a prohibition would prevent it from meeting the existing water needs in the area it services. *Both contentions appear to be speculative at this time. Respondent will not be prohibited from using the water to which it is entitled, but petitioner may renew its application for such prohibition based upon evidence of the actual use of such additional water for purposes it considers improper*." (Italics added.)

This appeal follows.[2]

DISCUSSION

A. THE DIRECTIVE IN *FRIENDS I*

Appellant first contends the trial court misconstrued our directive in *Friends I*. Appellant's position is that our decision gave the trial court the power

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[2] In July 2002, we denied respondent's motion to dismiss the appeal because denial of a *pendente lite* injunction is appealable pursuant to Code of Civil Procedure section 904.1, subdivision (a)(6).

to enjoin either all or part of the project pending certification of a new EIR but that it did not give it the power to decide, as it did in the proceedings it conducted following remand, not to enjoin any part of the project. Appellant relies upon the following language we now italicize from *Friends I*: "Like the court in *PCL, supra,* 83 Cal.App.4th at page 926 and footnote 16, we leave to the trial court's discretion whether to enjoin *all or portions* of respondent's project pending completion of an adequate EIR." (*Friends I, supra,* 95 Cal.App.4th 1373, 1388, italics added.) From that language, appellant argues "the Superior Court was not vested with the discretion to issue no injunction, but only with [the] discretion to issue a full or partial injunction."

Appellant's argument lacks merit because it ignores the clear dispositional language of our opinion which gave the trial court the authority to deny in toto a request for injunctive relief.

"Where a reviewing court has remanded a matter to the trial court with directions '. . . the trial court . . . is bound to specifically carry out the instructions of the reviewing court. . . . [A]ny material variance from the explicit directions of the reviewing court is unauthorized and void.'" (*Coffee-Rich, Inc. v. Fielder* (1975) 48 Cal.App.3d 990, 998.)

The appellate court's directions are determined by "look[ing] first to the dispositional language of the opinion--the language which constitutes the remittitur directions." (*Frankel v. Four Star International, Inc.* (1980) 104 Cal.App.3d 897, 902.) *Only if* the dispositional language is ambiguous and in need of interpretation will that language "be interpreted in light of the reasoning and holdings found in the body of the opinion. [Citations.]" (*Lesny Development Co. v. Kendall* (1985) 164 Cal.App.3d 1010, 1021.)

As set forth earlier, the pertinent portion of the dispositional language in *Friends I* read: "The judgment is reversed. The trial court shall issue a writ of

mandate vacating the certification of the EIR, shall retain jurisdiction until respondent certifies an EIR complying with CEQA consistent with the views expressed in this opinion, *and shall consider such orders it deems appropriate under section 21168.9.*" (*Friends I, supra,* 95 Cal.App.4th 1373, 1388, italics added.) The statutory provision referenced--Public Resources Code section 21168.9--is lengthy and set forth in toto below in footnote 3.[3] The definitive

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3 The statute provides:

"(a) If a court finds, as a result of a trial, hearing, or remand from an appellate court, that any determination, finding, or decision of a public agency has been made without compliance with this division, the court shall enter an order that includes one or more of the following:

"(1) A mandate that the determination, finding, or decision be voided by the public agency, in whole or in part.

"(2) If the court finds that a specific project activity or activities will prejudice the consideration or implementation of particular mitigation measures or alternatives to the project, a mandate that the public agency and any real parties in interest suspend any or all specific project activity or activities, pursuant to the determination, finding, or decision, that could result in an adverse change or alteration to the physical environment, until the public agency has taken any actions that may be necessary to bring the determination, finding, or decision into compliance with this division.

"(3) A mandate that the public agency take specific action as may be necessary to bring the determination, finding, or decision into compliance with this division.

"(b) Any order pursuant to subdivision (a) shall include only those mandates which are necessary to achieve compliance with this division and only those specific project activities in noncompliance with this division. The order shall be made by the issuance of a peremptory writ of mandate specifying what action by the public agency is necessary to comply with this division. However, the order shall be limited to that portion of a determination, finding, or decision or the specific project activity or activities found to be in noncompliance only if a court finds that (1) the

(Fn. continued.)

construction of that statute is found in our Supreme Court's opinion in *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376. It concluded that the statute permits but does not require a court to enjoin a project while a new EIR is prepared. (*Id.* at pp. 423-425.) In deciding whether injunctive relief is appropriate, a court is to rely upon "traditional equitable principles." (*Id.* at p. 423.) Given this long-standing construction of section 21168.9,[4] it is clear our dispositional language granted the trial court the option to decline to grant any injunctive relief after it properly considered the pertinent equities. Appellant's argument that the trial court failed to follow our directions by declining to grant equitable relief is therefore without merit.

In any event, appellant engages in a crabbed interpretation of one phrase in our opinion to argue the trial court had no discretion to deny a request for

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> portion or specific project activity or activities are severable, (2) severance will not prejudice complete and full compliance with this division, and (3) the court has not found the remainder of the project to be in noncompliance with this division. The trial court shall retain jurisdiction over the public agency's proceedings by way of a return to the peremptory writ until the court has determined that the public agency has complied with this division.
>
> "(c) Nothing in this section authorizes a court to direct any public agency to exercise its discretion in any particular way. Except as expressly provided in this section, nothing in this section is intended to limit the equitable powers of the court."

4 See also *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1456 ["Section 21168.9, as construed by the Supreme Court in *Laurel Heights,* merely grants a reviewing court the authority to stay all activity or use of a project until an agency certifies a proper EIR; it does not require it to do so. [Citation.] The court in *Laurel Heights* relied upon traditional equitable principles in deciding that injunctive relief there was not appropriate."].

injunctive relief. The sentence in which the phrase is found began with a specific reference to the *PCL* opinion: its dispositional language found at page 926, including footnote 16. That language included the same direction found in our dispositional language: the direction the trial court shall make any such orders it deems appropriate under section 21168.9. Footnote 16 read: "We earlier declined to stay implementation of the Monterey amendments and transfer of the Kern Fan Element. Consequently, the project was permitted to proceed pending disposition of this appeal. The record does not reflect the current status of the project and, in the absence of such information, we shall issue no orders concerning further implementation of the project. The trial court, acting under the authority provided by Public Resources Code section 21168.9, is the more appropriate forum to consider and rule upon requests *to enjoin all or portions of the project pending* the completion of administrative and judicial proceedings necessitated by our opinion." (*PCL, supra,* 83 Cal.App.4th 892, fn. 16 at p. 926, italics added.) Just as the *PCL* court did not intend to limit the trial court's authority by requiring it to enjoin at least a portion of the project, neither did we. We, as did the *PCL* court, were simply describing the types of requests that might be made, e.g., requests for a partial or full injunction. We did not intend to divest the trial court of its power to deny a request for injunctive relief if it either concluded that the moving party had failed to establish the predicates for relief or that, given the equities, relief was not required.

B. DENIAL OF INJUNCTIVE RELIEF

Appellant next contends: "The Superior Court's decision regarding injunctive relief was an abuse of discretion, because there is no factual basis to support the decision." (Bold omitted.) We disagree.

A decision to grant or deny a request for injunctive relief rests within the trial court's discretion. Its order will not be reversed on appeal unless an abuse of discretion is shown. It is, of course, the appellant's burden to establish an abuse of discretion. (*Cohen v. Board of Supervisors* (1985) 40 Cal.3d 277, 286.) "A trial court will be found to have abused its discretion only when it has exceeded the bounds of reason or contravened the uncontradicted evidence. [Citation.]" (*Lubavitch Congregation v. City of Long Beach* (1990) 217 Cal.App.3d 1388, 1391.)

It was appellant's burden as moving party in the trial court to establish the predicates for injunctive relief. In particular, Public Resources Code section 21168.9, subdivision (a)(2) requires the court to first find that a "specific project activity . . . will prejudice the consideration or implementation of particular mitigation measures or alternatives to the project" and that such activities "could result in an adverse change or alteration to the physical environment" before an injunction will issue. The trial court found appellant's claim of irreparable harm--new permanent water connections that will not be able to be reversed--to be speculative. In other words, it concluded appellant had failed to discharge its burden of proof.[5] However, it specifically left open the opportunity for appellant

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5 To a certain extent, appellant relies upon four documents not presented to the trial court to support its contention of abuse of discretion. Three of those documents were prepared after the trial court entered judgment in October 2002. Each document is a portion of a report prepared for respondent. Prior to the submission of briefing, we granted appellant's request to take judicial notice of these documents.

Appellant wants to use this information to show respondent is improperly representing to third parties it is entitled to the 41,000 acre-feet per year of water. Appellant argues this is proof of the irreparable harm it is suffering because the trial court declined to enjoin respondent.

Our prior grant of appellant's motion for judicial notice does not require us to consider these documents. "Although a reviewing court may take judicial notice of

(Fn. continued.)

to renew its claim "based upon evidence of the actual use of such additional water for purposes it considers improper."

Distilled to its essence, appellant's present position is nothing more than an argument the trial court was required to credit the allegations in its counsel's declaration which allegedly supported its request for injunctive relief. That is, appellant would have us find that no reasonable judge could have found its evidentiary showing insufficient. We cannot make that finding.

The evidence on this issue was conflicting. As set forth above, Masnada's declaration directly contradicted some of the allegations made by appellant's counsel. Given the (purported) deficiencies Masnada pointed out in counsel's declaration, the fact that much of counsel's declaration was based upon information and belief, and appellant's failure to file a reply declaration addressing those points with its reply memorandum, the trial court was well within its discretion to conclude that *at that point in time* appellant had failed to make the requisite showing.

Appellant argues such a conclusion is insupportable because the trial court also found respondent's trial court contention to be speculative. Not so. Appellant

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matters not before the trial court, . . . the reviewing court need not give effect to such evidence. 'Having taken judicial notice of such a matter, the reviewing court may or may not apply it in the particular case on appeal. The effect to be given to matters judicially noticed on appeal, where the question has not been raised below, depends on factors that are not evidentiary in character.' [Citation.]" (*Doers v. Golden Gate Bridge etc. Dist.* (1979) 23 Cal.3d 180, 184, fn. 1.)

In this instance, given that (1) these documents essentially constitute "new evidence" in support of appellant's request for injunctive relief and (2) the trial court explicitly anticipated appellant would renew its request before it, we decline to consider the documents on this appeal.

If appellant wishes to renew a request for injunctive relief, it can bring these documents to the trial court's attention.

is conflating two distinct points respondent made in the trial court. First, based upon a claim of irreparable harm, respondent had affirmatively sought an order that the transfer of entitlement remain in effect until the new EIR was completed. Second, respondent refuted the factual allegations about its water sources contained in the declaration executed by appellant's counsel. The trial court's finding of speculation was directed at the first point: respondent's claim it would suffer irreparable harm if the trial court denied its request for an order that the transfer remain in effect until the EIR was completed. The finding of speculation was not directed at the second point: respondent's discrete refutations of appellant's allegations. The trial court could reasonably find respondent had failed to meet its burden to establish the predicate for the relief it sought but could also reasonably find that the portions of Masnada's declaration set forth above were sufficient to show appellant's claim for relief was likewise subject to serious question and therefore grounded in speculation. We therefore reject appellant's claim that "[r]espondent's entire argument that there was no abuse of discretion is incorrectly based on evidence that the lower court determined was mere speculation, not fact."[6] (Fn. omitted.)

Lastly, we address an argument raised in the amici brief jointly filed by the Planning and Conservation League and the Citizens Planning Association of Santa

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6 Appellant cites to various comments the court made as well as questions it posed during the hearing as proof that the court grounded its decision either in facts unsupported by the evidence or on legal principles inapplicable to the case. This approach is in error. A contextual reading of the transcript of the hearing indicates the court's questions and comments were intended to gather information, to focus the parties' arguments, and to test the strength of the parties' respective positions. The "bottom line" is whether the trial court abused its discretion in finding appellant had failed to discharge its burden to establish the predicates for injunctive relief. As explained above, the court did not so abuse its discretion.

Barbara County, Inc. in support of appellant. Amici are two of the environmental organizations that were the prevailing parties in *PCL, supra,* 83 Cal.App.4th 892.

Amici first inform us that in May 2003--seven months after the trial court entered judgment in this matter--the superior court in Sacramento approved a settlement agreement entered into by the parties in the *PCL* case. Pursuant to that agreement, work has commenced on a new EIR in regard to the Monterey Agreement and related issues. The settlement agreement recognizes that the transfer underlying this lawsuit is "'subject to pending litigation in the Los Angeles Superior Court following remand from the Second District Court of Appeal'"; that "'jurisdiction with respect to that litigation should remain in the [Los Angeles Superior Court]'"; and that "'nothing in this settlement agreement is intended to predispose the remedies or other actions that may occur in that pending litigation.'"

Amici argue the trial court abused its discretion in denying appellant's request for injunctive relief because the court ignored "the specific directions of *Friends I*" that its determination on interim relief should be based upon the status of the *PCL* litigation and the new statewide EIR to be prepared for the Monterey Agreement.[7] As support for that proposition, Amici cites us to the last two paragraphs of our opinion in *Friends I.* There, after concluding that other than the *PCL*/tiering issue all of appellant's complaints about the EIR were meritless, we wrote: "This suggests that respondent may be able to cure the *PCL* problem by awaiting action by the DWR complying with the *PCL* decision, then issuing a subsequent EIR, supplement to EIR, or addendum to EIR [citations] tiering upon a newly certified Monterey Agreement EIR. Appellant itself so suggests. [¶] Like the court in *PCL, supra,* 83 Cal.App.4th at page 926 and footnote 16, we leave to

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7 Appellant raised this point in the trial court and its opening brief.

the trial court's discretion whether to enjoin all or portions of respondent's project pending completion of an adequate EIR. The trial court is in a better position than this court to determine factually the current status of the *PCL* litigation or of a new Monterey Agreement EIR." (*Friends I, supra,* 95 Cal.App.4th 1373, 1387-1388.)

Amici misapprehend our directions to the trial court. As explained above, those directions are found in the dispositional language of our opinion. That language directed the trial court, inter alia, to "consider such orders it deems appropriate under [Public Resources Code] section 21168.9." (*Ibid.*) That section grants the trial court broad powers to fashion equitable relief. (See fn. 3, *ante*, and accompanying text at pp. 10-12.) Amici's argument that the exercise of said discretion was to be based upon the status of either the *PCL* litigation or the new EIR for the Monterey Agreement is at odds with the clear dispositional language we employed. The two paragraphs in our opinion upon which amici rely were merely suggestions as to how respondent could proceed and a statement that in exercising its discretion whether to grant equitable relief pending completion of a new EIR for this project, the trial court could ascertain, and if it so chose, rely upon the status of the *PCL* litigation and new Monterey Agreement EIR.

In any event, the parties' papers in the trial court informed it of what was then the current status of both the *PCL* litigation and the new Monterey Agreement EIR and the issue was discussed at the hearing. Nothing in the record suggests the court did not consider those facts in rendering its decision, a decision that was properly framed by the specific prayers for relief each party advanced in the trial court. To a large extent, amici's position is nothing more than an attempt to reargue the motion and to do so based upon events that occurred after judgment was rendered. Because the *PCL* litigation settled *after* the trial court entered its judgment, that settlement and the status of the preparation of the new Monterey Agreement EIR are matters that can be brought to the attention of the trial court if

appellant seeks to renew its request for injunctive relief. Lastly, in order to forestall any unnecessary future litigation, we hasten to add that nothing stated in this opinion is to be construed to be an indication as to how the trial court should rule in any further proceeding(s) on any specific issue(s).

DISPOSITION

The judgment is affirmed.

NOT TO BE PUBLISHED IN THE OFFICIAL REPORTS

VOGEL (C.S.), P.J.

We concur:

HASTINGS, J.

CURRY, J.

R. Bruce Tepper
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Los Angeles, CA 90067-1602

Division 4
Friends of the Santa Clara River
v.
Castaic Lake Water Agency
B164027

Statement of Decision, ***California Water Network v. Castaic Lake Water Agency*, Los Angeles County Superior Court No. BS098724, filed April 2, 2007 (Chalfant Decision.)**

California Water Impact Network v. Castaic Lake Water Agency
BS 098724

Statement of Decision on Petition for Writ of Mandate

ORIGINAL FILED
APR 02 2007
LOS ANGELES SUPERIOR COURT

Petitioners California Water Impact Network ("CWIN") and Planning and Conservation League ("PCL") petition for writ of mandate under California Environmental Quality Act ("CEQA"). The court has read and considered the moving papers, oppositions, and reply, heard oral argument, and renders the following decision.

A. Statement of the Case

Petitioner CWIN commenced its petition for writ of mandate in Ventura County Superior Court on January 24, 2005. The petition alleges that on December 23, 2004, the Castaic Lake Water Agency ("Castaic"), a public water agency and water wholesaler that treats and delivers water to water retailers in Los Angeles and Ventura Counties, approved the permanent transfer of 41,000 acre feet per year from Real Party in Interest Kern County Water Agency ("Kern") and its member unit in Kern County, Wheeler Ridge-Maricopa Water Storage District ("Wheeler Ridge"), to Castaic (the "Kern water transfer," the "Kern transfer," or the "transfer"). Castaic also purported to certify the Environmental Impact Report ("EIR") for the project (the "2004 EIR" or the "EIR"). Petitioner claims the Kern water transfer "threatens to promote large-scale urban sprawl in Ventura and Los Angeles Counties, while diverting water from important environmental and agricultural uses in Kern County forever." Petitioner alleges that the 2004 EIR is premature, and fails to comply with CEQA.

The petition alleges a cause of action for violation of CEQA in that Real Party in Interest California Department of Water Resources ("DWR"), not Castaic, should have been the lead agency for the 2004 EIR, which does not adequately describe the background on which the project is based, fails to disclose a reliance on an invalid Urban Water Management Plan, fails to adequately describe alternatives to the project, including a "no project" alternative, fails to discuss growth inducement, and inaccurately states the availability of water availability.[1]

On January 24, 2005, PCL filed its own petition for writ of mandate against Castaic in Ventura County Superior Court. The PCL petition alleges a violation by Castaic in recording a Notice of Determination on December 23, 2004, certifying the 2004 EIR and rendering its approval of the Kern water transfer. The petition purports to allege five "causes of action" for violation of CEQA in the 2004 EIR based on Castaic stealing DWR's duty to be the lead agency for the EIR, certification of a defective EIR, approval of inadequate findings, erroneous presentation of the project as already complete, and "prejudicial abuse of discretion."

On June 22, 2005, upon motion by Castaic, the Ventura County Superior Court (the Honorable Frederick H. Bysshe, Jr.) ordered the transfer of both petitions, which had been consolidated, to Los Angeles. On March 27, 2006, the case was reassigned to this court.

On June 27, 2006, the court heard the demurrers of Castaic and Real Party in Interest Kern to the consolidated petitions. The court ruled that the petitions were timely filed and were

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[1]On CWIN's oral motion, the petition's second and third causes of action have been dismissed. As a result, CWIN's petition solely concerns Castaic's compliance with CEQA in the 2004 EIR.

not barred under the doctrine of *res judicata*. The court noted that the Kern water transfer agreements are valid. While principles of *collateral estoppel* barred Petitioners from re-raising issues resolved by the Second District with respect to the 1999 EIR, this conclusion did not foreclose the petitions and the demurrers were overruled.

On July 16, 2006, the court denied Castaic's motion for a legal determination under principles of *collateral estoppel* and party admission that Castaic is the proper lead agency for preparation of the EIR for the Kern water transfer. However, Petitioners are bound by their concession that Castaic may act as the lead agency at some point for an EIR on the Kern water transfer.

B. Preliminary Issues

1. Standing and Timeliness

Petitioner PCL alleges that it is a non-profit corporation devoted to environmental protection. PCL Pet. at ¶6-7. Some of PCL's members live in the area affected by the Kern water transfer. PCL Pet. at ¶8. Petitioner CWIN alleges that it is a nonprofit public benefit corporation the purpose of which is to protect California's environment. CWIN contends that it is impacted by the Kern water transfer because its members reside in and use the Santa Clara River watershed, which is impaired by the water transfer. CWIN Pet. at ¶9. Thus, Petitioners contend that they are impacted by the project and have standing to raise the issues herein. Respondents do not contest Petitioners' standing. *See* Waste Management of Alameda County, Inc. v. County of Alameda, (2000) 79 Cal.App.4th 1223, 1233-34.

The actions are timely on CEQA issues, each having been filed on January 24, 2005, within 30 days of Castaic's Notice of Determination that the 2004 EIR had been certified, filed in various counties between December 23 and December 27, 2004. *See* Pub. Res. Code §21167(c).

2. The Administrative Record

Castaic has certified the administrative record. Pub. Res. Code §21167.6; LASC 9.24(e). The record was received in evidence at trial.

Castaic and Kern, and DWR separately ask the court to judicially notice various records. Judicial notice is the acceptance by a court without formal proof of the existence of a matter of law or fact that is relevant to an issue in the case. People v. Rowland, (1992) 4 Cal.4th 238, 268, n.6. Certain documents are subject to judicial notice. Ev. Code §451, 452. Even where subject to judicial notice, however, a document must be relevant. Id.

The California Supreme Court decision in Western States Petroleum Assn. v. Superior Court, ("Western States") (1995) 9 Cal.4th 559, 573, n.4, provides that extrinsic evidence is generally not admissible for a traditional mandamus challenging a quasi-legislative agency action. The exclusion of extrinsic evidence in a traditional mandamus action is essentially the exclusion of irrelevant evidence. Extrinsic evidence is generally not admissible for a traditional mandamus challenging a quasi-legislative agency action. Id. Such evidence may be admissible in a narrowly construed exception in which (1) the evidence in question existed before the agency made the decision, and (2) the evidence could not have been presented to the agency in the first instance in the exercise of reasonable diligence. Id. at 578. The purpose of limiting extra-record evidence is that the free use of such evidence would invade the deference to which the legislative

branch is entitled under the constitutional separation of powers. If the courts freely considered extra-record evidence in mandamus cases, the highly deferential substantial evidence standard would be turned into a *de novo* standard where the courts in effect would decide not whether an administrative decision was supported by the evidence before the agency but instead whether it was the wisest and best decision according to the courts. Id. at 572.

Castaic asks the court to judicially notice: (1) the unpublished appellate decision in Friends of the Santa Clara River v. Castaic Lake Water Agency, 2003 Cal.App. Unpub. LEXIS 11239, dated December 1, 2003 ("Friends II"), and (2) the unpublished appellate decision in California Water Network v. Castaic Lake Water Agency, 2006 Cal.App. Unpub. LEXIS 2452, dated March 23, 2003.[2] The existence of these court decisions is subject to judicial notice. Ev. Code §452(d).[3]

DWR asks the court to judicially notice (1) Amendment No. 19 to the Water Supply Contract between it and Castaic dated May 28, 2003, and (2) Notice of Preparation of EIR for the Monterey Amendment dated January 24, 2003. DWR contends that these documents are official acts of a California agency subject to judicial notice under Ev. Code section 452(c) and (d). The Notice of Preparation is an official act of DWR and is judicially noticed. However, Amendment No. 19 is not. Official acts should be limited to regulations, public announcements, and other actions the existence of which is beyond dispute. A well informed person has no way of knowing whether Amendment No. 19 is authentic and valid. Nor is it a court record under section 452(d). DWR's request for judicial notice of Amendment No. 19 is denied.

C. Statement of Facts

1. SWP

In 1951, the Legislature authorized construction of a state water storage and delivery system. Planning & Conservation League v. Department of Water Resources, (2000) 83 Cal.App.4th 892, 898. The Legislature subsequently authorized the State Water Project ("SWP"), a complex system of 28 reservoirs and dams, 26 power and pumping plants, and 600 miles of canals and aqueducts to deliver 4.23 million acre-feet of water annually to Central and Southern California. The primary source for the SWP is the drainage of the Feather River, a tributary of the Sacramento River in Northern California (hereinafter, the "Delta").

DWR is the state agency charged with the statutory responsibility to build, manage, and operate the SWP. Essentially, DWR is the wholesale provider of water to middlemen agencies. In 1961, DWR entered into individual contracts with various agricultural and urban water suppliers in the State, referred to as State Water Contractors. *See* Water Code §12937. There are 29 agencies or districts that currently are State Water Contractors.

The SWP water contracts entitled the contractors to receive an annual amount of SWP

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[2]Castaic also supplied the court with copies of its decisions on demurrer and motion for legal determination in this case, which need not be judicially noticed.

[3]Real Party Wheeler purports to join in Castaic's request for judicial notice. In its ruling on the demurrers, the court informed Wheeler of the futility of a joinder as merely a cheerleading effort. No further discussion of the purported joinder is necessary.

water in exchange for a proportionate share of financing and maintaining the SWP facilities. Each water contract contains provisions for both allocation of the amount of water available each year and costs among the contractors. Each contract identifies a Table A amount, the annual maximum amount of water which DWR agrees to deliver, if available for delivery, to each SWP contractor on an annual basis. Delivery of the Table A amount is not assured, but rather provides the basis for proportional allocation of available water among contractors. The Table A amount is specified as either agricultural or urban (M&I). Each contract also includes Article 40, which permits water transfers between contractors, and Article 41, which requires DWR approval of any transfer subject to reasonable terms and conditions. AR 2356.

Each contractor annually submits a request to DWR for water delivery in the following year, up to the amount in Table A. In a year when DWR is unable to deliver the total of contractor requests, deliveries to all contractors will be reduced. The current Table A totals are 4.17 million acre-feet per year.[4] In fact, given existing facilities and contractor demands, the SWP can only deliver an average of 2.96 million acre-feet per year.

2. The Monterey Agreement

Historically, the delivery of less than Table A totals was not a significant problem because contractor demand was less than the Table A amounts. However, in the late 1980's and early 1990's, a drought led to SWP deliveries in amounts below that requested by contractors. Articles 18(a) and (b) of the SWP water contracts addressed DWR's temporary and permanent inability to deliver the water allocations listed in Table A of the contracts by requiring agricultural contractors to accept a reduction in water first before any remaining reduction was shared by urban contractors. In 1990, agricultural contractors received only half their requested water and none in 1991. Because contractors pay their proportionate share of fixed costs regardless of how much water is delivered, the agricultural contractors were paying for water they were not receiving and they were displeased. As a result, urban and agricultural water contractors clashed over DWR's delivery obligations and the proper interpretation of Article 18. AR 45-46.

In December 1994, five State Water Contractors and and DWR reached agreement on a broad set of fourteen principles (the "Monterey Agreement"). Among other things, the Monterey Agreement changed the allocation between agricultural and urban contractors of entitlements to SWP water. The Monterey Agreement eliminated Article 18 and specified that all SWP water was to be allocated in proportion to Table A amounts. Paragraph 24 of the Monterey Agreement provides for the permanent transfer of 130,000 acre-feet from certain willing agricultural contractors, including KWCA, to urban contractors, as implemented by individual agreement. AR 2515. It also provides that individual contractors may transfer entitlements among themselves beyond the 130,000 acre feet proposed, with DWR expeditiously executing any necessary documents and approving all such contracts. Other provisions of the Monterey Agreement include a revision of water allocations during shortages, eliminating the "agriculture first" provision, and retirement of 45,000 other acre-feet of entitlement by agricultural contractors.

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[4]An "acre-foot" is the amount of water that would cover one acre one foot deep.

The Monterey Agreement provides that individual SWP contracts could be amended to conform to it. Over the next two years, 27 of the 29 Water Contractors amended their SWP contracts to implement the principles of the Monterey Agreement (collectively, the "Monterey Amendments").

In 1995, a State Water Contractor, Central Coast Water Authority ("Central"), acted as lead agency and certified a program EIR analyzing the environmental impacts of the Monterey Agreement. This program EIR also addressed Paragraph 24 (Article 53 in the Monterey Amendments) water transfers, including the Kern water transfer. In late 1995, PCL filed a lawsuit in Sacramento Superior Court challenging the program EIR, Planning & Conservation League v. Department of Water Resources, ("PCL").

3. The Kern Water Transfer Agreement

Castaic is a State Water Contractor created by the California Legislature. Its mandate is to purchase and deliver sufficient supplies of water to serve the needs of the Santa Clarita Valley. *See* Swanson v. Marin Municipal Water District, (1976) 56 Cal.App.3d 512, 524 (water district has obligation to augment available water to meet increasing demands). Castaic diverts its SWP water from the West Branch of the California Aqueduct. Castaic is one of the Water Contractors entering into the Monterey Amendments (Amendment 17 to Castaic's SWP contract).

Kern County Water Agency ("KCWA") is a special district formed by the Legislature in 1961. Wheeler Ridge is a special district formed in 1959 to provide supplemental water to agricultural lands in Kern County and is located immediately north and east of Castaic. KCWA has contracts with Wheeler Ridge and other member agencies, for KCWA's SWP water.[5]

In March 1999, Castaic entered into an agreement to purchase from Wheeler Ridge, subject to KCWA's consent, 41,000 acre-feet per year of SWP water (the Kern water transfer). The price for the transfer was $47 million in debt instruments purchased by private investors. The purpose of the transfer is to permit Castaic to serve the water demands of existing users, as well as meet a portion of future water demand from anticipated growth within the Castaic service area. AR 16. The Kern water transfer is the largest transfer under Article 53 of the Monterey Amendments, and it counts towards the 130,000 acre-feet limit. In their transfer agreement, both sides warranted that there was no pending or threatened litigation other than PCL that could affect the 41,000 acre feet SWP entitlement. AR 2562-63.[6]

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[5]In 1998, another KCWA member, Belridge Water Storage District, certified an EIR on the environmental effects of transferring 130,000 acre-feet of SWP water to unidentified purchasers. This EIR was not challenged.

[6]Castaic has been planning since 1987 to increase the supply of water to Santa Clarita Valley. At that time, Los Angeles County General Plan forecast substantial population growth in the Santa Clarita Valley. In 1988, Castaic adopted a Capital Program and Water Plan (the "Capital Program") to address the purchases, construction, and improvements necessary to meet the anticipated water demand. The Capital Program called for the purchase of SWP water from districts willing to sell, including Wheeler Ridge, and the storage of water for later use during drought conditions at Semitropic Groundwater Storage District's ("Semitropic") basins. AR

DWR's approval of the Kern water transfer was required under Articles, 15, 41, and 56 of the SWP contracts. On March 31, 1999, DWR approved the transfer by entering into Amendment 18 of Castaic's SWP contract. Amendment 18 adds Article 53(j), which provides that "in accordance with Article 53(a)" of the Monterey Amendments, Castaic's Table A annual entitlements were increased by 41,000 acre-feet. AR 2545-47. DWR and KCWA, which consented to the transfer of its water, also entered into Amendment 28 to KCWA's SWP contract, an amendment which reduced KCWA's entitlement by 41,000 acre-feet. Based on these amendments, DWR has allocated SWP water to Castaic since 1999 based on a total Table A amount of 95,000 acre-feet -- Castaic's original Table A 54,000 acre-feet plus the 41,000 acre-feet from the Kern water transfer.

On March 29, 1999, Castaic, acting as lead agency, certified an EIR for the Kern water transfer. This 1999 EIR tiered off the 1995 Monterey Amendment program EIR, the Belridge EIR, and Castaic's own 1988 EIR for the Capital Program. In April 1999, Castaic's EIR for the Kern water transfer was challenged in Friends of the Santa Clara River v. Cataic Lake Water Agency, BS056954 ("Friends"). On August 16, 2000, the trial court entered judgment, denying the petition in its entirety.

4. The PCL and Friends Decisions

In September 2000, the Third Appellate District in PCL found that DWR was the only entity with the "statewide perspective and expertise" to serve as lead agency for the Monterey Agreement program EIR. Because "the allocation of water to one part of the state has potential implications for distribution throughout the system," the court recognized DWR's principal responsibility to "facilitate the water transfers allowed under the Monterey Agreement." 83 Cal.App.4th at 907. The use of Central as lead agency for the Monterey Agreement program EIR was inappropriate. Id. at 907.

This lead agency error was not harmless because the EIR also was defective. Perhaps as a consequence of Central's lack of statewide expertise, the EIR failed to properly discuss a "no project" alternative, including the environmental impact of implementing the pre-Monterey Agreement Article 18(b)'s permanent water shortage provision. Id. at 918. This was particularly important because local land use planners rely on the "paper water" entitlements in Table A

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Pursuant to the Capital Program, Castaic permanently acquired 12,700 acre-feet of SWP Table A water in 1991 from Devil's Den Water District, a SWP contractor immediately north of Castaic. This transfer was subject to DWR approval, which per Article 41 of the SWP contracts could not be unreasonably withheld. DWR approved the transfer, noting that the transferred water remained labeled for "agricultural purposes" for purposes of delivery shortages.

Also pursuant to the Capital Program, in 2002 Castaic entered into a groundwater storage or "banking" agreement with Semitropic. This action was challenged under CEQA on the basis that the Monterey Agreement required DWR to conduct an environmental review. The challenge was rejected by the appellate court, which held that DWR had no jurisdiction over Castaic's management of water; DWR merely schedules SWP water delivery to Castaic. Cal. Water Network v. Castaic Lake Water Agency, (2006) 206 Cal.App. Unpub. LEXIS 2452, 9.

rather than real, deliverable water. The question was what impacts were reasonably foreseeable from eliminating Article 18(b)'s solution to permanent water shortage? Id. at 914-15. The PCL court held that the EIR, which lacked simulation models and projections relating to land use planning and demand for water, did not adequately address this issue. Id. at 919. It directed the Sacramento Superior Court to retain jurisdiction over the action until a new EIR was prepared and certified.

Based on the Third District's PCL decision, on January 10, 2002, the Second Appellate District reversed the judgment in Friends and directed the trial court to issue a writ of mandate compelling Castaic to set aside certification of its EIR. Friends, (2002) 95 Cal.App.4th 1373. The reversal was based solely on the fact that Castaic's EIR had been tiered upon the now inadequate Monterey Agreement program EIR. The Second District rejected all of the other challenges to Castaic's EIR, finding them to be without merit. The appellate court noted that Castaic may be able to cure the defect by waiting for DWR to comply with the Third District's directive in PCL by preparing a new program EIR. Castaic could issue a subsequent EIR, a supplement to EIR, or addendum to EIR, tiering upon the new Monterey Agreement EIR.

The Friends appellate decision concluded as follows: "The judgment is reversed. The trial court shall issue a writ of mandate vacating the certification of the EIR, shall retain jurisdiction until Respondent certifies an EIR complying with CEQA consistent with the views expressed in this opinion, and shall consider such orders it deems appropriate under [Pub. Resources Code] section 21168.9."

On October 25, 2002, after remand from the court of appeal, the Friends trial court issued a Peremptory Writ of Mandate and Judgment on Remand, retaining jurisdiction until Castaic certifies an EIR that complies with CEQA and is consistent with the views expressed by the Second District. The trial court did not direct Castaic to set aside its approval of the Kern water transfer and denied the petitioner's request to enjoin Castaic from using any of the 41,000 acre feet of additional water allotted to it by the Kern water transfer. The trial court did state that the injunction request could be renewed upon a showing that the water was actually used for an improper purpose (irreversible new development).

5. Monterey Plus

On June 6, 2003, the Sacramento Superior Court approved a settlement between the parties in PCL. That settlement, known as "Monterey Plus," provides that the Monterey Agreement can proceed on an interim basis. In exchange, DWR agreed, among other things,[7] to prepare a new program EIR for implementation of the Monterey Agreement. This new EIR would include (1) information on water deliveries during the drought and recent historical period, (2) an analysis of a no project alternative, including the environmental impact of Article 18's water shortage provisions, (3) analysis of environmental impacts from changes in SWP operations and deliveries resulting from implementation of the Monterey Agreement, (4) analysis

[7]Some of the other provisions include biennial reports on project reliability, land use restrictions on the Kern Water Bank, new guidelines for permanent water transfers, new procedures for public involvement in contract changes, and funding for watershed restoration and new technical studies. AR 45048-49.

of environmental impacts of seven already completed water transfers from KWCA and member units totaling 70,000 acre-feet (Attachment E), which the parties recognized were "final," and of the Kern water transfer, which the parties acknowledged was being challenged in the pending Friends litigation in Los Angeles Superior Court, and (5) analysis of the environmental impacts from implementation of Monterey Plus. AR 48557-59. With respect to the Kern water transfer, the Monterey Plus parties agreed that "jurisdiction with respect to [Friends] should remain in that court and that nothing in this Settlement Agreement is intended to predispose the remedies or other actions that may occur in that pending litigation." The Monterey Plus did not require DWR to re-approve or disapprove any transfer.

6. The Friends II Decision

The Second District upheld the Friends trial court's decision not to grant injunctive relief for the Kern water transfer on December 1, 2003, in unpublished case no. B164027 ("Friends II"). PCL had filed an *amicus* brief supporting the petitioner in Friends II, pointing out that the Monterey Plus settlement now existed and arguing that the Friends decision required the trial court to rely on the status of PCL litigation, including the new Monterey Agreement program EIR DWR was to prepare, in deciding injunctive relief. The Friends II appellate court stated that PCL was wrong; it merely had suggested, not required, that the trial court could determine and rely on the status of the PCL case in deciding injunctive relief.

7. The 2004 EIR

After Friends, Castaic decided to prepare a revised EIR prior to DWR's preparation of a Monterey Amendment EIR. Castaic was driven by a concern that the Friends petitioner and others would use the decertification of its 1999 EIR to cloud its right to the transferred water, as well as Castaic's duty to its customers to complete the environmental documentation and finalize the Kern water transfer.

In June 2004, Castaic prepared and circulated a draft EIR that tiered only on Castaic's 1988 Capital Program EIR. Castaic concluded that it was the lead agency because it has the principal responsiblility for carrying out and implementing the project. Because the transfer is between neighboring SWP contractors, involving the withdrawal of water from a single branch of the Aqueduct, Castaic concluded that the transfer has no significant impacts on SWP operations or the water diverted from the Delta. *See* AR 13-14.

PCL served comments to the draft EIR on August 16, 2004. These comments criticized the use of Castaic as lead agency, arguing that Castaic's review was "premature" and "likely to operate at cross-purposes with DWR's statewide review." AR 1959. PCL contended that DWR, not Castaic, was required to be the lead agency under the PCL decision. Only DWR's expertise could analyze the changes in the amount of supplies available, the location and timing of deliveries, and changes in the SWP's conveyance and storage facilities for all of the proposed transfers, including the Kern water transfer. AR 1962. CWIN also timely expressed concern about Castaic's lack of authority to act as lead agency, and the potential for conflict with DWR's role. AR 578-580.

DWR, acting as a responsible agency under CEQA, commented on the draft EIR. It stated that the "document adequately and thoroughly discusses the proposed project and its

impacts. The [draft]EIR discusses the effects of the project on the environment and State Water Project (SW) and uses baseline conditions consistent with those being considered for inclusion in [DWR's EIR]. The draft also "adequately discusses the reliability of the SWP, pre- and post-Monterey Amendment conditions, future conditions, and SWP operations." DWR acknowledged that Castaic's EIR uses a model, DWRSIM, to assess the potential impact associated with the Kern transfer and that DWR's EIR will use a newer model, CALSIM II. DWR indicated that the use of a different computer model may cause slight changes in results, which may lead DWR to different conclusions than those made by Castaic in its EIR. Despite this fact, DWR concluded that the draft EIR adequately discusses the reliability of SWP, pre- and post- Monterey Amendments conditions, future conditions, and SWP operations. AR 564-65.

Castaic rejected Petitioners' concerns, and relied on DWR's comments to refute objections that its draft EIR will be inconsistent with the yet to be prepared DWR program EIR. AR 961-4. Castaic adopted findings, a mitigation monitoring program and statement of overriding considerations and certified a final EIR (the 2004 EIR).[8] The 2004 EIR describes Castaic's water program for the future needs of Santa Clarita Valley, the procedural history of the project (including the 1999 EIR), and the fact that the Kern water transfer has been implemented and ongoing since 1999. It uses two separate baselines for the project setting and evaluates environmental impacts of the Kern water transfer on the SWP, Castaic, and Wheeler Ridge. In discussing these impacts, the 2004 EIR considers three SWP scenarios: (a) with the Monterey Agreement, (b) without the Monterey Agreement, and (c) without the Monterey Agreement and with Article 18(b) permanent shortages. The EIR uses the DWRSIM model and concludes no significant direct environmental impacts will occur as a result of the project. There would, however, be indirect growth impacts as a result of water provided by the project.

8. The Petitioners Take Over from the Friends Petitioner

On January 24, 2005, CWIN and PCL filed separate petitions for writ of mandate in Ventura County concerning Castaic's compliance with CEQA in the 2004 EIR, and other issues.

On February 1, 2005, the Friends petitioner dismissed the action with prejudice. On February 7, 2005, the trial court in Friends held a hearing on Castaic's *ex parte* application to vacate the dismissal with prejudice and to discharge the writ of mandate. Castaic argued that, by dismissing, the petitioner was attempting to get the clerk, through ministerial act, to divest the court of its continuing jurisdiction over the 2004 EIR prepared in response to the court's peremptory writ of mandate. Instead, the Friends petitioner was passing the baton to CWIN and PCL for a challenge to the 2004 EIR. The trial court declined to set aside the dismissal, stating that whether the Ventura proceedings were a continuation of the Friends lawsuit was an issue of fact for the Ventura (now this) court.

On March 5, 2005, Castaic petitioned the Second Appellate District for a writ of mandate with respect to the trial court's refusal to vacate the dismissal, arguing that the trial court violated Pub. Resources Code section 21168.9 (stating that the trial court shall maintain jurisdiction over the agency's proceedings until the court has determined that the agency has complied with

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[8]On December 30, 2004, Castaic filed its return to the peremptory writ of mandate in Friends.

CEQA) because it had not yet determined that the 2004 EIR complied with CEQA Yet, under CEQA, a trial court that orders preparation of a new EIR must retain jurisdiction for a final determination of the EIR's validity.

On April 14, 2005, the Second Appellate District denied Castaic's petition for "failure to demonstrate that the 'retain jurisdiction' provision of Public Resources Code section 21168.9, subdivision (b), abrogates the entitlement to voluntary dismissal conferred by Code of Civil Procedure section 581, subdivision (b)(1)."[9]

D. CEQA

1. Standard of Review

A party may seek to set aside an agency decision for failure to comply with CEQA by petitioning for either a writ of administrative mandamus (CCP §1094.5) or of traditional mandamus. CCP §1085. A petition for administrative mandamus is appropriate when the party seeks review of a "determination, finding, or decision of a public agency, made as a result of a proceeding in which by law a hearing is required to be given, evidence is required to be taken and discretion in the determination of facts is vested in a public agency, on the grounds of noncompliance with [CEQA]." Pub. Res. Code §21168. This is generally referred to as an "adjudicatory" or "quasi-judicial" decision. Western States Petroleum Assn. v. Superior Court, ("Western States") (1995) 9 Cal.4th 559, 566-67. A petition for traditional mandamus is appropriate in all other actions "to attack, review, set aside, void or annul a determination, finding, or decision of a public agency on the grounds of noncompliance with [CEQA]." Where an agency is exercising a quasi-legislative function, such as by adopting a rule or entering into a contract, it is properly viewed as a petition for traditional mandamus. Id. at 567; Pub. Res. Code §21168.5.

At issue here is a CEQA challenge to a quasi-legislative action recorded by Castaic in a December 23, 2004 Notice of Determination approving the project, certifying the 2004 EIR, and adopting findings, a mitigation monitoring program, and a statement of overriding considerations. This procedural setting, where no administrative hearing was held or required, is governed by traditional mandamus. In determining whether to grant a petition for traditional mandamus in a CEQA case, the court may consider only whether there was a prejudicial abuse of discretion. Public entities abuse their discretion under CEQA if the agency has not proceeded in a manner required by law or if its determination or decision is not supported by substantial evidence. Western States, 9 Cal.4th at 568; Pub. Res. Code §21168.5.[10]

This requires "scrutiny of the alleged defect" depending on whether the claim is predominately "improper procedure or dispute over the facts." Vineyard Area Citizens for

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[9]The Second District later dismissed Castaic's appeal from the Friends dismissal, finding that the voluntary dismissal was not appealable. *See* H.D. Arnaiz, Ltd. v. County of San Joaquin, (2002) 96 Cal.App.4th 1357, 1364-67.

[10]The standard of review for traditional mandamus in a non-CEQA case is governed by an "arbitrary and capricious" standard, not a "prejudicial abuse of discretion" standard. The CEQA standard is the more stringent inquiry. Western States, 9 Cal.4th at 574.

Responsible Growth v. City of Rancho Cordova, ("Vineyard") (2007) 40 Cal.4th 412, 435. Whether Castaic is the proper lead agency is an procedural issue of law for the court. PCL, 83 Cal.App.4th at 905-06. Similarly, as Petitioners argue (Pet. Supp. Resp. Br. at 5), whether Castaic's 2004 EIR failed to provide certain required information and, as a result, presents uncertainties about the finality of the Kern water transfer is failing "to proceed in a manner required by CEQA" and an issue of law. Vineyard, 40 Cal.4th at 435. These issues require "a critical consideration, in a factual context, of legal principles and their underlying values." Harustak v. Wilkins, (2000) 84 Cal.App.4th 208, 212.

On the other hand, whether Castaic abused its discretion in the 2004 EIR's findings must be answered with reference to the evidence in the administrative record. This standard requires deference to the agency's factual and environmental conclusions based on conflicting evidence, but not to issues of law. Laurel Heights Improvement Assn. v. Regents of University of California, ("Laurel Heights") (1988) 47 Cal.3d 376, 393, 409. Argument, speculation, and unsubstantiated opinion or narrative will not suffice.[11] Guidelines, 15384(a), (b). The findings must be supported by "substantial evidence," defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. CEQA Guidelines §15384(a). The question whether substantial evidence exists is a question of law. *See* California School Employees Association v. DMV, (1988) 203 Cal.App.3d 634, 644.

2. CEQA

The purpose of CEQA (Pub. Res. Code §21000 *et seq.*) is to maintain a quality environment for the people of California both now and in the future. Pub. Res. Code §21000(a). "[T]he overriding purpose of CEQA is to ensure that agencies regulating activities that may affect the quality of the environment give primary consideration to preventing environmental damage." Save Our Peninsula Committee v. Montery County Board of Supervisors, (2001) 87 Cal.App.4th 99, 117. CEQA must be interpreted "so as to afford the fullest, broadest protection to the environment within reasonable scope of the statutory language." Friends of Mammoth v. Board of Supervisors, (1972) 8 Cal.3d 247, 259. Public agencies must regulate both public and private projects so that "major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian." Pub. Res. Code §21000(g).

The Legislature chose to accomplish its environmental goals through public environmental review processes designed to assist agencies in identifying and disclosing both environmental effects and feasible alternatives and mitigations. Pub. Res. Code §21002.

Under CEQA, a "project" is defined as any activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment (1) undertaken directly by any public agency, (2) supported through contracts, grants, subsidies, loans or other public assistance, or (3) involving the issuance of a lease, permit,

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[11]As an aid to carrying out the statute, the State Resources Agency has issued regulations called "Guidelines for the California Environmental Quality Act ("Guidelines"), contained in Code of Regulations, Title 14, Division 6, Chapter 3, beginning at section 15000.

license, certificate, or other entitlement for use by a public agency. Pub. Res. Code §21065. The word "may" in this context means a reasonable possibility. Citizen Action to Serve All Students v. Thornley, (1990) 222 Cal.App.3d 748, 753. "Environment" means the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance. Guidelines, §21060.5.

The "project" is the whole of the action, not simply its constituent parts, which has the potential for resulting in either direct or reasonably foreseeable indirect physical change in the environment. Guidelines §15378. An indirect physical change must be considered if that change is a reasonably foreseeable impact which may be caused by the project. On the other hand, a change that is "speculative or unlikely to occur is not reasonably foreseeable." Guidelines §15064(d)(3). The term "project" may include several discretionary approvals by government agencies; it does not mean each separate government approval. Guidelines §15378(c).

The EIR is the "heart" of CEQA, providing agencies with in-depth review of projects with potentially significant environmental effects. Laurel Heights, 6 Cal.4th at 1123. An EIR describes the project and its environmental setting, identifies the potential environmental impacts of the project, and identifies and analyzes mitigation measures and alternatives that may reduce significant environmental impacts. Id. Using the EIR's objective analysis, agencies "shall mitigate or avoid the significant effects on the environment... whenever it is feasible to do so. Pub. Res. Code §21002.1. The EIR serves to "demonstrate to an apprehensive citizenry that the agency has in fact analyzed and considered the ecological implications of its actions." No Oil, Inc. v. City of Los Angeles, (1974) 13 Cal.3d 68, 86. It is not required to be perfect, merely that it be a good faith effort at full disclosure. Kings County Farm Bureau v. City of hanford, (1990) 221 Cal.App.3d 692, 711-12. A reviewing court passes only on its sufficiency as an informational document and not the correctness of its environmental conclusions. Laurel Heights, 47 Cal.3d at 392. An EIR will be upheld if it suffices as an informational document; mandate will issue only if it fails to include relevant information which precludes informed decision-making and informed public participation.

"Choosing the precise time for CEQA compliance involves a balancing of factors. EIRs... should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment." Guidelines, §15004(b). As a general rule, public agencies shall not undertake actions concerning a proposed project that would have a significant adverse effect or limit the choice of alternatives or mitigation measures before completion of CEQA compliance. Guidelines, §15004(b)(2). "[I]n order to achieve the salutary objectives of CEQA the determination of the earliest feasible time to [prepare the CEQA document] is to be made initially by the agency itself, which decision must be respected in the absence of manifest abuse." Mount Sutro Defense Committee v. Regents of University of California, (1978) 77 Cal.App.3d 20, 36, 40.

E. Analysis

CWIN and PCL argue that DWR is required to be the lead agency for the Monterey Amendments project EIR, which will examine all water transfers on a program level. The Kern

water transfer is part of the Monterey Amendments project. Therefore, DWR is the correct lead agency to conduct the environmental review of the Kern water transfer. According to Petitioners, while Castaic may not serve as the lead agency for "first-level" environmental review of the water transfer, it may serve as lead agency for a project level EIR for the Kern water transfer.

1. Validity of the Transfer

At the outset, the court must make clear an issue greatly discussed at hearing. Petitioners contend, and Castaic and Wheeler Ridge strongly dispute, that DWR may "invalidate" the Kern water transfer when it performs the program EIR.

Under contract and validation law, the Kern water transfer contract, entered into in 1999, is valid, has been approved by DWR, and Castaic has paid Wheeler Ridge for it. Neither the parties nor DWR can terminate the Kern transfer contract. Nothing in CEQA permits a public agency to void a contract.

In Kenneth Mebane Rranches v. Superior Court, (1992) 10 Cal.App.4th 276, a flood control district sought to condemn land outside its territory in order to mitigate the environmental impact of a project within its boundaries. The appellate court held that CEQA only requires mitigation of environmental impacts where it is feasible to do so. Where mitigation is infeasible, an agency can always approve a project notwithstanding environmental impacts if it issues a statement of overriding interests. But it cannot take actions that are not legal, and hence infeasible. 10 Cal.App. at 291-92.

Thus, in evaluating the environmental effects of the Monterey Agreement, DWR may impose mitigations that are legal. But it cannot invalidate the Kern transfer. The imposition of illegal mitigations would be infeasible. *See also* Pub. Res. Code §21004 (in mitigating significant environmental impact, agency may only employ powers provided by law).[12]

This does not mean that DWR's Monterey Amendments EIR cannot affect the Kern water transfer. DWR's EIR will consider the environmental impacts of the Kern water transfer in conjunction with the Attachment E transfers which the parties in Monterey Plus agreed were completed and final. DWR conceivably could conclude that these transfers have significant environmental impacts. As a consequence, DWR might have to impose feasible mitigation measures, adopt alternatives, or make a finding of infeasibility and adopt a statement of overriding considerations.[13] If mitigations/alternatives are adopted, they could significantly impact Castaic and Wheeler Ridge. As DWR states, "the contract amendments that effectuated the transfers under the Monterey Amendment[s] do not preclude DWR in its choice of

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[12]The parties disagree on whether the Monterey Amendments are valid and final. That is, they disagree on whether the amendments can be challenged in a reverse validation action separate and apart from CEQA. Resolution of this issue is unnecessary to the court's decision.

[13]At hearing, Petitioners' counsel stated that the parties to Monterey Agreement entered into a joint statement of the possible impacts from the Amendments, citing AR 48628-29. The joint statement at those pages of the record does not discuss possible mitigations; it merely summarizes the terms of Monterey Plus.

alternatives in the Monterey Amendment[s] EIR or mitigation measures that may need to be imposed to reduce significant impacts to less than significant." DWR Br. at 20. DWR gives an example of reducing the amount of SWP water to protect water quality standards for fish in the Delta. Id. at 20. These mitigations could undermine the Kern water transfer.[14] But DWR will not be considering whether the Kern water transfer is valid; it simply does not have the authority to void that transfer. *See* Kenneth Mebane Ranches v. Superior Court, (1994) 10 Cal.App.4th 276, 292.

2. Lead Agency Law

The lead agency under CEQA is the agency that carries out a project or has primary authority for approving a project. Pub. Res. Code 121067; Guidelines §15051; *see* PCL, 83 Cal.App.4th at 904 (DWR, not Central (a State Water Contractor), had principal responsibility for carrying out the Monterey Agreement and should have been lead agency for program EIR). The role and responsibility of the lead agency is "fundamental to the CEQA process as a whole." Guidelines §15050. The identification of the proper lead agency plays a "crucial role" in the division of responsibilities among public agencies reviewing a project. PCL, 83 Cal.App.4th at 903. When determining the appropriate lead agency, the courts look to determine which agency has principal responsibility for the core project activity. Friends of Cuyamaca Valley v. Lake Cuyamaca, (1994) 28 Cal.App.4th 419, 427. The lead agency responsibility is placed upon the agency with power to approve or disapprove the project. Lexington Hills v. State of California, (1988) 200 Cal.App.3d 415, 433. Though one agency has substantial responsibility for a project, it cannot act as lead agency if another agency bears final responsibility. *See* Fullerton Joint Union High School District v. Board of Education, (1982) 32 Cal.3d 779, 795, n.15 (State Board of Education, not county, had final responsibility for school district plan). Where the project is local, such as land use decisions, the agency that has general governmental power over a project is almost always the lead agency. Where two or more agencies are involved in a project, the agency that will carry out the project shall be the lead agency. Guidelines §15051(a).

3. The Impact of the PCL Decision

Petitioners contend that the PCL decision left no doubt that DWR is the appropriate lead agency for a program-level environmental review of the water transfers in the Monterey Agreement, contrasting DWR's statewide expertise with CCWA's "provincial experience." The Monterey Amendments restructure water distribution throughout the state, and the "allocation of water to one part of the state has potential implications for distribution throughout the system." Only DWR has principal responsibility for implementation of the Monterey Amendments. Op. Br. at 11-12; *see* PCL, 83 Cal.App.4th at 904, 908. Since the Kern water transfer is part of the Monterey Amendments, DWR must perform any EIR concerning the Kern water transfer.

Petitioners' argument is a *non-sequitur*. Nothing in PCL requires DWR to perform the environmental review for the Kern water transfer. Certainly, the PCL decision requires that DWR prepare the program EIR for the Monterey Amendments, now Monterey Plus. The

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[14]The close cooperation between DWR and Castaic on the 2004 EIR reduces, but does not eliminate, the prospect that DWR will impose alternatives or mitigations.

appellate court's reason for committing this task to DWR is that CEQA requires the lead agency to be the agency with principal responsibility for the project, the project is the environmental review of the Monterey Agreement, and DWR, not CCWA, has principal responsibility for implementing the Monterey Agreement. The decision pointed out that DWR manages the SWP, and has the statewide expertise and perspective to conduct the environmental review of the Monterey Agreement, which statewide project. While CCWA may have had a substantial stake in seeing the Monterey Agreement implemented, it did not have principal responsibility for it. DWR did, and DWR is required to perform the EIR for the Monterey Agreement. 83 Cal.App.4th at 906.

However, the PCL decision does not commit DWR to conduct the EIR for the Kern water transfer, or for any site specific project conducted pursuant to the Monterey Amendments. The PCL decision plainly requires DWR to prepare the program EIR for the Monterey Amendments, and its permanent transfer of 130,000 acre feet of SWP water. But it does not even mention the Kern water transfer, which is a local water transfer of Wheeler Ridge water to a point 60 miles further south in Santa Clarita Valley. The local nature of the project makes Castaic the logical choice to act as lead agency of this transfer, and nothing in PCL requires Castaic to wait for DWR's program EIR. The Kern water transfer is simply a different project from the Monterey Amendments.

Petitioners' concession that at some point Castaic can and should act as the lead agency for the Kern water transfer EIR undermines their argument that PCL committed this task to DWR. The concession shows that Petitioners really are concerned about the timing of this project specific EIR, and not whether it was committed to DWR in the PCL decision. Petitioners contend that Castaic must wait for DWR's Monterey Amendments program EIR and tier off of it for the Kern water transfer EIR. This argument is, as Castaic describes it, that Castaic "jumped the gun" by preparing the 2004 EIR. But the argument implicitly concedes that PCL did not commit the transfer EIR to DWR.

4. The Agency with Principal Responsibility

Even if PCL did not commit environmental review of the Kern water transfer to DWR, Petitioners argue that the Kern water transfer is an integral part of the Monterey Amendments project. This is shown by Monterey Plus, which excludes the Kern water transfer from the list of transfers designated as "final" and recognizes DWR's responsibility to assess its environmental impacts as part of the programmatic review. The Kern water transfer contract itself expressly relies on the Monterey Amendments, using its provisions as authority to accomplish the Kern water transfer. Even Wheeler Ridge's amendment to its SWP contract identifies the outcome of PCL as a factor that could impact the Kern water transfer's effectiveness. All of these facts, Petitioners argue, mean that the transfer is part of the Monterey Amendments environmental review.

Petitioners further argue that the nature of a program EIR supports their position. This purpose "is to document a series of actions so related they can be characterized as one project." Friends, 95 Cal.App.4th at 1377. The Monterey Amendments, including its transfer provisions, qualify as a "series of actions so related that they can be characterized as one project." An integrated review of the entire program may provide occasion for a more exhaustive

consideration of effects and alternatives than would be practical in an EIR on an individual action, ensure consideration of cumulative actions that might be slighted on a case-by-case analysis, avoid duplicative reconsideration of basic policy considerations, and allow the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time when the agency has greater flexibility to deal with basis problems or cumulative impacts. Id. at 1377. These factors are all borne out by the 2004 EIR, which presents a series of issues (the amount of supplies available to several water agencies, the location and timing of SWP deliveries, and use of SWP conveyance and storage facilities) on which DWR has superior expertise and greater accountability than Castaic. DWR may not delegate to Castaic its responsibility to prepare the environmental review for the Kern water transfer.

Under lead agency law, Castaic may act as lead agency and prepare an EIR for the Kern water transfer. The Kern water transfer is a project separate in time from the Monterey Amendments, now Monterey Plus. The core of the project is a local transfer of water between Castaic and Wheeler Ridge. Castiac alone had the responsibility to determine the water needs of its service area and to obtain the necessary water for those needs. Castaic negotiated and entered into the transfer contract with Wheeler Ridge. Castaic performed the contract by obtaining private investors who paid $47 million to Wheeler Ridge's water, and by taking delivery from DWR. The transfer is valid and cannot be challenged. Thus, Castaic has the general governmental power over the transfer, and is presumptively the lead agency for its own project. Bakman v. Dept. of Transportation, (1979) 99 Cal.App.3d 665, 678-79. Indeed, the environmental review of water transfers is generally performed by a local, not state, agency. County of Amador v. El Dorado County Water Agency, (1999) 76 Cal.App.4th 931 (local agency's analysis of water transfer project); Save Our Carmel River v. Monterey Peninsula Water Management District, (2006) 141 Cal.App.4th 677, 701 (city was lead agency as recipient of water transfer); Friends of the Eel River v. Sonoma County Water Agency, (2003) 108 Cal.Appp.4th 859 (local agency's EIR for plan to increase diversions of water from river); Sierra Club v. West Side Irrigation District, (2005) 128 Cal.App.4th 690 (local agency's environmental review of two projects to transfer water rights).[15]

It is true that DWR has an overall interest in promoting effective water management on a statewide basis. Pursuant to this interest, DWR had the right to approve the Kern water transfer, and it did so. This does not equate to principal responsibility, however. DWR is required by statute to "facilitate" the voluntary transfer of water between local agencies. Water Code §109.

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[15]The Friends court implicitly decided that Castaic may act as lead agency for the Kern water transfer. The Friends court acknowledged that it was required to address all deficiencies in the EIR unless it made a finding of improper lead agency. Pub. Res. Code §21005(c). If Castaic was the improper lead agency for the 1999 EIR, the appellate court was obligated to say so. The Friends court concluded that the 1999 EIR's only deficiency was that it tiered from the defective Monterey Agreement program EIR. Thus, the decision necessarily implied that Castaic was the proper lead agency for the 1999 EIR.

Of course, this case concerns the 2004 EIR, not the 1999 EIR, and the court previously held that Petitioners were not bound by the Friends court's implied determination. But the project is the same, and the implicit appellate determination is entitled to weight.

Per the SWP contracts, DWR's approval of the Kern water transfer could not be unreasonably withheld. Thus, DWR's involvement in the transfer is to facilitate the transfer by approving it and providing the SWP schedule delivery. Moreover, the SWP is intended as a supplement, not the exclusive supply, of water. Water supply decisions must be made by local Water Contractors, who obtain water both from SWP and other sources.[16]

Given that the decision to enter into the Kern water transfer belonged solely to Castaic and Wheeler-Ridge, and that DWR's approval is necessary merely to facilitate the transfer, Casataic had principal responsibility for the transfer.[17]

5. Project Definition

Petitioners contend for the first time in their Supplemental Vineyard Reply and at oral argument that the correct project definition is not the Kern water transfer, but is really the Monterey Amendments, citing the court's earlier ruling on Castaic's motion for legal determination that the key issue is whether the Amendments are a "series of actions (including the Kern water transfer) so related that they should be characterized as a single project." Pet. Supp. Reply at 5.

The correct definition of the project -- whether it is the Monterey Amendments or the Kern water transfer -- is a different issue than whether Castaic can act as lead agency for the project. Although the court did allude to project definition in ruling on the earlier motion, Petitioners never raised this issue in their opening brief or reply. Instead, they raise it for the first time in a reply brief on the application of Vineyard to this case. On appeal, an issue raised without analysis or authority lacks foundation and need not be addressed. City of Arcadia v. State Water Resources Control Board, ("Arcadia") (2006) 135 Cal.App.4th 1392, 1429, 1431. Similarly, an issue raised for the first time in supplemental reply deprives the opposing party of an opportunity to analyzing the issue and defend their position. Petitioners have waived the correct project definition as an issue by not raising it earlier.

Assuming *arguendo* that the issue has not been waived, a project under CEQA includes an activity directly undertaken by a public agency which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. Pub. Res. Code §21065(a). The "project" must be broadly defined, so as to ensure against avoiding environmental review by "chopping a larger project into little ones" or "piecemealing." Bozung v. Local Agency Formation Commission, (1975) 13 Cal.3d 263, 283-84. The project includes "the whole of an action" that has a potential for resulting in a direct or indirect physical change in the environment. Guidelines §15378. An accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a

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[16]As Wheeler Ridge points out, DWR was not the lead agency for the 1991 Devils Den transfer or any of the Attachment E transfers listed in the Monterey Agreement.

[17]Given that DWR's approval may not be unreasonably withheld, cases holding that a state agency should prepare the EIR where it has final authority to approve a project are simply inapposite. *See* Fullerton v. State Board of Education, (1982) 32 Cal.3d 779, 795, n.15 (State Board of Education had final authority to submit plan to voters for new unified school district).

proposed activity. Mcqueen v. Board of Directors, (1988) 202 cal.App.3d 1136, 1143. The agency must avoid "piecemealing" or splitting a project into two or more segments. Otherwise, the cumulative environmental impacts of each piece may not be fairly analyzed. Burbank-Glendale-Pasadena Airport Authority v Hensler, (1991) 233 Cal.App.3d 577, 592. On the other hand, CEQA was not intended to and cannot reasonably be construed to make a project of every activity of a public agency, regardless of the nature and objective of such activity...." Simi Valley Recreation & Park District v. Local Agency Formation Commission, (1975) 51 Cal.App.3d 648, 663.

In San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus, (1994) 27 Cal.App.4th 713, 731-32, the court held that the project description in an EIR was improperly restricted to a 633 single family residential units, a 40,500 square foot commercial center, and a 14 acre park, failing to include sewer expansion which the EIR acknowledged would be required as part of the development. Although a separate EIR was prepared for the sewer expansion, neither it nor the development project EIR referred to the growth-inducing effects of the two projects considered together. This failure to address cumulative impacts was a separate failure of the development EIR. 27 Cal.App.4h at 733. "[t]he danger of filing separate environmental documents for the same project is that considration of the cumulative impact on the environment of the two halves of the project may not occur. This danger was here realized." Id. at 734 (citation omitted). Because the EIR did not "adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project" informed decision-making was precluded, the EIR was inadequate. Id.

The lesson from San Joaquin and other project definition cases is that the project should be defined broadly to ensure a complete analysis of impacts resulting from future expansion or continuation of other phases of the project.

In this case, DWR is the lead agency for the Monterey Amendments program EIR. DWR's description of its project is to improve the management of SWP supplies and operations through the Monterey Amendments. Thus, the Monterey Amendments EIR is broad in scope. The EIR will look at changing the allocation of all SWP water supplies (including deletion of agriculture first shortage provisions), retiring 45,000 acre feet of agricultural water, and establishing more efficient use of SWP facilities. As part of the analysis, it will analyze the potential impacts from permanently transferring 130,000 acre feet of water from agricultural to urban contractors per the Monterey Agreement. This analysis will look at the individual transfers, including the Kern water transfer, as they fit the entire Monterey Amendments. But DWR does not intend to consider each transfer individually; it intends to evaluate the impact of all the Attachment E transfers and the Kern water transfer as a whole. DWR Br. at 17.

Castaic's 2004 EIR project description concerns the impacts of the Kern water transfer alone. Castaic's EIR does look at cumulative impacts of the project with other projects, including the Monterey Amendments, but does not purport to assess the environmental impacts of the Monterey Amendments independent of the Kern water transfer. AR 141-42.

Castaic relies on the independent utility test to argue that the Kern water transfer is a separate project the environmental impact of which may be separately analyzed from the Monterey Amendments. The "independent utility" test has been developed in NEPA cases to determine whether multiple actions are connected so as to require an agency to consider them in

a single environmental review. Wetlands Action Network v. United Sates Army Corps. Engineers, (9th Cir. 2000) 222 F.3d 1105, 1118.[18] Pursuant to the independent utility test, where each of two projects would have taken place with or without the other, each has "independent utility" and the two are not considered so connected that an agency must consider them in a single environmental review. Native Ecosystems Council v. Dombeck, (9th Cir. 2002) 304 F.3d 886, 894. *See also* DelMar Terrace Conservancy, Inc. v. City Council of the City of San Diego, (1992) 10 Cal.App.4th 712 (freeway segment was separate project serving a viable purpose even if long-term, multi-segment plan to expand freeway never occurred, and had independent utility under CEQA).

Castaic argues that it has contemplated the Kern water transfer since 1988, when it included a transfer with Kern in its 1988 Capital Program for the Santa Clarita Valley's future water needs. For economic reasons, Wheeler Ridge, too, sought to transfer its SWP water rights since approximately 1985. Castaic concludes that the Kern water transfer would have occurred with or without the Monterey Amendments. Articles 40 and 41 of the SWP contract permitted transfers between Water Contractors, subject to DWR approval. Article 53, added to the SWP contracts by the Monterey Amendments and concerning the transfer of 130,000 acre-feet, did not "enlarge, restrict, or otherwise impact" Castaic's right to acquire water from Wheeler Ridge under Articles 40 and 41. Instead, it was merely a blanket approval of certain contemplated transfers. Castaic Op. Br. at 21. The Kern water transfer was completed, paid for, and operating since 1999. Nothing about it is tied to the outcome of the Monterey Amendments. Thus, while the transfer is part of a larger scheme (the Monterey Amendments), it is a long-planned site specific project with independent utility from the Monterey Amendments.

The court cannot conclude that the Kern water transfer would have taken place without the Monterey Amendments. True, Castaic has wanted Wheeler Ridge's SWP allocation of water since the late 1980's, and Wheeler Ridge was willing to provide it. Yet, it did not happen until after the Monterey Amendments. The contract between Castaic and Wheeler Ridge states that the transfer was taking place "in accordance with" Article 53 of the Monterey Amendments, and those Amendments change the way SWP water is allocated in California. It does not say that the transfer is being made under Article 41. Petitioners contend, and the court agrees, that only through conjecture can one conclude that Castaic and Wheeler Ridge would have entered into the transfer without the Monterey Amendments, and with Article 18's agriculture first provisions in place.[19]

Though the court cannot conclude that the Kern water transfer would have occurred without the Monterey Amendments, it can conclude that the transfer will remain in effect even if the Monterey Amendments are not approved or otherwise are mitigated under CEQA. The court

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[18]Since CEQA was modeled on the federal NEPA statute, federal decisions on NEPA are persuasive authority on CEQA issues. No Oil, Inc. v. Los Angeles, (1974) 13 Cal.3d 68, 86.

[19]When Petitioners commented on the draft EIR that any pre-Monterey Amendments transfer would be subject to Article 18's agriculture first provisions, Castaic did not say that the Kern transfer would have occurred without the Monterey Amendments. It merely responded that the transfer "could occur" either pre- or post- Monterey Amendments. AR 993.

already has indicated that the Kern water transfer is final. The parties to the transfer stated at hearing that they have no intention of rescinding it even if the Monterey Amendments are mitigated and Article 18's agriculture first provisions are in effect. This position is supported by the fact that the 2004 EIR evaluates the water supply impacts of just such a pre-Monterey Amendment Article 18 scenario. AR 186. As such, it is compelling evidence that the transfer will stand.[20]

Plainly, then, the Kern water transfer is final and will remain in place whatever happens to the Monterey Amendments. As such, the transfer has "independent utility" for purposes of environmental review. It is not so connected to the larger Monterey Amendments that the two must must be considered in a single environmental review. *See* Native Ecosystems Council v. Dombeck, 304 F.3d at 894.

6. EIR Timing

Petitioners' real argument seems to be that, whenever a program EIR is anticipated, the agency preparing an EIR for a specific project must wait for the program EIR.

This is not the law. Nothing in CEQA requires Castaic to wait for DWR's program EIR. Indeed, as a general proposition, the environmental review process should be undertaken early enough in the planning process to impact planning decisions, with the timing committed to the agency's discretion. City of Vernon v. Board of Harbor, (1988) 63 Cal.App.4th 677, 690-91. The Kern water transfer occurred almost eight years ago. It has been paid for and operating for a number of years. Castaic tried to conduct a timely environmental review, but that EIR was set aside in Friends. It is not an abuse of discretion for Castaic to want to complete the environmental review and obtain finality for the transfer without waiting for DWR's program EIR of the Monterey Amendments, now Monterey Plus.

Nor does this decision frustrate the law concerning program EIRs and tiering. The purpose of a program EIR is to document a series of actions so related that they can be characterized as one project. Friends, 95 Cal.App.4th at 1377. If the program EIR is sufficiently comprehensive, the lead agency may dispense with further environmental review for later activities within the program that are adequately covered in the program EIR. Guidelines §15618(c). Thus, the program EIR may be used to focus or simplify later environmental review, or as the basis of a tiered EIR. "Tiering" means the coverage of general matters and environmental effects in an EIR prepared for a policy, plan, program or ordinance, followed by narrower or site-specific EIRs which incorporate by reference the discussion in the prior report. *See* Pub. Resources Code §§ 21068.5, 21093 and Guideline §§ 15152, 15385. Tiering is favored "whenever feasible, as determined by the lead agency." Pub. Resources Code §21093(b). It is required where a prior EIR has been prepared and certified for a program, plan, or ordinance. Pub. Resources Code §21094(a). However, tiering is only required "where a prior environmental report has been prepared and certified for a program." Friends, 95 Cal.App.4th at 1383. It is not required, and in fact is prohibited, where the program EIR has yet to be prepared. Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova, ("Vineyard") (2007) 40 Cal.4th 412

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[20]Petitioners think so too, for their principal argument is premised on the 2004 EIR's assumption that the transfer is final for all purposes.

EIR cannot tier off of *future* environmental document).

7. Vineyard

In Vineyard, the Supreme Court addressed a county prepared EIR for a large land use development project known as "Sunrise Douglas." The principal issue was the availability of long-term water supply for the project, and the environmental impacts and mitigation for such supply. The Supreme Court analyzed the various water supply cases and distilled several principles. First, the EIR for a land use project must present sufficient facts to evaluate the pros and cons of supplying the amount of water the project will need, and not simply ignore or assume a water supply solution will be found for a development project. Second, an adequate EIR for a large project must show water supply for the entire project. It is not enough to show available water for early stages. While the agency may tier and defer analysis of certain details of later phases of long-term or complex projects, deferring analysis through tiering is appropriate when the impacts or mitigation measures are not determined by the first-tier approval and are specific to later phases. Third, the future water supplies identified and analyzed must bear a likelihood of actually being available. Finally, where there is some uncertainty about availability, CEQA requires some discussion of possible replacement sources or alternatives, and their environmental consequences.

Of particular use herein, the Supreme Court discussed the EIR's reliance on an anticipated local Water Board's master plan update, which would discuss the availability of long-term water supplies to the area and their environmental impact. The Court held that the county's EIR cannot tier from a *future* environmental document. If the environmental analysis from the Water Board's anticipated master plan update was important to understanding the long-term water supply for Sunrise Douglas, it should have been performed in the Sunrise Douglas EIR even though that might result in subsequent duplication by the Water Board's master plan update. Or, the county could have deferred analysis and approval of Sunrise Douglas until the Water Board's master plan update, then tiered the Sunrise Douglas EIR from the programmatic analysis performed by the Water Board.

The Vineyard decision shows that the timing of Castaic's project specific EIR in relation to DWR's program EIR is up to Castaic. It may either wait for DWR's program EIR and tier off of it, or prepare its own EIR for the Kern water transfer first. If it chooses the latter, Castaic may not tier off an environmental document that does not yet exist. Instead, Castaic must analyze all necessary environmental impacts and mitigations. If analysis of some portion of the Monterey Amendments is important to understanding the environmental impacts of the Kern water transfer, then analysis of that issue must be included in Castaic's EIR. But if Castaic's EIR does so, it is irrelevant that the document duplicates some of what DWR would do, or even that it may be inconsistent with DWR's analysis.[21] As DWR contends, CEQA's goal is to ensure sufficient information; it contains no prohibition against too much information. DWR Br. at 21. The timing of Castaic's EIR for the Kern water transfer is up to Castaic and Castaic alone.

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[21]As previously stated, the prospect of inconsistencies between Castaic's EIR and DWR's program EIR is diminished by Castaic's use of DWR modeling, DWR's comments and input into the 2004 EIR, and the general cooperation and coordination between the two agencies.

F. Contents of the 2004 EIR

Apart from the proper lead agency, Petitioners argue that the 2004 EIR is inadequate. Initially, the court believed that Castaic could have real problems on this issue. It is one thing for Castaic to act as lead agency on a water transfer before the program EIR is prepared; Vineyard and other case law say that Castaic may do so. But the EIR must be adequate and complete. Vineyard teaches that if analysis of some portion of the Monterey Amendments is important to understanding the environmental impacts of the Kern water transfer, then that analysis must be included in Castaic's EIR. PCL held that the "no project" alternative was particularly important for the Monterey Amendments, and the public was entitled to know what would happen if the Amendments were not approved and Article 18 was implemented in the event of water shortage. Commentators particularly wanted to know whether imposition of Article 18 might eliminate the "paper water" entitlements in the water contracts, reduce land planning decisions based on that paper water, and ultimately reduce growth and construction of additional SWP facilities. PCL, 83 Cal.App.4th at 892-3.

The court wondered whether Castaic would have the expertise to perform any analysis of the Monterey Amendments or the "no project" alternative that would be required in the 2004 EIR. However, the parties' briefs, and oral argument at hearing, have demonstrated that, with one exception, the 2004 EIR's contents are sufficiently presented. Indeed, Petitioners barely criticize the 2004 EIR's adequacy, except as it impacts the lead agency issue.

1. "Deception"

Petitioners' principal argument about content is that the 2004 EIR is deceptive in failing to make clear that the Kern water transfer is not "final." They contend that the 2004 EIR's project definition treats the Kern water transfer as an immutable *fait accompli* which fails to disclose that the "final status" of the transfer depends on the DWR's forthcoming review. According to Petitioners, the EIR improperly relies on the interim availability of the water to predict that DWR will "leave it in place," a point which the court in California Oak Foundation v. City of Santa Clarita, ("California Oak") (2005) 133 Cal.App.4th 1219, 1238, n.16 had no trouble dispatching, and also improperly states that it would be unnecessary and speculative to consider what the DWR might do to change the transfer (*See* AR 994). Pet. Op. Br. at 19-20. This false assumption that the transfer is immutable may result in land use decision-makers approving projects based on water availability "worth little more than a wish and a prayer." Id. at 20-21.

The court has determined that the transfer is final as a matter of law. Therefore, the EIR is not wrong in saying so. What Petitioners really contend is that the Kern water transfer, though final, can be affected by the DWR's program EIR through mitigations and imposition of alternatives. Yet, the EIR proceeds as if the transfer cannot be altered. As counsel described the issue at hearing, the 2004 EIR "talks about risk, but never directly informed the public about the fact that the transfer may be unwound through the Monterey Amendment EIR process." Thus, the EIR refers to the transfer as of an "*existing* 41,000 " acre feet of SWP Table A water (AR 15, 35) and states that "no permits or *other approvals* would be required other than" certification of the

EIR. AR 16.[22]

The EIR is the method for disclosure of environmental issues. Rural landowners Assn. V City Council, 43 Cal.App.3d 1013, 1020. CEQA's purpose is to compel agencies to make decisions with environmental consequences in mind, but CEQA does not and cannot guarantee that these decisions will always favor environmental concerns. Laurel Heights, 47 Cal.3d at 393. The EIR should provide sufficient analysis to allow decision-makers to make intelligent judgments about environmental consequences. Guidelines §15151. The evaluation of environmental effects need not be exhaustive, but the EIR's sufficiency is reviewed in the light of what is reasonably foreseeable. Id. Perfection is not required, but adequacy, completeness, and a good faith effort at full disclosure is. Id.

In California Oak, the court addressed the proposed development of a 584 acre industrial park project in the Santa Clarita. The City's EIR relied on the Kern water transfer for water supply, and the appellate court held that it did not adequately address the uncertainty in that water delivery. 133 Cal.App.4th at 1236. The City's comments "did little more than dismiss project opponents' concerns about water supply" and the EIR failed to discuss the adequacy and availability of water supply absent the Kern water transfer. Appendix K to the EIR did acknowledge uncertainty in the Kern water transfer, but this was insufficient in part because inforamtion "scattered here and there in EIR appendices" or a report "buried in an appendix" is not a substitute for good faith reasoned analysis. Id. at 1239 (citation omitted). Moreover, Appendix K contained no facts and analysis about the likelihood of deficit or alternative sources of supply, and was misleading about the fact that Castaic had an SWP "entitlement" without explaining that the entitlement consisted in part of "paper water." Id. at 1239-40. Hence the EIR failed as an informational document on water supply issues.

Castaic contends, and the other Respondents agree, that the 2004 EIR fully addresses the uncertainty of what DWR will do. At hearing, they contended that Petitioners really are arguing that the 2004 EIR is misleading because it does not anticipate Petitioners' argument.[23]

The EIR explains that planning for water supply to meet demands requires consideration of reliability of SWP supplies, because historical and statistical analysis show that the full Table A amount will not be available in some years. AR 41. The EIR explains that Castaic's Table A amount is the maximum SWP amount, and the amount of SWP water actually available to it varies from year to year. Id. The EIR acknowledges that DWR's allocations are based on that year's hydrological conditions, the amount of water stored in the SWP system, and contractor requests for water. AR 16. The EIR discusses the Monterey Agreement (AR 46-47), PCL and Monterey Plus. AR 17-18, 47. The EIR cautions land use planners who might rely on the EIR to predict future water supplies, that while Castaic will implement all feasible measures to obtain water "past water deliveries are not a guarantee of future delivery rates." AR 13.

The EIR considers the environmental impact of the project based on water allocation

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[22]At trial, Petitioners' counsel made plain that this issue of deception is distinct from the reliability of water delivery by DWR.

[23]Respondents' contention sounds like an argument that Petitioners failed to exhaust their administrative remedies. However, no failure to exhaust claim was made in their briefs.

scenarios of pre-Monterey Amendments without Article 18 cutbacks, pre-Monterey Amendments with Article 18 cutbacks, and post-Monterey Amendments. AR 56. The EIR argues that the project could have been authorized under Article 41, but instead was implemented under Article 53 of the Monterey Agreement. It adds that DWR is preparing a new EIR for the Monterey Amendment.

Since the Monterey Amendments change the way in which SWP water is allocated among contractors, the 2004 EIR provides three separate analyses of the project's impacts to water supply. AR 186-89. The EIR goes to great lengths to discuss the uncertainties in the Article 18 allocations. AR 187-89. For each scenario, the EIR estimates reliability based on wet, dry, and extended dry year conditions. AR 183-91. The EIR addresses direct impacts to water supply and water quality under the three water allocation scenarios. AR 202-05. It discusses indirect impacts from the growth-inducing effect of the project, and mitigations of these impacts through implementation of existing agency policies. AR 207-224. It discusses the cumulative impact of the project and other projects inside and outside the project area. AR 278-89. Finally, it addresses alternatives to the project, including a no project alternative. AR 293-300.

The EIR clearly demonstrates the variability of SWP deliveries, and covers what could happen as a result of the Monterey Amendments EIR. But Petitioners are correct that the EIR has a hole in it. The EIR does not directly explain that the project may be impacted by the outcome of the Monterey Amendments EIR. Instead, the 2004 EIR assumes there are three possible water delivery scenarios without any discussion of why or how they would occur: "Since the Monterey Amendments change the way in which SWP water is allocated among contractors, the 2004 EIR provides three separate analyses of the project's impacts to water supply." The reader is left to interpret how these allocations could come about, and must conclude on his or her own that they are three possible outcomes of challenges to the Monterey Amendments. Nor does the EIR explain how such challenges could cause these allocations to occur.

An EIR is an informational document which is supposed to provide the reader with the "analytic route the...agency traveled from evidence to action."Citizens of Goleta Valley v. Board of Supervisors, ("Goleta") (1990) 52 Cal.3d 553, 568. This means that the EIR must contain facts and analysis, not just the agency's bare conclusions or opinions. Castaic is not required to predict the outcome of litigation, and may not be able to discuss the likelihood of each of the three allocations. However, it should have at least explained why the three scenarios are relevant and how they would occur.[24] The failure to do so leaves the reader wondering why they are pertinent. Consequently, the 2004 EIR fails to provide the analytic route by which the three alternatives are relevant.

Non-compliance with the disclosure requirements of CEQA may constitute a prejudicial abuse of discretion regardless of whether the agency would have taken the same action had it complied with CEQA. Pub. Res. Code §21005(a). Still, CEQA is subject to the established principle that there is no presumption of prejudicial error. Pub. Res. Code §21005(b). Only if the manner in which the agency failed to follow the law is prejudicial must the decision be set aside. Sierra Club v. State Board of Forestry, (1994) 7 Cal.4th 1215, 1236.

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[24]For example, the court has no idea how a pre-Monterey Amendments without Article 18 cutbacks would occur.

The issue is whether Castaic's failure to supply the analytical route for its consideration of the three allocations is prejudicial. Prejudice depends on whether the failure to include this information makes "any meaningful assessment" of the project's environmental effects impossible, in which case prejudice is presumed. Sierra Club v. State Board of Forestry, (1994) 7 Cal.4th 1215, 1236 (agency approved timber harvesting plans without requiring necessary environmental information in them).[25] Even under this standard, not every CEQA failure is prejudicial. An EIR will be upheld if the error *de minimus* or clerical in nature (Save San Francisco Bay Association v. San Francisco Bay Conservation and Development Commission (1992) 10 Cal.App.4th 908, 935), the EIR analysis is comprehensive, if not perfect, despite the error (Schaeffer Land Trust v. San Jose City Council, (1989) 215 Cal.App.3d 612, 627-28), and information which should have been included to make the EIR accurate nonetheless has no material effect on informed decision-making or informed public participation (Al Larson Boat Shop, Inc. v. Board of Harbor Commissioners, (1993) 18 Cal.App.4th 729, 747-50).

The Vineyard court reiterated that the reviewing court must focus on the nature of the defect, depending on whether the claim is predominantly one of improper procedure or a dispute over facts. Where the agency has employed the correct procedures, greater deference is given to the agency's factual conclusions, which are reviewed for substantial evidence. 40 Cal.4th at 435.

The 2004 EIR's non-compliance concerns its analytic route – why and how the three allocations are pertinent. This is not a fact issue to be supported by substantial evidence. Instead, it is a failure affecting the public's ability to make a "meaningful assessment" of the project's environmental effects. As such, it is prejudicial. *See also* Rural Land Owners Assn. v. Lodi City Council, (1983) 143 Cal.App.3d 1013, 1023 (whenever failure to comply with CEQA results in a subversion of its purposes by omitting information from the environmental review process, the error is prejudicial).[26]

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[25]One appellate court, Resource Defense Fund v. Local Agency Formation Commission, (1987) 191 Cal.App.3d 886, 897-98 has stated that "[f]ailure to comply with CEQA is necessarily prejudicial." This does not appear to be the consensus approach. *See* Dusek v. Anaheim Redevelopment Agency, (1985) 173 Cal.App.3d 1029, 1040-42 ("a minor CEQA sin or two" constituting technical defects where the public had not been misled or defrauded is not enough for prejudice).

[26]Petitioners also argue that the 2004 EIR finesses the non-final nature of the project by jumping the gun and analyzing pre-Monterey Amendments. According to Petitioners, Castaic performed a "mini-programmatic review" at AR 155-06 and App. D (AR 468-550). The charts at AR 184 and 506 show this. According to Petitioners, this is not just factual overlap; this is usurpation of DWR's responsibilities.

DWR correctly points out that Petitioners are complaining about too much information, something that CEQA does not proscribe. Petitioners have no complaint about the content of the mini-program review. To the extent that Castaic performed a task that DWR is obligated to perform, DWR may either use Castaic's analysis or perform a new one. The cooperation of DWR and Castaiac suggests that the overlapping environmental analysis will be consistent. Even if inconsistent, DWR's analysis will control for the Monterey Amendments. There is no

2. Modeling

Petitioners contend that Castaic used an obsolete DWR model, DWRSIM, for making predictions about the amount of SWP water that could be available as a result of the Kern water transfer. DWR has used CALSIM II for modeling SWP deliveries since 2000. While the EIR uses CALSIM II to look at the environmental setting, it only uses DWRSIM to look at environmental impacts. According to Petitioners, Castaic's rationale for doing so -- that DWRSIM should be used for the 1998 environmental setting -- makes no sense. Modeling is for future results, not historical analysis.

Petitioners argue that Castaic's use of an old model prejudicially overstates the reliability of SWP water delivery. App.D, Table 2-2 compares the projected 2020 deliveries based on the two different models. AR 493. The graph shows a discrepancy between the two models, particularly in the 50-70% supply range, and most glaringly in the range of drought conditions. Although the EIR does not quantify these differences, Castaic's responses to public comments presents a table that does. The table shows that the two models can differ by as much as 5000 acre-feet. Pet. Op. Br. at 23. According to Petitioners, this is not the "slight discrepancy" DWR states it is.

When a challenge is brought to studies on which an EIR is based, "the issue is not whether the studies are irrefutable or whether they could have been better. The relevant issue is only whether the studies are sufficient credible to be considered as part of the total evidence that supports the" agency's decision. Laurel Heights, 47 Cal.3d at 409 (lead agency entitled to choose and rely on expert opinion even though others may disagree). Expert testimony constitutes substantial evidence and an agency is entitled to rely on it. Uhler v. City of Encinitas, (1991) 227 Cal.App.3d 795, 805. Even where experts disagree, the agency is entitled to choose one expert's opinion over another. Laurel Heights, 47 Cal.3d at 409. The party challenging the EIR bears the burden of demonstrating that the studies on which the EIR is based "are clearly inadequate or unsupported." State Water Resources Control Board Cases, (2006) 136 Cal.App.4th 674, 795.

CEQA requires Castaic to reasonably inform the reader about the amount of water available. The EIR states that all environmental impacts from the project are driven by the amount of water delivered and the timing of delivery. AR 55. Castaic analyzed the amount of SWP water available for delivery through hydrologic modeling with computer simulations that predict the amount of water available under various hydrologic conditions. To do so, the EIR, like all EIR's had to have an environmental setting for the project. This environmental setting describes the conditions of the project as they exist at the time the Notice of Preparation is published or, if there is none, at the time the environmental analysis is commenced. This setting will normally constitute the baseline physical conditions by which an agency determines whether an impact is significant. Guidelines §15125(a).

The 2004 EIR states that its baseline 1998 environmental setting used DWRSIM, which is a model simulating the operations of the SWP, "because this is the modeling tool that was available during 1998." AR 55. DWR had used DWRSIM in 2000 to conduct a reliability study for another project. The 2004 EIR does use CALSIM II for the current environmental setting of

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usurpation of responsibility.

the project. CALSIM II was available because DWR performed a SWP Delivery Reliability Report in 2003 using CALSIM II as its model. AR 56. Although the modeling tools are different, the criteria used to input into the computer simulation has not changed significantly. Id.

The question raised by Petitioners is why use an older computer simulation model (DWRSIM) for the 1998 baseline when a newer model (CALSIM II) was available? Appendix D of the 2004 EIR, entitled "Technical Data for Hydrologic Analysis," explains that Castaic had to do so because it did not perform any model analysis of its own. Instead, Castaic relied upon DWR's expertise, and its existing model studies. *See* AR 491. DWR used DWRSIM in its 2000 study and CALSIM II in its 2003 study; Castaic relied upon those same studies and same models.

Castaic's reliance on DWR's existing studies and its expertise is an explanation, but the issue becomes whether it is an adequate one.

The answer is in Appendix D, which explains that DWRSIM has a database of monthly runoff based on historic hydrologic data for a 73 year period from 1922-74. DWRSIM takes this data and, depending on the input variables of operating constraints and water contractor demand, estimates the amount of water SWP can deliver each month over that 75 year period. Assuming that hydrologic conditions repeat, the operator can predict the amount of water available under that particular hydrologic condition and with a particular demand and operating condition. AR 491.

Appendix D then shows that DWRSIM and CALSIM II predict similar outcomes, and that the differences in their predictions can be explained. In Figures 2-1 and 2-2 of Appendix D, Castaic compares the two models' prediction of SWP water deliveries at existing demand and at predicted 2020 demand levels. AR 493. The "existing demand" for the DWRSIM model is 1998 demand. The "existing demand" for the CALSIM II model is 2001 estimated demand. The 2001 demand is higher than the 2000 demand. Consistent with reality, the model will only show delivery up to the amount of demand; SWP will not deliver more water than is asked for even if it is available. This difference in demand explains why CALSIM II shows more delivery in wet years than DWRSIM; the lower demand in 1998 limits the amount of delivery.

The difference in demand also explains in part why CALSIM II predicts a higher delivery in extremely dry conditions; 1998's lower demand means more water is left in storage from the preceding year and is available for delivery in a dry year. Appendix D says that the proof is in the pudding: comparison of DWRSIM and CALSIM II in Figure 2-2, for the year 2020 with the same level of demand for each model, shows very close prediction of SWP delivery for both models. AR 492-93.

Castaic concludes that the two models predict "generally comparable" results and their differences are minimal. AR 491, 1003. Castaic argues that, if anything, the slightly higher supplies predicted by the DWRSIM model provide a worst case scenario for purposes of growth inducing impacts; the more water the more developers will grow the Santa Clarita Valley. AR 1003-04, 1009.

Contrary to Petitioners' argument, the use of DWRSIM and not CALSIM II in the 1998 baseline study does not affect the conclusion that the study constitutes substantial evidence. Petitioners do not present expert opinion that the use of DWRSIM results in any error. They merely rely on the differences in Figures 2-1 and 2-2 of Appendix D, and Appendix D explains

the reason for the differences. As Castaic points out, Petitioners cannot point to any environmental significance to the use of DWRSIM and not CALSIM II. Therefore, Petitioners have not met their burden of demonstrating that use of DWRSIM for the 1998 baseline in the 2004 EIR was "clearly inadequate or unsupported."[27]

3. Cumulative Impacts

Petitioners contend that the 2004 EIR attempts to assess the project's impacts on the SWP without discussion why Castaic is competent to do so. As an example, the EIR rejects any significant project impact on the Delta, even though it acknowledges that differences in timing in the use of water for urban (Castaic) rather than agricultural (Wheeler Ridge) purposes would change the timing of deliveries. AR 192. Petitioners argue that the Delta is "in crisis" and there is great potential for conflict between Castaic's and DWR's respective environmental analysis. Pet. Op. Br. at 23-4.

An EIR must contain a cumulative impacts analysis of the project's environmental impact when considered in conjunction with other projects (Guidelines §15130) in order to ensure that "the entire relevant environmental picture" has been adequately considered. Laupheimer v. State of California, (1988) 200 Cal.App.3d 440, 462. A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. Guidelines §15130(a)(1). The EIR should not discuss impacts which do not result at least in part from the project being evaluated. Id. The analysis should reflect the severity and likelihood of occurrence of the impact. Guidelines §15130(b). In every case, there should be at least a preliminary search for potential cumulative environmental effects and a preliminary assessment of their significance. Laupheimer, 200 Cal.App.3d at 462-63. The detail required in a cumulative impacts discussion need not be as great as provided for the environmental impacts attributable to the project alone. Guidelines §15130(b). Generally, the EIR should list the projects producing cumulative impacts or provide a summary of projections contained in a prior certified or adopted environmental document which describe the regional conditions contributing to the cumulative impact. Guidelines §15130(b)(1). The 2004 EIR uses the list approach to discuss cumulative impacts of the project's environmental impact when considered in conjunction with other projects. AR 241-289.

Castaic argues that everything that happens with respect to the Kern water transfer happens south of the Delta, and the EIR thoroughly discusses that, including the impact of the timing of deliveries. AR 193-06. Thus, the EIR's conclusion that the project will have no direct

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[27]Castaic does not have statewide expertise on SWP reliability, but its consultants and DWR do. In commenting on Castaic's draft EIR, DWR stated that the differences between CALSIM II and DWRSIM "may cause slight changes in results, which may lead DWR to different conclusions....[in DWR's Monterey Amendments EIR]" AR 564. However, DWR also found that the draft EIR adequately and thoroughly discussed the project and its impacts, including the effects of the project on the environment and the SWP, using appropriate baseline conditions, and had a good discussion of the relationship between the Kern water transfer and Monterey Plus. DWR concluded that the draft EIR a "adequately discusses the reliability of the SWP, pre- and post- Monterey Amendment conditions, and SWP operations." AR 564-65.

significant impact on the SWP or related facilities is fully supported. Castaic contends that Petitioners really are attacking its ability to act as lead agent for a local project if the project has the potential for statewide impact. According to Castaic, this argument goes to the lead agency issue, and is incorrect as a matter of law. Castaic is qualified and required by CEQA to assess impacts that occur outside of its borders in evaluating the Kern water transfer. Citizens of Goleta Valley v. Board of Supervisors, (1990) 52 Cal.3d 553, 573.

The court does not know whether Petitioners really are attacking Castaic's expertise or the adequacy of its assessment of SWP impacts from the Kern transfer. The reason is that Petitioners' arguments are conclusionary and unsupported by analysis, authority, or many facts. Petitioners' obligation was to point out what is wrong with the analysis, or what has been omitted that was required. An issue raised without analysis or authority lacks foundation and need not be addressed. Arcadia, 135 Cal.App.4th at 1429, 1431. The court has no obligation to search the EIR's cumulative analysis section to look for defects. Their general objection requires only a general response that Castaic's cumulative impacts analysis is adequate.

4. The "No Project" Alternative

Petitioners argue that the 2004 EIR fails to address the "no project" alternative, an issue particularly important because it was the principal defect in the PCL Monterey Agreement EIR. As the PCL court stated, a "no project" alternative must discuss "existing conditions" and "what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." 83 Cal.App.4th at 912. The Monterey Agreement EIR did not discuss the projections related to land planning, demand for water, and other impacts of reducing entitlements pursuant to Article 18(b). Id. at 919. Petitioners contend that the 2004 EIR does discuss the water supply reliability impacts of invoking Article 18(b), but not the statewide impacts the PCL court found so crucial.

The short answer to Petitioners contention is that 2004 EIR addresses a different project than the Monterey Amendments. The "no project" alternative for any EIR requires a comparison of the impacts of approving the project with the effect of not doing so. Guidelines §15126.6.(e)(1); Mira Mar Mobile Community v. City of Oceanside, (2004) 119 Cal.App.4th 477, 488-89. The only "no project alternative" that Castaic is obligated to consider is the alternative of "no Kern water transfer." Castaic has addressed this alternative by discussing groundwater sources of water and a possible moratorium. AR 291-4. Petitioners do not quibble with this analysis. But Castaic had no obligation to consider "no Monterey Amendments" as a no project alternative.[28] Indeed, it would make no sense to evaluate "no Monterey Amendments" as an alternative to the Kern water transfer.[29]

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[28]Of course, the 2004 EIR is obligated to consider invocation of Article 18(b) as a reasonably foreseeable environmental impact, and the adequacy of it doing so has been discussed.

[29]For a similar reason, Castaic need not analyze alternative uses of the SWP water in a "no project" alternative. CEQA does not require consideration of alternatives that do not meet the project objective; *i.e.*, delivery of water to Castaic's customers. *See* Guidelines §15126.6(c).

5. Post-Hoc Rationalization

Petitioners also suggest that the 2004 EIR is a post-hoc rationalization for "a decision already made." Pet. Op. Br. at 18. Pre-judging environmental decisions in order to accomplish a project is prohibited under CEQA. An agency may not commit to a project before CEQA review is completed because a fundamental purpose of an EIR is to provide decision-makers with information they can use in deciding whether to approve a project. Therefore, post-approval environmental review has been condemned. Laurel Heights, 47 Cal.3d at 394. *See* Residents Ad Hoc Stadium Com. v. Board of Trustees, (1979) 89 Cal.App.4th 274, 285. Of course, an agency contemplating a project may be presumed to favor the project, and CEQA assumes this to be inevitable. Therefore, it builds in procedural protections to insure that the decision-maker does not fail to note the facts and arguments by opponents to the EIR. Id. at 285.

Castaic had completed the transfer and performed under it for several years prior to preparing the 2004 EIR. Plainly, it desires to keep the transfer and not change it. When the 1999 was found deficient, Castaic was required under CEQA to perform a "fresh look" at the transfer's environmental impacts. With the exception of the analytical hole discussed above, it has done so. *See* City of Vernon v. Board of Harbor, (1998) 63 Cal.App.4th 677, 1523 (adequacy of EIR overcomes contention that it was a post-hoc rationalization).

G. Conclusion

Castaic may act as the lead agency for the Kern water transfer. The 2004 EIR was properly prepared except for one defect – it fails to show the analytic route as to how and why the three allocations of pre-Monterey Amendments, pre-Monterey Amendments without Article 18, and post-Monterey Amendments are relevant and would occur. The court offers no opinion on whether this failure must be rectified by addendum (Guidelines §15164), a subsequent EIR, a supplement to EIR, or a new EIR. That determination is Castaic's to make in the first instance.

The Petition for Writ of Mandate is granted in part. A writ shall issue commanding Castaic to set aside its approval of the 2004 EIR and comply with CEQA, either through the preparation of a new EIR or other environmental documentation, such as an addendum, addressing the analytic route of the three water allocations. Castaic is not directed to set aside the Kern water transfer. Judgment shall be entered in favor of Petitioners solely on this issue.

This shall serve as the court's proposed statement of decision in compliance with CRC 232(c). If there are no written objections filed, the statement shall be final. As Respondents have prevailed on all but one issue, Castaic's council is ordered to prepare a writ of mandate and judgment consistent with this decision, and serve it on all other counsel for approval as to form. After 10 days, Castaic may file the proposed writ and judgment with the court, along with a declaration stating the nature and extent of any objections received. An OSC re: judgment shall be set for April 23, 2007.

Dated: April 2, 2007

/s/ JAMES C. CHALFANT
Superior Court Judge

JAMES C. CHALFANT

California Water Impact Network, Inc. v. Castaic Lake Water Agency,
Second Appellate District, Division Five, Appellate Case No. B205622,
Filed April 20, 2009

Filed 4/20/09 California Water Impact Networkv. Castaic Lake Water Agency CA2/5

NOT TO BE PUBLISHED IN THE OFFICIAL REPORTS

California Rules of Court, rule 8.1115(a), prohibits courts and parties from citing or relying on opinions not certified for publication or ordered published, except as specified by rule 8.1115(b). This opinion has not been certified for publication or ordered published for purposes of rule 8.1115.

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

SECOND APPELLATE DISTRICT

DIVISION FIVE

CALIFORNIA WATER IMPACT NETWORK, INC. et al., Plaintiffs and Appellants, v. CASTAIC LAKE WATER AGENCY, Defendant and Respondent.	B205622 (Los Angeles County Super. Ct. No. BS106546)

APPEAL from an order of the Superior Court of Los Angeles County, Dzintra I. Janavs, Judge. Affirmed.

Law Offices of Babak Naficy and Babak Naficy for Plaintiffs and Appellants.

Hortvitz & Levy, Barry R. Levy and Felix Shafir; McCormick, Kidman & Behrens, Russell G. Behrens and David Boyer for Defendant and Respondent.

I. INTRODUCTION

Plaintiffs, California Water Impact Network and the Friends of the Santa Clara River, appeal from a judgment denying their amended mandate petition which sought to set aside the certification of an environmental impact report and approval for a 2006 Water Acquisition Project ("the project") by defendant, Castaic Lake Water Agency. The 2006 project consists of a plan by defendant to purchase a minimum of 11,000 acre feet per year of water from the Buena Vista Water Storage District ("Buena Vista district") and the Rosedale-Rio Bravo Water Storage District ("Rosedale-Rio Bravo district"). The two districts operate the Buena Vista Water Storage District/Rosedale-Rio Bravo Water Storage District Water Banking and Recovery Program ("Buena Vista/Rosedale-Rio Bravo water banking program"). The Buena Vista/Rosedale-Rio Bravo water banking program, which was subject to full environmental review in 2002, sells water to third parties such as defendant. Defendant's 2006 project also allows for the additional purchase of 9,000 acre feet per year of water that may be available from time to time depending upon hydrologic and operational conditions affecting the Buena Vista/Rosedale-Rio Bravo water banking program.

Plaintiffs argue defendant's 2006 environmental impact report does not comply with the environmental review requirements of the California Environmental Quality Act. (Pub. Resources Code,[1] § 21000 et seq.) Plaintiffs argue the 2006 environmental impact report: does not properly describe the project; does not adequately analyze the growth inducing impacts of the 2006 project; was not prepared by the proper lead agency; and calls for the acquisition of water supplies for developments that are inconsistent with and unaccounted for in the Los Angeles County General Plan. We disagree the asserted grounds provide a basis for setting aside defendant's certification of the 2006

[1] All further statutory references are to the Public Resources Code unless otherwise indicated.

environmental impact report and affirm the judgment denying the amended mandate petition.

II. FACTUAL AND PROCEDURAL MATTERS

A. The 2002 Environmental Impact Report And Buena Vista/Rosedale-Rio Bravo Water Banking Program

The Buena Vista and Rosedale-Rio Bravo districts are adjacent water districts that jointly serve approximately 92,000 acres of primarily agricultural land in southern San Joaquin Valley, west of the City of Bakersfield. The Buena Vista district, which was organized in 1924, has a gross area of approximately 49,000 acres. The Rosedale-Rio Bravo district, which was formed in 1959, has a gross area of approximately 44,000 acres of land developed primarily for irrigated agriculture and urban users. Both water districts are engaged in groundwater recharge, banking, and recovery programs. Both are member units of the Kern County Water Agency ("Kern County agency") which is a water wholesaler. The Kern County agency was created in 1961 by the Legislature to secure and supply adequate water to its local member units in Kern County. Both the districts have rights to Kern River waters. Both the Buena Vista and Rosedale-Rio Bravo districts also have rights to a water supply from the State Water Project through the Kern County agency.

Water Code section 43001 allows a water district to "sell, distribute, or otherwise dispose" of water and water rights.[2] In September 2002, the Buena Vista and Rosedale-Rio Bravo districts certified an environmental impact report which evaluated the impacts of operating their water banking and recovery program including the sale of water to third-party users such as defendant. The 2002 environmental impact report expressly

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[2] Water Code section 43001 states in its entirety, "The board may sell, distribute, or otherwise dispose of water and water rights not necessary for the uses and purposes of the district."

states that third party customers such as defendant will be required to conduct appropriate environmental review as a condition of any sales. The Buena Vista/Rosedale-Rio Bravo water banking and recovery program environmental impact report was certified on October 11, 2002.

The 2002 Buena Vista/Rosedale-Rio Bravo water banking environmental impact report states that approximately 25 percent of groundwater banking would be accomplished using existing accounts in the Buena Vista district. An additional 75 percent of water banking will be accomplished by using accounts to be developed primarily through recharge of Buena Vista Kern River high flow water within the Rosedale-Rio Bravo district. Defendant's 2006 environmental impact report defines "groundwater recharge" as follows, "Refers to the addition to the water within the earth that occurs naturally from infiltration of rainfall and from water flowing over the earth materials that allow water to infiltrate below the land surface." According to the 2002 Buena Vista/Rosedale-Rio Bravo water banking program environmental impact report, recovery from the groundwater banking accounts will be accomplished by: using direct and in-lieu methods; via groundwater pumping; and exchanges of State Water Project supplies. The Buena Vista and Rosedale-Rio Bravo districts were to jointly recover the groundwater. The groundwater was to be recovered by means of accounts to be developed through recharge within the Rosedale-Rio Bravo district. More than 80,000 acre feet of Buena Vista Kern River wet year water were to be captured and recharged within the Rosedale-Rio Bravo district service area in a given year. The recharged waters were to be included in the groundwater bank account. Also, the account would include groundwater which had been previously recharged within the Kern River area by the Buena Vista district. The Buena Vista district committed to the program 150,000 acre feet of previously recharged exportable groundwater which it currently stored. It was estimated that more than 20,000 acre feet of banked water could be recovered or withdrawn from the groundwater bank account in order to supply water demands created by the Buena Vista/Rosedale-Rio Bravo water banking program. The water recovered under the Buena Vista/Rosedale-Rio Bravo water banking program could be delivered to

third-party buyers such as defendant. The primary method of recovery or delivery would be through an "in-lieu" exchange of State Water Project Table A supplies. (Table A, an attachment to long-term water contracts, will be fully discussed later in this opinion.) When the Table A supplies were insufficient for an "in-lieu" exchange, the banked groundwater will be pumped into the California Aqueduct of the State Water Project for delivery to a buyer such as defendant. The 2002 Buena Vista/Rosedale-Rio Bravo water banking program "in-lieu" exchange process was approved by the Department of Water Resources prior to its implementation. The Department of Water Resources monitors all exchanges and deliveries.

B. The 2006 Project

The California Department of Water Resources is responsible for overall water planning for the State of California. Defendant is located in Los Angeles and Ventura Counties and was created by the Legislature in 1962. (Stats.1962, 1st Ex. Sess., ch. 28, p. 208, § 1. Amended by Stats.1970, ch. 443, p. 873, § 1; Wat. Code App. § 103-1.) Defendant is 1 of 29 State Water Project Contractors who enter into agreements with the Department of Water Resources. The 29 contractors have long-term water supply contracts for water service from the State Water Project. The 29 contractors obtain deliveries from the Department of Water Resources in accordance with the long-term contracts. The acre feet of water that may be delivered under an individual contractor's agreement with the Department of Water Resources is set forth in an attachment to the long-term contract. The attachment which sets forth the acre feet of water is referred to as Table A. The Table A attachment establishes the total amount of State Water Project that a contractor may request and potentially receive each year under the terms of the long-term water supply contract. In exchange, the contractors pay the Department of Water Resources any fees and costs related to the operation and maintenance of the State Water Project. The yearly fees are calculated by reference to the Table A amount. The Department of Water Resources is not always able to deliver the quantity of requested

water because of certain factors such as hydrologic conditions, current reservoir storage, and total water contractor requests.

Defendant's service area is approximately 195 square miles (124,800 acres) in incorporated and unincorporated areas in, or adjacent to, the Santa Clarita Valley. Defendant's purpose, at its formation, was to contract through the Department of Water Resources to acquire and distribute State Water Project water to four local purveyors. Defendant's purpose was subsequently expanded by legislation to: acquisition of water from the Department of Water Resources; distribution of water wholesale; water reclamation; retail water sale; and exercise of other related powers. Defendant has a fundamental duty to plan for and procure a reliable water supply. (Cal. Wat. Code-App. § 103-15.) Defendant principally obtains its water supply from the State Water Project.

In February 1984, the Los Angeles County Board of Supervisors adopted the Santa Clarita Valley Areawide General Plan. The 1984 general plan projected that 165,000 residents would inhabit defendant's area by the year 2000. In August 1987, the Los Angeles County Department of Regional Planning prepared a draft amendment to the 1984 general plan forecasting that the population would be 210,000 rather than 165,000 by the year 2000. The 1987 document forecast a population of 270,000 by 2010 in defendant's area. To address water supply and demand forecasts, defendant completed the Capital Program and Water Plan in 1988. The 1988 Capital Program involves a long-term plan for financing purchases, construction, and improvements to meet future needs. The 1988 plan is currently being implemented. In 2003, defendant issued a Water Supply Reliability Plan for the Santa Clarita Valley. The purpose of the 2003 plan is to develop a protocol to evaluate the technical, environmental, and economic issues surrounding a water supply reliability project. The goal is to have in the future only the most effective and cost-efficient projects.

The California Urban Water Planning Act (Wat. Code, § 10631 et seq.) requires contractors, such as defendant, to assess water supply reliability that compares total projected usage with the expected supply over a 20-year period in 5-year increments. (Wat. Code, § 10621, subd. (a), 10631, subd. (a); see *Friends of Santa Clara River v.*

Castaic Lake Water Agency (2004) 123 Cal.App.4th 1, 8.) In accordance with statutory requirements, defendant adopted the 2005 Urban Water Management Plan. However, defendant's 2005 Urban Water Management Plan exceeds the minimum 20-year period and covers a 25-year period. Defendant's 2005 Urban Water Management Plan built upon its 2000 Urban Water Management Plan, as amended. Defendant evaluated the long-term water needs within its service area and compared these requirements against existing potential water supplies. The United States Census indicates defendant's service area had a population of approximately 190,000 with 63,000 households. Defendant projects a population growth from 249,343 in 2005 to 428,209 in 2030. The 2005 Urban Water Management Plant was identified as a potential source to meet future demands for water.

On January 31, 2006, pursuant to section 21092, subdivision (a) defendant issued a notice of preparation of the draft environmental impact report for the 2006 project. The 2006 project consists of the contractual right to annually purchase water from the Buena Vista/Rosedale-Rio Bravo water banking program in the amount of 11,000 acre feet through the year 2035. Defendant further has the right to extend the contract with the Buena Vista and Rosedale-Rio Bravo districts subject to compliance with applicable law. The 2006 project environmental impact report states the 11,000 acre feet of water per year purchase from the Buena Vista/Rosedale-Rio Bravo water banking program "is to be used primarily for annexations" to defendant's service area. But until "any such annexations are likely approved," the supply would be available to meet existing demands. Defendant also has the right to purchase an additional 9,000 acre feet in any given year from the Buena Vista/Rosedale-Rio Bravo water banking program. The Buena Vista/Rosedale-Rio Bravo water banking program delivers water to customers such as defendant in two ways. The first way is the so-called "in lieu" exchange. Under the in lieu exchange method, the Buena Vista and Rosedale-Rio Bravo districts, rather than use their banked groundwater, transfers water to which they have rights under their contracts with the State Water Project. The groundwater could be sold to local customers or it can remain in the ground. In other words, in lieu of pumping groundwater, the

Buena Vista and Rosedale-Rio Bravo districts could ship other water to which they have rights to customers such as defendant. Hence, the terminology in lieu exchange describes this first method of delivering water to defendant under the 2006 project. The second way to deliver the contracted for water is to pump it out of the ground in the Buena Vista and Rosedale-Rio Bravo districts and deliver it via the California Aqueduct to defendant. The principal method of recovery and delivery would be from State Water Project water delivered to the Buena Vista and Rosedale-Rio Bravo districts for recharging or irrigation purposes. Resort to groundwater pumping would occur only in years when the State Water Project undergoes shortages—1 to 5 years in every 35-year period. Under either delivery system, all deliveries were required to comply with State Water Project standards.

Defendant determined its projected demands required supplemental water sources beyond the amounts specified in Table A attached to its long-term water contract with the Department of Water Resources. In addition, banking was needed to improve water supply especially in drought years. In some years, the full amount of contracted water due from the State Water Project may not be available for delivery to its long-term contractors due to: hydrology; the amount of water in storage; the operational constraints and environmental regulations; the amounts of water requested by other contractors; climatic conditions; and other factors. The 2006 environmental impact report states the project consists of an action by defendant to augment its supply to meet the demands of its service area. Further, the 2006 environmental impact report states defendant desired to augment its water supply to meet future demands in the event its service area is enlarged by reason of annexation; or transfer of water from the Buena Vista/Rosedale-Rio Bravo water banking program. Defendant's purchase of water from the Buena Vista/Rosedale-Rio Bravo water banking program guaranteed a firm water supply which is not subject to the variations in the State Water Project supply. The 2006 project is also identified in defendant's 2005 Urban Water Management Program as a source to meet projected demand in the Santa Clarita Valley.

The 2006 environmental impact report indicates that there were no significant direct impacts from the project. The 2006 environmental impact report states that less significant impacts included increased electrical power demand and air emissions from moving water to defendant's service area. This impact removed obstacles to growth in defendant's service area. As a result, defendant identified population growth or development as potential indirect impacts. However, defendant notes that its responsibility is to provide water in the service area and not to approve locations of any new development. To the extent that there were visual or aesthetic effects caused by water purchase programs, the 2006 environmental impact report states that such impact could be mitigated by the county and city agencies approving such developments in the project-specific environmental review process. The 2006 environmental impact report identifies three alternatives to the project: reduced water supply; purchase of desalinated water; and no project. The 2006 environmental impact report concludes the project was the environmentally superior alternative. This is because, under the reduced water supply and no project alternatives, defendant would be required to obtain additional water supplies to meet the projected needs of the service area. The 2006 environmental impact report notes that the desalination project could actually cause more direct impacts to the environment than the project. This is because the construction and operation of new desalination facilities would be required. These activities would have significant impacts on: air quality; aesthetic and visual resources; agricultural resources; biological resources; marine resources; geology and soils; hydrology and water quality; land use and planning; noise levels; and recreation.

The 2006 environmental impact report identifies five possible annexation sites within the service area. The 2006 environmental impact report states that whether the sites were actually annexed was not within the defendant's authority but that water availability was a factor in the annexation process. The potential annexations would result in a 4,375 acre feet of water per year increase in demand for water. The 2006 environmental impact report states that 11,000 acre feet of water per year of water would

be able to serve between approximately 11,340 and 11,830 households, which translates into approximately 36,290 and 37,850 persons.

Pursuant to section 21092, subdivisions (a) and (b)(i) and California Code of Regulations, title 14, section 15087, subdivision (c)(2),[3] the public was provided with the opportunity to comment on the draft 2006 environmental report. Among the issues raised during the comment period was whether the 2006 environmental impact report adequately disclosed whether the project was being pursued under the so-called Monterey Amendment to State Water Project long-term contracts. In the 1990's, disagreements arose between contractors and others with the Department of Water Resources concerning the distribution of State Water Project supplies. State Water Project contractors and the Department of Water Resources negotiated a settlement which provided for an overhaul of long term water contracts and a new approach to managing State Water Project supplies. The dispute arose under article 18 of the long-term contracts. The principles developed as part of the 1994 settlement are known as the "Monterey Agreement." The 1994 "Monterey Agreement" amended water contracts and those changes are known as the "Monterey Amendment." The Monterey Amendment was approved in 1995 and went into effect in August 1996. (See *Friends of Santa Clara River v. Castaic Lake Water Agency* (2002) 95 Cal.App.4th 1373, 1375; *Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 897-902.) One principle of the Monterey Amendment called for the transfer of about 130,000 acre feet of water per year from agriculture to urban users. (*Friends of the Santa Clara River v. Castaic Lake Water Agency*, *supra*, 95 Cal.App.4th at pp. 1376-1377; *Planning & Conservation League v. Department of Water Resources*, *supra*, 83 Cal.App.4th at pp. 901-902.)

The comments to the 2006 draft environmental impact report state: it did not fully disclose whether the transfers were permanent; a permanent transfer implicated the

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[3] All future reference to the Guidelines are to the provisions of California Code of Regulations, title 14.

Monterey Amendment; and the project was the "functional equivalent" of a permanent transfer of water requiring the Department of Water Resources prepare an environmental impact report as the lead agency under the standards set forth in *Planning & Conservation League v. Department of Water Resources*, *supra*, 83 Cal.App.4 at page 920. Defendant responded to the comments by noting the water purchased from the Buena Vista Rosedale-Rio Bravo districts under the 2006 project did not involve the State Water Project Table A supplies. According to defendant, the Monterey Agreement applied to two types of water transfers—permanent transfers of Table A amounts and annual transfers of allocated Table A supplies. Defendant further stated that the Monterey Agreement did not address transfers of non-State Water Project supplies. Citing section 2.4 of the draft environmental impact report, defendant explained no purchase of water subject to Table A had occurred. Instead, defendant pointed out: the Table A supplies for it, as well as Buena Vista and Rosedale-Rio Bravo districts, would remain the same under the 2006 project; the purchased water originated from local and other supplies that will be recharged and banked in groundwater basins; and the supplies included Kern River wet year water and other acquired waters. Defendant also noted that all of the information about the program water supplies was set forth in the 2002 Buena Vista/Rosedale-Rio Bravo water banking environmental impact report.

Defendant denied that there was a functional equivalent of a permanent transfer of Table A waters subject to the Monterey Agreement. Defendant stated the State Water Project Table A supplies attributed to the long-term contract with the Department of Water Recovery constitute but one mechanism for the purchased water to be delivered to defendant through an in-lieu exchange. Thus, defendant argued the Department of Water Resources did not have to be the lead agency. The only role of the Department of Water Resources in the project is to approve the change in place of use and point of delivery of exchange water delivered from to another State Water Project long-term contractor and for the direct delivery of groundwater into the California Aqueduct.

Defendant's Board of Directors adopted Resolution No. 2492 on October 25, 2006, certifying the final 2006 environmental impact report for the project and adopting:

findings; a mitigation monitoring and reporting program; and a statement of overriding considerations. Resolution No. 2492 approved the project. The board determined: the 2006 project's benefits outweighed any significant and unavoidable environmental impacts; substantially all of the 2006 project's indirect impacts consist of growth inducement which is outside of its jurisdiction and control; the 2006 project will bring substantial benefits to the defendant's service area by improving the its ability to meet the present and projected water demands; and the 2006 project will bring substantial benefit to defendant's service area by preparing for projected growth.

C. The Amended Mandate Petition And Its Denial

On November 26, 2006, plaintiffs filed their mandate petition. The first amended petition alleged that plaintiffs are non-profit organizations. Plaintiffs sought to set aside the certification of the 2006 environmental impact report for the project and a declaration defendant's actions were unlawful. The amended petition further alleged: the 2006 environmental impact report fails to clearly identify and describe the likely source of water that will be acquired by defendant because it does not accurately describe the "in-lieu" method; the method employed by the 2006 project is really a transfer of State Water Project Table A water; the 2006 environmental impact report fails to forecast the project's potential impacts on marine life including some sensitive species which would be caused by additional winter pumping; defendant was not the proper lead agency to conduct environmental review of the 2006 project; and the 2006 environmental impact report fails to properly evaluate the use of State Water Project facilities to deliver the exchange of water to the service area which must be done by the Department of Water Resources. Plaintiffs requested issuance of alternative and peremptory writs of mandate commanding defendant to set aside, invalidate, and void the certification of the 2006 environmental impact report. Plaintiffs also requested declaratory and injunctive relief. The trial court denied the first amended petition after briefing and a hearing. Judgment

was entered on all of plaintiffs' causes of action in favor of defendant. This timely appeal followed.

III. DISCUSSION

A. Standard of Review

Our Supreme Court in *Citizens of Goleta Valley* v. *Board of Supervisors* (1990) 52 Cal.3d 553, 563-564, summarized the purposes of the California Environmental Quality Act: "As we recently observed in *Laurel Heights Improvement Assn.* v. *Regents of University of California* (1988) 47 Cal.3d 376, (*Laurel Heights*): 'The foremost principle under [the California Environmental Quality Act] is that the Legislature intended the act "to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."' [Citation.] [¶] The EIR has been aptly described as the 'heart of CEQA.' (Guidelines, § 15003, subd. (a); *Laurel Heights, supra,* 47 Cal.3d at p. 392; *County of Inyo* v. *Yorty* (1973) 32 Cal.App.3d 795, 810.) Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government.' (*Laurel Heights, supra*, 47 Cal.3d at p. 392.) [Fn. omitted.]"

Whether defendant's certification of the 2006 environmental impact report complies with the relevant provisions of law is reviewed for a prejudicial abuse of discretion. (§ 21168.5; *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1161; *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435; *Citizens of Goleta Valley* v. *Board of Supervisors, supra,* 52 Cal.3d at pp. 563-564.) Section 21168.5 states, ". . . Abuse of discretion is established if the agency has not proceeded in a manner required by law or if the determination or decision is not supported by substantial evidence." In deciding whether a prejudicial abuse of discretion has occurred

our Supreme Court has stated: "As a result of this standard, 'The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its sufficiency as an informative document.' [Citation.] [¶] . . . [¶] A court may not set aside an agency's approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable. [Citation.] A court's task is not to weigh conflicting evidence and determine who has the better argument when the dispute is whether adverse effects have been mitigated or could be better mitigated. We have neither the resources nor scientific expertise to engage in such analysis, even if the statutorily prescribed standard of review permitted us to do so. Our limited function is consistent with the principle that 'The purpose of CEQA is not to generate paper, but to compel government at all levels to make decisions with environmental consequences in mind. . . . ' [Citation.]" (*Laurel Heights Improvement Assn. v. Regents of University of California, supra,* 47 Cal.3d at pp. 392-393; see also *Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal.4th 559, 573-574; *Citizens of Goleta Valley v. Board of Supervisors, supra,* 52 Cal.3d at p. 564.) We review defendant's actions de novo determining whether the administrative record demonstrates any legal error and it contains substantial evidence to support the factual determinations. (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova, supra,* 40 Cal.4th at p. 427; *Citizens of Goleta Valley* v. *Board of Supervisors, supra,* 52 Cal.3d at pp. 563-564.)

B. Compliance With The California Environmental Quality Act

1. The environmental impact report adequately describes the project.

There is no merit to plaintiff's argument the 2006 project environmental impact report fails to include an adequate and consistent description of the water source. The absence of information from an environmental impact report does not establish a

violation of Guidelines, section 15124,[4] the controlling provision, as a matter of law. (*Berkeley Keep Jets Over the Bay Committee v. Board of Port Comrs.* (2001) 91 Cal.App.4th 1344, 1355; *Al Larson Boat Shop, Inc. v. Board of Harbor Commissioners* (1993) 18 Cal.App.4th 729, 749.) Rather, judicial review under the prejudicial abuse of discretion standard set forth in section 21168.5 focuses on the sufficiency of the environmental impact report as an informative document. (*Laurel Heights Improvement Assn. v. Regents of University of California, supra,* 47 Cal.3d at p. 392; accord *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova, supra,* 40 Cal.4th at p. 445; *Western States Petroleum Assn. v. Superior Court, supra,* 9 Cal.4th at pp. 573-574.) A prejudicial abuse of discretion occurs when the failure to include information in the environmental impact report prevents informed decisions and public participation, which thwarts the goals of the evaluative process. (*Anderson First Coalition v. City of*

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[4] Guidelines, section 15124 states: "The description of the project shall contain the following information but should not supply extensive detail beyond that needed for evaluation and review of the environmental impact. [¶] (a) The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map. [¶] (b) A statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project. [¶] (c) A general description of the project's technical, economic, and environmental characteristics, considering the principal engineering proposals if any and supporting public service facilities. [¶] (d) A statement briefly describing the intended uses of the EIR. [¶] (1) This statement shall include, to the extent that the information is known to the lead agency, [¶] (A) A list of the agencies that are expected to use the EIR in their decision-making, and [¶] (B) A list of permits and other approvals required to implement the project. [¶] (C) A list of related environmental review and consultation requirements required by federal, state, or local laws, regulations, or policies. To the fullest extent possible, the lead agency should integrate CEQA review with these related environmental review and consultation requirements. [¶] (2) If a public agency must make more than one decision on a project, all its decisions subject to CEQA should be listed, preferably in the order in which they will occur. On request, the Office of Planning and Research will provide assistance in identifying state permits for a project."

Anderson (2005) 130 Cal.App.4th 1173, 1178; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1117.) Guidelines section 15151 provides: "An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. . . . The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." (See *Anderson First Coalition v. City of Anderson*, *supra*, 130 Cal.App.4th at p. 1178; *Berkeley Keep Jets Over the Bay Committee v. Board of Port Comrs.*, *supra*, 91 Cal.App.4th at p. 1355; *Rio Vista Farm Bureau Center v. County of Solana* (1992) 5 Cal.App.4th 351, 368.)

Plaintiffs argue the 2006 environmental impact report omits or mischaracterizes information about the sources for the water supply. To the extent plaintiffs are criticizing the ambiguity of the Buena Vista/Rosedale-Rio Bravo water banking program, they cannot raise that contention. The 2002 environmental impact report is conclusively presumed valid and it is not subject to challenge in this action. (§ 21167.2; *Laurel Heights Improvement Assn. v. Regents of University of California* (1993) 6 Cal.4th 1112, 1130.) Thus, plaintiffs cannot challenge the Buena Vista/Rosedale-Rio Bravo water banking and recovery program under the guise of litigating the 2006 environmental impact report. This action must be limited to whether the 2006 environmental impact report sufficiently informs the decisionmakers and the public about impacts from the project. Plaintiffs may not litigate the impact of the Buena Vista/Rosedale Rio Bravo water banking program. The aforementioned conclusive 2002 environmental impact report repeatedly states that the primary method of delivery will be through "in-lieu" exchange of State Water Project supplies. The 2002 environmental impact report sets forth: the environmental effects of operating the program which included the sale of water to third-parties; discussions of delivery through banked underground water; and analysis of delivery through "in-lieu" exchange of Table A supplies. The 2002 program

environmental impact report fully disclosed that the primary method of delivery would be "in-lieu" exchange but that in some years the delivery might vary depending upon State Water Project supplies.

In any event, the 2006 environmental impact report adequately describes the project. The 2006 environmental report: identifies the sources of the water that will be delivered; describes the growth related effects of the purchase in defendants' service area; and identifies the effects of additional water pumping. The 2006 environmental impact report explains that the primary source of water provided by the Buena Vista/Rosedale-Rio water banking program will be water provided to them by the State Water Project. There is no merit to plaintiffs' contention the discussion in that regard is incomplete or misleading.

Furthermore, we disagree with plaintiffs the "in-lieu" exchange delivery amounts to a permanent transfer of Table A water or the functional equivalent thereof. Before proceeding to a discussion of the merits of plaintiffs' environmental analysis, it bears emphasis that the Buena Vista and Rosedale-Rio Bravo Districts have the statutory authority to sell their water and water rights pursuant to Water Code section 43001. (See fn. 2, *infra*.) At oral argument, plaintiffs' counsel admitted there is no statutory bar to the sale of water rights by the Buena Vista and Rosedale-Rio Bravo Districts. Rather, as fleshed out at oral argument, plaintiffs argue that the proposed transfer of waters violate attachment C to the Monterey Agreement which are Department of Water Resources guidelines for review of proposed permanent transfers of Table A waters. The attachment C guidelines are in furtherance of the state policy favoring voluntary water transfers which includes a preference for use of water for non-irrigation purposes; i.e., for the sustenance of human beings, household conveniences, and the care of livestock. (Wat. Code, § 106; *Prather v. Hoberg* (1944) 24 Cal.2d 549, 562.) Further, paragraph 3 of attachment C states, "These guidelines are not intended to change or augment existing law."

In any event, as discussed above, all information concerning the environmental impacts from the two delivery methods was discussed and analyzed in the *conclusive*

2002 environmental impact report. Nevertheless, there is no merit to the contention that there is a permanent transfer of Table A amounts. Both the Buena Vista and Rosedale-Rio Bravo districts have contractual rights with the State Water Project which allow them to receive a maximum amount of water supply in a given year. The water supply from the State Water Project varies depending on the conditions such as: hydrologic conditions; current reservoir storage; and total water contractor requests. However, the actual amount of water delivered under the 2006 project is not contingent upon Table A supplies distributed by the State Water Project to the Buena Vista and Rosedale-Rio Bravo districts. It is undisputed that the Table A supplies can vary yearly. Rather, under the program, defendant has a contractual right to receive 11,000 acre feet of water per year regardless of whether the Buena Vista and Rosedale-Rio Bravo districts receive Table A supplies. Thus, use of Table A water is neither the actual nor the functional equivalent of a permanent transfer because it may not occur. The "in-lieu" exchange is simply one method to meet the contractual obligation to deliver 11,000 acre feet of water to defendant. It is not a permanent transfer of Table A supplies. And even if the project were such a transfer, it is sufficiently described along with its effects in the 2006 environmental impact report. The 2006 environmental impact report expressly states that the water purchased would come from two sources. The first source is the Buena Vista and Rosedale-Rio Bravo Districts State Water Project waters. The second source is the banked groundwater whose rights are owned by Buena Vista and Rosedale-Rio Bravo Districts. In an unusually dry year, groundwater supplies may be the sole source of waters sold to third parties such as defendant. And the 2006 environmental impact report states that 2006 project does not involve the purchase of Table A amounts. Contrary to plaintiffs' counsel's assertion at oral argument, the 2006 environmental impact report does not mask the source of the waters.

2. The 2006 environmental impact report adequately reviewed growth inducing impacts.

Plaintiffs contend that the 2006 environmental impact report fails to adequately review the growth inducing impacts generated by the purchase of the water. We disagree. In *Muzzy Ranch Co. v. Solano County Airport Land Use Com.* (2007) 41 Cal.4th 372, 388-389, our Supreme Court articulated an agency's responsibility to analyze growth inducing impacts as follows: "Under CEQA, a public agency is not always 'required to make a *detailed* analysis of the impacts of a project on [future] housing and growth.' [Citation.] 'Nothing in the [CEQA] Guidelines, or in the cases, requires more than a general analysis of projected growth. The detail required in any particular case necessarily depends on a multitude of factors, including, but not limited to, the nature of the project, the directness or indirectness of the contemplated impact and the ability to forecast the actual effects the project will have on the physical environment.' [Citation.] [¶] 'In addition, it is relevant, although by no means determinative, that future effects will themselves require analysis under CEQA.' [Citation.] And '[t]hat the effects will be felt outside of the project area . . . is one of the factors that determines the amount of detail required in any discussion. Less detail, for example, would be required where those effects are more indirect than effects felt within the project area, or where it [would] be difficult to predict them with any accuracy.' [Citations].) Most significantly, the CEQA Guidelines provide for streamlined review of projects that are consistent with existing general plans and zoning. [Citation.] When approving a project that is consistent with a community plan, general plan, or zoning ordinance for which an environmental impact report already has been certified, a public agency need examine only those environmental effects that are peculiar to the project and were not analyzed or were insufficiently analyzed in the prior environmental impact report. [Citation.]" (See also *Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 369.)

The 2006 environmental impact report complies with the statutorily imposed informational requirements. Chapter 4.0 of the 2006 environmental impact report discusses growth inducing impacts and potential indirect impacts on resources from growth. Furthermore, there is no evidence the additional water will induce any growth that is unaccounted for in the general plan of the area. Rather, chapter 5.0 of the 2006 environmental impact report contains a discussion of the project's consistency with general and regional plans. The 2006 environmental impact report assumes that the entire 11,000 acre feet of water per year would be for new growth. The project also assumes that approximately 37,850 people would be served by the water supply from the project. The growth potential was within the general plan forecasts of 270,000 by 2010 and 428,209 by 2030 for the Santa Clarita Valley. Moreover, the 2006 project is a part of a process to meet defendant's obligation to provide water to its service area in accordance with projected population increases. Thus, the 2006 environmental impact report contains a detailed analysis of growth inducing impacts. The 2006 project is also consistent with existent general and community plans projecting growth increases in the service area. The 2006 environmental impact report adequately discusses growth related issues. (*Muzzy Ranch Co. v. Solano County Airport Land Use Com.*, *supra*, 41 Cal.4th at pp. 388-389; *Napa Citizens for Honest Government v. Napa County Bd. of Supervisors*, *supra*, 91 Cal.App.4th at p. 369; see also Guidelines, § 15126.2, subd. (d); *Sierra Club v. West Side Irrigation Dist.* (2005) 128 Cal.App.4th 690, 702-703.)

Finally, we disagree with plaintiffs that there was something amiss in the 2006 environmental impact report because defendant included five proposed annexation sites in the discussion. Plaintiffs interpret defendant's inclusion of the five potential sites identified in chapter 3.0 as evidence of a plan to grow the area. Because of the pending applications, defendant was required to include the sites in the environmental impact report. (Guidelines, § 15125; *Muzzy Ranch Co. v. Solano County Airport Land Use Com.*, *supra*, 41 Cal.4th at pp. 387-388 [§ 21060.5 obligates an defendant to consider environmental impact of project outside the project area when it will have effect on geographically distant area].)

3. Defendant is the correct lead agency.

Plaintiffs assert that defendant's imprecise discussion is an attempt to mask what is the "functional equivalent" of a permanent transfer of surplus Table A supplies belonging to the Buena Vista and Rosedale-Rio Bravo districts. Relying on *Planning & Conservation League v. Department of Water Resources*, *supra*, 83 Cal.App.4th at pages 903-907, plaintiffs argue the proper lead agency should have been the Department of Water Resources. The *Planning & Conservation League* decision held the Department of Water Resources was the proper lead agency for conducting environmental review of the Monterey Agreement. (*Ibid*.; see *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2007) 157 Cal.App.4th 149, 153.) The *Planning & Conservation League* decision had statewide implications and involved a number of urban and agricultural contractors. The issues also involved rights under the long-term water supply contracts which governed the entire State of California.

In this case, defendant is the correct lead agency. Section 21067 defines a lead agency, '"Lead agency' means the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." Defendant argues it is the proper lead agency because: it is the lead proponent of the water acquisition plan; a substantial portion of the 2006 project occurs within its geographic area; and it alone decides whether to accept any water. We agree. Defendant has the principal responsibility for approving and carrying out a project to acquire a water supply for its service area. (§§ 21005, 21080, subd. (c), 21165; Guidelines, §§ 15051-15053.) The 2006 project also affects defendant's duties and obligations to provide water to its service area. In addition, the 2006 project occurs within defendant's jurisdiction. The transfer of water applies to only three agencies, albeit that the transfer will take place within State Water Project facilities. The three agencies are the primary ones affected by the 2006 project. Thus, defendant was the proper lead agency. In any event, plaintiffs conceded in the trial court in their reply brief, and at hearing on the petition that its lead agency analysis rests on the conclusion the

2006 project is in effect a Table A transfer. We have concluded no disguised permanent nor functional equivalent transfer of Table A water has occurred. As a result, the Department of Water Resources was not required to be the lead agency such that it should have prepared the environmental impact report. (*Eller Media Co. v. Community Redevelopment Agency* (2003) 108 Cal.App.4th 25, 46; *Friends of Cuyamaca Valley v. Lake Cuyamaca Recreation & Park Dist*. (1994) 28 Cal.App.4th 419, 426-428; *City of Sacramento v. State Water Resources Control Bd*. (1992) 2 Cal.App.4th 960, 970-973; *City of Redding v. Shasta County Local Agency Formation Com.* (1989) 209 Cal.App.3d 1169, 1173-1177.)

4. The project does not impermissively rely on a draft of general plan.

Relying on *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 941-951, plaintiffs argue the 2006 project improperly appropriated water supplies for development that had not already been included in the Los Angeles County General Plan. In *County of Amador*, the environmental impact report was based on population projections contained in a draft general plan prepared by El Dorado County. (*Id*. at pp. 941, 947.) The *County of Amador* opinion concluded, "We hold only that, in this case, an [environmental impact report] predicated on a draft general plan is fundamentally flawed and cannot pass CEQA muster." (*Id.* at p. 951.)

The *County of Amador* decision is not controlling. Here, there is no draft general plan at issue. In other words, defendant did not predicate the project on a draft general plan which has been judicially determined to be inadequate. Rather, the water planning in this case for the project was based on projections from a number of sources including: the United States Census; defendant's 2005 Urban Water Management Plan; and the existing Santa Clarita Valley Area Plan of the County of Los Angeles General Plan. The existing Los Angeles County General Plan had projections of a population growth of 270,000 by the year 2010. The 2005 Urban Water Management Plan predicted the future need for water to meet the demand for population growth that had been projected by Los

Angeles County and the City of Santa Clarita. Defendant has a duty to plan for long term needs in the service area. The California Urban Water Planning Act (Wat. Code, § 10631 et seq.) requires water contractors, such as defendant, to assess water supply reliability that compares total projected water use with the expected water supply over a 20-year period in 5-year increments. (See *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova, supra,* 40 Cal.4th at pp. 434-435; *Friends of Santa Clara River v. Castaic Lake Water Agency, supra,* 123 Cal.App.4th at p. 8.) The proposed water purchase from the Buena Vista and Rosedale-Rio Bravo districts is one of several measures taken by defendant in order to meet the forecasts of population growth contained in county, city, and federal documents. The *County of Amador* opinion does not require reversal.

IV. DISPOSITION

The judgment is affirmed. Defendant, Castaic Lake Water Agency, is to recover its costs on appeal from plaintiffs, California Water Impact Network and Friends of the Santa Clara River.

NOT TO BE PUBLISHED IN THE OFFICIAL REPORTS

TURNER, P. J.

We concur:

MOSK, J. KRIEGLER, J.

Castaic Lake Water Agency Litigation Settlement Agreement, dated April 6, 2007

CASTAIC LAKE WATER AGENCY LITIGATION

SETTLEMENT AGREEMENT

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CASTAIC LAKE WATER AGENCY LITIGATION

SETTLEMENT AGREEMENT

This Castaic Lake Water Agency Litigation Settlement Agreement (the **"Agreement")** is dated as of April 6, 2007 **("Agreement Date"),** by and between the Castaic Lake Water Agency (**"CLWA"**), Santa Clarita Water Company (**"SCWC"**), Newhall County Water District (**"NCWD"**) and Valencia Water Company (**"VWC"**) (collectively, **"Plaintiffs"**), on the one hand, and Whittaker Corporation (**"Whittaker"**), Santa Clarita L.L.C. (**"SCLLC"**), Remediation Financial, Inc. (**"RFI"**), and American International Specialty Lines Insurance Company (**"AISLIC"**), on the other hand. Hereinafter, Whittaker, SCLLC and RFI are collectively referred to as **"Defendants,"** the Plaintiffs and Defendants and AISLIC are collectively referred to as the **"Parties,"** each Plaintiff, each Defendant, and AISLIC is individually referred to as a **"Party,"** and SCLLC and RFI are collectively referred to as the **"RFI Parties"** or **"Debtors."**

RECITALS

A. SCLLC is the owner of approximately 964.79 acres of real property located in the City of Santa Clarita, County of Los Angeles, State of California, described more fully in Exhibit A hereto (the "**SCLLC Property**"). Bermite Recovery, LLC ("**BRLLC**") is the owner of approximately 23.6 acres of real property located in the City of Santa Clarita, County of Los Angeles, State of California, described more fully in Exhibit B hereto (the "**BRLLC Property**"). The SCLLC Property and the BRLLC Property are hereinafter referred to collectively as the "**Site**."

B. SCWC is the operator of water wells commonly designated as Saugus 1, Saugus 2 and the Stadium Well. NCWD is the owner and operator of water wells commonly designated as NC11 and NC13. VWC is the owner and operator of water wells commonly designated as V157 and Q2. Saugus 1, Saugus 2, the Stadium Well, NC11, V157 and Q2 are collectively referred to at all times as the "**Subject Wells**". As set forth in Section 9.1.7 hereof, NC13 shall be deemed a "Subject Well" in the event and only in the event it is treated as a Project Modification pursuant to Section 9.1.7 and only prospectively from that date it is so treated.

C. Plaintiffs and Defendants are parties to a civil action pending in the United States District Court for the Central District of California, Case No. CV 00-12613 AHM (RZx) (the "**Underlying Action**"). In the Underlying Action, Plaintiffs allege, among other things, that (1) groundwater in the vicinity of the Site has been contaminated by perchlorate and other hazardous materials and that such contamination is continuing with releases to the groundwater; (2) perchlorate has been found in the Subject Wells, and Plaintiffs have incurred and will continue to incur costs in responding to the contamination; and (3) Defendants caused and/or permitted (and are continuing to cause and/or permit) the contamination found on, above, under, or released to the environment at and near the Site and in the Subject Wells. Plaintiffs further allege that they have incurred "response costs" in addressing this contamination, including the costs of engaging consultants to undertake environmental assessment, water treatment studies, groundwater analysis and characterization work in connection with the alleged perchlorate contamination. Plaintiffs are seeking recovery of their alleged response costs and other damages, as well as injunctive and declaratory relief. Defendants deny Plaintiffs' allegations and, further, contend in their Counter-Claims that Plaintiffs are liable, in whole or in part, for Plaintiffs' alleged costs and damages **("the Counter-Claims").**

D. Plaintiffs have entered into that certain Environmental Oversight Agreement ("**EOA**") with the California Environmental Protection Agency, Department of Toxic Substances Control ("**DTSC**"). Plaintiffs are designated as "Proponents" under the EOA.

E. Whittaker and DTSC are parties to that certain 1994 Consent Order, Docket HAS 94/95-012 (the "**Consent Order**"), and the DTSC issued to Whittaker that certain Imminent and Substantial Endangerment Determination and Order and Remedial Action Order (the "**Order**") in 2002. SCLLC and DTSC are parties to that certain 2001 Enforceable Agreement (the "**Enforceable Agreement**").

F. Plaintiffs and Defendants entered into that certain Interim Settlement and Funding Agreement dated as of July 28, 2003 (the "**Interim Agreement**") and that certain First Amendment to Interim Settlement and Funding Agreement dated as of October 11, 2004 (the "**First Amendment**") which, among other things, extended the term of the Interim Agreement through January 2005.

G. Plaintiffs and Defendants mutually agree on the "Project and Associated Facilities" (as hereinafter defined) that shall be implemented by the Plaintiffs. The Project and Associated Facilities are intended to provide containment of perchlorate in off-site groundwater in portions of the Saugus Formation and to restore Plaintiffs' groundwater production capacity diminished by perchlorate contamination in the Subject Wells.

H. The Project fulfills some of Defendants' obligations under and resolves some of Defendants' alleged liabilities to DTSC under the Consent Order, the Order, and the Enforceable Agreement with respect to the remediation of groundwater, and Defendants' remaining responsibility for addressing groundwater remediation will be determined in compliance with the lawful requirements of the regulatory agencies.

I. This Agreement provides for certain funds to be available rapidly to address any future perchlorate contamination of Plaintiffs' presently existing **"Threatened Wells"** (as defined herein) during the period defined herein without prejudice to other rights and remedies of the Plaintiffs or the defenses of the Defendants. This Agreement also provides for arbitration to be available to Plaintiffs to resolve certain future disputes, if any, between or among the Parties involving possible future perchlorate contamination of Plaintiffs' **"Presently Existing Saugus Production Wells and Alluvial Production Wells"**, other than the Subject Wells, as hereinafter defined.

J. This Agreement contemplates that the Defendants (or any **"Buyer"** (as defined below) of the Site that assumes certain liabilities of Defendants) will be in compliance with their remediation responsibilities under law with respect to the Site and the associated groundwater, as reflected in the applicable requirements of the Consent Order, Order and the Enforceable Agreement, and that Defendants will conduct their remediation activities in a reasonably expedient, efficient and cost-effective manner as reasonably determined by Defendants and the regulatory authorities. In particular, the Defendants' (and/or any Buyer of the Site that assumes certain liabilities of Defendants) remedial activities within the Site are important to addressing the contamination within the Saugus and **"Alluvial Aquifers"** (as defined below). The Parties acknowledge that payments and expenditures under this Agreement are deemed reasonable and necessary for addressing offsite groundwater contamination emanating from the Site and are consistent with the National Contingency Plan, and are deemed **"Response Costs"** (as defined below) as that term is used and contemplated in CERCLA.

K. VWC reported detecting perchlorate in its alluvial well Q2 in connection with its regular monitoring of active municipal supply wells operating near the site in April 2005

(although a more recent sampling did not detect perchlorate above the current California Department of Health Services ("DHS") limit for reporting perchlorate). VWC temporarily removed the well from active service and installed wellhead treatment to remove perchlorate. The Q2 treatment system started operating in October 2005. The Defendants have funded five hundred thousand dollars ($500,000) for reasonable and necessary and approved capital costs and two hundred twenty three thousand and two hundred ten dollars ($223,210) for reasonable and necessary and approved operations and maintenance costs of the Q2 Treatment System in a Q2 Escrow Account. The Defendants have agreed to pay certain additional reasonable and necessary operating and maintenance costs of that system in accordance with the terms of this Agreement.

L. On July 7, 2004, SCLLC, and RFI filed voluntary Chapter 11 bankruptcy petitions, and the cases thereby commenced are pending in the United States Bankruptcy Court for the District of Arizona ("**Bankruptcy Court**"), denominated Cases Nos. 2-04-BK-11910 CGC, and 2-04-BK-11911 CGC. BRLLC filed a voluntary Chapter 11 bankruptcy petition on September 30, 2004, denominated Case No. 2-04-BK-17294 CGC, also pending in the Bankruptcy Court. Case Nos. 2-04-BK-11910 CGC, 2-04-BK 11911 CGC and 2-04-BK-17294 CGC are hereinafter referred to collectively as the "**Bankruptcy Cases.**" RFI Realty, Inc. filed a voluntary Chapter 11 bankruptcy petition on June 15, 2004 denominated as Case No. 2-04-BK-10486 CGC; the Bankruptcy Cases are jointly administered with RFI Realty, Inc.'s bankruptcy case under Case No. 2-04-BK-10486 CGC. SCLLC and BRLLC have filed a motion seeking Bankruptcy Court Approvals to sell the Site. The term "**Buyer**," as used herein, means the entity to which title to the Site is conveyed after Bankruptcy Court approval; provided, however, that if either the Bankruptcy Court does not approve a sale or a sale approved by the Bankruptcy Court

in the Bankruptcy Cases does not close pursuant to Bankruptcy Court approval, and consequently there is no Buyer, then this Agreement shall not be impacted in any way whatsoever.

M. Plaintiffs have prepared and submitted to DTSC for approval and DTSC has approved a Remedial Investigation ("RI") consisting of a technical memorandum prepared on behalf of the United States Army Corps of Engineers, a Feasibility Study ("FS") and an Interim Remedial Action Plan ("IRAP") for a containment and treatment system for perchlorate contamination in portions of the Saugus Formation. Such containment and treatment system is consistent with the discussions and understandings between the Plaintiffs and Defendants.

N. The Parties are entering into this Agreement in order to effectuate a settlement of the Underlying Action and to resolve certain disputes between Plaintiffs and Defendants that have arisen between them, as well as to provide the Parties with expedited alternative dispute resolution mechanisms for resolving certain disputes which may arise between Plaintiffs and Defendants in the future, to the extent provided and in accordance with the terms and conditions set forth in this Agreement. The Plaintiffs and Defendants have reached a separate settlement concerning the Defendants' Counter-Claims which will be the subject of a separate settlement agreement to be executed by certain of the Parties simultaneously with the execution of this Agreement, (the "Related Settlement") and which is part of the consideration for and a condition precedent to this Agreement.

O. Certain funds from the **"Steadfast PLC Policy"** (defined below), in accordance with and subject to the Coverage and Claims Settlement Agreement and the Bankruptcy Court's December 22, 2005 Order approving same, and the Joint Escrow 1 Agreement and Instructions, are being made available to settle the matters described and released herein. AISLIC shall

request the SF Escrow 1 Account Escrow Agent (Wells Fargo Bank or any successor) to release funds from the SF Escrow 1 Account to satisfy certain of Defendants' payment obligations and obligations to fund escrow accounts hereunder.

P. The Defendants and AISLIC represent that this Agreement is a settlement in the CLWA Case that meets all "Approved CLWA Settlement Parameters" set forth in Exhibit 16 to the Coverage and Claims Settlement Agreement.

Q. The Defendants and AISLIC represent that the payment obligations pursuant to this Agreement will be funded on behalf of Defendants as provided by Section VIII ("Funding Settlement of CLWA Case") of the Coverage and Claims Settlement Agreement and as provided herein.

R. Nothing in this Agreement is intended to alter any rights or obligations existing under the Coverage and Claims Settlement Agreement.

NOW, THEREFORE, in consideration of the execution of this Agreement and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

AGREEMENT

ARTICLE 1. DEFINITIONS

In addition to terms defined elsewhere in this Agreement, the following terms shall have the following meanings:

1.1 "**Administrator**" means AISLIC or such successor entity designated as the Administrator of the "SF Escrow 1" in the "Coverage and Claims Settlement Agreement."

1.2 **"Agreement"** means this "Castaic Lake Water Agency Litigation Settlement Agreement."

1.3 **"Agreement Date"** means April 6, 2007.

1.4 "**AISLIC**" means American International Specialty Lines Insurance Company, which issued Pollution Legal Liability Select/Cleanup Cost Cap, policy no. PLS 267-9186 (the "AISLIC Policy") to Defendant Whittaker Corporation and is the entity presently designated as the Administrator of the "SF Escrow 1" in the "Coverage and Claims Settlement Agreement."

1.5 "**AISLIC Future Perchlorate Determination of Coverage**" means a coverage determination by AISLIC satisfactory to Whittaker, at its discretion exercised in good faith, agreeing to provide coverage with respect to a "**Non-Subject Well Future Perchlorate Circumstance"** in response to the demand for coverage delivered by Whittaker as set forth in Section 10.1.1 below.

1.6 **"Allowed Claim"** has the meaning set forth in Section 12.1.5, below.

1.7 **"Alluvial Aquifer**" means the shallow (typically, 50 to 200 feet of saturated thickness), generally unconfined aquifer consisting of unconsolidated fluvial sand and gravel within the valleys and canyons of the Santa Clarita Valley. The Alluvial Aquifer unconformably overlies the Saugus Formation.

1.8 **"Annual Project O&M Deposit"** has the meaning set forth in Section 5.2.1.

1.9 **"Approved Capital Costs"** has the meaning set forth in Section 6.2.1, below.

1.10 **"Approved O&M Costs"** has the meaning set forth in Section 6.4.1, below.

1.11 **"Approved Q2 O&M Costs"** has the meaning set forth in Section 6.3.1, below.

1.12 **"Associated Facilities"** means the "Distribution Pipelines" and the "Replacement Wells & Associated Pipelines" (as defined below).

1.13 **"Bankruptcy Court"** has the meaning described in Recital L.

1.14 **"Bankruptcy Court Determinations"** has the meaning set forth in Section 2.4, below.

1.15 **"Bankruptcy Cases"** has the meaning described in Recital L.

1.16 **"BRLLC"** means Bermite Recovery, LLC the owner of approximately 23.6 acres of real property located in the City of Santa Clarita, County of Los Angeles, State of California and as more fully described in Exhibit B.

1.17 **"BRLLC Property"** has the meaning fully described in Exhibit B.

1.18 **"Buyer"** has the meaning fully described in Recital L.

1.19 **"CGL Policy"** has the meaning set forth in Section 11.1.1.

1.20 **"CLWA"** means Castaic Lake Water Agency.

1.21 **"Commencement of Operations"** means commencement of the operation to purvey water to the public from the Project or **"Q2 Treatment System" (as defined below)**, as the case may be. The Parties agree that Commencement of Operations for the Q2 Treatment System was October 12, 2005 ("Q2 Commencement Date").

1.22 **"Consent Order"** has the meaning fully described in Recital E.

1.23 **"Counter-Claims"** has the meaning fully described in Recital C

1.24 **"Coverage and Claims Settlement Agreement"** means the Settlement Agreement by and between the "RFI Parties", the "Zurich Companies", the "AISLIC Parties", and "Whittaker" (as those terms are defined in the Coverage and Claims Settlement Agreement) that provides for certain funding for this Agreement, and that was filed in the Bankruptcy Cases on November 15, 2005 and approved as modified by the Bankruptcy Court's Order Approving Coverage and Claims Settlement Agreement dated December 22, 2005 (the "Coverage Order").

1.25 **"Day"** or **"day"** means a calendar day unless expressly stated to be a Working Day.

1.26 **"Debtors"** means SCLLC and RFI.

1.27 **"Defendants"** means Whittaker, SCLLC and RFI, collectively.

1.28 **"Distribution Pipelines"** means construction of certain new distribution pipelines as described in Exhibit C.

1.29 **"DTSC"** means the California Environmental Protection Agency, Department of Toxic Substances Control as referred to in Recital D.

1.30 **"Earthquake Policy"** has the meaning set forth in Section 11.1.1.

1.31 **"EIL Policy"** has the meaning set forth in Section 11.1.1.

1.32 **"Effective Date"** has the meaning set forth in Section 2.1

1.33 **"Enforceable Agreement"** refers to that certain 2001 Enforceable Agreement made by SCLLC and DTSC, as described in Recital E, above.

1.34 **"EOA"** means the Environmental Oversight Agreement as referred to in Recital D.

1.35 "**Escrow Accounts**" means the "Project Capital Costs Escrow Account", the "Project O&M Escrow Account", the "Replacement Wells/Distribution Pipelines Escrow Account", and the "Q2 Escrow Account," (all as hereinafter defined.)

1.36 **"Final Approval Order"** has the meaning set forth in Section 2.1.

1.37 **"First Amendment"** has the meaning described in Recital F.

1.38 **"Good Faith Certifications"** has the meaning set forth in Section 2.1.1.

1.39 **"Initial Project Capital Costs Deposit"** has the meaning set forth in Section 4.4.

1.40 **"Interim Agreement"** has the meaning described in Recital F.

1.41 **"JAMS"** means Judicial Arbitration and Mediation Service.

1.42 **"Lump Sum Determination"** has the meaning set forth in Section 5.2.6.

1.43 **"MCL"** means Maximum Contaminant Level as set forth in Section 9.1.1.

1.44 **"NCWD"** means Newhall County Water District.

1.45 **"Order"** refers to that certain Imminent and Substantial Endangerment Determination and Order and Remedial Action Order described in Recital E.

1.46 **"Parties"** means Plaintiffs and Defendants and AISLIC, collectively.

1.47 **"Plaintiffs"** means Castaic Lake Water Agency ("CLWA"), Santa Clarita Water Company ("SCWC"), Newhall County Water District ("NCWD") and Valencia Water Company ("VWC"), collectively.

1.48 **"Plaintiffs' Past Environmental Claims"** means any claim for costs, including response costs, damages, attorneys and consultant fees, replacement water costs, and costs for remedial investigations, monitoring and litigation incurred by Plaintiffs prior to the Effective Date of this Agreement due to contamination of the Subject Wells or contamination of or threatened releases to groundwater at and in the vicinity of the Site; provided, however, that certain costs associated with Saugus 1 & 2 Treatment System, Replacement Wells and Associated Pipelines, and Distribution Pipelines, incurred prior to February 1, 2007, as set forth in Exhibit E to this Agreement (**"Plaintiffs' Past Design Costs"**) or incurred after January 31, 2007 and included within Project Capital Costs pursuant to Section 1.54, are excluded from Plaintiffs' Past Environmental Claims.

1.49 **"Plaintiffs' Past Design Costs"** means certain costs associated with Saugus 1 & 2 Treatment System, Replacement Wells and Associated Pipelines, and Distribution Pipelines, incurred by Plaintiffs prior to February 1, 2007, as set forth in Exhibit E to this Agreement.

1.50 **"Presently Existing Saugus Production and Alluvial Production Wells"** means the wells identified in Exhibit U, including wells replaced in the normal course of system operations in the immediate vicinity of the respective Presently Existing Saugus Production and Alluvial Wells.

1.51 **"Pro Forma Estimate of Project O&M"** has the meaning as set forth in Section 5.1.1 and is attached hereto as Exhibit D. **"Joint Estimate of Project O & M"** has the meaning as set forth in Section 5.2.1.

1.52 **"Project"** means:

1.52.1 The planning, development, design, permitting, construction, operation and maintenance of a system to be installed at the existing Rio Vista Intake Pump Station site for treatment of (i.e., removal of perchlorate from) water pumped from Saugus 1 and 2, so that the water will be available for potable purposes; any necessary operational modifications at the Saugus 1 and 2 Wells; any necessary "Sentry Wells" (as defined below) and/or monitoring wells, to the extent not paid for by other sources and to the extent consistent with applicable regulatory requirements; associated piping at the pump station; and the pipeline from Saugus 1 to Saugus 2 to the treatment plant, described more fully in Exhibit F hereto (the "Saugus 1 & 2 Treatment System"). The Parties through the monthly technical meetings will determine what Sentry Wells and/or monitoring wells may be required, provided that if the technical committee is unable to reach agreement on the number of or need for such wells, and if additional wells are required by DHS or other regulators, the number of and/or need for such wells will be determined by the Cost Consultant in accordance with Article 7.

1.52.2 The **"Q2 Treatment System"** (as defined below), when it has been relocated and incorporated into the Project pursuant to a Q2 Treatment System Relocation as provided in Section 4.2.1 herein.

1.53 **"Project Modification Notice"** has the meaning set forth in Section 9.1.2.

1.54 "**Project Capital Costs**" means the reasonable and necessary costs associated with the planning, development, design, permitting, construction, installation and/or closure of the Project, including such costs incurred after January 31, 2007, but prior to the Effective Date.

1.55 **"Estimate of Project Capital Costs"** means the estimate of the capital costs for the Project as set forth in Exhibit G.

1.56 **"Project Capital Costs Escrow Account"** means the escrow account into which Defendants shall deposit or cause to be deposited the initial amount of five million dollars ($5,000,000), to be used for the purposes described in Section 1.52 of this Agreement. Additional deposits by Defendants into the Project Capital Costs Escrow, up to a maximum additional amount of five million dollars ($5,000,000), may be required as described in Section 4.4 of this Agreement for the purposes set forth in Section 1.52 of this Agreement. Within thirty (30) days after Bankruptcy Court approval of this Agreement, Whittaker, on behalf of all Defendants shall open the "Project Capital Costs Escrow Account" by signing and delivering to City National Bank or other agreed bank escrow instructions substantially in the form of Exhibit H-1 hereto, and depositing the amount of five million dollars ($5,000,000) into said account as described above.

1.57 "**Project Costs**" means Project Capital Costs and Project O&M Costs, including costs arising from a Project Modification, to the extent provided in this Agreement.

1.58 **"Project Modification"** has the meaning set forth in Article 9.

1.59 "**Project O&M Costs**" means the identifiable reasonable and necessary costs actually incurred in operating and maintaining the Project to perform its intended function of providing containment of perchlorate as defined in Section 9.1 of this Agreement and restoring impacted groundwater production capacity, which shall be estimated in an annual estimate to be prepared

by CLWA and agreed to by Whittaker and AISLIC or confirmed by the Cost Consultant, unless and until all Lump Sum determinations are made pursuant to Sections 5.2.6 and 9.1.7 or the applicable regulatory authorities determine that treatment is no longer necessary. Costs of operations and maintenance of the Project incurred by Plaintiffs, limited to such reasonable and necessary additional costs directly related to the perchlorate contamination, shall include (based upon the Project as currently contemplated):

Saugus 1 and 2 Treatment Plant Operations and Maintenance

- Vendor Resin Service Contract(s) – (Replacement Resin, Labor, Transportation, Disposal, Disposal Certification, Insurance)-to be negotiated with Vendor jointly by Plaintiffs, Defendants, and AISLIC

- Power – Treatment Plant Operations, including the costs to pump water from Saugus 1 and 2 and, if applicable, Q2 (after relocation) through the treatment system, but excluding the power costs to pump water to the ground surface and the power costs to pump treated water into the CLWA's or VWC's water system. These power costs shall be based on an allocation calculated by CLWA and approved by Whittaker and AISLIC, and subject to Cost Consultant determination in the event that agreement cannot be reached.

- Materials/Supplies
  - Disinfection (Ammonia) and acid
  - Filters
  - Miscellaneous

- Spare Parts
  - Treatment Equipment
  - Pumping and Piping Systems at Treatment Plant
  - Miscellaneous

- Plaintiffs' Labor, if not performed by outside contractor – salary plus actual benefit load (but not-to-exceed 42%) imposition above his/her normal salary:
  - District Employee, Operations Monitoring/Sampling
  - District Employee, Treatment Equipment Maintenance

- Expenses
  - Water Testing (Directly Related to 97-005 Compliance or process monitoring at Purveyor's Rate Schedule)
  - DHS and POTW Fees
  - Miscellaneous Directly Related to Treatment System Maintenance

- Outside Consultants
  - Permits/Renewals
  - Services in addition to those of the Plaintiffs' employee(s) required to meet obligations under Section 8.3.1.1, 8.3.2.3, 8.3.2.4, and 8.4.1, to the extent such employee(s) are not able to meet such obligations
  - Reports/Compliance
  - Engineering
  - Modeling (Directly Related to 97-005 Compliance)
  - Legal (Directly Related to 97-005 Compliance and Plant Operations), limited to the services provided by law firm(s) employed by Plaintiffs for such DHS compliance and plant operations matters, and at the rates such firm(s) normally charge for such work.
  - Insurance – (Insurance as provided in Article 11)

- Arbitrator (per Section 13.2) and Cost Consultant Costs and Fees (per Article 7)
- Project O&M Escrow Costs and Fees

Project O&M costs shall also include an annual flat payment of twenty thousand dollars ($20,000) (to be adjusted after five years as necessary to account for inflation) in lieu of the following activities and costs: Plaintiffs' Employee(s) to provide services under Sections 8.3.1.1, 8.3.2.3, 8.3.2.4, and 8.4.1; any wages or salaries related to the perchlorate contamination plus all benefit load imposition above his/her normal salary; any additional costs for such employee(s) associated with the monitoring, reporting and record-keeping activities described in Section 8.3.1.1, 8.3.2.3, and 8.3.2.4 of this Agreement that are related to the perchlorate contamination; and any Plaintiffs' Employee(s) costs incurred by Plaintiffs in connection with the Monthly Technical Meetings described in Section 8.4.1 of this Agreement.

Project O&M Costs shall also include the identifiable reasonable and necessary costs of operating and maintaining the Q2 Treatment System when it is relocated from Well Q2 and incorporated into the Project as provided for in Section 4.2.1, monitoring and laboratory services for necessary Sentry Wells and monitoring wells encompassed within the Project to the extent not paid for by other sources and to the extent consistent with applicable regulatory requirements**,** and Project Modification O&M costs, including any costs of evaluating containment for purposes of determining whether a Project Modification is appropriate. The costs and approach of evaluating containment shall be discussed and agreed upon by representatives of Plaintiffs, Whittaker and AISLIC at the monthly Technical Meetings, or determined by Cost Consultant. Prior to determination of the Lump Sum pursuant to Section 5.2.6, Project O&M Costs will also include the reasonable and necessary outside fees and costs

incurred by Plaintiffs and Whittaker that are directly related to the perchlorate contamination and to obtaining funding from Public Funding Sources, subject to an annual cap of two hundred thousand dollars ($200,000) on Plaintiffs' outside fees and costs and one hundred thousand dollars ($100,000) on Whittaker's outside fees and costs, subject to such other restrictions as are found in Section 14.2, below. Fees and costs incurred by Plaintiffs or to be incurred by Plaintiffs in the future that are associated with obtaining funding from **"Public Funding Sources"** (as defined below) will not be considered in the determination of the Lump Sum pursuant to Section 5.2.6 and 9.1.7.

1.60 **"Project O&M Escrow Account"** means the escrow account established and funded by Defendants for payment of Project O&M Costs as described in Section 6.4 of this Agreement.

1.61 **"Property Policy"** has the meaning set forth in Section 11.1.1.

1.62 **"Proofs of Claim"** has the meaning set forth in Section 12.1.5.

1.63 **"Public Funding Sources"** has the meaning set forth in Article 15.

1.64 **"Q2 Capital Costs"** means the costs set forth in Exhibit I which were incurred by VWC for the design and installation of the Q2 Treatment System, all of which have been approved and reimbursed by Defendants.

1.65 **"Q2 Escrow Account"** has the meaning set forth in Section 4.1.

1.66 **"Q2 Escrow Account Instructions**" means the Escrow Instructions for the Q2 Capital Costs Escrow Account attached as Exhibit J hereto, as amended as reflected in Exhibits K-1 and K-2.

1.67 **"Q2 O&M Costs"** means the reasonable and necessary costs actually incurred in operating and maintaining the Q2 Treatment System prior to relocation and incorporation into the Project as provided in Section 4.2.1, as set forth in the Estimate of Q2 O&M Costs, and not

to exceed nine thousand and three hundred dollars ($9,300) on average per month for the first 2 years following Commencement of Operations, except in the event of a **"Q2 Resin Exchange,"** (as defined below). Costs of operation and maintenance of the Q2 Treatment System shall include, but not be limited to, equipment rental, service fees, chemicals, monitoring, laboratory services, and resin replacement related to the treatment of perchlorate and flow rates currently permitted by DHS for the Q2 Treatment System.

1.68 "**Estimate of Q2 O&M Costs**" means the approved monthly operations and maintenance estimate for Q2 O&M Costs for the first two years after Commencement of Operations prior to relocation and incorporation into the Project, set forth in Exhibit L.

1.69 **"Q2 Resin Exchange"** means the removal of ion exchange resin which VWC determines is no longer capable of performing its intended function from the ion exchange vessels and replacement with new resin, and includes but is not limited to, transportation of the spent and new resin, and proper destruction of the spent resin in accordance with applicable regulations.

1.70 **"Q2 Semi-Annual O&M Statement"** has the meaning set forth in Section 6.3.2.

1.71 **"Q2 Treatment System**" means the construction, operation and maintenance of a system installed in October 2005 for treatment of (i.e., removal of perchlorate from) water pumped from Valencia's well Q2.

1.72 **"Q2 Treatment System Relocation"** means the relocation of the Q2 Treatment System as described in Section 4.2.1.

1.73 **"Rapid Response Funds"** means the funds, limited to ten million dollars ($10,000,000), available to Plaintiffs for the period of time set forth in Section 11.2.1 of this Agreement, which the Defendants shall cause to be paid to Plaintiffs on a demand basis in accordance with Section

11.2 of this Agreement, as a result of specified perchlorate impacts to “Threatened Wells” (as defined herein).

1.74 **“Related Settlement”** has the meaning set forth in Recital N.

1.75 **“Remedial Action Plan”** means a technical report prepared in accordance with Section 25356.1 of the California Health and Safety Code and which, at a minimum, addresses the remedial investigation, risk assessment, and evaluation of remedial alternatives and proposes a remedial alternative.

1.76 **“Remedy Stoppage”** means a cessation of Project operations under circumstances requiring a Project Modification.

1.77 **“Replacement Wells & Associated Pipelines”** means:

1.77.1 Two new wells capable of producing water at the combined rate of 4200 gpm (**“Replacement Wells**”) and associated pipeline to convey the water pumped from the Replacement Wells to a nearby reservoir and associated disinfection facility (**“Associated Pipelines”**). As currently contemplated, the Replacement Wells will be constructed in the vicinity of Magic Mountain Amusement Park and the Associated Pipelines will consist of approximately 1000 feet of a 12 inch pipeline and 2500 feet of 18 inch pipeline, as described more fully in Exhibit M hereto (the **“Magic Mountain Wells”)**;

1.77.2 Potential closure and abandonment of the Stadium Well, in SCWC’s reasonable discretion, and NC11, in NCWD’s reasonable discretion, described more fully in Exhibit N hereto (the "Well Closures");

1.77.3 Construction of a new alluvial well (the **"Stadium Replacement Well"**), to be located northeast of the Site in an alluvial area where perchlorate is not present in groundwater, and associated pipeline(s), described more fully in Exhibit O hereto.

1.78 **"Replacement Wells/Distribution Pipelines Capital Costs Escrow Account**" means the escrow account into which Defendants shall make an initial deposit of four million seven hundred and fifty thousand dollars ($4,750,000), to be used for the purposes described in Section 4.3 of this Agreement. Additional deposits by Defendants into the Replacement Wells/Distribution Pipelines Capital Costs Escrow Account may be required for Replacement Wells/Distribution Pipelines Capital Cost additional costs as described in Section 4.3 of this Agreement and for the purposes set forth therein. These additional deposit(s) shall be paid as described in Section 4.3.3. Within thirty (30) business days after Bankruptcy Court approval of this Agreement, Whittaker, on behalf of all Defendants, shall open the "Replacement Wells/Distribution Pipelines Capital Costs Escrow Account" by signing and delivering to City National Bank or other agreed bank escrow instructions substantially in the form of Exhibit P hereto, and depositing the amount of $4,750,000 into said account as described above.

1.79 **"Response Costs"** means "response costs" as defined under CERCLA.

1.80 **"RFI"** means Remediation Financial, Inc.

1.81 **"RFI Parties"** means Santa Clarita L.L.C. ("SCLLC") and Remediation Financial, Inc. ("RFI"), collectively.

1.82 **"Saugus Formation"** means the generally deeper (up to 8,500 feet thick) formation of aquifers consisting of semi-consolidated sandstone, siltstone and conglomerate of Pleistocene age and occurs under confined, semi-confined and unconfined conditions.

1.83 **"SCLLC"** means Santa Clarita L.L.C.

1.84 **"SCLLC Property"** has the meaning described in Exhibit A.

1.85 **"SCWC"** means Santa Clarita Water Company.

1.86 **"Sentry Wells"** means groundwater monitoring wells located upgradient of the Subject Wells.

1.87 **"Site"** means the SCLLC Property and the BRLLC Property collectively

1.88 **"Steadfast PLC Policy"** means the Property Transfer Liability Policy Number PLC 3598792-00 issued by Steadfast Insurance Company ("Steadfast") to the Defendants.

1.89 **"Subject Wells"** has the meaning referred to in Recital B of this Agreement.

1.90 The "**SF Escrow 1 Account**" and the "SF Escrow 1" means the "SF Escrow 1" or "SF Escrow 1 Account" as defined in, established, and governed by the Coverage and Claims Settlement Agreement and the "Joint Escrow 1 Agreement and Instructions (Steadfast Escrow 1 Account)" filed in the Bankruptcy Cases on March 31, 2006.

1.91 The "**SF Escrow 2 Account**" means the "SF Escrow 2" or "SF Escrow 2 Account" as defined in, established, and governed by the Coverage and Claims Settlement Agreement and the "Joint Escrow 2 Agreement and Instructions (Steadfast Escrow 2 Account)" filed in the Bankruptcy Cases on March 31, 2006.

1.92 **"Steadfast"** means Steadfast Insurance Company.

1.93 **"SSCH"** means Steadfast Santa Clarita Holdings, LLC.

1.94 **"Estimate of Supplemental Project O&M"** has the meaning set forth in Section 5.2.3.

1.95 **"Third Party Claims"** has the meaning set forth in Section 12.1.1.

1.96 **"Threatened Wells"** has the meaning set forth in Section 11.2.1.

1.97 **"Underlying Action"** has the meaning referred to in Recital C of this Agreement.

1.98 "**V-206 Replacement Well"** means construction and installation of VWC's well V206 and associated pipelines, and permanent closure and abandonment of VWC's well V157 as described in Exhibit Q.

1.99 **"VWC"** means Valencia Water Company.

1.100 **"Whittaker"** means Whittaker Corporation.

1.101 "**Working Day**" means a day other than a Saturday, Sunday, or federal or California state holiday.

ARTICLE 2. COURT APPROVALS AND RELATED SETTLEMENTS

2.1 Final Bankruptcy Court Approval Order and Good Faith Certifications Required

Except for this Section which is effective upon execution of this Agreement by all Parties, this Agreement, including the Parties' promises, obligations, releases, representations and warranties under this Agreement, shall take effect on the later of the date of the Final Approval Order (as defined below) or the date of the "Good Faith Certifications" (as defined below) ("the **Effective Date**") and is absolutely contingent upon the entry of an order of the Bankruptcy Court that approves this Agreement in its entirety without any modifications and contains the Bankruptcy Court Determinations referenced below, and that has become effective and as to which no stay pending appeal has been issued ("**Final Approval Order**") and such order not being subject to any stay.

2.1.1 This Agreement, and the settlement of claims reflected herein, is absolutely contingent upon (i) court certification that such settlement is made in good faith, and (ii) a settlement of, or the dismissal with prejudice of, all of the claims asserted in the Counter-Claims (the "**Related Settlement**") and court certification of the Related Settlement as being made in good faith (collectively, the "**Good Faith Certifications**"). The court's order(s) setting forth the Good Faith Certifications shall at a minimum provide that "any and all claims against the settling Defendants and the settling counter-defendants, arising out of the matters addressed in the Underlying Action or addressed in the Related Settlement, regardless of when asserted or by whom, are barred; such claims are barred regardless of whether they are brought pursuant to

CERCLA, or pursuant to common law or other federal or state laws," or language substantially to the same effect.

2.1.2 This Agreement shall be null and void *ab initio*, and the Parties shall be returned to their respective positions in all aspects, if either (a) the Related Settlement, Good Faith Certifications and Final Approval Order have not all been obtained before October 31, 2007 for any reason; or (b) the Bankruptcy Court denies a motion to approve this Agreement as written or (c) a court denies a motion for good faith certification of either this Agreement, the Related Settlement or both, as written. RFI Parties, at their sole cost and expense, shall prepare and file a motion with the Bankruptcy Court in a form satisfactory to all Parties seeking the Final Approval Order promptly after the Agreement's execution by all Parties. RFI Parties' motion for a Final Approval Order shall include a request that the Bankruptcy Court in its Final Approval Order make the Bankruptcy Court Determinations in accordance with the requirements set forth in Section 2.4 of this Agreement.

2.1.3 All other Parties shall support the entry of the Final Approval Order and shall cooperate with RFI Parties in presenting the motion seeking approval. The Parties shall cooperate in preparing and filing motions with the District Court seeking the Good Faith Certifications. To the extent required under CERCLA or applicable federal law, the Parties agree to cooperate in obtaining approval of a United States District Court having appropriate jurisdiction (the "**District Court**") as necessary to ensure enforceability of the terms and intent of this Agreement (including but not limited to asking the Bankruptcy Court to certify its findings and/or conclusions regarding certain issues to such District Court).

2.2 Plaintiffs' Reservation of Rights Against Buyer

Plaintiffs specifically reserve all rights against Buyer with regard to Buyer's compliance with all environmental laws and performance of any applicable remediation obligations, subject only to the terms of Section 12.1 hereof.

2.3 Plan Filed by Debtors

If a Final Approval Order is entered by the Bankruptcy Court in the Bankruptcy Cases, then any plan filed by the Debtors in the Bankruptcy Cases ("**Plan**") shall not be materially inconsistent with the terms of this Agreement and the Final Approval Order.

2.4 Final Approval Order Provisions

Debtors and all other Parties hereto acknowledge and agree, and the Final Approval Order shall provide that (a) funds in SF Escrow 1 Account were, pursuant to the Coverage Order, already earmarked for the purposes of satisfying Defendants' obligations pursuant to this Agreement; (b) the requirement that the funds in SF Escrow 1 Account be used exclusively for the purposes for which they are agreed to be used pursuant to the Coverage and Claims Settlement Agreement as modified by the Coverage Order (which are consistent with the purposes for which those funds are to be used pursuant to this Agreement) is res judicata in the Debtors' Bankruptcy Cases; (c) payment of obligations under this Agreement, upon entry of the Final Approval Order, constitutes the permitted use of SF Escrow 1 funds to "fund settlement or a stipulated judgment pursuant to a settlement in the CLWA Case" that meets all of the "Approved CLWA Settlement Parameters" as provided in paragraph IV.F.5.a.(i) of the Coverage and Claims Settlement Agreement as modified by the Coverage Order and as described in Exhibit 16 thereto and such payments pursuant to this Agreement shall constitute, and shall be deemed to be consistent with the requirements for the administration of the SF Escrow 1 funds

by AISLIC pursuant to Section IV.F.5.d. of the Coverage and Claims Settlement Agreement as modified by the Coverage Order; (d) any payment or transfers of funds to or for the benefit of Plaintiffs from SF Escrow 1 Account that are consistent with this Agreement are free and clear of all other adverse claims, rights, title, interest, liens or encumbrances of any kind whatsoever that could be asserted against any property or interest of the Debtors; and (e) the Agreement is a complex agreement resolving numerous disputes and pending legal proceedings among numerous parties and that following the Effective Date, it will be practically and legally impossible to unwind this Agreement or restore the parties to their status quo based upon any reversal or modification on appeal or rehearing or other review; (f) upon entry of the Final Approval Order, the Defendants' payment obligations under this Agreement including any sum awarded pursuant to arbitration hereunder, may be made from the SF Escrow 1 Account; and (g) either i) the terms of the Agreement and Related Settlement are fully consistent with the terms of the SunCal Purchase and Sale Agreement and Joint Escrow Instructions dated July 6, 2006, or ii) that the Buyer consents to the Agreement and the Related Settlement to the extent there is any inconsistency. (Subparagraphs (a) through (g) above required to be included in the Final Approval Order are referred to herein as the "Bankruptcy Court Determinations.") The Final Approval Order shall also provide that the Order applies to any successor Administrator of the "SF Escrow 1" in the "Coverage and Claims Settlement Agreement."

2.5 Plaintiffs' Recourse Against Debtors

Plaintiffs' recourse to (i) enforce all of Debtors' obligations under this Agreement and (ii) for any and all actions, causes of action, claims, demands, liabilities, damages, penalties, debts, losses, costs, expenses and fees (including, without limitation, litigation costs and attorney and consultant fees) of every kind and nature whatsoever, past or future, in law and in equity against

the Debtors and BRLLC arising from or in any way related to releases or threatened releases, or other environmental conditions, past or future, at or around the Site is expressly and completely limited to Debtors' rights to use, and title and interest in, the SF Escrow 1 Account established pursuant to the Coverage and Claims Settlement Agreement and the "Joint Escrow 1 Agreement and Instructions (Steadfast Escrow 1 Account)". Plaintiffs' rights against Debtors are not waived in the Bankruptcy Cases to the extent of Debtors' rights, title and interest in the SF Escrow 1 Account.

ARTICLE 3. PAYMENTS DIRECTLY TO PLAINTIFFS

3.1 Payment for Plaintiffs' Past Environmental Claims

Within thirty (30) Days after the Effective Date, Defendants shall pay the amount of ten million dollars ($10,000,000) by payment of the amount of two million five hundred thousand dollars ($2,500,000) to each of the four Plaintiffs. The obligation to make such payments shall be joint and several, subject to Section 2.5. This payment is in full and complete satisfaction and resolution of Plaintiffs' Past Environmental Claims.

3.2 Payment for Plaintiffs' Past Design Costs

Within thirty (30) Days after the Effective Date, Defendants shall pay the amount of one million seven hundred fifty three thousand one hundred fourteen dollars and fifty-eight cents ($1,753,114.58) to CLWA. The obligation to make such payment shall be joint and several, subject to Section 2.5. This payment is in full and complete satisfaction and resolution of Plaintiffs' Past Design Costs, as set forth in Exhibit E to this Agreement.

3.3 Payment to VWC

Within thirty (30) Days after the Effective Date, Defendants shall pay to VWC one million dollars ($1,000,000). The obligation to make such payment shall be joint and several, subject to Section 2.5. This payment is in full and complete satisfaction and resolution of

Plaintiffs' claims in the Underlying Action for V-206 Replacement Well, including, but not limited to, construction and installation of VWC's well V206 and associated pipelines, and permanent closure and abandonment of VWC's well V157, as described in Exhibit Q.

ARTICLE 4. FUNDING OF Q2 COSTS, REPLACEMENT WELL/DISTRIBUTION PIPELINE CAPITAL COSTS AND PROJECT CAPITAL COSTS

4.1 Funding of Q2 Capital Costs and Q2 O&M Costs

Plaintiffs acknowledge that Defendants previously have caused to be deposited into the "**Q2 Escrow Account**" five hundred thousand dollars ($500,000) for reasonable and necessary and approved Q2 Capital Costs. This payment is in full and complete satisfaction and resolution of Plaintiffs' claims for the capital costs associated with the Q2 Treatment System. Plaintiffs acknowledge that Defendants previously have caused to be deposited into the "Q2 Escrow Account" two hundred twenty three thousand and two hundred ten dollars ($223,210) for certain reasonable and necessary and approved Q2 O&M Costs. This payment is in partial satisfaction and resolution of Plaintiffs' claims for the operations and maintenance costs associated with the Q2 Treatment System. Construction of the Q2 Treatment System has been completed and all Q2 Capital Costs associated with the Q2 Treatment System have been approved and paid by or on behalf of Defendants as of the Effective Date.

A copy of the Q2 Escrow Account Instructions is attached hereto as Exhibit J and incorporated herein by this reference. Copies of Amendments No. 1 and No. 2 to the Q2 Escrow Account Instructions are attached hereto as Exhibit K-1 and Exhibit K-2, respectively and incorporated herein by this reference. Any amounts, including interest, remaining in the Q2 Escrow Account as of the Effective Date shall be used by Plaintiffs for Q2 O&M Costs, and credited against Defendants' obligations for funding Q2 O&M Costs as set forth in Section 4.1.1 below.

4.1.1 The Q2 Treatment System commenced operations on October 12, 2005 ("Q2 Commencement Date"), and VWC has been incurring Q2 O&M Costs for the Q2 Treatment System since that date.

4.1.1.1 During the period prior to October 12, 2007, VWC's withdrawal of funds for Q2 O&M Costs shall not exceed nine thousand and three hundred dollars ($9300) on average per month except in the event of a Q2 Resin Exchange and except for reimbursement of any Q2 O&M Costs that have been incurred prior to the Effective Date and not previously paid out of the Q2 Escrow Account.

4.1.1.2 In the event Commencement of Operation of the Project has not occurred as of October 12, 2007, and the Q2 Treatment System must still be operated pursuant to applicable regulatory requirements, Defendants shall pay or cause to be paid an additional deposit of one hundred eleven thousand and six hundred dollars ($111,600) on or before October 12, 2007, to be used for Q2 O&M Costs. In the event Commencement of Operation of the Project has not occurred as of October 12, 2007, and the Q2 Treatment System must still be operated pursuant to applicable regulatory requirements, Defendants shall pay or cause to be paid additional reasonable and necessary Q2 O&M Costs until the Q2 Treatment System is relocated as provided in Section 4.2.1. After October 12, 2007, VWC may withdraw funds on a monthly basis as is reasonably necessary.

4.1.1.3 Defendants shall pay or cause to be paid into the existing Q2 Escrow Account an additional amount of one hundred sixty seven thousand and five hundred dollars ($167,500), or such other amount as may be agreed by the Defendants or determined by the Cost Consultant in accordance with Article 7, in the event a determination is made by VWC in accordance with its operating permit and upon agreement by Whittaker and AISLIC, that

replacement of the treatment resins used in the Q2 Treatment System is necessary. Such deposit shall be made within 10 days after VWC's written notice of determination and request for funding has been delivered to Defendants. Any dispute regarding such determination by VWC shall be resolved by the Cost Consultant in accordance with Article 7.

4.1.2 Defendants' obligations hereunder for deposits required to be made into the Q2 Escrow Account shall be on a joint and several basis subject to Section 2.5.

4.1.3 Any amounts, including interest, remaining in the Q2 Escrow Account upon Q2 Treatment System Relocation to the location of the Project shall be refunded into the SF Escrow 1 Account (as defined in the Coverage and Claims Settlement Agreement.).

4.1.4 Payments from the Q2 Escrow Account shall be made on a monthly basis in accordance with the procedures set forth in Article 6 and the applicable Q2 Escrow Account instructions.

4.1.5 Defendants and AISLIC shall not be entitled to withdraw any funds from the Q2 Escrow Account or to direct or control the payment of such funds, and shall have no rights with respect to such funds, except as provided in this Agreement.

4.1.6 Payments for Q2 O&M Costs shall continue until the date that VWC and CLWA are required to relocate and integrate the Q2 Treatment System into the Project pursuant to Section 4.2.1 or until treatment of Well Q2 is no longer required by DHS, whichever occurs first. The Q2 Escrow Account shall terminate following written notification from Plaintiffs that the Q2 Treatment System has been integrated into the Project or written notification from Plaintiffs or Cost Consultant or arbitrator determination that treatment of Well Q2 is no longer required by DHS, provided that payment has been made for all Q2 Capital Costs and Q2 O&M

Costs permitted to paid from the Q2 Escrow Account in accordance with the procedures set forth in this Agreement.

4.2 Termination of the Q2 Treatment System Operations

4.2.1 VWC shall undertake to terminate operation of the Q2 Treatment System as soon as reasonably feasible, in accordance with requirements of the California Department of Health Services (DHS). In connection with the construction of the Project, Plaintiffs shall incorporate the Q2 Well and the Q2 Treatment System into the Project, notwithstanding any prior determination that the treatment at Q2 Well is no longer required, so as to enable the Saugus 1&2 Treatment System to treat Q2 water in case the Q2 Well subsequently becomes recontaminated. In connection with the construction of the Project, VWC and CLWA shall incorporate the Q2 Well and the Q2 Treatment System into the operation of the Project not later than (i) two (2) years after the Q2 Commencement Date or (ii) the Commencement of Operations of the Project, whichever is later. Upon relocating operation of the Q2 Treatment System, VWC and CLWA shall transfer the treatment vessels used as part of the Q2 Treatment System to the location of the Project and incorporate the use of those vessels into that system. Upon terminating or relocating operation of the Q2 Treatment System, VWC and CLWA shall transfer the remaining resin used as part of the Q2 Treatment System to the location of the Project and incorporate the unused resin into that system.

4.2.2 The obligation to pay Q2 O&M Costs for the Q2 Treatment System pursuant to Section 4.1.1 of this Agreement shall cease either (i) upon written notification from Plaintiffs or Cost Consultant or arbitrator determination that treatment of Well Q2 is no longer required by DHS; or (ii) upon written notification from Plaintiffs that the Q2 Treatment System has been integrated with the Project and that the Q2 O&M Costs will be included in the Project

O&M Costs and handled in accordance with Article 5, which notice shall not occur later than (i) two (2) years after the Q2 Commencement Date or (ii) the Commencement of Operations of the Project, whichever occurs later. If, after a determination that treatment at well Q2 is no longer required, well Q2 becomes re-contaminated so as to require treatment, said treatment will be handled by means of the Project, and the costs thereof shall be Project O&M Costs.

4.2.3 Any dispute as to whether treatment of water pumped from Q2 can be discontinued or should be recommenced shall be resolved through binding Cost Consultant arbitration, as provided in Article 7 of this Agreement, provided that the arbitration decision must be consistent with the requirements of all regulatory agencies with jurisdiction regarding perchlorate.

4.3 Replacement Wells/Distribution Pipeline Capital Costs Escrow Account

Defendants shall be jointly and severally obligated subject to Section 2.5 to pay for their proportional share of the capital costs associated with the installation of new Distribution Pipelines and Replacement Wells & Associated Pipelines pursuant to this Section 4.3. CLWA, on behalf of all Plaintiffs, and Whittaker, on behalf of all Defendants, concurrently with execution of this Agreement, shall execute and, thereafter, promptly deliver to City National Bank or other agreed bank instructions for an escrow (the "**Replacement Wells/Distribution Pipeline Capital Costs Escrow Account**") substantially in the form of Exhibit P hereto. Within thirty (30) Days after the Effective Date, Defendants shall make an initial deposit into the Replacement Wells/Distribution Pipeline Capital Costs Escrow Account of four million seven hundred and fifty thousand dollars ($4,750,000) to be used for Distribution Pipelines, and Replacement Wells & Associated Pipelines. The Replacement Wells & Associated Pipelines will provide new Saugus Formation production capacity to replace lost well capacity not

provided by the Project or V-206. The Distribution Pipelines will be connected to various turnouts within the Plaintiffs' system.

4.3.1 The Defendants' initial proportional share of the capital costs associated with the Distribution Pipelines and the Replacement Wells & Associated Pipelines will be based on the Percentage Cost Allocation for Distribution Pipelines and Replacement Wells & Associated Pipelines set forth in Exhibit R and the bid items submitted by the bidder selected through a competitive bidding process in accordance with CLWA bid procedures and applicable law. Whittaker's and AISLIC's technical representatives shall be provided reasonable opportunity to advise and consult on design, engineering, location of well replacement and other technical aspects of the contractor selection and construction process. For bid items that do not have specific cost allocations, the weighted cost allocation of the other bid items shall be applied. During construction, the Plaintiffs and Defendants shall provide the funds necessary to pay the selected contractors in the proportion provided for by the determination of the initial proportional share. Upon completion and Plaintiffs' acceptance of the construction, a true-up of the cost allocation shall be performed. To the extent feasible, the true-up shall apply the cost allocation of Distribution Pipelines and Replacement Wells presented in Exhibit R to the actual costs of the Distribution Pipelines and Replacement Wells, including approved change orders.

4.3.2 The Parties acknowledge that construction of the Replacement Wells and Associated Pipelines, except the drilling of the Replacement Wells, will be deferred until the construction of the extension of Magic Mountain Parkway is initiated.

4.3.3 In the event Defendants' proportional share of capital costs associated with Distribution Pipelines and Replacement Wells & Associated Pipelines exceeds four million and seven hundred fifty thousand dollars ($4,750,000), including all costs of redrilling

Replacement Wells that are not capable of producing water at the required rate, Defendants shall be obligated, on a joint and several basis subject to Section 2.5, to deposit in the Replacement Wells/Distribution Pipeline Capital Costs Escrow Account additional funds sufficient to cover such excess, as reasonably determined by Plaintiffs, subject to approval by Whittaker and AISLIC or determination by the Cost Consultant. Such deposits shall be made by Defendants in a timely manner. The Estimate of Replacement Wells/Distribution Pipeline Capital Costs attached hereto as Exhibit S reflects that Defendants' proportional share of the Replacement Wells/Distribution Pipeline Capital Costs exceeds $4,750,000. However, in the event that cost savings are achieved such that Defendants' proportional share of capital costs associated with Distribution Pipelines and Replacement Wells & Associated Pipelines is less than the amounts deposited by Defendants into the Replacement Wells/Distribution Pipeline Capital Costs Escrow Account, any amounts remaining in the Replacement Wells/Distribution Pipeline Capital Costs Escrow Account shall be refunded into the SF Escrow 1 Account (as defined in the Coverage and Claims Settlement Agreement).

4.3.4 Any dispute regarding the reasonableness, timing or necessity of Replacement Wells/Distribution Pipeline Capital Costs, the selection of the lowest responsive and responsible bid in the competitive bidding process, or the Defendants' appropriate proportional share shall be resolved through Cost Consultant arbitration in accordance with Article 7.

4.4 Project Capital Costs Escrow Account

CLWA, on behalf of all Plaintiffs, and Whittaker, on behalf of all Defendants, concurrently with execution of this Agreement, shall execute and, thereafter, promptly deliver to City National Bank or other agreed bank instructions for an escrow (the **"Project Capital Costs**

Escrow Account") substantially in the form of Exhibit H-1 hereto. Within thirty (30) Days after the Effective Date, Defendants shall, jointly and severally, be obligated to make a deposit into the Project Capital Costs Escrow Account of five million dollars ($5,000,000) (**"Initial Project Capital Costs Deposit"**) to pay Project Capital Costs.

4.4.1 In the event Project Capital Costs exceed the amount of the Initial Project Capital Costs Deposit, Defendants shall deposit in the Project Capital Costs Escrow Account additional funds sufficient to cover such excess, as determined by Plaintiffs, subject to AISLIC and Whittaker approval or determination by the Cost Consultant; but such total additional funds shall not exceed five million dollars ($5,000,000). Defendants shall deposit the additional funds in a timely manner after approval by AISLIC and Whittaker or by the Cost Consultant. The Estimate of Project Capital Costs attached hereto as Exhibit G reflects that Project Capital Costs are projected to exceed five million ($5,000,000). However, in the event that cost savings are achieved such that Project Capital Costs are less than the amounts deposited by Defendants into the Project Capital Costs Escrow Account, any amounts remaining in the Project Capital Costs Escrow Account shall be refunded into the SF Escrow 1 Account (as defined in the Coverage and Claims Settlement Agreement.).

4.4.2 Any dispute regarding the reasonableness, timing or necessity of Project Capital Costs shall be resolved through arbitration in accordance with Article 7.

ARTICLE 5. PAYMENT OF PROJECT O&M COSTS

5.1 Project O&M Escrow Account

5.1.1 Defendants shall be jointly and severally obligated subject to Section 2.5 to pay Project O&M Costs in accordance with the terms of this Agreement. The "*pro forma*" Estimate of Project O&M ("**Pro Forma Estimate of Project O&M**") as of the date of execution of this Agreement is attached hereto as Exhibit D.

5.1.2 CLWA, on behalf of all Plaintiffs, and Whittaker, on behalf of all Defendants, and AISLIC shall, within thirty (30) days after Whittaker and AISLIC's receipt of Plaintiffs' written notice of anticipated commencement of Project operations execute and thereafter, promptly deliver to City National Bank or other agreed bank instructions for an escrow for funds to be used for payment of Project O&M Costs substantially in the form of Exhibit H-2 hereto.

5.1.3 Payments from the Project O&M Escrow Account shall be made on a monthly basis in accordance with the procedures set forth in this Article 5, Article 6, and the applicable escrow instructions, which instructions are subject to approval by Plaintiffs, Whittaker, and AISLIC and shall be consistent with the terms of this Agreement.

5.1.4 Upon termination of the Project O&M Escrow Account in accordance with this Agreement, any balance in that account shall be refunded into the SF Escrow 1 Account. The Project O&M Escrow Account shall terminate upon termination of this Agreement or earlier payment of all Lump Sum awards, provided that payment has been made for all Project O&M Costs in accordance with the procedures set forth in this Agreement.

5.2 Project O&M Costs

5.2.1 Defendants shall fund Project O&M Costs by depositing annually in the Project O&M Escrow Account the annual O&M amounts reasonably estimated by CLWA and modified as reasonably estimated by Defendants and AISLIC, or modified as determined by the Cost Consultant, and reflected in the Joint Estimate of Project O&M jointly prepared by the Parties (which may include determinations of the Cost Consultant). The first annual deposit ("**Initial Project O&M Deposit**") shall be due thirty (30) days after Whittaker's, and AISLIC's receipt of Plaintiffs' written notice of anticipated commencement of Project operations and a

Joint Estimate of Project O&M has been agreed between the Parties or determined by the Cost Consultant for the first year of operations. The initial "Joint Estimate of Project O&M" shall be based upon the Pro Forma Estimate of Project O&M attached as Exhibit D hereto, as modified by CLWA and approved by Defendants and AISLIC or determined by the Cost Consultant. ("**Joint Estimate of Project O&M**") Defendants will reasonably consider and respond to CLWA's proposed modifications to the attached Pro Forma Estimate of Project O&M as provided in this Article 5. The Parties will meet and confer concerning any disputes in preparing the initial Joint Estimate of Project O&M . Subsequent annual O&M deposits (each an **"Annual Project O&M Deposit"**) in the amount of the Joint Estimate of Project O&M for the upcoming year (each a "Joint Estimate of Project O&M") as agreed between the Parties or determined by the Cost Consultant, shall be due on or before the anniversary of the Initial Project O&M Deposit. CLWA will provide Whittaker, AISLIC, and Steadfast with a copy of each of Plaintiffs' proposed Joint Estimate of Annual Project O&M at least seventy-five (75) days prior to the anniversary date of the prior year's Annual Project O&M Deposit.

5.2.2 In the event of Defendants' or AISLIC's objection to any item included or excluded on any of the Plaintiffs' proposed Joint Estimates of Project O&M, Defendants or AISLIC shall notify Plaintiffs of their objection in writing within thirty (30) days after receipt of the proposed estimate, stating the reasons for its objection, and the Parties shall exercise their best efforts to resolve the disputed item(s). In the event that the disputed item is not resolved within fifteen (15) days after Defendants' or AISLIC's notice of objection, the disputed item(s) shall be submitted to the Cost Consultant, for expedited resolution in accordance with Article 7, below. Following meet and confer and any determinations of the Cost Consultant, the Parties

shall jointly prepare the Joint Estimate of Project O&M as agreed among the Parties or determined by the Cost Consultant.

5.2.3 In the event that CLWA determines it will be necessary to supplement the Project O&M Escrow Account in any given year to pay for Project O&M Costs, CLWA shall notify Defendants, AISLIC and Steadfast of its determination and provide an itemized statement, using the same format as the then-current Joint Estimate of Project O&M, of the amount of the supplemental funding **("Estimate of Supplemental Project O&M"**) required to cover the additional Project O&M Costs. In the event of Defendants' or AISLIC's objection to any item included in the Plaintiffs' proposed Estimate of Supplemental Project O&M, Defendants or AISLIC shall notify Plaintiffs of their objection in writing within fifteen (15) days after receipt of the proposed Estimate of Supplemental Project O&M, stating the reasons for its objection, and the Parties shall exercise their best efforts to resolve the disputed item(s). In the event that the disputed item is not resolved within fifteen (15) days after Defendants' or AISLIC's notice of objection, the disputed item(s) shall be submitted to the Cost Consultant for expedited resolution in accordance with Article 7. Defendants shall deposit into the Project O&M Escrow Account the amount of the Estimate of Supplemental Project O&M within ten (10) days after determination of the amount of the Estimate of Supplemental Project O&M by agreement of the Parties or determination of the Cost Consultant.

5.2.4 Subject to the provisions of Section 9.1.7 below, the obligation to pay Project O&M Costs pursuant to this Article 5 shall cease the earlier of (i) the California Department of Health Services (DHS), and any other agency that has asserted jurisdiction and whose agreement is required, agrees that treatment of water pumped from Saugus 1 & 2 can be discontinued; or (ii) thirty (30) years after Commencement of Operations of the Project.

5.2.5 Any dispute regarding the reasonableness, applicability or necessity of Project O&M Costs, except for the issue of whether treatment of water pumped from Saugus 1 & 2 can be discontinued, shall be resolved through binding arbitration, as provided in Article 7 of this Agreement, provided that the arbitration decision must be consistent with the requirements of all regulatory agencies with jurisdiction, and prior to determination of the Lump Sum as described in Section 5.2.6. Any dispute regarding whether treatment of water pumped from Saugus 1 & 2 can be discontinued, shall be resolved through binding arbitration, as provided in Sections 13.1 and 13.2 of this Agreement (unless all Parties agree that the issue may be resolved as provided in Article 7 of this Agreement), provided that the arbitration decision must be consistent with the requirements of all regulatory agencies with jurisdiction, and prior to determination of the Lump Sum as described in Section 5.2.6.

5.2.6 Subject to the provisions of Section 9.1.7 below, beginning five years after Commencement of Operations of the Project (which time period will be tolled during any period in excess of one week of Remedy Stoppage), CLWA, Whittaker, or AISLIC may demand binding arbitration, as provided in Article 13 of this Agreement, for purposes of obtaining a determination of a lump sum for payment in lieu of the Project O&M Costs that would otherwise be due and payable during the remainder of the up-to thirty-year period (the "Lump Sum") based on the following criteria:

5.2.6.1 The Lump Sum will be calculated on a net present value basis using appropriate assumptions and techniques, including consideration of risk, activities and costs anticipated to occur after payment of the Lump Sum, and any other factors introduced by the Parties at arbitration and determined to be relevant by the arbitrator, but the Lump Sum shall be calculated on the assumption that the Defendants' obligation to pay for the Project O&M shall

cease not later than thirty years after Commencement of Operations of the Project, except as provided in Section 9.1.7. The Lump Sum determination shall also be based, in part, on consideration of the actual Project O&M Costs experienced prior to arbitration, but excluding any such Project O&M Costs as may have been associated with start-up of the system or otherwise not indicative of future Project O&M Costs. The Lump Sum amount will not include any capital costs, including but not limited to, capital costs of Project Modifications implemented pursuant to Article 9 of this Agreement or any projected or potential capital costs for Project Modifications which become or may become necessary after the first three years following Commencement of Operations of the Project (which time period will be tolled during any period in excess of one week of Remedy Stoppage). The Lump Sum amount will not include any lobbying costs or legal fees or costs associated with obtaining funding from Public Funding Sources. With respect to the activities and costs subject to the annual flat fee payment of twenty thousand dollars ($20,000), described in Section 1.59, the Lump Sum will be calculated based on an assumption that the $20,000 annual flat fee will be escalated based on CPI. For purposes of this Agreement, CPI means the Consumer Price Index for All Urban Consumers (CPI-U) in the Los Angeles-Riverside-Orange County Consolidated Metropolitan Statistical Area, All Items, as published by the United States Department of Labor, Bureau of Labor Statistics, for which the base year is 1982-84 = 100, or if such publication ceases to be in existence, a comparable index agreed by the Parties.

5.2.7 In the event a Lump Sum determination is made in accordance with Section 5.2.6, the amount of the Lump Sum shall be paid by Defendants, jointly and severally, and subject to Section 2.5, to Plaintiffs within thirty (30) Working Days after the arbitrator's decision is issued and any petition filed prior to that time to vacate or correct the arbitrator’s

decision, pursuant to Cal. Code of Civil Procedure Section 1286.2 (Grounds for Vacation of Award) or Section 1286.6 (Grounds for Correction of Award), is finally adjudicated. Plaintiffs agree to use the Lump Sum amount solely for Project O&M Costs until such Lump Sum amount is exhausted, or until Plaintiffs' obligation to operate the Project, as set forth in Section 8.3.1, ceases.

ARTICLE 6. PAYMENTS FROM THE ESCROW ACCOUNTS

6.1 General

6.1.1 Payments from the Q2 Escrow Account, the Replacement Wells/Distribution Pipeline Capital Costs Escrow Account, the Project Capital Costs Escrow Account, and the Project O&M Escrow Account (the "**Escrow Accounts**") shall be made in accordance with the procedures set forth in this Section and each Escrow Account's instructions, which instructions shall be jointly approved by Plaintiffs, Whittaker, and AISLIC, and shall be consistent with the terms of this Agreement. The Parties acknowledge and agree that funding of the Escrow Accounts is based on the cost estimates contained in the Exhibits to this Agreement, which estimates were prepared by Plaintiffs' consultants and reviewed but not independently verified by Defendants' and AISLIC's consultants, and that the actual costs and expenses incurred will control all corresponding future payments from the Escrow Accounts. The Parties acknowledge and agree that payments from the Escrow Accounts are to be made solely for reasonable and necessary costs and expenses actually incurred and not paid or reimbursed by other sources, even if less than the sums set forth in any estimate. The Parties shall cooperate in minimizing all costs incurred and paid pursuant to this Agreement. The Parties acknowledge and agree that payments from the Escrow Accounts are to be made only for reasonable capital or operations and maintenance costs for the Project, the Replacement Wells and Associated

Pipelines, Q2 Treatment System, and Distribution Pipelines pursuant to this Agreement, and only to the extent such costs are necessary.

6.1.2 Except as provided in this Agreement, Defendants and AISLIC shall not be entitled to withdraw any funds from the Escrow Accounts or to direct or control the payment of such funds, and shall have no rights with respect to such funds, other than approval rights expressly provided in this Agreement. Reporting and payment of taxes owed on income earned with respect to the escrows shall be the responsibility of Plaintiffs.

6.1.3 Upon termination of the Escrow Accounts in accordance with this Agreement, any balance in the Escrow Accounts shall be refunded to the SF Escrow 1 Account. The Q2 Escrow Account shall terminate as set forth in Section 4.1.6. The Project Capital Costs Escrow Account shall terminate upon completion of the construction of the Project, provided that payment has been made for all Project Capital Costs in accordance with the procedures set forth in this Agreement. The Project O&M Costs Escrow Account shall terminate as set forth in Section 5.1.4. The Replacement Wells/Distribution Pipelines Escrow Account shall terminate upon completion of the construction of the Replacement Wells & Associated Pipelines and Distribution Pipelines, provided that payment has been made for all Replacement Wells & Associated Pipelines and Distribution Pipelines in accordance with the procedures set forth in this Agreement. The term "completion" as used in this Section 6.1.3 shall mean satisfactory completion of construction, startup and testing, and formal acceptance by the applicable Plaintiff.

6.2 <u>Payment of Capital Costs</u>

6.2.1 Costs incurred for activities and within the aggregate approved amounts set forth in Exhibit G, with respect to the Project, and Exhibit S, with respect to the Replacement Wells/Distribution Pipelines, following resolution of disputed costs pursuant to Article 7, shall

constitute **"Approved Capital Costs."** Costs incurred for activities or items that are not contained in Exhibits G and S for the applicable Escrow Account, or are in excess of the aggregate amount set forth therein, shall be subject to the approval of Whittaker and AISLIC or confirmation by the Cost Consultant in accordance with Article 7, below, and upon such approval or confirmation, such costs shall also constitute "Approved Capital Costs".

6.2.2 Plaintiffs shall prepare (1) a monthly statement setting forth capital costs incurred by Plaintiffs for the prior period for the Project (the "**Project Monthly Capital Costs Statement**") and paid by Plaintiffs from the Project Capital Costs Escrow Account, (2) a monthly statement setting forth capital costs incurred by Plaintiffs for the prior period for the Replacement Wells/Distribution Pipeline Capital Costs Escrow Account (the "**Replacement Wells/Distribution Pipeline Capital Costs Statement**") and paid by Plaintiffs from the Replacement Wells/Distribution Pipeline Capital Costs Escrow Account, in each case accompanied by copies of relevant underlying invoices and other supporting documentation for such costs. Copies of the Project Monthly Capital Costs Statement, the Replacement Wells/Distribution Pipeline Capital Costs Statement (together, the **"Monthly Capital Costs Statements"**) shall be provided to Whittaker, AISLIC and Steadfast for review at least ten (10) days prior to each monthly Technical Meeting described in Section 8.4, below, and the Parties shall exercise their best efforts to resolve any disputes concerning the invoices included in the Monthly Capital Costs Statements at or prior to the Technical Meeting.

6.2.3 In the event of a dispute concerning items on any invoice, if such dispute is not resolved at or prior to the Technical Meeting, Whittaker or AISLIC shall provide Plaintiffs with written notice of the reason it disputes the invoice within ten (10) days after the Technical Meeting, and the disputed item(s) shall be resolved by the Cost Consultant in accordance with

Article 7, below. Notwithstanding any pending dispute regarding Whittaker or AISLIC's disapproval of an invoice for payment, Plaintiffs may withdraw funds on a monthly basis from the Escrow Accounts to pay for Project Capital Costs, and Replacement Wells/Distribution Pipelines Capital Costs, subject to the provisions of Article 7 of this Agreement, and to pay Escrow Agent's fees, and any fees incurred for the Cost Consultant in accordance with Article 7 below or for arbitrator's fees in accordance with Article 13, Section 13.2 below. Any appropriate adjustment resulting from the determination of the Cost Consultant shall be reconciled in the following Monthly Capital Costs Statement.

6.2.4 Plaintiffs shall provide the tax identification number required to open any Escrow and shall be responsible for fulfilling tax payment, reporting and filing requirements. Interest that accrues on the balances in the Escrow Accounts shall be retained in those Accounts and available for use by Plaintiffs pursuant to the respective agreed uses of each Account until Termination, and credited against Defendants' funding obligations as to the applicable Account.

6.3 Payment of Q2 O&M Costs

6.3.1 Costs incurred for activities and within the approved Q2 Monthly O&M Costs amount shall constitute **"Approved Q2 O&M Costs."**

6.3.2 VWC shall, within ten (10) Working Days after the end of each semi-annual period after Commencement of Operations for the Q2 Treatment System, deliver to Whittaker and AISLIC a statement of invoices for Q2 O&M Costs incurred by VWC during the preceding semi-annual period **("Q2 Semi-Annual O&M Statement"**), accompanied by copies of all of the underlying invoices and other supporting documentation. Copies of the Q2 Semi-Annual O&M Statements shall be provided to Whittaker, AISLIC and Steadfast for review at least twenty (20) days prior to the Technical Meeting following the end of each semi-annual

period. Plaintiffs, Whittaker and AISLIC shall exercise their best efforts to resolve any disputes concerning the invoices included in the Q2 Semi-Annual O&M Statement at or prior to the Technical Meeting; provided, however, that Approved O&M Costs shall not be subject to review or approval.

6.3.3 In the event of a dispute concerning items other than Approved O&M Costs on any invoice, if such dispute is not resolved at or prior to the Technical Meeting, Whittaker or AISLIC shall provide Plaintiffs with written notice of the reason it disputes the invoice within ten (10) days after the Technical Meeting, and the disputed item(s) shall be resolved by the Cost Consultant in accordance with Article 7, below.

6.3.4 Notwithstanding any pending dispute regarding Whittaker's or AISLIC's disapproval of an invoice for payment, Plaintiffs may withdraw funds on a monthly basis from the Q2 Escrow Account to pay Q2 O&M Costs for the Q2 Treatment System, subject to the provisions of Article 7 of this Agreement, and to pay Escrow Agent's fees, and any fees incurred by Plaintiffs for the Cost Consultant in accordance with Article 7, below, or for arbitrator's fees in accordance with Article 13, Section 13.2 below. Any appropriate adjustment resulting from the determination of the Cost Consultant shall be reconciled in the following Q2 Semi-Annual O&M Statement.

6.3.5 Upon request, Plaintiffs shall additionally provide to SCLLC and RFI, or Buyer if the sale has closed, the statement of invoices with copies of the underlying invoices and supporting documentation.

6.4 <u>Payment of Project O&M Costs</u>

6.4.1 Costs incurred for Project O&M activities and within the aggregate amount set forth in the applicable Joint Estimate of Annual Project O&M or Estimate of

Supplemental Project O&M following resolution of any disputed items pursuant to Article 7, shall constitute "**Approved O&M Costs**." Costs incurred for activities or items that are not Approved O&M Costs or are in excess of the aggregate amount set forth in the applicable Joint Estimate of Annual Project O&M or Estimate of Supplemental Project O&M shall be subject to the approval of Whittaker and AISLIC or confirmation by the Cost Consultant in accordance with Article 7, below, and upon such approval or confirmation, such costs shall also constitute "Approved O&M Costs."

6.4.2 Plaintiffs shall, within ten (10) Working Days after the end of each quarterly period following the Commencement of Operations, deliver to Whittaker, AISLIC and Steadfast a statement of invoices for Project O&M Costs incurred and paid by Plaintiffs from the Project O&M Escrow Account during the preceding quarterly period (**"Quarterly Project O&M Statements"**), accompanied by copies of all of the underlying invoices and other supporting documentation. Copies of the Quarterly Project O&M Statements shall be provided to Whittaker and AISLIC for review at least ten (10) days prior to the Technical Meeting following the end of each quarter, and the Parties shall exercise their best efforts to resolve any disputes concerning the invoices included in the Quarterly Project O&M Statement at or prior to the Technical Meeting.

6.4.3 Upon request, Plaintiffs shall additionally provide to SCLLC and RFI, or Buyer if the sale has closed, the Quarterly Project O&M Statements with copies of the underlying invoices and supporting documentation.

6.4.4 In the event of a dispute concerning items on any invoice, if such dispute is not resolved at or prior to the Technical Meeting, Whittaker and/or AISLIC shall provide Plaintiffs with written notice of the reason it disputes the invoice within ten (10) days after the

Technical Meeting, and the disputed item(s) shall be resolved by the Cost Consultant in accordance with Article 7, below.

6.4.5 Notwithstanding any pending dispute regarding Whittaker or AISLIC's disapproval of an invoice for payment, Plaintiffs may withdraw funds on a monthly basis from the Project O&M Escrow Account to pay actual Project O&M Costs, subject to the provisions of Article 7 of this Agreement, and to pay Escrow Agent's fees, and any fees incurred for the Cost Consultant in accordance with Article 7 below or for arbitrator's fees in accordance with Article 13, Section 13.2 below. Any appropriate adjustment resulting from the determination of the Cost Consultant shall be reconciled in the following Quarterly Project O&M Statement.

ARTICLE 7. COST CONSULTANT ARBITRATION

7.1 Cost Consultant

7.1.1 Appointment of Cost Consultant. Michael Kavanaugh shall act as Cost Consultant and perform the functions of Cost Consultant set forth in this Agreement. If Mr. Kavanaugh, any replacement Cost Consultant, or all parties to a disputed issue, determine that the Cost Consultant lacks expertise as to a specific disputed issue, the Cost Consultant (after consultation with the parties to the dispute) shall retain an expert to assist him or her in reaching a determination of that particular dispute.

7.1.2 Functions of Cost Consultant

7.1.2.1 The Cost Consultant, and any replacement Cost Consultant, shall not act as an agent or representative for any Party, and shall exercise independent, neutral judgment in the performance of the Cost Consultant's responsibilities under this Agreement.

7.1.2.2 In the event of a timely demand for arbitration pursuant to Sections 4.1, 4.2, 4.3, 4.4, 5.2 (except as otherwise provided in Sections 5.2.5 and 5.2.6), 6.2,

6.3, 6.4, 8.2, 8.3, 8.4.2, and 9.1 of this Agreement, the Cost Consultant shall resolve the dispute in accordance with this Article 7.

7.1.3 Cost Consultant Fees: The Cost Consultant's fees and costs shall be included in Project O&M Costs.

7.1.4 Replacement of Cost Consultant: The Cost Consultant may only be replaced by mutual agreement of the Plaintiffs, Whittaker and AISLIC or for good cause established to the satisfaction of the arbitrator designated pursuant to Article 13, Section 13.2 of this Agreement. In the event of the resignation, replacement for good cause, or unavailability of the Cost Consultant, Plaintiffs and Whittaker and AISLIC shall jointly retain a replacement Cost Consultant. If the Parties are unable to agree on a replacement, a replacement shall be chosen by the arbitrator designated pursuant to Article 13, Section 13.2 of this Agreement.

7.2 Cost Consultant Dispute Resolution

In the event that the Parties are unable to resolve a dispute arising under the sections listed in Section 7.1.2.2, Plaintiffs, Whittaker and/or AISLIC may, within the time period provided by the applicable section of this Agreement, demand expedited arbitration of the dispute. If no time period is specified in the applicable section, then the demand for expedited arbitration must be made within ten (10) days after the Technical Meeting at which such dispute was addressed and not resolved. Any such demand, accompanied by all materials that Plaintiffs, Whittaker and/or AISLIC consider necessary for resolution of the dispute, shall be served on the other Parties. By the end of the tenth day after their receipt of such a demand for arbitration, the receiving Party may submit to the Cost Consultant and, if so, shall serve upon the other Parties all materials that the receiving Party consider necessary for resolution of the dispute. The Cost Consultant may request further information from the Parties or schedule an arbitration hearing

date (in-person or by telephone conference) and shall render a decision within twenty (20) days after delivery of the demand for arbitration or, if an arbitration hearing is conducted, within ten (10) days of the conclusion of the arbitration hearing, or at such later time as may be agreed by the parties to the dispute and the Cost Consultant. If a Party does not timely demand arbitration, its disapproval shall be deemed waived.

ARTICLE 8. OWNERSHIP, CONSTRUCTION, OPERATION AND MANAGEMENT OF FACILITIES

8.1 Ownership of Facilities

Plaintiffs shall own or lease all Project facilities, all Replacement Wells and Associated Pipelines, all Distribution Pipelines, and the Q2 Treatment System. Plaintiffs represent and warrant that they have reached separate agreement as to their respective ownership of Project facilities, and this Agreement shall remain in full force and effect regardless of any dispute or disagreement that may exist or arise relating to their ownership of Project facilities, all Replacement Wells and Associated Pipelines, all Distribution Pipelines, and the Q2 Treatment System.

8.2 Plaintiffs' Responsibilities

8.2.1 Plaintiffs will be responsible for the planning, development, design, permitting, construction, installation, operation and maintenance of the Project, Q2 Treatment System, and Replacement Wells & Associated Pipelines and Distribution Pipelines consistent with generally accepted industry standards and practices, and subject to review of Project Capital Costs and Project O&M Costs as provided in Articles 4 and 5 of this Agreement, review of Q2 Treatment System as provided in Article 4 of this Agreement, and review of Replacement Wells & Associated Pipelines and Distribution Pipelines as provided in Article 4 of this Agreement, and resolution of disputed items or costs as provided in Articles 6 and 7 of this Agreement.

Subject to dispute resolution by the Cost Consultant in accordance with Article 7, Plaintiffs shall conduct such planning, development, design, permitting, construction and installation of the Project and the Q2 Treatment System through one or more contracts with design professionals and licensed contractors approved by Whittaker and AISLIC, such approval not to be unreasonably withheld.

8.2.2 Whittaker and AISLIC have previously approved of U.S. Filter as the initial Resin Service Contract Vendor for the Project, and the Q2 Treatment System which has already commenced operations. Whittaker and AISLIC shall participate with Plaintiffs in the negotiation of the initial Resin Service Contract with U.S. Filter for the Project, and shall be participants in Plaintiffs' negotiation of any renewal or substitute Resin Service Contract(s) for the Project prior to payment of the Lump Sum. Prior to an arbitration determination of the Lump Sum, all Plaintiff/Whittaker/AISLIC negotiations on Resin Service Contract(s) will include consideration and negotiation of insurance that the Vendor is able to obtain for Plaintiffs and Defendants and obtaining Vendor Labor in connection with operations, monitoring, sampling and maintenance of the Project, and comparison with alternative options of Plaintiffs' costs for substantially same Labor and insurance, liability exposure considerations, and all associated costs. The Parties agree that Plaintiffs will have the option of performing all or certain of the operations, monitoring, sampling and maintenance of the Project and to secure their own insurance policies in accordance with Article 11 "Project Insurance", provided, however, that Defendants' Project O&M payment obligations for such labor and insurance costs will be limited to the cost of reasonably comparable, efficient and effective alternatives available by means of a bid for a resin service contract selected through a competitive bidding process in accordance with CLWA bid procedures and applicable law.

8.2.3 The Project shall be designed, constructed and installed in accordance with Exhibit F (subject to Project Modification pursuant to Article 9 of this Agreement) and all applicable state, federal and local government laws, regulations, ordinances and other applicable legal requirements.

8.3 Operation, Maintenance and Management of Project

8.3.1 Plaintiffs shall, in consultation with each other, operate, maintain and manage the Project (a) in accordance with all applicable state, federal and local government laws, regulations, ordinances, other applicable legal requirements (including the DTSC-approved IRAP), and generally accepted industry standards and practices, and (b) to perform its intended function of providing containment of perchlorate as defined in Section 9.1 of this Agreement, until exhaustion of any Lump Sum determined and paid pursuant to Section 5.2.6 of this Agreement; provided, however, that if there is no Lump Sum determination and payment, Plaintiffs shall operate, maintain, and manage the Project until Defendants cease funding Project O&M Costs pursuant to Section 5.2.4 of this Agreement or any other reason. In fulfilling their obligations hereunder, Plaintiffs shall not be required to fund any Project Modification.

8.3.1.1 Plaintiffs shall provide accounting services necessary for accurately tracking Project Capital and O&M Costs, invoice payments, budget process, deposits to and disbursements from the Escrow Accounts, and credits for funds received from Public Funding Sources.

8.3.2 Monitoring and Reporting

8.3.2.1 As contemplated by the DTSC approved IRAP, Plaintiffs shall arrange for and supervise the required groundwater monitoring and promptly after receipt

provide sampling data to Whittaker, AISLIC, and upon request, to SCLLC, RFI, or if the sale has closed, the Buyer.

8.3.2.2 Plaintiffs shall ensure timely, complete, and satisfactory preparation and submission of any reports and other deliverables that may be required by any state, federal or local government law, regulation, ordinance or other applicable legal requirement, including the DTSC-approved IRAP, and provide copies of such reports to Whittaker and AISLIC. Copies of such reports shall, upon request, be made available to SCLLC, RFI, or if the sale has closed, the Buyer. This obligation can be met by an electronic posting of the requested materials.

8.3.2.3 Plaintiffs shall maintain any and all books, records, accounts and supporting documentation **("Records")** either required by or necessary to document (i) compliance with all applicable state, federal and local government laws, regulations, ordinances and other applicable legal requirements; and (ii) responsible financial management of the Project. Financial Records shall be maintained in accordance with generally accepted accounting principles and shall be retained until the later of (a) five (5) years from the "as of" date or period applicable to the financial Record; or (b) the Internal Revenue Service retention period for such Records. All other Records shall be retained for a minimum of ten (10) years after the record was created. All Records shall be subject to audit pursuant to Section 8.5 of this Agreement.

8.3.2.4 Plaintiffs shall provide Whittaker, AISLIC, and Steadfast on a semi-annual basis, copies of the Plaintiffs' cost estimates for the Project, the Replacement Wells/Distribution Pipelines and the Q2 Treatment System, showing expenditures against such budgets, and shall provide copies of any reports, contracts or other materials to be considered at

the Technical Meeting, in accordance with Section 8.4, below. Plaintiffs shall make available such reports to SCLLC, RFI, or if the sale has closed, the Buyer, upon request.

8.4 Monthly Technical Meetings

8.4.1 Plaintiffs shall hold monthly meetings to consider technical, financial and other issues related to the planning, development, design, permitting, construction, installation, operation and management of the Project, the Q2 Treatment System, and the Replacement Wells/Distribution Pipelines ("Technical Meetings").

8.4.2 Participation in Technical Meetings

8.4.2.1 Each Plaintiff and Whittaker and AISLIC shall designate one or more representative(s) to participate in Technical Meetings in furtherance of planning, development, design, permitting, construction, installation, operation and management of the Project and the Q2 Treatment System, and the planning, development, design, permitting, construction, and installation of the Distribution Pipelines and Replacement Wells & Associated Pipelines. Such meetings shall be held monthly, or more or less frequently if agreed to by all Plaintiffs and Whittaker and AISLIC, upon no less than ten (10) days written notice from Plaintiffs. After Defendants' payment of the Lump Sum as described in Section 5.2.6 and installation of the Distribution Pipelines and Replacement Wells & Associated Pipelines, such meetings will no longer be held, unless otherwise requested by Whittaker and/or AISLIC, with reasonable compensation payable to Plaintiffs as agreed by the Parties.

8.4.2.2 Except for those contracts, proposals, and/or solicitation materials listed in Exhibit T attached to this Agreement, no contract, request for proposal, solicitation of bid package or other solicitation for planning, development, design, permitting, construction or installation of the Project, the Q2 Treatment System or the Distribution Pipelines

and Replacement Wells & Associated Pipelines shall be made by any Plaintiff unless approved by Whittaker and AISLIC, or -- if disapproved by Whittaker and/or AISLIC-- approved by the Cost Consultant. Copies of any contract, request for proposal, solicitation of bid package, report or other document to be considered at any Technical Meeting held pursuant to Section 8.4.2.1 of this Agreement shall be provided to each designated representative at least ten (10) days before the meeting, unless such document or report was then not available, in which event the document or report shall be distributed as long in advance of the meeting as possible. Whittaker and AISLIC shall notify Plaintiffs as soon as possible, but in any event within ten (10) Working Days after receipt, whether they respectively approve each contract, request for proposal, solicitation of bid package or other solicitation for planning, development, design, permitting, construction or installation of the Project, the Q2 Treatment System, or the Distribution Pipelines and Replacement Wells & Associated Pipelines. Absent such timely notice, approval shall be presumed. If Whittaker and/or AISLIC gives timely notice of disapproval of any such contract, request for proposal, solicitation of bid package or other solicitation for planning, development, design, permitting, construction or installation, such notice must be accompanied by a written explanation of the reason for disapproval and, if possible, a proposed revision that is approved.

8.4.2.3 Whittaker's and/or AISLIC's disapproval of any contract, request for proposal, solicitation of bid package or other solicitation for planning, development, design, permitting, construction or installation of the Project, the Q2 Treatment System, or the Distribution Pipelines and Replacement Wells & Associated Pipelines will be subject to binding arbitration, pursuant to Article 7 of this Agreement. The arbitration shall be conducted by the Cost Consultant. Within fifteen (15) Days after Whittaker and/or AISLIC's timely notice of disapproval of any contract, request for proposal, solicitation of bid package or other solicitation

for planning, development, design, permitting, construction or installation of the Project, the Q2 Treatment System, or the Distribution Pipelines and Replacement Wells & Associated Pipelines, Whittaker and/or AISLIC may demand such expedited arbitration. Any such demand, accompanied by all materials that Whittaker and/or AISLIC considers necessary for resolution of the dispute, shall be served on Plaintiffs within that fifteen (15) day period. By the end of the tenth day after their receipt of such a demand for arbitration, Plaintiffs may submit to the Cost Consultant and, if so, shall serve upon Whittaker and AISLIC, all materials that Plaintiffs consider necessary for resolution of the dispute. The Cost Consultant may request further information from the Parties and AISLIC or schedule an arbitration hearing date (in-person or by telephone conference) and shall render a decision within twenty (20) days after delivery of the demand for arbitration or, if an arbitration hearing is conducted, within ten (10) days of the conclusion of the arbitration hearing, or at such later time as may be agreed by the parties to the dispute and the Cost Consultant. If Whittaker and/or AISLIC does not timely demand arbitration, its disapproval shall be deemed waived.

8.4.2.4 Plaintiffs shall make available to Whittaker, AISLIC and Steadfast (i) copies of all notices, documents and other written communications (including, without limitation, drafts and revisions) concerning planning, development, design, permitting, construction or installation of the Project or the Q2 Treatment System sent by Plaintiffs or their consultants to DTSC, DHS, Regional Water Quality Control Board ("**RWQCB**"), California Public Utilities Commission ("**CPUC**"), U.S. Environmental Protection Agency ("**EPA**") and/or any other regulatory agency with jurisdiction at the same time and by the same manner of delivery by which such notices, documents or other written communications are sent; and (ii) promptly following receipt, all notices, documents and other written communications concerning

planning, development, design, permitting, construction or installation of the Project or the Q2 Treatment System received by Plaintiffs or their consultants from DTSC, DHS, RWQCB, CPUC, EPA and/or any other regulatory agency with jurisdiction. Plaintiffs shall additionally make all of such information available upon request to SCLLC, RFI, or if the sale has closed, to the Buyer.

8.4.2.5 Whittaker shall make available to Plaintiffs, AISLIC and Steadfast copies of all public or non-public and non-confidential notices, reports, documents and other written communications to or from Whittaker and DTSC, DHS, RWQCB, EPA and the Buyer (with the Buyer's consent) concerning the Site and groundwater remediation activities and obligations, at the same time and by the same manner of delivery by which such notices, documents or other written communications are sent, or promptly upon receipt by Whittaker.

8.5 Audits

Whittaker and/ or AISLIC may, upon reasonable notice and no more frequently than once a year, audit Plaintiffs' Records, including all invoices and supporting documentation for Project expenditures. The costs of any such audit shall be paid by the requesting party. Any dispute arising from an audit shall be resolved by the arbitrator designated pursuant to Section 13.2.2. Whittaker and/or AISLIC may demand arbitration of such a dispute within thirty (30) Days after receipt of the audit report triggering the dispute. Failure to demand arbitration within that time period shall be a waiver of any dispute triggered by the audit report.

ARTICLE 9. PROJECT MODIFICATION

9.1 Project Modification

9.1.1 The Parties acknowledge that the effectiveness of the remedy contemplated by the Project is not guaranteed by the Plaintiffs, although the Parties believe that the implementation of the Project represents a reasonable approach to providing containment of

perchlorate as defined below and restoring water production. In the event that within the first three (3) years after Commencement of Operations of the Project (which time period will be tolled during any period in excess of one week of Remedy Stoppage), a modification of the Project relating to perchlorate remediation is required (1) because of any regulatory requirement or directive or court order; (2) because of a change in water quality standards or regulations; (3) because of an increase in concentration levels of perchlorate in the Subject Wells; (4) to achieve containment of downgradient perchlorate migration; (5) to restore the contemplated capability of the Project to provide water for potable purposes; or (6) to improve Project efficiency or cost effectiveness, Plaintiffs, Whittaker, and/or AISLIC may develop and implement the necessary modification of the Project ("**Project Modification**") in accordance with this Article 9. Any Project Modification will be funded separately from and is not included in the amounts deposited into the Project Capital Costs Escrow Account as described in Section 1.56. For the purposes of this Agreement, containment is achieved when groundwater monitoring and modeling demonstrates (subject to agreement by representatives of Plaintiffs, Whittaker and AISLIC at the monthly Technical Meetings or there is a determination by the Cost Consultant) that hydraulic control of Saugus Formation groundwater in the vicinity of Saugus 1 and 2 is such that future perchlorate migration from the Site in the Saugus Formation will not result in impacts to existing Saugus Formation production wells identified in Exhibit U above an applicable Notification Level or Maximum Contaminant Level ("MCL"). The groundwater modeling and evaluation of containment will also consider other contaminant mass removal and contaminant containment measures implemented on and in the vicinity of the Site.

9.1.2 Promptly upon the occurrence of any of the circumstances described in Section 9.1.1, above, Plaintiffs may provide Whittaker, AISLIC and Steadfast with written

notification of the need for a Project Modification (**"Project Modification Notice"**), with a proposal for the required modification and/or a procedure for developing, implementing and funding such a modification, and the Plaintiffs, Whittaker and AISLIC shall exercise their best efforts to develop an appropriate and mutually acceptable Project Modification. Any proposed Project Modification shall incorporate the use of best available, cost efficient and effective technology upon consultation with the technical representatives of Whittaker and AISLIC. If, within 60 days after the receipt of the Project Modification Notice, the Plaintiffs, Whittaker and AISLIC are unable to agree upon a Project Modification, Plaintiffs may demand arbitration. In that event, the matter will be resolved by the Cost Consultant in accordance with Article 7.

9.1.3 In addition to the foregoing, within the first three (3) years after Commencement of Operations of the Project (which time period will be tolled during any period in excess of one week of Remedy Stoppage), Whittaker or AISLIC may propose a Project Modification based upon the occurrence of any of the circumstances described in Section 9.1.1 above, and deliver the proposal, including all appropriate documentation, to the other Parties for consideration at the next Technical Meeting. If the Plaintiffs, Whittaker and AISLIC are unable to agree on the proposed Project Modification within 60 days after delivery of the proposal and documentation, the proposing party may demand arbitration. In that event, the matter will be resolved by the Cost Consultant in accordance with Article 7.

9.1.4 Following the first three (3) years after Commencement of Operations of the Project (which time period will be tolled during any period in excess of one week of remedy stoppage requiring Project Modification), and prior to determination of a Lump Sum pursuant to Section 5.2.6, Whittaker or AISLIC may propose a Project Modification and deliver the proposal, including all appropriate documentation, to the other Parties for consideration at the

next Technical Meeting, if Whittaker or AISLIC are willing to pay for the capital costs and O&M costs associated with such Project Modification. If the Parties are unable to agree on the proposed Project Modification within 60 days after delivery of the proposal and documentation, the matter will be resolved by arbitration in accordance with Article 7.

9.1.5 Following the first three (3) years after Commencement of Operations of the Project (which time period will be tolled during any period in excess of one week of Remedy Stoppage, and prior to determination of a Lump Sum pursuant to Section 5.2.6, Plaintiffs may propose a Project Modification and deliver the proposal, including all appropriate documentation, to the other Parties for consideration at the next Technical Meeting, if Plaintiffs are willing to pay for the capital costs associated with such Project Modification. Defendants, subject to Section 2.5, will retain the obligation to pay Project O&M Costs, including any increase in such costs resulting from the Project Modification. If the Parties are unable to agree on the proposed Project Modification within 60 days after delivery of the proposal and documentation, the matter will be resolved by arbitration in accordance with Article 7.

9.1.6 Funding By Defendants

Once a Project Modification has been agreed upon or resolved by arbitration, the Project Modification shall become incorporated in the Project, and shall be handled in all respects as a part of the Project, with Defendants obligated on a joint and several basis subject to Section 2.5 to pay for all reasonable and necessary Project Capital Costs and Project O&M Costs associated with the Project Modification, including costs of replacement water in the event of a Remedy Stoppage within the first three years after Commencement of Operation of the Project (which time period will be tolled during any period in excess of one week of Remedy Stoppage). This Project Modification funding obligation for Project Capital Costs is in addition to the obligation

for funding Project Capital Costs as defined in Section 1.5.4, for which an amount of ten million dollars ($10,000,000) has been allocated. In the event that a modification of the Project is required or desired after the first three (3) years following Commencement of Operations of the Project (which time period will be tolled during any period in excess of one week of Remedy Stoppage), Plaintiffs will bear all Project Capital Costs associated with the Project Modification, except for Project Modifications proposed by Whittaker or AISLIC pursuant to Section 9.1.4. Any increase in O&M costs resulting from such Project Modification will be included in Project O&M Costs required to be paid by Defendants pursuant to the applicable provisions of this Agreement.

9.1.7 Newhall County Well NC13

9.1.7.1 Notwithstanding any other provisions of this Agreement, the provisions of this Section shall govern matters relating to Newhall County Well NC13 in the event of any conflict.

9.1.7.2 The Parties recognize that perchlorate contamination reportedly found in Newhall County Well NC13 may require well-head or equivalent treatment, or well replacement, in the future. If NCWD reasonably believes that well-head or equivalent treatment or replacement of Newhall County Well NC13 is in fact required, then such proposed measures may, in NCWD's sole discretion, be treated as a request for a Project Modification subject to the provisions of Section 9.1.2, even if the proposal is not made until later than three (3) years after Commencement of Operations of the Project; provided, however, that Whittaker and AISLIC retain expressly all rights under the Project Modification provisions of Article 9, including the right to object based on the cost-ineffectiveness of the proposal or on other grounds, and provided that the proposal shall not be treated as a Project Modification unless it is made no later

than July 1, 2017. The funding by Defendants of a Project Modification pursuant to this Section shall include capital costs even if it does not occur until later than three (3) years after Commencement of Operations of the Project.

9.1.7.3 If NCWD seeks and obtains a Project Modification with respect to NC13, then NC13 shall be treated as a Subject Well; however, unless and until NCWD obtains a Project Modification with respect to NC13, it shall not be deemed a Subject Well and there shall be no release of any liability in connection therewith.

9.1.7.4 Any Lump Sum Arbitration conducted at a time when NC13 is not part of a Project Modification shall have no impact on the obligations created in this Section. If NC13 is a Project Modification and is undergoing well head or equivalent treatment at the time a Lump Sum Arbitration for Saugus 1 and 2 Treatment Plant Operations and Maintenance is conducted, the Lump Sum Arbitration shall also determine a separate lump sum for the operation and maintenance of NC13 for the remainder of the up to thirty (30) year period after the commencement of well-head or equivalent treatment at NC13, deducting that portion of the Lump Sum determined for Saugus 1 and 2 Treatment Plant Operations and Maintenance costs allocable to NC13 from such separate lump sum to the extent NC13 is being treated through the Saugus 1 and 2 Treatment Plant.

9.1.7.5 In the event that NC13 becomes a Project Modification after a Lump Sum Arbitration for Saugus 1 and 2 Treatment Plant Operations and Maintenance costs has occurred, the obligation to pay for Project Modification costs shall continue for a period of up to thirty (30) years after the commencement of well-head or equivalent treatment at NC13, unless, beginning three (3) years after such Project Modification, Plaintiffs, Whittaker, or AISLIC, demand binding arbitration as provided in Article 13 of this Agreement and consistent

with this Section, to determine a lump sum payment of NC13 operation and maintenance costs for the remainder of the up to thirty (30) year period.

9.1.7.6 Prior to NC13 becoming a Project Modification, Plaintiffs' rights under the Rapid Response Fund will not be impaired.

ARTICLE 10. DISPUTES REGARDING POSSIBLE FUTURE PERCHLORATE CONTAMINATION

10.1 Process for Addressing Possible Future Perchlorate Contamination

The Parties acknowledge that the remedy contemplated by the Project and Distribution Pipelines, the Q2 Treatment System, and the Replacement Wells and Associated Pipelines does not specifically address possible future impacts of perchlorate on wells other than the Subject Wells.

10.1.1 In the event that there is detection of perchlorate contamination confirmed by subsequent sample above the Notification Level or MCL that affects water production from Presently Existing Saugus Production Wells or Alluvial Wells, other than one of the Subject Wells (hereinafter referred to as a "**Non-Subject Well Future Perchlorate Circumstance**" or "**Circumstance**"), one or more of the affected Plaintiffs shall provide written notice to all other Parties that a Non-Subject Well Future Perchlorate Circumstance exists. Such written notice shall include the facts relevant to such Circumstance, as well as documents relevant to such Circumstance, and shall specify whether any action, payment, or relief is being demanded. The sender of the Notice shall provide such other and further information and documentation, and updates regarding the Circumstance, as may be reasonably appropriate. In the event that an action, payment, or other relief is being demanded of Whittaker, Whittaker shall, within fifteen (15) days of receipt of the Notice, forward such Notice to AISLIC seeking a determination of coverage with respect to such demand, if Whittaker believes that coverage exists for such

demand. In its letter to AISLIC requesting a determination of coverage, and thereafter, Whittaker shall provide to AISLIC all information and documents relating to the Circumstance as have been provided to Whittaker, and Whittaker shall request that AISLIC provide a determination of coverage as soon as possible, and AISLIC shall respond no later than sixty (60) days following AISLIC's receipt of information and documents reasonably necessary to make a coverage determination. In the event that an action, payment, or other relief is being requested, the sender of the Notice shall meet and confer in good faith with such Party that is a subject of the Notice and, as appropriate, its insurers, to attempt to negotiate a resolution of the issues presented by the Circumstance. In the event that after 90 days from the date of receipt of the Notice (the "**Notice Period**"), the issues presented in the Notice are not resolved through such meeting or meetings, then any Plaintiff may elect to initiate the arbitration process for Future Perchlorate Contamination Disputes under Section 13.3.2.1 of this Agreement, provided that the AISLIC Future Perchlorate Determination of Coverage has been received by Whittaker, and Whittaker satisfies itself, at its discretion exercised in good faith, that AISLIC's determination of coverage is acceptable to allow the arbitration to go forward. Whittaker shall notify such Party and AISLIC in writing of Whittaker's decision within 15 days of receiving AISLIC's determination of coverage. If Whittaker provides such notice indicating that AISLIC's determination of coverage is not acceptable to Whittaker, or if AISLIC fails to provide any determination of coverage within the requisite sixty (60) period, then no Plaintiff may elect to initiate the arbitration process.. Where arbitration may be initiated hereunder and a Plaintiff elects to initiate the arbitration process, said Future Perchlorate Contamination Dispute will be resolved through the procedures for Future Perchlorate Contamination Disputes set forth in Section 13.3 of this Agreement.

10.1.2 Unless arbitration may be initiated pursuant to Section 10.1.1 above, and a Plaintiff elects in its sole discretion to initiate the arbitration process pursuant to Section 13.3.2.1 with respect to a Future Perchlorate Contamination Dispute, such dispute will not be subject to the procedures set forth in Section 13.3 and may instead be heard in its entirety by a court of competent jurisdiction.

10.1.3 Except as provided herein, each Party agrees that execution of this Agreement shall constitute their respective consents to jurisdiction of the Federal District Court, Central District of California, or the Superior Court of the County of Los Angeles with regard to Future Perchlorate Contamination Disputes. Notwithstanding the foregoing, the venue for any action against the Debtors, or the reorganized Debtors pursuant to a plan of reorganization approved by the Bankruptcy Court, shall be the Bankruptcy Court to the fullest extent that the Bankruptcy Court has subject matter jurisdiction over such action.

10.1.4 Notwithstanding the foregoing, in the event that Plaintiffs have obtained funds from the Rapid Response Fund pursuant to Section 11.2 to address a Circumstance as defined herein, any disputes over the use of the Rapid Response Fund for the Circumstance for which arbitration is initiated under Section 10.1.1 will be handled in accordance with Section 13.3.

ARTICLE 11. PROJECT INSURANCE; RAPID RESPONSE FUND

11.1 Project Insurance

11.1.1 Plaintiffs shall obtain and maintain in force the following policies of insurance for the Project or obtain additional insured status on policies offered by the Resin Service Contract Vendor throughout the first thirty years of operation of the Project (including any renewals with same or substantially similar coverage):

- a comprehensive general liability policy of insurance, including contractual liability, in substantially the form of Exhibit V to this Agreement (the "**CGL Policy**");
- an Environmental Impairment Liability policy in substantially the form of Exhibit W to this Agreement (the "**EIL Policy**") if obtainable for a commercially reasonable premium as agreed by the Parties and AISLIC or determined by the Cost Consultant;
- an earthquake policy of insurance in substantially the form of Exhibit X to this Agreement (the "**Earthquake Policy**")
- a First-Party Property Insurance policy in substantially the form of Exhibit Y to this Agreement (the **"Property Policy"**).

The CGL Policy, the EIL Policy, the Earthquake Policy and the Property Policy must be obtained by Plaintiffs with Plaintiffs and, other than the Earthquake and Property Policies, Defendants and the Buyer, identified as named insureds or additional insureds, and with coverages, policy limits, and deductibles or self-insured retentions as set forth on Exhibits V, W, X, and Y or as provided on substantially similar coverage, or alternatively, as provided on less expensive similar insurance offered through the Resin Service Contract Vendor. In the event that the Resin Service Contract Vendor is retained to provide operations and maintenance Labor for the Project, no cost of EIL coverage shall be paid by Defendants as Project O&M Costs or otherwise, so long as EIL coverage substantially similar to Exhibit W is provided to Plaintiffs by the Resin Service Contract Vendor.

11.1.2 Incremental costs of the Project Insurance coverage, in excess of the Plaintiffs' non-Project costs of such coverage, will constitute Project O&M Costs.

11.1.3 Duties of Named Insureds

11.1.3.1 Each Party that is named as an insured or additional insured under the CGL Policy, the EIL Policy, or substitute insurance obtained through Resin Service Contract Vendor, Earthquake Policy and Property Policy, shall perform its duties as an insured as set forth in each such policy of insurance.

11.1.3.2 No Party that is named as an insured or additional insured under the CGL Policy or EIL Policy shall act on behalf of any other Party also insured under said insurance policies with respect to (a) giving or receiving of notice of cancellation; or (b) receipt or acceptance of any endorsement issued to or for a part of any of said insurance policies. No Party insured under the CGL Policy or EIL Policy shall cancel, or assign the right to cancel, any of said policies without first obtaining the written consent of all other Parties, which shall not be unreasonably withheld.

11.1.4 The Parties agree not to make a claim against Plaintiffs, Whittaker, AISLIC, the Buyer, Debtors, Steadfast, or SF Escrow 1 or SF Escrow 2 for any sums paid by any insurance policy referenced in this Article 11. The insurance obtained pursuant to this Article 11 shall contain a waiver of subrogation against Plaintiffs, Whittaker, AISLIC, the Buyer, Debtors, Steadfast, and SF Escrow 1 and SF Escrow 2.

11.2 Rapid Response Fund

11.2.1 The Parties acknowledge that the remedy contemplated by the Project and Q2 Treatment System may not effectively contain downgradient movement immediately of perchlorate contamination in the Alluvial Aquifer or portions of the Saugus Formation. Accordingly, Plaintiffs may submit to AISLIC and AISLIC shall process and pay, as soon as practicable from the SF Escrow 1 Account in accordance with this Section 11.2 and the

Coverage and Claims Settlement Agreement, costs incurred to respond on an expedited basis to perchlorate contamination that is confirmed to be present by subsequent sampling, with split samples to be provided to Defendants, in concentrations exceeding the applicable Notification Level or MCL, in VWC wells N, N-7, N-8, S6, S7, S8, 201, and 205, and NCWD wells NC-10, NC-12 and/or NC-13 (the **"Threatened Wells"**) up to a total amount of ten million dollars ($10,000,000) (the **"Rapid Response Fund"**). Plaintiffs shall be entitled to seek such payment and/or reimbursement only for the period ending July 1, 2017.

11.2.2 Pending agreement between Plaintiffs, Whittaker and AISLIC, or a final determination of the appropriate remedy and amounts payable, allowable uses of the Rapid Response Fund by Plaintiffs include, (a) the additional costs of providing consumers with water from alternative water sources ("**Replacement Water**"), if and to the extent that Replacement Water is necessary and not otherwise available, from existing sources without negative impact to Plaintiffs or any of them, and (b) any costs for rental equipment and resin, including the costs of operating and maintaining leased treatment equipment, or for associated site acquisition, preparation and installation costs. Capital Costs for purchase of capital equipment or permanent capital improvements, and operations and maintenance costs associated with purchased capital equipment or permanent capital improvements, are not allowable uses of the Rapid Response Funds absent later agreement by both AISLIC and Whittaker on a case by case basis.

11.2.3 The Rapid Response Fund obligation will be paid from the funds maintained in the SF Escrow 1 Account. The Defendants and AISLIC agree, and the Defendants represent and warrant that they have obtained the agreement of the "Zurich Parties" and the "AISLIC Parties" (as defined in the Coverage and Claims Settlement Agreement) that

the funding of the Rapid Response Fund from the SF Escrow 1 Account falls within the Uses of SF Escrow 1 Funds, Section IV.F.5.a.(i) of the Coverage and Claims Settlement Agreement.

11.2.4 To obtain payment and/or reimbursement from the Rapid Response Fund, Plaintiffs must directly tender their written request(s) for payment for a ninety day period of time, along with a sworn statement describing the need for specified funds due to confirmed perchlorate contamination in concentrations exceeding the applicable Notification Level or MCL in one or more of the Threatened Wells, and identifying the last date, if any, that the Well for which funding is sought may have been disinfected and the product or solution that may have been used, to AISLIC, with courtesy copies to Defendants. All written requests for payment shall state the need for said specified funds within a ninety day period. Any request for additional ninety day funding shall require a new written request for payment accompanied by a new supporting statement as described above and supporting cost documentation. Within fifteen (15) days of receipt of such written request and sworn statement, AISLIC will instruct Wells Fargo Bank or other agreed bank to make payment of the required Rapid Response Funds to Plaintiffs from the SF Escrow 1 Account.

11.2.5 In the event that the SF Escrow 1 Account Terminates (as defined in Section 5 of the SF Escrow 1 Instructions) prior to the expiration of the time period described in Section 11.2.1 above and in the further event that the $10,000,000 Rapid Response Funds have not been fully paid, the AISLIC Policy Coverages A-F, to the extent that limits remain thereunder, will be available to Whittaker to provide Plaintiffs with a rapid response for the remainder of the time period described in Section 11.2.1 above for the remaining unpaid amount of the agreed $10,000,000 in Rapid Response Funds. In the aforementioned circumstances, Plaintiffs must directly submit their written request(s) for payment for a ninety day period of

time, along with a sworn statement describing the need for specified funds due to confirmed perchlorate contamination in concentrations exceeding the applicable Notification Level or MCL in one or more of the Threatened Wells as described in Section 11.2.4, to Whittaker, with courtesy copies to AISLIC. Within seven (7) Working Days of receipt of such written request and sworn statement, Whittaker, in turn, shall submit a claim pursuant to this Agreement to AISLIC under Coverages A-F for the aforementioned Rapid Response Funds, and Whittaker's payment shall be due within twenty-eight (28) Working Days of receipt of Plaintiff's written request to the extent that limits remain under AISLIC Policy Coverages A-F. Upon receipt of said claim from Whittaker ("Whittaker Rapid Response Claim") and provided that the CLWA Plaintiffs have provided a written request and sworn statement to Whittaker pursuant to and in accordance with Section 11.2 "Rapid Response Fund" of this Agreement, AISLIC shall: (1) treat any Whittaker Rapid Response Claim as a covered claim under AISLIC Policy Coverages A, B, C, D, E, or F, and respond to said claim pursuant to the terms of the AISLIC Policy Coverages A-F and without reservation of coverage rights to the extent that limits remain under AISLIC Policy Coverages A-F, but with reservation of AISLIC's rights, to the full extent of the rights set forth herein (a) to assert disputes, claims or controversies under this Agreement and (b) to assert all of Whittaker's substantive defenses to payment of Rapid Response Funds as provided in this Agreement and (2) make payment on Whittaker's Rapid Response Claim to CLWA Plaintiffs on behalf of Whittaker within twenty one (21) Working Days of AISLIC's receipt of a Whittaker Rapid Response Claim that is fully compliant with Section 11.2 of the Castaic Lake Water Agency Litigation Settlement to the extent that limits remain under AISLIC Policy Coverages A-F. Nothing in this Section 11.2.5 of this Agreement is intended or shall be construed to be agreement as to which Coverage(s) (i.e., A, B, C, D, E, or F) apply to Whittaker's Rapid

Response Claim(s). This Section 11.2.5 is unique and specific to Whittaker's Rapid Response obligation and nothing in this Section 11.2.5 is intended to be or shall be of precedential value or construed to be agreement as to treatment or handling of any other current or future claims that Whittaker may assert under or Plaintiffs may assert with respect to the AISLIC Policy.

11.2.6 Any dispute, claim or controversy concerning payment of costs or losses under this Section, including any disputes as to the reasonableness and necessity of said costs, will be resolved by expedited binding arbitration in accordance with Section 13.2 or Section 13.3, as appropriate.

11.2.7 This Rapid Response Fund remedy is in addition to any remedy otherwise available to Plaintiffs at law or in equity, or pursuant to this Agreement, provided that Plaintiffs will not seek duplicate recovery from Defendants or their insurers or AISLIC or SF Escrow 1 for any losses, costs, expenses, or damages paid by the Rapid Response Funds. Defendants and their insurers reserve all defenses they may have with respect to payment of Rapid Response Funds, including but not limited to the defense that Plaintiffs' disinfection or other operation and maintenance procedures carried out after the Effective Date hereof have contributed to or caused the perchlorate detection and the defense that Defendants are not otherwise legally or factually responsible or liable for the perchlorate contamination. In the event that Rapid Response Funds are determined by binding arbitration to have been improperly requested by or paid to Plaintiffs in whole or in part based upon defenses the Defendants or their insurers or AISLIC may have with respect to payment of Rapid Response Funds, Plaintiffs shall be required to reimburse those funds in whole or in part to the SF Escrow 1 or the AISLIC Coverages A-F limits, as appropriate, which Escrow and/or Policy shall be replenished to the extent of the reimbursement.

ARTICLE 12. RELEASES AND DISMISSAL OF UNDERLYING ACTION

12.1 Plaintiffs' Releases

12.1.1 In consideration of Defendants' payments, promises, and covenants herein, including funding provided by or on behalf of Defendants pursuant to the Coverage and Claims Settlement Agreement and the Related Settlement, each Plaintiff, on behalf of itself and its predecessors, successors and assigns, hereby forever releases, acquits and forever discharges Whittaker and its insurers (including but not limited to AISLIC, The Insurance Company of the State of Pennsylvania ("ISOP"), and Steadfast), SCLLC, RFI, RFI Realty, BRLLC, the Buyer, and Steadfast Santa Clarita Holdings, LLC (**"SSCH"**), and their respective officers, directors, shareholders, members, employees, agents, representatives, contractors, reinsurers, consultants, subsidiaries, affiliates, predecessors, successors and assigns from any and all actions, causes of action, claims, demands, liabilities, damages, penalties, fines, debts, losses, costs, expenses and fees (including, without limitation, litigation costs and attorney and consultant fees) of every kind and nature whatsoever, in law and in equity, whether known or unknown, suspected or unsuspected, foreseen or unforeseen, arising out of or relating to the past, present or future detection of perchlorate in the Subject Wells, (except for claims addressed in Section 12.1.2 and Section 12.1.3 which are not released in this Section 12.1.1) including (without limitation) all claims for past and future purchase of replacement water as a result of the detection of perchlorate in the Subject Wells (except for the costs of providing consumers with water from alternative water sources during the first three years after Project operations commence if there is a Remedy Stoppage during said time period), all Plaintiffs' Past Environmental Claims, all Plaintiffs' Past Design Costs Claims, all Plaintiffs' claims relating to the V-206 Replacement Well, including, but not limited to, construction and installation of VWC's well V-206 and associated pipelines, and permanent closure and abandonment of VWC's well V-157, all claims

with respect to the Capital Costs for Q2, and all claims for past or future response costs and other costs incurred as a result of perchlorate detection in the Subject Wells, including attorneys' and consultants' fees and costs. However, excluded from the release provided in this section are any claims or causes of action arising out of or relating to any future claims, causes of action, suits, legal or administrative proceedings by third parties (or by Defendants where the proceeding is initiated by a third party) against Plaintiffs for actual bodily injury, property damage or response costs allegedly suffered or incurred by such third-parties, including but not limited to any and all third party claims, causes of action, suits, legal or administrative proceedings against Plaintiffs and any resulting damages, losses, penalties, fines or liabilities , after the Effective Date arising out of or related to alleged exposure to or release of perchlorate or other chemicals caused by Plaintiffs' operation of the Project, (collectively, **"Third Party Claims"**) but not excluding any Third Party Claims resulting from the Plaintiffs' negligence or willful misconduct in operation of the Project. Plaintiffs represent and warrant that, as of the Effective Date of this Agreement, they are not aware of any Third Party Claims brought against any of them. The releases provided in this Section 12.1.1 shall be effective upon payment of all funds required to be paid within thirty (30) days after the Effective Date of this Agreement..

12.1.2 Release For Costs Applied Against Escrows. Upon each payment from the Escrow Accounts for Project Capital and O&M Costs, Q2 O&M Costs, and Replacement Wells/Distribution Pipeline Capital Costs (and following any adjustment for a disputed item), and upon each payment of Rapid Response Funds from the SF Escrow 1 Account or the AISLIC Policy, as applicable, each Plaintiff, on behalf of itself and its predecessors, successors and assigns, hereby forever releases, acquits and forever discharges Whittaker and its insurers (including but not limited to AISLIC, ISOP and Steadfast), SCLLC, RFI, RFI Realty, BRLLC,

the Buyer, and SSCH, and their respective officers, directors, shareholders, members, employees, agents, representatives, contractors, reinsurers, consultants, subsidiaries, affiliates, predecessors, successors and assigns from any and all actions, causes of action, claims, demands, liabilities, damages, penalties, debts, losses, costs, expenses and fees (including, without limitation, litigation costs and attorney and consultant fees) of every kind and nature whatsoever, in law and in equity, in connection with the Project, the Q2 Treatment System, the Replacement Wells and the Distribution Pipelines, and the Rapid Response Funds, but only to the extent of such payment.

12.1.3 As to Project O&M Costs, and subject to Section 9.1.7 hereof, upon the sooner of payment by Defendants of a Lump Sum determined by arbitration pursuant to Section 5.2.6 hereinabove or of payment of all Project O&M pursuant to Article 5, each Plaintiff, on behalf of itself and its predecessors, successors and assigns, hereby forever releases, acquits and forever discharges Whittaker and its insurers (including but not limited to AISLIC, ISOP and Steadfast), SCLLC, RFI, RFI Realty, BRLLC, the Buyer, and SSCH and their respective officers, directors, shareholders, employees, agents, representatives, contractors, reinsurers consultants, subsidiaries, affiliates, predecessors, successors and assigns from any and all actions, causes of action, claims, demands, liabilities, damages, penalties, debts, losses, costs, expenses and fees (including, without limitation, litigation costs and attorney and consultant fees) of every kind and nature whatsoever, in law and in equity, in connection with the Project. The releases provided in this Section 12.1.3 exclude any Third Party Claims arising after the Effective Date related to alleged exposure to or release of perchlorate or other chemicals caused by Plaintiffs' operation of the Project, other than Third Party Claims resulting from the Plaintiffs' negligence or willful misconduct in operation of the Project.

12.1.4 Plaintiffs agree that the Steadfast PLC policy no. PLC 3598792-00 issued by Steadfast to Defendants has been exhausted by Steadfast's deposit into the SF Escrow 1 Account and the SF Escrow 2 Account of the remaining limits of this pollution liability coverage (**"Steadfast PLC Policy"**) insurance policy, with Plaintiffs waiving any and all purported rights and claims they have or may have against such PLC Policy. Plaintiffs waive and release any and all purported rights and claims they have or may have against the Steadfast EOC policy no. 3554336.

12.1.5 Each of the Plaintiffs has filed a proof of claim in each of the Bankruptcy Cases in which RFI and SCLLC are the debtors asserting the liquidated and unliquidated claims alleged by them against RFI and SCLLC in the Underlying Action (**"Proofs of Claim"**). In place of the Proofs of Claim, Plaintiffs shall have a single allowed claim against the Debtors, and each of them, in the Bankruptcy Cases in an amount equal to the obligations of Debtors pursuant to this Agreement (**"Allowed Claim"**) and the Final Approval Order shall so provide. Except to the extent that certain funds in SF Escrow 1 will be paid on behalf of Defendants to Plaintiffs and to fund escrow accounts for the benefit of Plaintiffs pursuant to this Agreement, and the Coverage and Claims Settlement Agreement, Plaintiffs waive any right to any payment or distribution of assets, property or funds of the estates of the Debtors in the Bankruptcy Cases by reason of their Allowed Claim and such Proofs of Claim shall be deemed satisfied by the consideration furnished by Debtors pursuant to this Agreement. Plaintiffs further agree that, notwithstanding any other provision of this Agreement, their sole recourse against the Debtors and any reorganized Debtors pursuant to a plan of reorganization approved by the Bankruptcy Court, for any and all actions, causes of action, claims, demands, liabilities, damages, penalties, debts, losses, costs, expenses and fees (including, without limitation, litigation costs and attorney

and consultant fees) of every kind and nature whatsoever, in law and in equity against the Debtors shall be the SF Escrow 1 Account.

12.1.6 Plaintiffs agree that this Settlement does not compromise, release, diminish or adversely affect the rights of Debtors or their successors in interest to enforce obligations, if any, of SCWC and/or NCWD to provide water to the Property pursuant to the documents attached collectively as Exhibit Z.

12.1.7 Plaintiffs agree that: (i) the Steadfast PLC Policy is released by all such Plaintiffs such that no Plaintiff can assert any claim against the Steadfast PLC Policy; and (ii) the Steadfast EOC Policy is released by all such Plaintiffs such that no Plaintiff can assert any claim against the Steadfast EOC Policy.

12.2 Bankruptcy Releases.

Debtors, acting on behalf of themselves and on behalf of each of their bankruptcy estates, shall release the Plaintiffs from any and all claims, obligations, causes of action and liabilities (i) under any of sections 542, 544, 545, 547, 548, 549, or 553 of the Bankruptcy Code to avoid any alleged transfer to or seek turnover from a Plaintiff, (ii) under section 550 of the Bankruptcy Code to recovery any such alleged transfer, (iii) under section 510(c) of the Bankruptcy Code to subordinate any claim of a Plaintiff, and (iv) under Section 502(d) or 502(j) of the Bankruptcy Code.

12.3 Civil Code Section 1542

12.3.1 The Parties to this Agreement have read and fully understand the statutory language of Section 1542 of the Civil Code of State of California ("Section 1542"), which reads as follows: "A general release does not extend to claims which the creditor does not know or

suspect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor."

12.3.2 As to the releases given in Section 12.1 and 12.2, each Party hereto acknowledges that it may hereafter discover facts different from, or in addition to, the facts which it now knows or believes to be true with respect to the perchlorate groundwater contamination in the area of the Site or Subject Wells, and that it is each Party's intention to specifically waive and relinquish any and all protections, privileges, rights and benefits under Section 1542 as to the claims to be specifically released under Sections 12.1 and 12.2.

12.4 Dismissal of Underlying Action

Within forty-five (45) Days after the Effective Date, and provided that the Defendants have paid to Plaintiffs the full amount required to be paid within thirty (30) days after the Effective Date of this Agreement, the Plaintiffs shall file a request for dismissal, with prejudice to the extent expressly released herein and otherwise without prejudice, of the claims asserted in the Underlying Action and, thereafter, shall do whatever is required to effectuate such dismissal.

12.4.1 With respect to any claims dismissed without prejudice, the Parties agree not to assert any statute of limitation or equitable defense based on the passage of any period of time prior to, at a minimum, one year after the Effective Date of this Agreement (the "Tolled Period"). The Tolled Period will be extended automatically for an additional three years (the "Extended Period") unless a Party determines to terminate the Tolled Period at that Party's sole discretion, and provides written notice at any time within the Extended Period, of a specific date, set no earlier than ten days from the date of such written notice. Any applicable statutes of limitation or equitable defense based on the passage of time shall begin to run after four years have elapsed from the Effective Date, or after an earlier date that may be set in accordance with

the foregoing termination of the Extended Period. Notwithstanding anything in this Section, and unless the Extended Period is terminated by a Party, the Parties agree to meet and confer before the expiration of the Extended Period to consider renewal of the tolling period for up to an additional four years in accordance with California Code of Civil Procedure Section 360.5.

12.4.2 With respect to any claims Plaintiffs may allege to have with respect to or arising out of the presence of perchlorate or other hazardous substances, wastes or materials in the groundwater, soil or surface water at or in the vicinity of the Site, Plaintiffs agree to forebear from bringing any action in any court based on such claims for the Tolled Period of one year after the Effective Date of this Agreement and for any additional period of time that the Extended Period is in effect in accordance with subsection 12.4.1 (the "Forbearance Period"). The Forbearance Period shall run concurrently with the Tolling Period and any Extended Period, and the Parties may, by mutual agreement, renew the Tolling and/or Extended Periods in accordance with subsection 12.4.1. Subsections 12.4.1 and 12.4.2 expressly do not apply to any claims that may be asserted in accordance with the provisions of Section 11.2 (Rapid Response Fund), above, and any defenses thereto.

12.5 Notification Regarding Use of Well Disinfectant

Prior to performing any disinfection of any of the Subject Wells or Threatened Wells, Plaintiffs agree to provide Whittaker and AISLIC with 10 days written notice. Prior to applying any disinfecting product or solution down-hole, one water sample will be collected from the Well and analyzed for perchlorate. After all down-hole operations are completed, and prior to putting the Well back into service, one water sample will be collected and analyzed for perchlorate. In addition, one sample of the product or solution to be used for down-hole disinfection will be collected and analyzed for perchlorate. Plaintiffs further agree that in all

other respects, they will follow the American Water Works Association's "AWWA Standard For Disinfection Of Wells", dated November 1, 2003, attached hereto as Exhibit CC, and that Plaintiffs will timely provide Whittaker and AISLIC with the analytic results of the above-referenced three samplings, as well as copies of a completed Worksheet containing the information called for in the AWWA's sample Worksheet that is attached hereto as part of Exhibit CC. All three (3) samples will be tested for perchlorate using the approved United States Environmental Protection Agency (EPA) and DHS Method 314.0 and report the results using a detection limit for reporting (DLR) of 4 ppb. Plaintiffs agree to use the most current perchlorate test method and DLR approved by DHS for drinking water in the event Method 314 is revised in the future.

ARTICLE 13. DISPUTE RESOLUTION

13.1 Disputes Governed by Article 13

All disputes between Parties to this Agreement arising out of or related to this Agreement, including the interpretation, enforcement or breach of this Agreement, (excluding disputes to be decided by the Cost Consultant, which are to be resolved pursuant to Article 7), are subject to the dispute resolution procedures contained in this Article 13.

13.1.1 Procedures Applicable To All Disputes Governed by Article 13

13.1.1.1 Additional Procedural Requirements. The procedural rules of the arbitration herein shall be supplemented by any non-conflicting arbitration procedures of the Judicial Arbitration and Mediation Service (**"JAMS"**) Comprehensive Arbitration Rules & Procedures, or such other alternative dispute resolution provider as may be agreed upon by the parties to the dispute in writing, applicable to commercial arbitration and may be modified by agreement of the parties to the dispute (the "Rules"). If any provision of this Agreement conflicts with the Rules, then this Agreement shall govern.

13.1.1.2 Retention of Consultants. The arbitrator may seek the approval of the parties to the dispute to retain a consultant. The arbitrator shall provide to all parties to the dispute an explanation for the need for the consultant, the consultant's identity, hourly rate, and the estimated costs of the service. All parties to the dispute must approve the retention of the consultant and, if retention of the consultant is approved, the parties to the dispute shall share equally the costs of the consultant. The consultant's cost shall not exceed ten thousand ($10,000) without the prior written consent of the parties to the dispute.

13.2 Expedited Arbitration Procedures

13.2.1 Notice of Dispute; Good Faith Meeting; Demand for Arbitration

Any Party who perceives that a dispute has arisen which is subject to the dispute resolution procedures contained in this Article 13, other than Future Perchlorate Contamination Arbitration or Lump Sum Arbitration governed by Section 13.3 below, may give written notice of such dispute to all other Parties. The Parties shall meet to resolve the dispute within seven (7) Working Days after receipt of such written notice by the last Party to receive it. If the Parties are unable to resolve the dispute in good faith within fifteen (15) Days after receipt of such written notice by the last party to receive it, the Party that gave written notice of the dispute may initiate the arbitration procedure described below by delivery of a Demand for Arbitration to all other Parties (excluding any that no longer legally exist) no later than thirty (30) Days after receipt of the written notice of such dispute by the last party to receive it.

13.2.2 Approved Arbitrators

Disputes subject to the expedited arbitration procedure set forth in this section 13.2 shall be decided by one impartial arbitrator qualified to serve as an arbitrator. The list in Exhibit AA consists of five (5) approved arbitrators; however, on or about the third

anniversary of the effective date of this agreement, the parties shall meet and agree to a list of five arbitrators for the next three year period, and the same process shall take place on each third anniversary thereafter. The list of arbitrators may be supplemented by mutual agreement of the Parties in writing. An arbitrator shall be chosen by agreement of the parties involved in the dispute. If the parties involved in the dispute are unable to reach agreement, the one arbitrator shall be selected by each side (Defendants and AISLIC being considered one side for purposes of such strikes) striking one arbitrator from the list in succession (beginning with Plaintiffs) until only one arbitrator remains. Plaintiffs shall strike one arbitrator within two (2) Working Days of notice of the arbitration. Each successive strike shall take place within two (2) Working Days thereafter. Notice shall be given pursuant to the provisions of Section 15.4 hereof. If the list of five (5) approved arbitrators needs to be supplemented in order to assure a complete list of five (5) available arbitrators before such a selection, the parties to the dispute shall supplement the list by mutual agreement, or in the absence of such agreement, the list shall be supplemented by the Judicial Arbitration and Mediation Service ("JAMS") in Los Angeles (or a mutually agreeable substitute). If the method described above does not identify a person available to act as arbitrator for any particular dispute, the parties involved in the dispute shall use their best efforts to select an arbitrator by mutual agreement. If the parties to the dispute are unable to reach agreement, the listing process set forth by JAMS Rule 15 shall govern.

13.2.3 Expedited Arbitration

Plaintiffs and Defendants and AISLIC shall, within fifteen (15) Working Days after receipt of a Demand for Arbitration pursuant to Section 13.2.1, above, provide written statements of position to the arbitrator, with copies to the other Parties, setting forth their respective positions. Within ten (10) Working Days after receipt of such a written statement of

position, any party may provide a rebuttal to the arbitrator, with copies to the other Parties. Evidentiary hearing and oral argument of the disputed matter shall be held no earlier than fifteen (15) Working Days after delivery of the rebuttal summaries, and should be scheduled at the earliest available convenient time for the parties to the dispute and the arbitrator. The arbitrator shall render a binding written opinion, including detailed findings of fact and conclusions of law, within ten (10) Working Days after the conclusion of the evidentiary hearing and oral argument.

In any such arbitration in which the written opinion is rendered by the arbitrator prior to the arbitrator's determination of the Lump Sum pursuant to Section 5.2.6 and 13.3, the arbitrator's fees shall be a Project O&M Cost. The award by the arbitrator may include the award of reasonable attorney's fees to the prevailing party, if the arbitrator finds that there is a "prevailing" party. The arbitrator will inter alia be empowered to award response costs or damages. The arbitrator will not be empowered to award injunctive or declaratory relief or award punitive damages or determine coverage issues under the AISLIC Policy. In awarding damages resulting from a breach of the Agreement, the arbitrator may take into consideration, among other things, any disruption to the Project, lost production capacity in the Subject Wells, and costs of replacement water resulting from Defendants' breach of their funding obligations hereunder. Any arbitration award against the Debtors is subject to Section 2.5 herein. The Parties acknowledge and agree that each of the Plaintiffs, in its sole discretion, reserves the right to seek declaratory and/or injunctive relief in a state or federal court action against Defendants, notwithstanding the initiation or resolution of any arbitration proceeding under this Article 13. The Plaintiffs agree that they will refrain from pursuing any claim or lawsuit for injunctive or declaratory relief against Defendants based on the same factual circumstances, pending receipt of the arbitrator's determination. The Parties understand and agree that the record from any

arbitration will be admissible in any future claim or lawsuit by Plaintiffs against Defendants or AISLIC, or by Defendants or AISLIC against Plaintiffs, for injunctive or declaratory relief based on the same factual circumstances.

13.3 Procedures Applicable To Arbitration of Future Perchlorate Contamination Disputes And Arbitration of Lump Sum

13.3.1 Panel of Arbitrators. Future Perchlorate Contamination Disputes pursuant to Article 10 hereof and Arbitration of Lump Sum pursuant to Section 5.2.6 and 9.1.7 hereof shall be decided by a panel of three impartial arbitrators qualified to serve as arbitrators. The list in Exhibit "BB" consists of eleven (11) approved arbitrators. The list of arbitrators may be supplemented or amended by mutual agreement of the Parties in writing. An arbitration panel of three (3) shall be chosen by agreement of the parties involved in the dispute. If the parties involved in the dispute are unable to reach agreement, the panel of three (3) arbitrators shall be selected by each side striking one arbitrator from the list in succession (beginning with Plaintiffs) until only a panel of three arbitrators remains. Plaintiffs shall strike one arbitrator within five (5) Working Days of notice of the arbitration. (Defendants and AISLIC being considered one side for purposes of such strikes.) Each successive strike shall take place within two (2) Working Days thereafter. Notice shall be given pursuant to the provisions of Section 15.4 hereof. If the list of eleven (11) approved arbitrators needs to be supplemented in order to assure a complete list of eleven (11) available arbitrators before such a selection, the parties to the dispute shall supplement the list by mutual agreement, or in the absence of such agreement, the list shall be supplemented by the Judicial Arbitration and Mediation Service ("JAMS") in Los Angeles (or a mutually agreeable substitute). If the method described above, does not identify a person available to act as arbitrator for any particular dispute, the parties involved in the dispute shall

use their best efforts to select an arbitrator by mutual agreement. If the parties to the dispute are unable to reach agreement, the listing process set forth by JAMS Rule 15 shall govern.

13.3.2 Election to Arbitrate.

13.3.2.1 Future Perchlorate Contamination Disputes

If there is a dispute with respect to Future Perchlorate Contamination pursuant to Article 10 hereof, any Plaintiff may elect, in its sole discretion, to arbitrate said Future Perchlorate Contamination dispute in accordance with the provisions of Article 10 and this Section 13.3.2. A Plaintiff electing to arbitrate shall initiate the arbitration procedure described below by delivery of a Demand for Arbitration to all other Parties (excluding any that no longer legally exist) no later than thirty (30) Days either (i) after receipt of Whittaker's decision regarding an acceptable AISLIC Future Perchlorate Determination of Coverage as required by Section 10.1.1, or (ii) the expiration of the Notice Period under Section 10.1.1, whichever is later. Within fifteen (15) days of the selection or determination of the panel of arbitrators pursuant to Article 13.2.1 hereof, each party to the dispute shall submit to the arbitrators, and serve on all parties to the arbitration, a short statement of the dispute, their respective positions, and a proposed discovery and hearing schedule. The arbitrators shall be empowered to resolve all issues of law and fact relating to the dispute, including without limitation any issues relating to liability, compensatory damages, response costs and/or the nature and scope of the remedy associated with the presence of perchlorate, but shall not be empowered to award injunctive or declaratory relief. However, the arbitrators designated for any Future Perchlorate Contamination Dispute, may retain continuing jurisdiction after they render a final, binding decision to resolve any additional response cost and damage claims thereafter arising from the same, continuous or related pollution conditions that are involved in the dispute

for which they originally were designated. The Parties acknowledge and agree that each of the Plaintiffs, in its sole discretion, reserves the right to seek declaratory and/or injunctive relief in a state or federal court action against Defendants respecting any Future Perchlorate Contamination Dispute, notwithstanding the initiation or resolution of any arbitration proceeding under this Article 13. The Plaintiffs agree that they will refrain from pursuing any claim or lawsuit for injunctive or declaratory relief against Defendants based on the same factual circumstances, pending receipt of the arbitrator's determination.

13.3.2.2 Lump Sum Arbitration

If Plaintiffs, Whittaker, or AISLIC desire to initiate Lump Sum Arbitration pursuant to Section 5.2.6 and/or 9.1.7, the requesting party shall give written notice to all other Parties. The Parties shall meet and confer to resolve the dispute within fifteen (15) days after receipt of such written notice by the last Party to receive it. If the Parties are unable to resolve the dispute in good faith, the party that gave written notice of the dispute may initiate the arbitration procedure described below by delivery of a Demand for Arbitration to all other Parties (excluding any that no longer legally exist) no later than fifty (50) Days after receipt of the written notice of such dispute by the last party to receive it. Within fifteen (15) days after the selection or determination of the panel of arbitrators pursuant to Article 13.3.1 hereof, Plaintiffs, Whittaker and AISLIC shall submit to the arbitrators and serve on all parties to the arbitration a short statement of the dispute, their respective positions, and a proposed discovery and hearing schedule. The arbitrators shall be empowered to resolve all issues of fact and law relating to said Lump Sum Arbitration.

13.3.3 Preliminary Hearing. Within thirty (30) days after selection or determination of the panel of arbitrators, the arbitrators shall schedule a preliminary hearing. At

the preliminary hearing, the arbitrators shall decide any discovery and briefing issues and set dates, including a hearing date. In resolving discovery issues, the arbitrators shall consider expedition, cost effectiveness, fairness, and the needs of the Parties for adequate information with respect to the dispute.

13.3.4 Commencement of Arbitration. The arbitration hearing shall be scheduled no later than ninety (90) days after the initial preliminary hearing, unless the parties to the dispute mutually agree in writing to extend the date or the arbitrators extend the date.

13.3.5 Decision of Panel Of Arbitrators Final. The arbitrators shall make a written decision, specifying the reasons for the decision, including detailed findings of fact and conclusions of law, within sixty (60) days after the hearing. The decision of at least two (2) of the three (3) panel members shall be binding and final, and there shall be no right to appeal the decision; provided, however, any party to the dispute may seek vacation or correction of the Panel's decision pursuant to California Code of Civil Procedure Section 1286.2 (Grounds for vacation of award) or Section 1286.6 (Grounds for correction of award). Plaintiffs and Defendants, each collectively, shall equally share the expense of the three arbitrators and the arbitration proceeding. The arbitrators will be empowered *inter alia* to award response costs and damages. The arbitrators will not be empowered to award injunctive or declaratory relief or award punitive damages or determine coverage issues under the AISLIC Policy. Any arbitration award against the Debtors is subject to Section 2.5 herein. The Parties understand and agree that the record from any arbitration will be admissible in any future claim or lawsuit by Plaintiffs against Defendants for injunctive or declaratory relief based on the same factual circumstances.

13.3.6 Time Period to Complete Arbitration. The arbitration shall be completed within one hundred fifty (150) days of the preliminary hearing, unless the parties to the dispute mutually agree in writing to extend the date or the arbitrators extend the date.

13.4 Entry of Judgment.

Judgment on the award rendered by the arbitrator(s) may be entered in and enforced by any court of competent jurisdiction.

13.5 Location.

Arbitration proceedings, including hearings, good faith meetings and settlement conferences, shall take place in Los Angeles, California, unless otherwise agreed to by the parties in writing. The Parties shall have the right to participate in any of the arbitration proceedings by telephone.

13.6 Governing Law.

The arbitration, including any proceedings to enforce, confirm, modify or vacate an award, and any proceedings to enforce the terms of this Agreement, shall be governed by the laws of the State of California and applicable federal law.

ARTICLE 14. INSURANCE ISSUES RELATED TO THE AISLIC POLICY

14.1 Condition M of AISLIC Policy

The Parties acknowledge and agree that Condition M of the AISLIC Policy provides as follows:

> Action Against Company – No action shall lie against the Company, unless as a condition precedent thereto, there shall have been full compliance with all of the terms of this Policy, nor until the amount of the Insured's obligation to pay shall have been finally determined either by judgment against the Insured after actual trial or by written agreement of the Insured, the claimant and the Company.
>
> Any person or organization or the legal representative thereof who has secured such judgment or written agreement shall thereafter be entitled to recover under this Policy to the extent of the insurance afforded by the Policy. No person or organization

shall have any right under this Policy to join the Company as a party to any action against the Insured to determine the Insured's liability, nor shall the Company be impleaded by the Insured or his legal representative. Bankruptcy or insolvency of the Insured or of the Insured's estate shall not relieve the Company of its obligations hereunder.

14.2 Effect of This Agreement Under Condition M

Solely to resolve the effect of this Agreement under Condition M of the AISLIC Policy, and not to apply to or affect any other provision of the AISLIC Policy, or affect the terms of the Coverage and Claims Settlement Agreement, nor to affect any other claims for coverage by Whittaker, the Parties agree as set forth in this Section 14.2 as follows. Provided that an arbitration award or Cost Consultant determination is issued pursuant to and in accordance with this Agreement, including but not limited to Articles 7 and 13, and that (a) the time for filing a petition to vacate or correct the arbitrator's or Cost Consultant's decision has expired or such filing has been waived by agreement or (b) any petition filed to vacate or correct the arbitrator's or Cost Consultant's decision, pursuant to Cal. Code of Civil Procedure Section 1286.2 (Grounds for vacation of award) or Section 1286.6 (Grounds for correction of award), is finally adjudicated or dismissed (hereinafter referred to as "Final Arbitration Awards"), AISLIC and Whittaker agree as follows:

i) a Final Arbitration Award issued in favor of Plaintiffs and against Whittaker pursuant to and in accordance with this Agreement shall be deemed to be "a judgment against Insured [Whittaker] after actual trial"; and

ii) any written settlement agreement executed by Plaintiffs, Whittaker, and AISLIC or executed by Plaintiffs and Whittaker (with written consent of AISLIC) on issues or disputes presented to or which could properly be presented to an arbitrator(s) or Cost Consultant pursuant to this Agreement shall be deemed to be

"written agreement of the Insured [Whittaker], the claimant [Plaintiffs] and the Company [AISLIC]", as those quoted phrases are used in Condition M “Action Against Company” of the AISLIC Policy**.**

14.3 Written Agreement

This Agreement shall be deemed to be "written agreement of the Insured [Whittaker], the claimant [Plaintiffs] and the Company [AISLIC]" as that quoted phrase is used in Condition M “Action Against Company” of the AISLIC Policy.

14.4 Full Compliance

AISLIC agrees that, as of the date that AISLIC executes this Agreement, Whittaker’s actions have been in “full compliance with all of the terms of [the AISLIC] Policy” with respect to this Agreement, as said quoted phrase is used in Condition M “Action Against Company” of the AISLIC Policy.

14.5 Covered Claims

Except with respect to the negotiation, arbitration, or litigation of a Non-Subject Well Future Perchlorate Circumstance, AISLIC agrees that (1) all costs, expenses, and obligations incurred by Whittaker pursuant to this Agreement shall be treated as a covered claim under AISLIC Policy Coverages A, B, C, D, E, or F, without reservation of coverage rights to the extent that limits remain under AISLIC Policy Coverages A-F and (2) all costs, expenses, and obligations incurred by Whittaker pursuant to this Agreement shall be paid from either SF Escrow 1, from SF Escrow 2 (under Section IV.F.6.a(iii) of the Coverage and Claims Settlement Agreement), or from any remaining applicable limits of the AISLIC Policy under Coverages A, B, C, D, E, or F, as provided in the Coverage and Claims Settlement Agreement.

14.6 Proceedings Under Article 10

With respect to the negotiation, arbitration, or litigation of a Non-Subject Well Future Perchlorate Circumstance pursuant to Article 10 of this Agreement, AISLIC affirms that it agrees to abide by the obligations set forth in that Article 10. In the event that AISLIC makes a determination of coverage and Whittaker notifies of its satisfaction with such determination pursuant to Article 10 of this Agreement, then the agreements, rights and obligations set forth in Section 14.2 of this Article 14 shall apply with respect to the arbitration of such Non-Subject Well Future Perchlorate Circumstance.

14.7 AISLIC Reservation of Rights

AISLIC reserves all rights of subrogation or contribution pursuant to the AISLIC policy and law with respect to any payments made hereunder, except any claims of subrogation or contribution against the Plaintiffs.

14.8 No Amendment or Waiver

Without limiting the obligations of Whittaker and AISLIC as set forth in this Article 14 of this Agreement, nothing herein shall constitute an amendment of any terms or conditions of the Coverage and Claims Settlement Agreement (including but not limited to, those terms related to funding of settlement of the Underlying Action), or a waiver or amendment of any duties, obligations, reservations, or rights, if any, of AISLIC or Whittaker under the Coverage and Claims Settlement Agreement. In particular, but not by way of limitation, AISLIC and Whittaker disagree over whether Section VI.C.3 of the Coverage and Claims Settlement Agreement independently obligates AISLIC to cover future perchlorate claims without reservation of rights and whether and to what extent, if any, AISLIC has reserved its defenses to

coverage. Nothing in this Article 14, is intended to affect, or shall affect, the resolution of that dispute.

14.9 Coverages K and L

Reference in this Article 14 to Coverages A-F shall not under any circumstances be deemed to affect any duties, obligations, reservations, or rights, if any, of AISLIC or Whittaker with respect to Coverages K and L. In particular, but not by way of limitation, the Parties agree that Coverages K and L are under all circumstances limits of liability that are "inapplicable" to Loss sustained for Clean-up Costs incurred after the Termination Date of the AISLIC Policy.

14.10 Additional Clarifications Regarding AISLIC Policy and Other Agreements

14.10.1 Nothing in this Agreement confers the status of an insured or additional insured or the rights of an insured or additional insured with respect to the AISLIC Policy on any person or entity.

14.10.2 Except as expressly set forth in this Article 14, this Agreement does not alter the rights, duties and obligations between Whittaker and AISLIC under (a) the AISLIC Policy or (b) any other agreements, including but not limited to the Coverage and Claims Settlement Agreement.

14.10.3 The parties agree that nothing in this Agreement shall under any circumstances require AISLIC to make any payment or fulfill any duty or obligation after its applicable limit of liability is exhausted.

14.10.4 Nothing herein shall be deemed or interpreted to alter or amend, nor waive or affect, the terms of Condition C of Section VII, Conditions of the AISLIC Policy.

14.10.5 Nothing herein shall be construed to affect any rights of Whittaker against any of its insurers other than AISLIC or under any of its insurance policies other than the AISLIC Policy.

ARTICLE 15. PUBLIC AND OTHER FUNDING SOURCES

15.1 Background of Intent of the Parties

In entering into this Agreement, the Parties are aware that federal and state Public Funding Sources may be or become available to assist in implementing the Project as well as remedial and/or source control activities to be conducted at or in the vicinity of the Site respecting perchlorate contamination. Federal funds may be available by virtue of the United States Department of Defense involvement and activities conducted at or in the vicinity of the Site. State funds may be available to assist in evaluating and implementing an investigatory/remedial program that may be regionally based, including but not limited to the restoration/containment work contemplated under this Agreement and remedial source control activities to be conducted at the Site.

15.2 Obtaining Funds from Public Funding Sources

The Plaintiffs shall use good faith efforts, in a manner consistent with each of the Plaintiffs' and their representatives' individual and unique obligations under applicable law, to obtain funds from Public Funding Sources so as to provide for reasonable and necessary: (1) costs associated with the Project, including costs to implement the Project, Project Modification, and cost overruns, as identified by Plaintiffs; (2) continued off-Site groundwater monitoring with respect to perchlorate contamination; (3) off-Site response activities in the alluvium and Saugus Formation that address perchlorate contamination; and (4) on-Site source removal activities with respect to perchlorate contamination. To the extent permissible under all applicable laws and the requirements of specific funding authorizations, funding from Public Funding Sources shall

be allocated, credited, and utilized to cover any of the aforementioned categories of reasonable and necessary costs in the above order of priority. The Parties shall comply with all applicable laws, rules and regulations regarding lobbying disclosures in their efforts to obtain funding from Public Funding sources. Whittaker shall cooperate in seeking such funds.

Prior to determination of the Lump Sum pursuant to Section 5.2.6, the reasonable and necessary outside consultant lobbying costs incurred by Plaintiffs and Whittaker that are directly related to the perchlorate contamination and seeking of funding under this Article, shall be Project O&M Costs, and will be included in the Estimate of Project O&M, subject to an annual cap of two hundred thousand dollars ($200,000) on Plaintiffs' outside fees and costs and one hundred thousand dollars ($100,000) on Whittaker's outside fees and costs. In no event shall such "outside fees and costs" include campaign donations or similar donations. Upon request of any Party, a full accounting of such costs shall be provided. The obligation to reimburse lobbying costs shall cease in the year 2011, but such costs may be requested thereafter upon a showing of both good cause and positive results, but in no event later than January 1, 2019.

15.3 Administration of Funds from Public Funding Sources

Plaintiffs shall document, account for, and administer all Public Funding Sources funds received by them in conformity with all applicable laws and all requirements of the administrators of Public Funding Sources.

15.4 Conformity with Public Funding Sources Requirements

Plaintiffs shall design, build, operate and maintain their respective restoration/containment work projects contemplated under this Agreement in conformity with all applicable requirements of the Public Funding Sources from which funds have been secured. If Public Funding Sources have requirements which conflict with this Agreement, the Parties shall

meet and negotiate in good faith to amend this Agreement to conform to the requirements of the Public Funding Sources in a manner that preserves the purposes for the use of such funds as much as possible in a manner consistent with the Parties' intent as contemplated in this Agreement. Notwithstanding any of the provisions of this Article 15 or any other provision of this Agreement, nothing in this Agreement is intended to waive or otherwise effectuate a release, nor shall any Party provide a release of the United States Department of Defense or any other agency or instrumentality of the United States in connection with any alleged liability same may have under federal or state law arising out of or relating to any involvement in operations, waste disposal, or other activities at or in the vicinity of the Site.

ARTICLE 16. MISCELLANEOUS

16.1 Governing Law

This Agreement shall be construed and enforced in accordance with the substantive laws of the State of California, without reference to choice of law rules.

16.2 Waiver

No waiver by a Party of any provision of this Agreement shall be valid unless in writing and signed by an authorized representative of such Party. The waiver by any Party of any failure on the part of another Party to perform any of its obligations under this Agreement shall not be construed as a waiver of any future or continuing failure or failures.

16.3 Amendment of the Agreement

No amendment of this Agreement shall be binding upon the Parties unless it is in writing and executed by all of the Parties (excluding any that no longer legally exist or that do not respond to communications directed to the address for that Party specified below or to such other address as has been designated in accordance with Section 16.4). This Agreement and the

exhibits attached hereto set forth all of the covenants, provisions, agreements, conditions and understandings with respect to the matters addressed in this Agreement and constitute a complete integration.

16.4 Notices

All notices and communications required or permitted to be delivered to the Parties, Steadfast and any Buyer pursuant to this Agreement shall be in writing and (a) delivered personally or (b) sent by a recognized overnight mail or courier service, with delivery receipt requested, or (c) sent by facsimile communication with receipt confirmed by telephone, to the following addresses (or to such other address as may from time to time be specified in writing by the addressee):

Castaic Lake Water Agency
27234 Bouquet Canyon Road
Santa Clarita, CA 91350-2173
Attn: Dan Masnada, General Manager
Telephone: (661) 297-1600
Facsimile: (661) 297-1610
E-mail: dmasnada@clwa.org

Valencia Water Company
24631 Rockefeller Ave.
P. O. Box 5904
Valencia, CA 91385-5904
Attn: Robert J. DiPrimio, President
Telephone: (661) 294-1150
Facsimile: (661) 294-3806
E-mail: rdiprimio@valencia.com

Newhall County Water District
23780 North Pine St.
P. O. Box 220970
Santa Clarita, CA 91321-0970
Attn: Stephen L. Cole, General Manager
Telephone: (661) 259-3610
Facsimile: (661) 259-9673
E-mail: scole@ncwd.org

Santa Clarita Water Company
22722 West Soledad Canyon Road
P. O. Box 903
Santa Clarita, CA 91380-9003
Attn: William J. Manetta, President
Telephone: (661) 259-2737
Facsimile: (661) 286-4333
E-mail: wmanetta@scwater.org

with a copy for all of the above to:

Nossaman, Guthner, Knox & Elliott LLP
445 South Figueroa Street, 31st Floor
Los Angeles, CA 90071-1602
Attn: Frederic A. Fudacz, Esq.
Telephone: (213) 612-7823
Facsimile: (213) 612-7801
E-mail: ffudacz@nossaman.com

Whittaker Corporation
Eric Lardiere, Esq.
Vice-President, Secretary and General Counsel
Whittaker Corporation
1955 N. Surveyor Ave.
Simi Valley, CA 93063-3349
E-mail: elardiere@wkr.com

with copies for Whittaker Corporation to:

Reynold L. Siemens, Esq.
Heller Ehrman LLP
333 S. Hope Street
Suite 3900
Los Angeles, CA 90071-3043
Fax: 213-614-1868
Email: rsiemens@hewm.com

and

Richard A. Dongell, Esq.
Dongell Lawrence Finney Claypool LLP
707 Wilshire Boulevard, 45th Floor
Los Angeles, CA 90017
213-943-6100 telephone
213-943-6101 facsimile

American International Specialty Lines Insurance Company as Administrator of SF Escrow 1:

Stacy Parker, Complex Claim Director
AIG Domestic Claims, Inc.
Pollution Insurance Products High Profile Unit
175 Water Street, 12th Floor
New York, New York 10038
Telephone: (212) 458-2910
Fax: (866) 261-3935

with a copy to:

Richard W. Bryan, Esq.
Erin N. McGonagle, Esq.
Jackson & Campbell, P.C.
1120 20th Street, N.W.
Washington, DC 20036-3437
Telephone: (202) 457-1600
Fax: (202) 457-1678

Santa Clarita, L.L.C.
Remediation Financial, Inc.
Remediation Financial, Inc., Managing Member
Great American Tower
3200 N. Central Avenue, Suite 1570
Phoenix, Arizona 85296
Attn: Myla D. Bobrow, Pres. & CEO
Remediation Financial, Inc.

with a copy for Santa Clarita, L.L.C.
and Remediation Financial, Inc. to:

Lawrence J. Hilton, Esq./William E. Halle, Esq.
Hewitt & O'Neil LLP
19900 MacArthur Boulevard, Suite 1050
Irvine, California 92612

Bermite Recovery LLC
Remediation Financial, Inc., Managing Member
Great American Tower
3200 N. Central Avenue, Suite 1570
Phoenix, Arizona 85296
Attn: Myla D. Bobrow, Pres. & CEO
Remediation Financial, Inc.

with a copy for Santa Clarita, L.L.C., Remediation Financial, Inc., and Bermite Recovery LLC to:

Avion Holdings, Inc.
Re: Remediation Financial Inc.
Suite B-204
15290 N. 78th Way
Scottsdale, AZ 85260
Fax: 480-905-0469

and

Alisa C. Lacey, Esq.
Stinson Morrison Hecker, LLP
1850 N. Central Avenue, Suite 2100
Phoenix, AZ 85004-6925
Telephone: (602) 212-8628
Facsimile: (602) 586-5237
E-Mail: alacey@stinson.com

American International Specialty Lines Insurance Company

Stacy B. Parker, Complex Claim Director
AIG Domestic Claims, Inc.
P & C Severity Claims
Pollution Insurance Products High Profile Unit
175 Water Street, 12th Floor
New York, NY 10038
Telephone: (212) 458-6364
Facsimile: (866) 253-0395

with a copy to:

Richard W. Bryan, Esq.
Erin N. McGonagle, Esq.
Jackson & Campbell, P.C.
1120 20th Street, N.W.
Washington, DC 20036-3437
Telephone: (202) 457-1600
Facsimile: (202) 457-1678
E-mail: rbryan@jackscamp.com
emcgonagle@jackscamp.com

Steadfast Insurance Company

Zurich North America
1400 American Lane
Schaumberg, IL 60196
Attn: General Counsel
E claim # 912-0038512

with a copy for Steadfast to:

Terry D. Avchen, Esq.
Christensen, Miller, Fink, Jacobs, Glaser, Weil & Shapiro
10250 Constellation Boulevard, 19th Floor
Los Angeles, California 90067
Telephone: (310) 556-2920
Fax: (310) 556-2920

and

Neil Selman, Esq.
Selman Breitman, LLP
11766 Wilshire Blvd
6th Floor
Los Angeles, California 90025-6538
Telephone: (310) 689-7070
Fax: (310) 473-2525

Buyer:

SunCal Santa Clarita LLC
c/o SunCal Companies
21900 Burbank Blvd.
Woodland Hills, CA 12367
Attn: Frank Faye
Telephone: (818) 444-1600
Fax: (818) 444-5501

with copies to:

SunCal Companies
2392 Morse Avenue
Irvine, CA 92614
Attn: Mr. Bruce Elieff
Bruce V. Cook, Esq.
Telephone: (949) 777-4000
Facsimile: (949) 7774280

Cherokee Santa Clarita, LLC
c/o Cherokee Investment Partners
4600 Ulster Street
Suite 500
Denver, Colorado 80237
Attn: Mr. Dwight Stenseth
Mr. Guy Arnold
Telephone: (303) 689-1460
Facsimile: 303-689-1461

16.5 Computation of Time

In computing any period of time under this Agreement, where the last day would fall on a Saturday, Sunday, or federal or California state holiday, the period shall run until 5 p.m. Pacific Time on the next Working Day.

16.6 Counterparts

This Agreement will be executed in counterparts, each of which shall be deemed an original, and all of which, taken together, shall constitute one and the same instrument.

16.7 Assignment

No Party shall assign or otherwise transfer its rights or obligations hereunder without the other Parties' prior written consent, which shall not be unreasonably withheld. This Agreement shall be binding upon and inure to the benefit of the respective successors and permitted assigns of the Parties.

16.8 Cooperation

Each Party agrees to execute and deliver such further documents and to perform such further acts as may be reasonable and necessary to carry out the provisions of this Agreement or to effectuate its intent.

16.9 Joint Drafting and Negotiation/Legal Counsel

This Agreement has been jointly negotiated and drafted. The language of this Agreement shall be construed as a whole according to its fair meaning and without regard to or aid of Civil Code Section 1654 and similar judicial rules of construction. Each Party has been advised in connection herewith by counsel of its own choosing.

16.10 Article and Section Headings and Captions

Article and Section headings and captions used in this Agreement are for reference only and shall not be considered in any way in connection with the interpretation or enforcement of this Agreement.

16.11 No Third Party Beneficiaries

No third party shall be entitled to claim or enforce any rights hereunder except (1) Buyer and BRLLC, but only to the extent expressly provided in this Agreement, and (2) persons specifically released in Section 12.1 are entitled to claim the benefit of and enforce such releases.

16.12 Severability

In the event that any provision of this Agreement is determined by a court to be invalid, the court shall reform the provision in a manner that is both consistent with the intent of the Parties and legally valid. The remainder of this Agreement shall not be affected thereby.

16.13 Successors and Assigns

All covenants and agreements contained in this Agreement by or on behalf of any of the Parties hereto shall bind and inure to the benefit of their respective successors and permitted assigns, whether so expressed or not, including any Trustee appointed in the Bankruptcy Cases or a subsequently converted Chapter 7 case or cases.

16.14 Organization/Authorization

Each of the Parties to this Agreement hereby respectively represents and warrants to the others that each of them is a duly organized or constituted entity, with all requisite power to carry out its obligations under this Agreement, and that the execution, delivery and performance of this Agreement have been duly authorized by all necessary action of the board of directors or other governing body of such Party, and will not result in a violation of such Party's organizational documents. RFI and SCLLC represent and warrant that, upon the Effective Date, this Agreement will have received any and all approvals required by the Bankruptcy Court in their respective bankruptcy cases to make this Agreement enforceable as against them.

16.15 No Assignment of Claims

Other than the assignment provided in Section VII of the Coverage and Claims Settlement Agreement and the assignment provided in the Purchase & Sales Agreement between RFI Parties and Whittaker, there has been no assignment of claims.

16.16 No Admission /Not Insurance

This Agreement effectuates settlement of claims that are disputed, contested and denied. Neither this Agreement nor any Party's performance under this Agreement is intended to be or shall be asserted by any other Party to be an admission of any kind or character whatsoever, nor

shall it be deemed to have precedential effect in any other dealings between or among the Parties in any other context. Nothing herein shall be deemed to constitute an insurance policy.

16.17 No Prejudice to Buyer

Nothing in this Agreement shall be construed to prejudice any rights, claims, or defenses, that a Buyer, as defined herein, of the Site may have under applicable federal or state law, or to impose any monetary obligations or liability on the Buyer.

16.18 Entire Agreement

Except as expressly provided herein, this Agreement is the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior agreements between the Parties with respect thereto. In the event of any conflict between the terms of this Agreement and the Interim Agreement or the First Amendment, the terms of this Agreement shall control.

16.19 Survival

Except as expressly set forth herein, each and all of the releases, representations, warranties, covenants, and agreements in this Agreement and in the Interim Agreement shall survive the execution and delivery of this Agreement.

IN WITNESS WHEREOF, this Agreement has been executed by the undersigned, effective as of the date first written above.

CASTAIC LAKE WATER AGENCY

_____

By:_____
Its: _____

NEWHALL COUNTY WATER DISTRICT

_____

By:_____
Its: _____

SANTA CLARITA WATER COMPANY

_____

By:_____
Its: _____

VALENCIA WATER COMPANY

_____

By:_____
Its: _____

WHITTAKER CORPORATION

_____

By:_____
Its: _____

SANTA CLARITA L.L.C.
By: Remediation Financial, Inc.,
Its: Managing Member

_____
By: Myla D. Bobrow
Its: President & CEO

REMEDIATION FINANCIAL, INC.

_____
By: Myla D. Bobrow
Its: President & CEO

AIG DOMESTIC CLAIMS, INC., the duly authorized claims handling agent of:

AMERICAN INTERNATIONAL SPECIALTY LINES INSURANCE COMPANY, in its capacity as "Administrator" of "SF Escrow 1 Account" and as insurer of Whittaker

_____
By:_____
Its: _____

REVIEWED AND APPROVED:

AVION HOLDINGS, LLC, in its limited capacity as designated representative for the Bankruptcy Estates.

_____

By: G. Neil Elsey
Its: Managing Member

LIST OF EXHIBITS

Exhibit A	Description of SCLLC Property
Exhibit B	Description of BRLLC Property
Exhibit C	Description of Distribution Pipelines
Exhibit D	Pro-Forma Joint Estimate of Project O&M Costs
Exhibit E	Past Design Costs
Exhibit F	Project Description
Exhibit G	Estimate of Project Capital Costs
Exhibit H-1	Project Capital Costs Escrow Instructions
Exhibit H-2	Project O&M Costs Escrow Instructions
Exhibit I	Estimate of Q2 Capital Costs
Exhibit J	Q2 Capital Costs Joint Escrow Agreement and Instructions
Exhibit K-1	Amendment No. 1 to Joint Q2 Escrow Agreement and Instructions
Exhibit K-2	Amendment No. 2 to Joint Q2 Escrow Agreement and Instructions
Exhibit L	Estimate of Q2 O&M Costs
Exhibit M	Description of Magic Mountain Wells
Exhibit N	Description of Well Closure
Exhibit O	Description of Stadium Replacement Well
Exhibit P	Replacement Well/Distribution Pipeline Capital Costs Escrow Instructions
Exhibit Q	Description of V-206 Replacement Well and Closure of V157 Well
Exhibit R	Cost Allocation for Distribution Pipelines and Replacement Wells & Associated Pipelines
Exhibit S	Estimate of Distribution Pipelines and Replacement Wells Capital Costs
Exhibit T	List of Approved Contracts
Exhibit U	Identification of Presently Existing Saugus and Alluvial Production Wells
Exhibit V	Form of CGL Policy

Exhibit W	Form of EIL Policy
Exhibit X	Form of Earthquake Policy
Exhibit Y	Form of First Party Property Insurance Policy
Exhibit Z	Section 12.1.6 Documents
Exhibit AA	List of Approved Arbitrators
Exhibit BB	List of Approved Arbitrators for Future Perchlorate Contamination Disputes and Lump Sum Arbitration
Exhibit CC	AWWA Standard for Disinfection of Wells and Sample Worksheet

Order Granting Joint Motion for Court Approval, Good Faith Settlement Determination and Entry of Consent Order dated July 13, 2007

FREDERIC A. FUDACZ (SBN 050546)
ALFRED E. SMITH (SBN 186257)
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Attorneys for Plaintiffs and Counter-Defendants
Castaic Lake Water Agency; Newhall County Water District;
Santa Clarita Water Company; and Valencia Water Company

FILED
CLERK, U.S. DISTRICT COURT
JUL 13 2007
CENTRAL DISTRICT OF CALIFORNIA
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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

CASTAIC LAKE WATER AGENCY; NEWHALL COUNTY WATER DISTRICT; SANTA CLARITA WATER COMPANY; and VALENCIA WATER COMPANY,

Plaintiffs,

vs.

WHITTAKER CORPORATION; SANTA CLARITA LLC; REMEDIATION FINANCIAL, INC.; and DOES 1-10, Inclusive,

Defendants.

AND RELATED ACTIONS

Case No.: CV 00-12613 AHM(RZx)

PROPOSED ORDER GRANTING JOINT MOTION FOR COURT APPROVAL, GOOD FAITH SETTLEMENT DETERMINATION AND ENTRY OF CONSENT ORDER

Hearing Date: **July 16, 2007**
Time: **10:00 a.m.**
Place: **Courtroom 14**
Hon. A. Howard Matz

The motion of Plaintiffs and Counter-Defendants Castaic Lake Water Agency, Newhall County Water District, Santa Clarita Water Company and Valencia Water Company (collectively, "Plaintiffs" or "Counter-Defendants"), Defendants and Counter Claimants Whittaker Corporation ("Whittaker") and Santa Clarita LLC ("SCLLC"), and Defendant Remediation Financial, Inc. ("RFI") (collectively, "Defendants"), (the foregoing Plaintiffs, Defendants collectively referred to herein as the "Parties"), for approval of the settlement agreement of Plaintiffs' claims ("Claims Settlement") and the settlement agreement of Defendants' counterclaims ("Counterclaim Settlement") and a determination that the settlements were in good faith came before this Court regularly for possible hearing after notice to all counsel. No hearing was necessary nor was a hearing held, in part because no opposition was filed. ATM

Having considered the papers submitted by the Parties, the proposed settlement agreements, and good cause appearing, the Court enters the following findings of fact:

1. The Claims Settlement and Counterclaim Settlement (collectively, the "Settlements") were reached by counsel experienced in similar litigation;
2. The Settlements were reached through the oversight of the Court appointed mediator, the Honorable (ret.) Eugene Lynch;
3. The Settlements were reached through arm's length negotiations without fraud or collusion;
4. Investigation and discovery were and are sufficient to allow counsel, the mediator and the Court to act intelligently; ATM
5. The amounts being paid by the Parties and other consideration being exchanged are fair and reasonable in order to end significant litigation costs and avoid the litigation risks by all Parties in having the unresolved issues determined at trial; ATM

Based on these findings of fact, IT IS HEREBY ORDERED that:

1. The proposed Claims Settlement and Counterclaims Settlement are hereby approved by this Court; and

2. The Claims Settlement and Counterclaims Settlement are in good faith and any and all claims against the settling Defendants and the settling Counter-Defendants that are addressed in the Claims Settlement and the Counterclaims Settlement, and the releases of the claims therein, regardless of when asserted or by whom, are barred; such claims are barred regardless of whether they are brought pursuant to CERCLA, or pursuant to common law or other federal or state laws.

3. The Court commends counsel for their exemplary professionalism.

DATED: July 13, 2007

The Honorable Howard A. Matz
United States District Court Judge

Stipulation to Dismiss Plaintiffs' Claims and Defendants' Counterclaim, dated August 20, 2007

FREDERIC A. FUDACZ (SBN 050546)
ALFRED E. SMITH (SBN 186257)
BYRON P. GEE (SBN 190919)
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Attorneys for Plaintiffs and Counter-Defendants Castaic Lake Water Agency; Newhall County Water District; Santa Clarita Water Company; and Valencia Water Company

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CLERK, U.S. DISTRICT COURT
AUG 20 2007
CENTRAL DISTRICT OF CALIFORNIA
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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

CASTAIC LAKE WATER AGENCY; NEWHALL COUNTY WATER DISTRICT; SANTA CLARITA WATER COMPANY; and VALENCIA WATER COMPANY, Plaintiffs, vs. WHITTAKER CORPORATION; SANTA CLARITA LLC; REMEDIATION FINANCIAL, INC.; and DOES 1-10, Inclusive, Defendants. AND RELATED ACTIONS.	Case No.: CV 00-12613AHM(RZx) **STIPULATION TO DISMISS PLAINTIFFS' CLAIMS AND DEFENDANTS' COUNTERCLAIMS** **Hearing** **Date:** N/A **Time:** N/A **Place:** Courtroom 14 Hon. A. Howard Matz

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CLERK, U.S. DISTRICT COURT
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This Stipulation to dismiss plaintiffs' claims and defendants' counterclaims, entered into by and among Plaintiffs and Counter Defendants Castaic Lake Water Agency, Newhall County Water District, Santa Clarita Water Company and Valencia Water Company (collectively, "Plaintiffs"), Defendants and Counter Claimants Whittaker Corporation ("Whittaker") and Santa Clarita LLC ("SCLLC") and Defendant Remediation Financial, Inc. ("RFI") (collectively, "Defendants"), (the foregoing Plaintiffs, and Defendants are collectively referred to herein as the "Parties"), is made with reference to the following facts and recitals:

RECITALS

1. **WHEREAS,** Whittaker is the former owner of approximately 960 acres of real property located in the City of Santa Clarita, County of Los Angeles, California, (the "Site"). The Site is currently owned by SCLLC.

2. **WHEREAS,** Plaintiff Santa Clarita Water Company is the operator of wells commonly designated as Saugus 1, Saugus 2, and the Stadium Well. Plaintiff Newhall County Water District is the owner and operator of a water well commonly designated as NC11. Plaintiff Valencia Water Company is the owner and operator of water wells commonly designated as V157 and Q2. Saugus 1, Saugus 2, the Stadium Well, NC11, V157 and Q2 are collectively referred to at all times herein the "Subject Wells."

3. **WHEREAS,** on or about November 29, 2000, a civil action was brought in the United States District Court for the Central District of California ("Court"), Case No. CV 00-12613 AHM (RZx) by Plaintiffs (the "CLWA action"). Whittaker, SCLLC and RFI were named as defendants in the CLWA action. In the CLWA action, Plaintiffs vdldsflkdsfkl;alleged, among other things, that 1) the groundwater in and around the Site has been contaminated by perchlorate and other hazardous materials; 2) perchlorate contamination has been found in Subject Wells owned by Plaintiffs; and 3) Whittaker, SCLLC, and RFI caused and/or permitted the contamination. Plaintiffs further alleged that they have incurred "response costs" in addressing this contamination, including the costs of engaging consultants to undertake environmental assessment, water treatment

studies, groundwater analysis and characterization work in connection with the alleged perchlorate contamination.

4. **WHEREAS,** on or about January 19, 2001, Whittaker answered the allegations of Plaintiffs and filed its affirmative defenses in support thereof, and filed its own counter-claims against Plaintiffs alleging, among other things, that Plaintiffs were responsible for the release or threatened release of hazardous substances in and around the Site and as a result Whittaker was entitled to a Declaratory Judgment pursuant to the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") §113(g)(2), contribution pursuant to CERCLA §113(f), and response costs pursuant to the Hazardous Substances Account Act ("HSAA"). The action commenced by Whittaker's filing of its counter-claims is hereinafter referred to as the "Whittaker Action." On or about January 18, 2001, SCLLC answered the allegations of Plaintiffs and filed its affirmative defenses in support thereof, and SCLLC filed a counter-claim against Plaintiffs (the "SCLLC Action") alleging substantially identical facts as the Whittaker Action and seeking declaratory relief under CERCLA §§ 107(a), contribution under CERCLA §113(f), and recovery of response costs under the HSAA.

5. **WHEREAS,** Whittaker, SCLLC and RFI, and Plaintiffs have entered into the Interim Settlement and Funding Agreement dated as of July 28, 2003 (the "Interim Agreement") and the First Amendment to the Interim Settlement and Funding Agreement dated October 11, 2004, which, among other things, extended the term of the Interim Agreement through January 2005.

6. **WHEREAS,** in or around July, 2004, SCLLC and two of its affiliates filed voluntary Chapter 11 bankruptcy petitions, and the cases thereby commenced are pending in the United States Bankruptcy Court for the District of Arizona (the "Arizona Bankruptcy Court"), denominated Cases Nos. 2-04-BK-11910 CGC, 2-04-BK 11911 CGC and 2-04-BK-17294 CGC, respectively, which cases are jointly administered with a bankruptcy case previously commenced by a petition filed by a third affiliate of SCLLC, RFI, and denominated as Case No. 2-04-BK-10486 CGC. Case Nos. 2-04-BK-11910

CGC, 2-04-BK 11911 CGC, 2-04-BK-17294 CGC and 2-04-BK-10486 are jointly administered under Case No. 2-04-BK-10486 CGC and are collectively referred to as the "Bankruptcy Cases."

7. **WHEREAS,** on April 6, 2007, Plaintiffs and Defendants entered into two settlement agreements that resolve Plaintiffs' claims and Defendants' counterclaims. The settlement agreements require that a joint stipulation to dismiss the claims and counterclaims be filed with the court after the settlement agreements are funded. The claims settlement agreement was funded on or about August 9, 2007 and the counterclaim settlement was funded on or about August 10, 2007.

NOW, THEREFORE, the parties hereby stipulate to dismiss Plaintiffs' claims against Defendants in accordance with the "Castaic Lake Water Agency Litigation Settlement Agreement," (previously filed as Exhibit 1 to the Parties' June 18, 2007 Joint Motion for Court Approval of Settlement Agreements and Good Faith Settlement Determination) with prejudice to the extent expressly released therein, and otherwise without prejudice, as to the claims asserted in the underlying complaint.

The Parties further stipulate to dismiss defendants Whittaker Corporation's and Santa Clarita, LLC's counterclaims against Plaintiffs in accordance with the Counterclaim Settlement Agreement and Release (previously filed as Exhibit 2 to the Parties' June 18, 2007 Joint Motion for Court Approval of Settlement Agreements and Good Faith Settlement Determination) with prejudice to the extent expressly released therein, and otherwise without prejudice, as to the claims asserted in the underlying counter-complaints.

Dated: August 17, 2007

FREDERIC A. FUDACZ
ALFRED E. SMITH
BYRON P. GEE
NOSSAMAN, GUTHNER, KNOX & ELLIOTT, LLP

By: _____
Attorneys for Plaintiffs and Counter-Defendants Castaic Lake Water Agency; Newhall County Water District; Santa Clarita Water Company; and Valencia Water Company

IT IS SO ORDERED
Dated August 20, 2007
_____
United States District Judge

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Dated: August 16, 2007

LAWRENCE J. HILTON
WILLIAM E. HALLE
HEWITT & O'NEIL LLP

By: _____
Attorneys for Defendant and Counter-Claimant Santa Clarita, LLC and Defendant Remediation Financial, Inc.

Dated: August ___, 2007

JOSEPH J. ARMAO
HELLER EHRMAN WHITE & McAULIFFE, LLP
RICHARD A. DONGELL
THOMAS F. VANDENBURG
DONGELL LAWRENCE FINNEY LLP

By: _____
Attorneys for Defendant Whittaker Corporation

344788.2 DOC

Dated: August ___, 2007

LAWRENCE J. HILTON
WILLIAM E. HALLE
HEWITT & O'NEIL LLP

By: _____
Attorneys for Defendant and Counter-Claimant Santa Clarita, LLC and Defendant Remediation Financial, Inc.

Dated: August 17, 2007

JOSEPH J. ARMAO
HELLER EHRMAN WHITE & McAULIFFE, LLP
RICHARD A. DONGELL
THOMAS F. VANDENBURG
DONGELL LAWRENCE FINNEY LLP

By: _____
Attorneys for Defendant Whittaker Corporation

PROOF OF SERVICE

The undersigned declares:

I am employed in the County of , State of California. I am over the age of 18 and am not a party to the within action; my business address is c/o Nossaman, Guthner, Knox & Elliott, LLP, 445 S. Figueroa Street, 31st Floor Los Angeles, California 90071-1602.

On August 17, 2007, I served the foregoing

STIPULATION TO DISMISS PLAINTIFFS' CLAIMS AND DEFENDANTS' COUNTERCLAIMS

on parties to the within action by placing ( ) the original (x) a true copy thereof enclosed in a sealed envelope, addressed as shown on the attached service list.

(XX) (By U.S. Mail) On the same date, at my said place of business, said correspondence was sealed and placed for collection and mailing following the usual business practice of my said employer. I am readily familiar with my said employer's business practice for collection and processing of correspondence for mailing with the United States Postal Service, and, pursuant to that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid, on the same date at Los Angeles, California.

( ) (By Facsimile) I served a true and correct copy by facsimile pursuant to C.C.P. 1013(e), to the number(s) listed on the attached sheet. Said transmission was reported complete and without error. A transmission report was properly issued by the transmitting facsimile machine, which report states the time and date of sending and the telephone number of the sending facsimile machine. A copy of that transmission report is attached hereto.

( ) (By Overnight Service) I served a true and correct copy by overnight delivery service for delivery on the next business day. Each copy was enclosed in an envelope or package designated by the express service carrier; deposited in a facility regularly maintained by the express service carrier or delivered to a courier or driver authorized to receive documents on its behalf; with delivery fees paid or provided for; addressed as shown on the accompanying service list.

Executed on August 17, 2007.

( ) (STATE) I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

(XX) (FEDERAL) I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Mina Muñoz

Mina Muñoz

SERVICE LIST

CASTAIC LAKE WATER AGENCY, et al. v. WHITTAKER CORPORATION, et al.
USDC Case No. CV 00-12613 AHM (RZx)

Lawrence Hilton, Esq. William Halle, Esq. **HEWITT & O'NEIL, LLP** 19900 MacArthur Boulevard, Suite 1050 Irvine, CA 92612	Telephone: (949) 798-0500 Facsimile: (949) 798-0511 **Attorneys for Defendants Santa Clarita, L.L.C. and Remediation Financial, Inc.**
Reynold L. Siemens, Esq. **HELLER EHRMAN, LLP** 333 South Hope Street, Suite 3900 Los Angeles, CA 90071	Telephone: (213) 689-0200 Facsimile: (213) 614-1868 **Attorneys for Defendant Whittaker Corporation**
Richard A. Dongell, Esq. Matthew Clark Bures, Esq. Thomas Vandenburg, Esq. **DONGELL LAWRENCE & FINNEY** 707 Wilshire Blvd, 45th Floor Los Angeles, CA 90017	Telephone: (213) 943-6100 Facsimile: (213) 943-6101 **Attorneys for Defendant Whittaker Corporation**
Joseph J. Armao, Esq. **HELLER EHRMAN, LLP** 333 Bush Street San Francisco, CA 94104-2878	Telephone: (415) 772-6000 Facsimile: (415) 772-6268 **Attorneys for Defendant Whittaker Corporation**
Steven L. Crane, Esq. Steven L. Feldman, Esq. **GOLDFARB, STURMAN & AVERBACH** 15760 Ventura Blvd, Suite 1900 Encino, CA 91436	Telephone: (818) 990-4414 Facsimile: (818) 905-7173 **Attorneys for Third Party Defendant and Third Party Counter-Claimant Hasa Chemicals, Inc.**

Santa Clarita Organization for Planning the Environment v. County of Los Angeles (2007) 157 Cal.App.4th 149 (SCOPE II)

Santa Clarita Organization for **Planning** the **Environment** v. **County** of **Los Angeles**
Cal.App. 2 Dist.,2007.

Court of Appeal, Second District, Division 6, California.
SANTA CLARITA ORGANIZATION FOR **PLANNING** THE **ENVIRONMENT** et al., Plaintiffs and Appellants,
v.
COUNTY OF **LOS ANGELES**, Defendant and Respondent;
Newhall Land and Farming Company et al., Real Parties in Interest and Respondents.
No. B189116.

Nov. 26, 2007.

Background: **Environmental organizations** petitioned for writ of mandate, requesting that court order **county** to vacate resolution certifying final **environmental** impact report (EIR) which approved development project. The trial court denied the petition, **organizations** appealed, and the Court of Appeal, 106 Cal.App.4th 715, 131 Cal.Rptr.2d 186, reversed. On remand after **county** revised and recertified EIR, the Superior Court, **Santa** Barbara **County**, No. 1043805,James W. Brown, J., again denied petition. **Organizations** appealed. The Court of Appeal, 66 Cal.Rptr.3d 559, affirmed, but granted rehearing, vacating its opinion.

Holdings: The Court of Appeal, Gilbert, P.J., held that:
(1) law of the case did not bar **organizations**' challenge to water transfer in revised EIR;
(2) EIR was not inadequate as it related to water transfer involved in pending litigation; and
(3) EIR was not required to discuss funding to remediate perchlorate contamination of local water wells.

Affirmed.

West Headnotes

[1] Environmental Law 149E 695

149E Environmental Law
149EXIII Judicial Review or Intervention
149Ek694 Determination, Judgment, and Relief
149Ek695 k. In General. Most Cited Cases
Court of Appeal's finding that water service portion of environmental impact report (EIR) for residential subdivision did not comply with California Environmental Quality Act (CEQA) did not bar, under doctrine of law of the case, environmental organizations' subsequent challenge to specific water transfer in revised EIR; Court of Appeal had stated no principle or rule of law bearing on the adequacy of the EIR's discussion of this water transfer, and silence on issue did not transform issue into law of the case. West's Ann.Cal.Pub.Res.Code § 21005(c).

[2] Appeal and Error 30 1097(1)

30 Appeal and Error
30XVI Review
30XVI(M) Subsequent Appeals
30k1097 Former Decision as Law of the Case in General
30k1097(1) k. In General. Most Cited Cases

Appeal and Error 30 1195(1)

30 Appeal and Error
30XVII Determination and Disposition of Cause
30XVII(F) Mandate and Proceedings in Lower Court
30k1193 Effect in Lower Court of Decision of Appellate Court
30k1195 As Law of the Case
30k1195(1) k. In General. Most Cited Cases
Where an appellate court states in its opinion a principle or rule of law necessary to its decision, that principle or rule becomes the "law of the case," which must be adhered to both in the lower court and upon subsequent appeal, even if the court that issued the opinion becomes convinced in a subsequent consideration that the former opinion is erroneous.

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[3] Environmental Law 149E 614

149E Environmental Law
149EXII Assessments and Impact Statements
149Ek612 Evidence
149Ek614 k. Presumptions, Inferences, and Burden of Proof. Most Cited Cases
Under California Environmental Quality Act (CEQA), an environmental impact report (EIR) approved by the appropriate governmental agency is presumed adequate, and the party challenging the EIR has the burden of showing otherwise. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[4] Environmental Law 149E 689

149E Environmental Law
149EXIII Judicial Review or Intervention
149Ek677 Scope of Inquiry on Review of Administrative Decision
149Ek689 k. Assessments and Impact Statements. Most Cited Cases
A party may challenge an environmental impact report (EIR) by showing the agency has abused its discretion either by reaching factual conclusions unsupported by substantial evidence or by failing to proceed in the manner California Environmental Quality Act (CEQA) provides. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[5] Environmental Law 149E 689

149E Environmental Law
149EXIII Judicial Review or Intervention
149Ek677 Scope of Inquiry on Review of Administrative Decision
149Ek689 k. Assessments and Impact Statements. Most Cited Cases
Where the alleged defect in an environmental impact report (EIR) under California Environmental Quality Act (CEQA) is that the agency's conclusions are not supported by substantial evidence, courts must accord deference to the agency's factual conclusions and may not weigh conflicting evidence to determine who has the better argument. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[6] Environmental Law 149E 689

149E Environmental Law
149EXIII Judicial Review or Intervention
149Ek677 Scope of Inquiry on Review of Administrative Decision
149Ek689 k. Assessments and Impact Statements. Most Cited Cases
Courts may not set aside an agency's approval of an environmental impact report (EIR) under California Environmental Quality Act (CEQA) on the ground that an opposite conclusion would have been equally or more reasonable. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[7] Environmental Law 149E 689

149E Environmental Law
149EXIII Judicial Review or Intervention
149Ek677 Scope of Inquiry on Review of Administrative Decision
149Ek689 k. Assessments and Impact Statements. Most Cited Cases
Where the alleged defect in an environmental impact report (EIR) is that the agency has failed to proceed in a manner provided by California Environmental Quality Act (CEQA), judicial review is de novo. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[8] Environmental Law 149E 599

149E Environmental Law
149EXII Assessments and Impact Statements
149Ek598 Adequacy of Statement, Consideration, or Compliance
149Ek599 k. In General. Most Cited Cases
An agency that fails to require an applicant to disclose information mandated by California Environmental Quality Act (CEQA) and to include that information in the environmental impact report (EIR), fails to proceed in a manner prescribed by CEQA. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[9] Environmental Law 149E 599

149E Environmental Law
149EXII Assessments and Impact Statements
149Ek598 Adequacy of Statement, Consideration, or Compliance
149Ek599 k. In General. Most Cited Cases
Where a party challenges an environmental impact report (EIR) under California Environmental Quality

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Act (CEQA) because it fails to disclose evidence that conflicts with its conclusions, the party must show that the failure to disclose the conflicting evidence precludes informed decision making or informed public participation. West's Ann.Cal.Pub.Res.Code § 21000 et seq.

[10] Environmental Law 149E 604(3)

149E Environmental Law
149EXII Assessments and Impact Statements
149Ek598 Adequacy of Statement, Consideration, or Compliance
149Ek604 Particular Projects
149Ek604(3) k. Waters and Water Courses; Dams and Flood Control. Most Cited Cases
Under California Environmental Quality Act (CEQA), water service portion of environmental impact report (EIR) for residential subdivision was not inadequate as it related to availability of water from water transfer agreement involved in pending litigation; EIR acknowledged that litigation made transfer legally uncertain, but substantial evidence supported finding that degree of uncertainty was small as transfer was intended to be permanent and any adverse outcome in litigation was unlikely to "unwind" transfer agreement in light of existing law and contracts. West's Ann.Cal.Pub.Res. Code § 21000 et seq.
See 12 Witkin, Summary of Cal. Law (10th ed. 2005) Real Property, § 840 et seq.; 9 Miller & Starr, Cal. Real Estate (3d ed. 2001) § 25:182 et seq.; Cal. Jur. 3d, Pollution and Conservation Laws, § 543 et seq.; Cal. Civil Practice (Thomson/West 2003) Environmental Litigation, § 8:17 et seq.

[11] Environmental Law 149E 604(3)

149E Environmental Law
149EXII Assessments and Impact Statements
149Ek598 Adequacy of Statement, Consideration, or Compliance
149Ek604 Particular Projects
149Ek604(3) k. Waters and Water Courses; Dams and Flood Control. Most Cited Cases
Under California Environmental Quality Act (CEQA), environmental impact report (EIR) for residential subdivision was not required to discuss funding to remediate perchlorate contamination of local water wells, since nothing suggested that described mitigation measures would not be implemented. West's Ann.Cal.Pub.Res. Code § 21000 et seq.

****451** Law Office of Alyse M. Lazar and Alyse M. Lazar, Westlake Village, for Plaintiffs and Appellants **Santa Clarita Organization** for **Planning** the **Environment** and Friends of the **Santa** Clara River.
Rossmann & Moore, Antonio Rossmann, Roger B. Moore and David Rowen, for amicus curiae **Planning** and Conservation League in support of Plaintiffs and Appellants.
Raymond Fortner, **County** Counsel, Richard D. Weiss, Assistant **County** Counsel, Tracy D. Swann, Principal Deputy **County** Counsel, and Lawrence Hafetz, Deputy **County** Counsel, for Defendant and Respondent **County** of **Los Angeles**.
Paul, Hastings, Janofsky & Walker, Robert I. McMurry, A. Catherine Norian, **Los Angeles**, and Edgar Kalatian, for Real Parties in Interest and Respondents Newhall Land and Farming Company and Valencia Corporation.

****452** OPINION ON REHEARING

GILBERT, P.J.
152** In ***Santa Clarita Organization** for **Planning** the **Environment** v. **County** of **Los Angeles (2003) 106 Cal.App.4th 715, 131 Cal.Rptr.2d 186 (*Scope I*), we held that the water service portion of an **environmental** impact report (EIR) must analyze the actual amount of water that will be available for a project. In *Scope I*, the EIR for the West Creek residential subdivision did not comply with the California **Environmental** Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).[FN1] It relied on contractual entitlements to water. Because this water is not of the "wet" variety, it has been called "paper water."

FN1. All statutory references are to the Public Resources Code unless otherwise stated.

After remand, the **County** of **Los Angeles** (**County**) revised and recertified the West Creek EIR. **Santa Clarita Organization** for **Planning** the **Environment** (SCOPE) again challenges the water services portion of the EIR. This time, SCOPE focuses on the EIR's analysis of a water transfer agreement and remediation costs for perchlorate contamination of water wells. The trial court denied SCOPE's petition for writ of administrative mandate.

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After the trial court denied SCOPE's petition, our Supreme Court decided *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 53 Cal.Rptr.3d 821, 150 P.3d 709*(Vineyard).* *Vineyard* states four principles governing the analysis of the water services portion of an EIR. We conclude the West Creek EIR satisfies all four principles.

FACTS

Background

In the 1950s, the Legislature and the voters approved the State Water Project (SWP). It was designed to deliver 4.23 million acre-feet of water annually. It is managed by the Department of Water Resources (DWR).

The DWR contracted to deliver water to water agencies throughout the state. The contracts entitle the agencies to specified amounts of water calculated on the designed capacity of the SWP. Only half of the SWP was constructed. The completion of the SWP was an expectation that has not grown beyond a hope. There is no reasonable expectation that the original plan will ever be completed. This leaves a vast difference between the amount of water to which the local agencies are entitled, and the amount of water the SWP can actually deliver.

***153** A drought in the 1990s highlighted the disparity between water entitlements and actual water. Agricultural and urban agencies disputed how shortfalls in water delivery would be allocated. The interested parties met in Monterey, and produced the Monterey Agreement.

Under the Monterey Agreement, the DWR and the contracting water agencies agreed to a statement of 14 principles. One principle provided for the permanent sale of water among agencies. The Castaic Lake Water Agency (Castaic) purchased 41,000 acre-feet per year (afy) from the Kern County Water Agency. Castaic serves the Santa Clarita Valley area, and the 41,000 afy constitutes over 40 percent of the 95,200 afy available to Castaic.

The Monterey Agreement scuttled the term "entitlement" to describe the amount of water the SWP has contracted to deliver to local water agencies. Instead, the agreement uses the term "Table A Amount." Table A of the agreement lists ****453** the contracting agencies and the amount of water the SWP has contracted to deliver. The change is not substantive.

In *Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 100 Cal.Rptr.2d 173 (*PCL*), the court ordered the EIR for the Monterey Agreement decertified. The court determined that the EIR was prepared by the wrong lead agency, a water agency instead of the DWR, and failed to consider the "no project" alternative. Because the EIR for the Kern-Castaic 41,000 afy transfer was "tiered" on the Monterey Agreement EIR, the EIR for the Kern-Castaic transfer was also ordered decertified. (*Friends of Santa Clara River v. Castaic Lake Water Agency* (2002) 95 Cal.App.4th 1373, 1387, 116 Cal.Rptr.2d 54(*Friends*).) Although the EIRs for the Monterey Agreement and the Kern-Castaic transfer were decertified, the projects were not enjoined. The agreements remain in effect to this day.

On July 22, 2002, the parties to the *PCL* litigation that decertified the Monterey Agreement EIR entered into a settlement agreement approved by the Sacramento County Superior Court. The settlement agreement requires the DWR as the lead agency to prepare a new EIR for the Monterey Agreement. The settlement agreement acknowledges that certain water transfers listed in Attachment E to the settlement agreement are final, and the parties agree not to challenge those transfers. The Kern-Castaic transfer is not listed in Attachment E. Instead, the settlement agreement provides:

"*Acknowledgement and Agreement Regarding Kern-Castaic Transfer.*With respect to ... the Kern-Castaic Transfer, the Parties recognize that such water transfer is subject to pending litigation in the Los Angeles County Superior Court following remand from the Second District Court of Appeal (See ***154** *Friends of the Santa Clara River v. Castaic Lake Water Agency,* 95 Cal.App.4th 1373, 116 Cal.Rptr.2d 54 (2002); *review denied* April 17, 2002). The Parties agree that jurisdiction with respect to that litigation should remain in that court and that nothing in this Settlement Agreement is intended to predispose the

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remedies or other actions that may occur in that pending litigation."

In 2004, Castaic certified a revised EIR for the Kern-Castaic transfer. This EIR is not tiered on the Monterey Agreement EIR. SCOPE's opening brief states that Castaic's EIR is being challenged in **Los Angeles County** Superior Court by **environmental** groups.

West Creek

West Creek is a proposed mixed residential and commercial development in the **Santa Clarita** Valley area of northern **Los Angeles County**. The project includes 2,545 housing units, 180,000 square feet of commercial retail space and 46 acres of community facilities. The **County** served as the lead agency in preparing the EIR for the project. The project developers are The Newhall Land and Farming Company and Valencia Corporation (hereafter collectively Newhall).

SCOPE challenges the **County's** certification of the West Creek EIR. The trial court denied SCOPE's petition for a writ of administrative mandate. We reversed on the ground that the EIR's evaluation of the availability of the water supply was inadequate. (*Scope I, supra*, 106 Cal.App.4th 715, 131 Cal.Rptr.2d 186.) The EIR relied on water entitlements instead of actual water in analyzing water availability. (*Ibid.*)

The County revised the water supply analysis, and recertified the EIR. SCOPE challenges the water supply analysis in the ****454** recertified EIR. This time it opposes the 41,000 afy Kern-Castaic water transfer.

The recertified EIR states that Castaic's total maximum SWP water allocation is 95,200 afy. The Kern-Castaic transfer accounts for 41,000 afy of that. The EIR acknowledges that the EIR for the Monterey Agreement and the original EIR for the Kern-Castaic transfer were decertified.

With regard to the status of the Kern-Castaic transfer, the EIR states:

"The [Kern-Castaic] transfer of SWP Table A Amount was the type of water transfer that fell within the provisions of the Monterey Agreement. As stated above, under the Monterey Agreement, certain SWP agricultural contractors agreed that 130,000 AF of their Table A Amount could be ***155** transferred to urban contractors. The [Castaic] 41,000-AF acquisition was a part of the 130,000 AF of SWP Table A Amount, which has been transferred under the Monterey Agreement.

"... The Monterey Agreement provides ... for those transfers by the participating SWP contractors, thus facilitating transfers of Table A Amounts from agricultural to urban SWP contractors. As stated above, the environmental documentation for the Monterey Agreement has been decertified. However, the ... legal proceedings (*Planning and Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 100 Cal.Rptr.2d 173 [*PCL litigation*]) did not invalidate ... the Monterey Agreement or enjoin[ ] either the Monterey Agreement or further implementation of the Monterey Agreement.

"In addition, the subsequent Settlement Agreement in the *PCL litigation* did not invalidate or otherwise enjoin the Monterey Agreement.

"Even in the absence of the Monterey Agreement, [Castaic's] permanent acquisition of an additional 41,000 AF of SWP Table A Amount could occur under existing SWP water supply contract provisions, subject to appropriate environmental review.

"Nothing in the existing SWP water supply contracts, or applicable law, prohibit such water transfers with or without the Monterey Agreement. The Monterey Agreement simply provides a specific vehicle for accomplishing transfers of SWP Table A Amounts from agricultural to urban SWP contractors; the amendments under the Monterey Agreement are not the exclusive means by which that Amount may be transferred. In support of that fact, in 1981 (almost 15 years before the Monterey Agreement), the entire SWP Table A Amount of the Hacienda Water District was permanently transferred to the Tulare Lake Basin Water Storage District, pursuant to an agreement approved by DWR.

"The acquisition could proceed as a water transfer under existing law. See, e.g., Water Code §§ 382, 383

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(authority for transferring surplus water) and Water Code §§ 1745, et seq. (authority for transferring non-surplus water). The Kern County Water Agency has reaffirmed its willingness to allow transfers of up to 130,000 AF of SWP table A Amounts under pre-Monterey Agreement conditions and/or under the terms of the Settlement Agreement....

"Finally, [Castaic] is not a party to the pending Monterey Agreement litigation (*Planning Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 100 Cal.Rptr.2d 173). Although not a party, an adverse final judgment invalidating the Monterey Agreement could affect [Castaic's] completed ***156** acquisition of the 41,000 AF, which ****455** could in turn impair [Castaic's] supply of SWP water through its contracts with DWR and other SWP contractors. Nevertheless, [Castaic] believes that an adverse outcome in the Monterey Agreement litigation is not likely to adversely affect [Castaic's] water supplies over the long-term because (a) [Castaic] believes that such a result is unlikely to 'unwind' executed and completed agreements with respect to the permanent transfer of SWP water amounts; (b) existing SWP water supply contract provisions allow such transfers (without the need for the Monterey Agreement); and (c) existing law enables [Castaic] to enter into contracts outside the context of the Monterey Agreement."

The EIR also discloses that there is perchlorate contamination in six water wells that will comprise part of the water service for West Creek. The EIR identifies remediation measures, but does not identify any source of funding for those measures.

DISCUSSION

I

[1] Newhall contends the doctrine of law of the case bars SCOPE's Kern-Castaic transfer arguments.

[2] Where an appellate court states in its opinion a principle or rule of law necessary to its decision, that principle or rule becomes the law of the case. (*Clemente v. State of California* (1985) 40 Cal.3d 202, 211, 219 Cal.Rptr. 445, 707 P.2d 818.) The law of the case must be adhered to both in the lower court and upon subsequent appeal. (*Ibid.*) This is true even if the court that issued the opinion becomes convinced in a subsequent consideration that the former opinion is erroneous. (*Ibid.*)

But our former opinion in this case (*Scope I*) stated no principle or rule of law bearing on the adequacy of the West Creek EIR's discussion of the Kern-Castaic transfer. Newhall attempts to turn silence into positive effect by citing section 21005, subdivision (c). The subdivision requires that our opinion discuss all the alleged grounds for noncompliance with CEQA. Newhall concludes that because we did not discuss the Kern-Castaic transfer in *Scope I*, we approved the transfer.

Newhall cites no authority, however, for the proposition that not discussing an issue as required by section 21005, subdivision (c), transforms that issue into law of the case. In *Friends, supra*, 95 Cal.App.4th at page 1387, 116 Cal.Rptr.2d 54, on which Newhall relies, after finding one of appellant's contentions meritorious, the court expressly stated it considered all of appellant's other contentions ***157** and found them without merit. *(iBid.)FRiends* does not discuss the effect of a failure to consider an issue, and does not even mention the doctrine of law of the case. If Newhall believed we failed to discuss an issue raised in *Scope I*, its remedy was a timely petition for rehearing. (Cal. Rules of Court, rule 8.268 (formerly cited as rule 25).) The time for such a petition has long since passed.

Moreover, we discussed all issues raised in *Scope I*. SCOPE mentioned the Kern-Castaic transfer in its opening brief, but SCOPE did not raise the transfer as an issue. In fact, Newhall argued that we could not consider *Friends*, the decision that decertified the Kern-Castaic transfer EIR, because it occurred after the County approved the West Creek project. Newhall pointed out that once a project is approved, new information does not require reopening the approval. (*Scope I, supra*, 106 Cal.App.4th at p. 723, 131 Cal.Rptr.2d 186.) SCOPE replied that it cited *Friends* only to show that SWP entitlements cannot be taken at face value. ****456** (*Ibid.*) Thus, at Newhall's urging, we did not consider in *Scope I* the issues SCOPE now raises. They arose after the County's initial approval of the project. Newhall cites no authority that prevents us from considering issues that arose prior to the recertification of the EIR.[FN2]

FN2. SCOPE contends the EIR's failure to

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properly analyze the Kern-Castaic transfer violated the terms of the remittitur in *Scope I*. It follows from what we have said that the contention has no merit. We did not consider the Kern-Castaic transfer in *Scope I*, and it was not within the terms of our remittitur in that case.

II

Newhall contends SCOPE waived its perchlorate contamination arguments by failing to appeal them. Newhall argues SCOPE's claim is waived because it is essentially identical to that denied by the trial court in the first challenge to the project's EIR.

But SCOPE's first challenge to the project's EIR concerned disclosure of the extent of perchlorate contamination of local water wells. SCOPE did not appeal the trial court's denial of that challenge. Here SCOPE is not challenging the EIR's disclosure of the extent of perchlorate contamination. Instead, it is challenging the mitigation measures suggested by the EIR. That issue is not substantially identical to the issue raised in the first challenge. There has been no waiver.

III

[3][4] We now consider SCOPE's challenge to the West Creek EIR. An EIR approved by the appropriate governmental agency is presumed adequate, and ***158** the party challenging the EIR has the burden of showing otherwise. (*Barthelemy v. Chino Basin Mun. Water Dist.* (1995) 38 Cal.App.4th 1609, 1617, 45 Cal.Rptr.2d 688(*Barthelemy*).) A party may challenge an EIR by showing the agency has abused its discretion either by reaching factual conclusions unsupported by substantial evidence or by failing to proceed in the manner CEQA provides. (*Vineyard*, *supra*, 40 Cal.4th at p. 435, 53 Cal.Rptr.3d 821, 150 P.3d 709.)

[5][6] In evaluating an EIR for CEQA compliance, we must adjust our scrutiny to the nature of the alleged defect. (*Vineyard*, *supra*, 40 Cal.4th at p. 435, 53 Cal.Rptr.3d 821, 150 P.3d 709.) Where the alleged defect is that the agency's conclusions are not supported by substantial evidence, we must accord deference to the agency's factual conclusions. (*Ibid.*) We may not weigh conflicting evidence to determine who has the better argument. (*Ibid.*) Thus we may not set aside an agency's approval of an EIR on the ground that an opposite conclusion would have been equally or more reasonable. (*Ibid.*)

[7][8][9] Where the alleged defect is that the agency has failed to proceed in a manner provided by CEQA, our review is de novo. (*Vineyard*, *supra*, 40 Cal.4th at p. 435, 53 Cal.Rptr.3d 821, 150 P.3d 709.) An agency that fails to require an applicant to disclose information mandated by CEQA and to include that information in the EIR, fails to proceed in a manner prescribed by CEQA. (*Ibid.*) Where a party challenges an EIR because it fails to disclose evidence that conflicts with its conclusions, the party must show that the failure to disclose the conflicting evidence precludes informed decision making or informed public participation. (*Barthelemy*, *supra*, 38 Cal.App.4th at p. 1617, 45 Cal.Rptr.2d 688.)

IV

[10] SCOPE challenges the adequacy of the EIR's water supply analysis as it relates to the Kern-Castaic transfer.

****457** Recently, our Supreme Court in *Vineyard* articulated four principles for analysis of future water supplies under CEQA:

"First, CEQA's informational purposes are not satisfied by an EIR that simply ignores or assumes a solution to the problem of supplying water to a proposed land use project. Decision makers must, under the law, be presented with sufficient facts to 'evaluate the pros and cons of supplying the amount of water that the [project] will need.' [Citation.]" (*Vineyard*,*supra*, 40 Cal.4th at pp. 430-431, 53 Cal.Rptr.3d 821, 150 P.3d 709.)

"Second, an adequate environmental impact analysis for a large project, to be built and occupied over a number of years, cannot be limited to the water supply for the first stage or the first few years. While proper tiering ***159** of environmental review allows an agency to defer analysis of certain details of later phases of long-term linked or complex projects until those phases are up for approval, CEQA's demand for meaningful information 'is not satisfied by simply stating information will be provided in the future.' [Citation.]" (*Vineyard*, *supra*, 40 Cal.4th at p. 431,

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53 Cal.Rptr.3d 821, 150 P.3d 709.)

"Third, the future water supplies identified and analyzed must bear a likelihood of actually proving available; speculative sources and unrealistic allocations ('paper water') are insufficient bases for decisionmaking under CEQA. [Citation.] An EIR for a land use project must address the impacts of *likely* future water sources, and the EIR's discussion must include a reasoned analysis of the circumstances affecting the likelihood of the water's availability. [Citation.]" (*Vineyard, supra*, 40 Cal.4th at p. 432, 53 Cal.Rptr.3d 821, 150 P.3d 709.)

"Finally, where, despite a full discussion, it is impossible to confidently determine that anticipated future water sources will be available, CEQA requires some discussion of possible replacement sources or alternatives to use of the anticipated water, and of the environmental consequences of those contingencies. [Citation.] The law's informational demands may not be met, in this context, simply by providing that future development will not proceed if the anticipated water supply fails to materialize. But when an EIR makes a sincere and reasoned attempt to analyze the water sources the project is likely to use, but acknowledges the remaining uncertainty, a measure for curtailing development if the intended sources fail to materialize may play a role in the impact analysis. [Citation.]" (*Vineyard, supra*, 40 Cal.4th at p. 432, 53 Cal.Rptr.3d 821, 150 P.3d 709.)

The West Creek EIR does not simply ignore or assume a solution to the problem of supplying water to the project. It identifies specific water sources, including the Kern-Castaic transfer. Nor is the EIR's water supply analysis limited to the first stage or the first few years of the project. The EIR analyzes the Kern-Castaic transfer as part of the permanent supply for the entire project.

SCOPE's concerns center on the third principle articulated in *Vineyard*, that "the future water supplies identified and analyzed must bear a likelihood of actually proving available...."(*Vineyard, supra*, 40 Cal.4th at p. 432, 53 Cal.Rptr.3d 821, 150 P.3d 709.)

SCOPE challenges the EIR's conclusion that an adverse outcome in the Monterey Agreement litigation is unlikely to affect Castaic's water supplies over the long term. The EIR supports this conclusion by stating that an adverse outcome in the Monterey Agreement litigation is unlikely to "unwind" existing agreements for permanent transfer of SWP water amounts, ****458** and that existing law and contracts allow transfers without the need for the Monterey Agreement.

***160** SCOPE argues the EIR fails to disclose that the Kern-Castaic transfer is not final and permanent. SCOPE points out that the Kern-Castaic transfer is not included among the water transfers listed as final and permanent in the Monterey Settlement Agreement.

But the Monterey Settlement Agreement makes it clear that the Kern-Castaic transfer is not listed among the final transfer agreements because its EIR is subject to pending litigation in the Los Angeles Superior Court. (Citing *Friends, supra*, 95 Cal.App.4th 1373, 116 Cal.Rptr.2d 54.) SCOPE points to no evidence that the parties to the Monterey Settlement Agreement consider the transfer as anything other than permanent now that the revised EIR for the transfer has been certified. The Monterey Settlement Agreement did not make the Kern-Castaic transfer temporary. A disclosure that the Monterey Settlement Agreement does not include the Kern-Castaic transfer on its list of final transfer agreements adds nothing substantial to an understanding of water availability.

In *California Oak Foundation v. City of Santa Clarita* (2005) 133 Cal.App.4th 1219, 1237-1238, 35 Cal.Rptr.3d 434, the court reviewed the adequacy of the discussion of the Kern-Castaic transfer contained in an EIR for an unrelated project. The court determined the EIR was inadequate because it failed to discuss the legal uncertainty of the Kern-Castaic transfer; specifically, the uncertainty created by the decertification of the transfer's original EIR.

In contrast, here the EIR discloses that the Monterey Agreement litigation makes the Kern-Castaic transfer legally uncertain. The EIR states that a judgment invalidating the Monterey Agreement could affect Castaic's acquisition of the 41,000 acre feet of water. The EIR concludes, however, that as a practical matter an adverse outcome in the Monterey Agreement litigation is unlikely to "unwind" the transfer agreement. Contrary to SCOPE's argument,

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this conclusion is supported by reasoned analysis. The EIR points out that the Kern-Castaic transfer is intended to be permanent, and that the transfer can be valid even without the Monterey Agreement.

SCOPE argues the Monterey Agreement is necessary to validate the Kern-Castaic transfer because all transfers of SWP water require the DWR's consent. SCOPE cites no authority that expressly requires the DWR's consent for water transfers. Instead, SCOPE reasons the DWR's consent is required because it controls the SWP facilities necessary for delivery of the water. Assuming DWR's consent is necessary, SCOPE cites no authority that the consent must come through the Monterey Agreement. In fact, the EIR discloses that the transfer of surplus and nonsurplus water is authorized by statute. (Water Code, §§ 382, 383, 1745 et seq.) The EIR also notes that at ***161** least one Table A Amount of water was permanently transferred with the DWR's consent almost 15 years prior to the Monterey Agreement.

Quite aside from the Monterey Agreement, the legislative policy of this state is to facilitate water transfers. (See Water Code, §§ 475, 480 et seq.) SCOPE points to no evidence whatsoever that the DWR has any inclination to disapprove the Kern-Castaic transfer even if the Monterey Agreement is ultimately invalidated.

SCOPE points to a letter from the DWR to Castaic dated July 30, 2004. The letter is in an appendix to the West Creek EIR. ****459** The letter states that the DWR staff has reviewed the draft EIR for the Kern-Castaic transfer and found that the document "adequately and thoroughly discusses the proposed project and its impacts," and provides a good discussion of the relationship between the Kern-Castaic transfer and the current Monterey Agreement process. The letter also states that the DWR is using a new model to assess the potential impacts of Table A transfers in preparing the revised Monterey Agreement EIR. It acknowledges that Castaic used an earlier model to analyze the effect of the Kern-Castaic transfer. It states that the use of the new model "may cause slight changes in results, which may lead DWR to different conclusions than the conclusions made by [Castaic] in the current EIR."Nevertheless, the letter states Castaic's draft EIR adequately discusses SWP reliability and pre- and post-Monterey Agreement conditions.

SCOPE argues the West Creek EIR is deficient in that it fails to include or discuss information that a new water model may lead the DWR to different conclusions than those made by Castaic and its draft EIR. But the letter describes any possible change in result as "slight." The letter does not state that the slight change in results will probably lead to different conclusions; it says only that it "may" lead to unspecified different conclusions. It is highly improbable that a slight change in results will lead to radically different conclusions. In fact, the letter praises the draft EIR's discussion of the proposed project and its impacts. The information contained in the letter adds nothing substantial to West Creek's EIR.

SCOPE argues the EIR is devoid of any factual discussion of the impacts of the *PCL* decision on the West Creek project. But the EIR discloses that a final judgment invalidating the Monterey Agreement could impair Castaic's supply of SWP water. The EIR goes on to state that such a result is unlikely because the Kern-Castaic transfer can be validated outside the Monterey Agreement. SCOPE cites no authority for the proposition that the West Creek EIR must discuss the factors the DWR will be required to consider in preparing a revised Monterey Agreement EIR. The Kern-Castaic transfer is not dependent on the Monterey Agreement. Such a discussion is not necessary for informed decision making or public participation.

***162** SCOPE cites *Vineyard, supra*, 40 Cal.4th at p. 440, 53 Cal.Rptr.3d 821, 150 P.3d 709, for the proposition that it is improper for an EIR to tier from an environmental document that will be completed in the future. SCOPE points out that West Creek's EIR was certified without waiting for the DWR to complete its revised EIR for the Monterey Agreement. But West Creek's EIR was not tiered on future Monterey Agreement environmental documents. In fact, West Creek's water supply analysis is based on the premise that the Monterey Agreement litigation is unlikely to affect the Kern-Castaic transfer.

West Creek's EIR satisfies the third principle of analysis stated in *Vineyard.* The record contains substantial evidence demonstrating a reasonable likelihood that water from the Kern-Castaic transfer

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will be available for the project's near- and long-term needs. (See *Vineyard, supra*, 40 Cal.4th at p. 437, 53 Cal.Rptr.3d 821, 150 P.3d 709.) The record also shows the County proceeded in a manner required by CEQA. The EIR neither improperly used tiering to defer all analysis of supplies to future stages of the project, nor relied upon demonstrably illusory supplies. (*Ibid.*)

****460** SCOPE argues that West Creek's EIR is deficient because it fails to analyze the project's water supply in the absence of the 41,000 afy Kern-Castaic transfer. When first published, *Vineyard's* fourth principle was slightly different than the one stated in the subsequent modified opinion. Principle four then stated that an EIR requires analysis of replacement or alternative water sources where "a full discussion leaves some uncertainty regarding actual availability of the anticipated future water sources...." Principle four in the modified version of *Vineyard* allows slightly more flexibility in determining the issue of available future water sources. It requires analysis of replacement or alternative sources only if it is "impossible to confidently determine" that anticipated future water sources will be available.

Here West Creek's EIR acknowledges there is at least some legal uncertainty about the Kern-Castaic transfer. The EIR states in part: "An adverse final judgment invalidating the Monterey Agreement could affect [Castaic's] completed acquisition of the 41,000 AF, which could in turn impair [Castaic's] supply of SWP water through its contracts with DWR and other SWP contractors."

Some would argue it is certain that the outcome of litigation is seldom certain. But whatever the outcome of the *PCL litigation*, it is highly unlikely it will affect the Kern-Castaic water transfer. The water is now available, and for years has been available for the project under executed agreements. The recertified EIR notes that the Kern-Castaic transfer can legally occur without the Monterey Agreement. Suffice it to say, however the Monterey Agreement ***163** litigation is eventually decided, the Kern-Castaic transfer will likely not be affected. Per principle four, we can confidently determine that the water will be available.

V

[11] SCOPE contends West Creek's EIR is deficient in that it fails to discuss the impact of the lack of funding to remediate perchlorate contamination of local water wells. SCOPE has no quarrel with the EIR's discussion of perchlorate contamination of local wells. Its contention is limited to the lack of funding for remediation measures.

In addition to SWP water, two local aquifers will serve as part of the project's water supply, the Alluvial Aquifer and the Saugus Aquifer. SCOPE argues there are 67 wells owned by water companies in these aquifers and an undisclosed number of private wells. SCOPE points to evidence that the estimated cost of remediation is $500,000 per well. No source of funding is identified in the EIR to pay for the equipment necessary for remediation.

SCOPE relies on *Federation of Hillside & Canyon Associations v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261-1262, 100 Cal.Rptr.2d 301(*Federation*). There the city adopted a general plan framework (GPF) as part of its general plan. The GPF identified mitigation measures, including a transportation plan designed to mitigate the transportation impacts of the GPF's growth policies. The transportation plan acknowledged that to implement the mitigation measures would require the cooperation of various public agencies, that the city's portion of the costs would exceed its revenues, and that there is "great uncertainty" whether the mitigation measures would ever be funded or implemented. Although the city adopted the mitigation measures, it made no effort to ensure they will actually be implemented or enforceable. The court determined that the city's approval of the GPF must be vacated for failing to ensure that feasible mitigation measures will actually****461** be implemented. (*Id.* at p. 1261, 100 Cal.Rptr.2d 301, citing §§ 21002.1, subd. (b); 21081.)

Here, although water agencies may have 67 wells, only six of them have been identified as being contaminated with perchlorate. Unlike the city in *Federation*, here the County did not acknowledge there is great uncertainty that mitigation measures would ever be funded or implemented. To the contrary, the EIR states in part: "Due to the high value of this local water resource, the purveyors have placed a high priority on replacing the impacted groundwater capacity by installing wellhead

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treatment and the construction of new wells." Here, unlike *Federation,* there is nothing to suggest the mitigation measures will not be implemented. Finally, SCOPE points to nothing in *Federation* or any other case that requires the EIR to discuss funding for mitigation measures.

***164** DISPOSITION

The judgment is affirmed. Costs on appeal are awarded to respondents and real parties in interest.

COFFEE and PERREN, JJ., concur.
Cal.App. 2 Dist.,2007.
Santa Clarita Organization for Planning the Environment v. County of Los Angeles
157 Cal.App.4th 149, 68 Cal.Rptr.3d 449, 07 Cal. Daily Op. Serv. 13,422, 2007 Daily Journal D.A.R. 17,387

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Annual Reports Consistent with SP 4.11-15

Newhall Ranch Specific Plan
2003 Annual Report
Los Angeles County Agriculture Water Use
Mitigation Measure 4.11 -15

Crop Type	Total Irrigated Acres	Adjusted CIMIS Water Use (af/ac)	Adjusted CIMIS Water Use (af/yr)	%of Water use by Crop	Total Pumped Water Based on SCE (af)	Allocation of Total Pumped Water By Crop (af/yr)	Acre Feet/ Year per Acre of Crop	LA Co. Irrigated Crops (acres)	LA Co. Crop Share Of Actual Pumped Water (af/yr)	LA Co. Crop Share Using Adjusted CIMIS (af/yr)
Citrus(furrow)	59	6.31	372	2.64%	12,286	325	5.51			
Citrus(micro)	492	4.73	2327	16.53%		2,030	4.13			
Sudan Grass	388	10.81	4194	29.79%		3,660	9.43	388	3,660	4,194
Vegetables	931	7.72	7187	51.04%		6,271	6.74	581	3,914	4,485
Totals				**100.00%**		**12,286**		**969**	**7,573**	**8,680**

Newhall Ranch Specific Plan
2004 Annual Report
Los Angeles County Agriculture Water Use
Mitigation Measure 4.11 -15

Crop Type	Total Irrigated Acres	Adjusted CIMIS Water Use (af/ac)	Adjusted CIMIS Water Use (af/yr)	%of Water use by Crop	Total Pumped Water Based on SCE (af)	Allocation of Total Pumped Water By Crop (af/yr)	Acre Feet/ Year per Acre of Crop	LA Co. Irrigated Crops (acres)	LA Co. Crop Share Of Actual Pumped Water (af/yr)	LA Co. Crop Share Using Adjusted CIMIS (af/yr)
Citrus	340	4.92	1673	10.86%	12,828	1,393	4.10			
Irrigated Hay	160	2.95	472	3.06%		393	2.46	160	393	472
Irrigated Pasture	174	11.26	1959	12.72%		1,632	9.38	174	1,632	1,959
Vegetables	1,392	8.04	11192	72.67%		9,322	6.70	627	4,199	5,041
Nursery	30	3.52	106	0.69%		88	2.93		-	-
Totals				**100.00%**		**12,828**		**961**	**6,224**	**7,472**

Newhall Ranch Specific Plan
2005 Annual Report
Los Angeles County Agriculture Water Use
Mitigation Measure 4.11 -15

Crop Type	Total Irrigated Acres	Adjusted CIMIS Water Use (af/ac)	Adjusted CIMIS Water Use (af/yr)	%of Water use by Crop	Total Pumped Water Based on SCE (af)	Allocation of Total Pumped Water By Crop (af/yr)	Acre Feet/ Year per Acre of Crop	LA Co. Irrigated Crops (acres)	LA Co. Crop Share Of Actual Pumped Water (af/yr)	LA Co. Crop Share Using Adjusted CIMIS (af/yr)
Citrus	308	3.69	1137	12.61%	8,800	1,110	3.60			
Irrigated Hay	160	6.03	965	10.70%		942	5.89	160	942	965
Irrigated Pasture	174	7.03	1223	13.57%		1,194	6.86	175	1,201	1,230
Vegetables	907	6.03	5469	60.68%		5,340	5.89	278	1,637	1,676
Nursery	83	2.64	219	2.43%		214	2.58			-
Totals				**100.00%**		**8,800**		**613**	**3,780**	**3,871**

Newhall Ranch Specific Plan
2006 Annual Report
Los Angeles County Agriculture Water Use
Mitigation Measure 4.11 -15

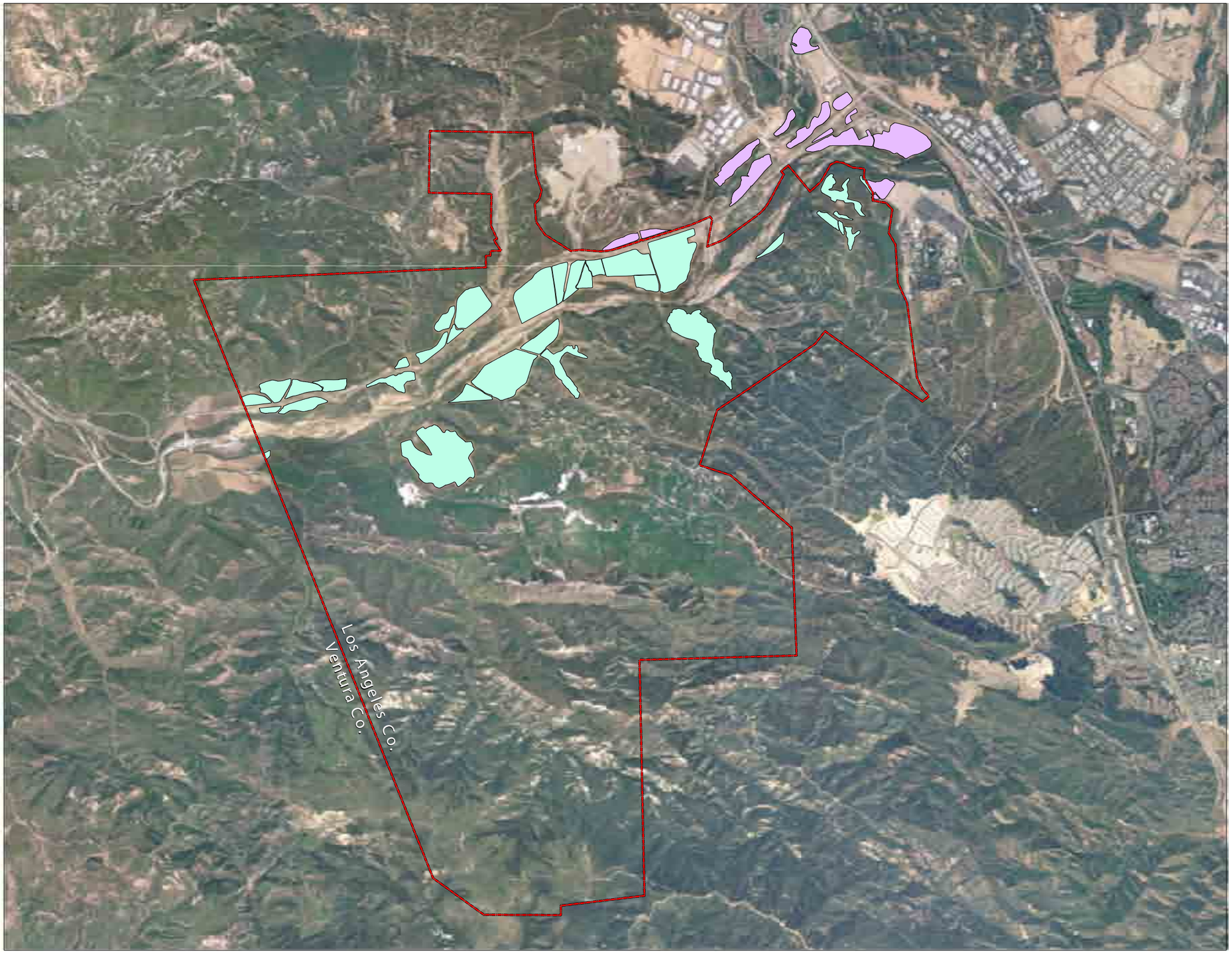
Crop Type	Total Irrigated Acres	Adjusted CIMIS Water Use (af/ac)	Adjusted CIMIS Water Use (af/yr)	%of Water use by Crop	Total Pumped Water Based on SCE (af)	Allocation of Total Pumped Water By Crop (af/yr)	Acre Feet/ Year per Acre of Crop	LA Co. Irrigated Crops (acres)	LA Co. Crop Share Of Actual Pumped Water (af/yr)	LA Co. Crop Share Using Adjusted CIMIS (af/yr)
Citrus	278	4.07	1131	9.44%	13,709	1,295	4.66			
Irrigated Hay	233	6.65	1549	12.93%		1,773	7.61	205	1,560	1,363
Sudan Grass (double Crop)		0	0	0.00%		-				
Irrigated Pasture	231	7.76	1793	14.96%		2,051	8.88	231	2,051	1,793
Vegetables	923	6.65	6138	51.23%		7,023	7.61	285	2,168	1,895
Sod	119	6.65	791	6.60%		905	7.61	119	905	791
Nursery	199	2.91	579	4.83%		663	3.33			-
Totals				**100.00%**		**13,709**		**840**	**6,685**	**5,842**

Newhall Ranch Specific Plan
2007 Annual Report
Los Angeles County Agriculture Water Use
Mitigation Measure 4.11 -15

Crop Type	Total Irrigated Acres	Adjusted CIMIS Water Use (af/ac)	Adjusted CIMIS Water Use (af/yr)	%of Water use by Crop	Total Pumped Water Based on SCE (af)	Allocation of Total Pumped Water By Crop (af/yr)	Acre Feet/ Year per Acre of Crop	LA Co. Irrigated Crops (acres)	LA Co. Crop Share Of Actual Pumped Water (af/yr)	LA Co. Crop Share Using Adjusted CIMIS (af/yr)
Citrus	278	4.45	1237	8.88%	11,781	1,046	3.76			
Alfalfa	205	7.27	1490	10.70%		1,261	6.15	205	1,261	1,490
Irrigated Hay	28	7.27	204	1.46%		172	6.15			
Sudan Grass (double Crop)		0	0	0.00%		-				
Irrigated Pasture	231	8.48	1959	14.07%		1,657	7.17	231	1,657	1,959
Vegetables	1,037	7.27	7539	54.13%		6,377	6.15	355	2,183	2,581
Sod	119	7.27	865	6.21%		732	6.15	119	732	865
Nursery	199	3.18	633	4.54%		535	2.69			
Totals				**100.00%**		**11,781**		**910**	**5,833**	**6,895**

Newhall Ranch Specific Plan
2008 Annual Report
Los Angeles County Agriculture Water Use
Mitigation Measure 4.11 -15

Crop Type	Total Irrigated Acres	Adjusted CIMIS Water Use (af/ac)	Adjusted CIMIS Water Use (af/yr)	%of Water use by Crop	Total Pumped Water Based on SCE (af)	Allocation of Total Pumped Water By Crop (af/yr)	Acre Feet/ Year per Acre of Crop	LA Co. Irrigated Crops (acres)	LA Co. Crop Share Of Actual Pumped Water (af/yr)	LA Co. Crop Share Using Adjusted CIMIS (af/yr)
Citrus	273	4.63	1264	10.31%	10,633	1,096	4.01			
Alfalfa	82	7.57	621	5.06%		538	6.56	82	538	621
Irrigated Hay	28	7.57	212	1.73%		184	6.56			
Sudan Grass (double Crop)		0	0	0.00%		-				
Irrigated Pasture	231	8.83	2040	16.63%		1,769	7.66	231	1,769	2,040
Vegetables	825	7.57	6245	50.93%		5,416	6.56	142	932	1,075
Sod	168	7.27	1221	9.96%		1,059	6.30	168	1,059	1,221
Nursery	199	3.31	659	5.37%		571	2.87		-	
Totals				**100.00%**		**10,633**		**623**	**4,298**	**4,957**



L E G E N D

- Newhall Ranch Specific Plan Boundary
- Irrigated Agricultural Lands - NRSP
- Irrigated Agricultural Lands - outside NRSP

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

FORMA

04-07-2003
agricultural_acres_040703.mxd

Newhall Land Historically Irrigated Agricultural Areas within Los Angeles County

APPENDIX 4.11

Wastewater Disposal

Written Correspondence with Basil Hewitt, August 15, 2005

Subject: SCVJSS INFORMATION
Date: Monday, August 15, 2005 2:58 PM
From: Hewitt, Basil <BHewitt@lacsd.org>
To: <mschaefer@impactsciences.com>
Conversation: SCVJSS INFORMATION

Minta,

Per your request, below is some information on the Districts' water reclamation plants in the Santa Clarita Valley:

The Districts operate two water reclamation plants (WRPs), the Saugus WRP and the Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These facilities are interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS). The SCVJSS has a design capacity of 28.1 million gallons per day (mgd) and currently processes an average wastewater flow of 21.5 mgd. The phase 1 of the Saugus/Valencia expansion was completed in July 2004. The Saugus Water Reclamation Plant currently treats approximately 5.5 mgd of wastewater and the Valencia Water Reclamation Plant currently treats 16 mgd of wastewater.

Basil

Wastewater Generation

Landmark Village Wastewater Generation

Land Use	Units	Quantity	Generation Factor (gpd)	Generation (gpd)	Generation (mgd)	AFY
Residential						
Single Family	du	308	260.00	80,080.00	0.0801	89.70112106
Multi-Family	du	1,136	195.00	221,520.00	0.2215	248.13427
Mobile Homes	du		195.00	0.00	0.0000	0
Non-Residential						0
Commercial Retail	tsf	1,033	100.00	103,300.00	0.1033	115.7108617
Hotel	sq.ft.		na			0
Hotel (1)	rooms		125.00	0.00	0.0000	0
School	tsf	20	200.00	4,000.00	0.0040	4.480575478
College	stdnts		20.00	0.00	0.0000	0
College	sq.ft.		na			0
Hospital	sq.ft.		na			0
Hospital (3)	beds		125.00	0.00	0.0000	0
Library (4)	tsf		50.00	0.00	0.0000	0
Church	tsf		50.00	0.00	0.0000	0
Business Park (7)	tsf		300.00	0.00	0.0000	0
Industrial/Manufacturing (5)	tsf		25.00	0.00	0.0000	0
Utilities	tsf		25.00	0.00	0.0000	0
Commercial/Medical Office	tsf		300.00	0.00	0.0000	0
Golf Course/Park	acres		0.00	0.00	0.0000	0
Golf Course/Park Imps	tsf		100.00	0.00	0.0000	0
Visitor Serving (8)	tsf		100.00	0.00	0.0000	0
Special Generator (9)	tsf		25.00	0.00	0.0000	0
			Totals	**408,900.00**	**0.4089**	**458.03**

gpd = gallons per day; mgd = million gallons per day; du = dwelling unit; tsf = thousand square feet;
sq. ft. = square feet; stdnts = students

Source of wastewater generation factors is CDSLAC, Loadings for Each Class of Land Use (1992-93).
This list is provided in Appendix 4.10.

(1) Number of hotel rooms is based upon an assumed 400 gross square feet per room.
(3) Number of hospital beds is based upon an assumed 500 gross square feet per bed.
(4) Uses same generation factor for library as used for church.
(5) Generation factor for industrial/manufacturing is based on dry manufacturing uses.
(7) Uses same generation factor as for professional building.
(8) Uses same generation factor as for commercial retail.
(9) Uses same generation factor as for industrial/manufacturing.

APPENDIX 4.12

Solid Waste

Solid Waste Information/Calculations

River Village Project Solid Waste Generation (No Recycling)

Land Use	Quantity	Units	Generation Rate		Total Waste Generated	
			(tpy) (1)	(lbs./day)	(tpy)	(lbs./day)
Residential Units						
Single-Family	308	du	2.0400	11.18	628	3,443
Multi-Family	1,136	du	1.1700	6.41	1,329	7,283
Commercial						
Commercial Retail	337,600	sq. ft.	0.0024	0.01	810	4,440
Commercial Office	702,400	sq. ft.	0.0014	0.01	983	5,388
School						
Elem./Middle Schools	436	students	0.1090	0.60	48	260
High School	151	students	0.1090	0.60	16	90
Parkland	16	acres	0.2000	1.10	3	18
				Totals	**3,818**	**20,922**

du = dwelling unit; sq.ft. - square feet; tpy = tons per year; lbs. = pounds

(1) The solid waste daily generation rates in tons per year are derived from the Ventura County Solid Waste Management Department's Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts. These figures do not reflect any recycling activities on the part of the generator.

Prepared by Impact Sciences, Inc.
10/4/04

River Village Solid Waste Generation Cumulative + Project (No Recycling)

Land Use	Quantity	Units	Generation Rate (tpy) (1)	Generation Rate (lbs./day)	Total Waste Generated (tpy)	Total Waste Generated (lbs./day)
Residential Units:						
Single Family Detached	93,589	du	2.0400	11.18	190,922	1,046,146
Multi-Family or Attached	49,149	du	1.1700	6.41	57,504	315,092
Mobile Home	2,699	du	1.1700	6.41	3,158	17,303
Commercial/Industrial						
Commercial Retail	20,236,630	sq. ft.	0.0024	0.01	48,568	266,126
Sit Down Restaurant	283,790	sq. ft.	0.0108	0.06	3,065	16,794
Fast Food Restaurant	23,600	sq. ft.	0.0108	0.06	255	1,397
Car Dealership	411,000	sq. ft.	0.0051	0.03	2,096	11,485
Hotel	2,071	sq. ft.	0.0053	0.03	11	60
Movie Theater (2)	3,300	seats	0.2000	1.10	660	3,616
Health Club (2)	54,000	sq. ft.	0.0056	0.03	302	1,657
Medical Offices	133,730	sq. ft.	0.0027	0.01	361	1,978
Hospital	247,460	sq. ft.	0.0055	0.03	1,361	7,458
Business Park	8,424,330	sq. ft.	0.0014	0.01	11,794	64,625
Commercial Office	702,400	sq. ft.	0.0014	0.01	983	5,388
Elem./Middle Schools (3)	279,389	students	0.1090	0.60	30,453	166,868
High School (3)	12,994	students	0.1090	0.60	1,416	7,761
College (3)	29,948	students	0.1090	0.60	3,264	17,887
Day Care	785,000	sq. ft.	0.0013	0.01	1,021	5,592
Trans., Comm., Utilities	1,150,240	sq. ft.	0.0079	0.04	9,087	49,791
Special Generator (4)	413	sq. ft.	0.0079	0.04	3	18
Golf Course	1,209	acres	0.2000	1.10	242	1,325
Parkland	509	acres	0.2000	1.10	102	558
Library (5)	171,790	sq. ft.	0.0014	0.01	241	1,318
Manufacturing/Warehouse	3,932,470	sq. ft.	0.0050	0.03	19,662	107,739
Church (5)	501,190	sq. ft.	0.0014	0.01	702	3,845
Industrial Park (6)	501,190	sq. ft.	0.0010	0.01	501	2,746
Undeveloped Parkland	1,000	acres				
				Totals	**386,532**	**2,117,982**

du = dwelling unit; sq.ft. - square feet; tpy = tons per year; lbs. = pounds

(1) The solid waste daily generation rates in tons per year are derived from the Ventura County Solid Waste Management Department's Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts, unless otherwise noted. These figures do not reflect any recycling activities on the part of the generator.

(2) California Integrated Waste Management Website, November 2002, which cites SWANA Technical Bulletin 85-6, Recovery Sciences 1987 and Santa Clarita SRRE, 1990.

(3) California Integrated Waste Management Website, November 2002, which cites SWANA Technical Bulletin 85-6, Recovery Sciences 1987 and Matrix Management Group "Best Management Practices Analysis for Solid Waste."

(4) Conservatively assumes same generation rate as utilities.

(5) Assumes same generation rate as for office.

(6) California Integrated Waste Management Website, November 2002, which cites City of Los Angeles Bureau of Solid Waste 1989.

Prepared by Impact Sciences, Inc.
10/4/04

APPENDIX 4.13

Police Services

Written Correspondence from Captain Patti A. Minutello,
Los Angeles County Sheriff's Department, Santa Clarita Valley Station,
August 4, 2004

LEROY D. BACA, SHERIFF

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169
(661) 255-1121

August 4, 2004

Ms. Julie Berger
Impact Sciences Incorporated
30343 Canwood Street, Suite 210
Agoura Hills, California 91301

Dear Ms. Berger:

DRAFT ENVIRONMENTAL IMPACT REPORT
RIVER VILLAGE, NEWHALL RANCH
TENTATIVE TRACT NO. 53108

The proposed Project consisting of 1,444 residential units located south of State Route 126 near the intersection with Chiquita Canyon Road is within the jurisdiction of the Los Angeles County Sheriff's Department, Santa Clarita Valley Station, 23740 Magic Mountain Parkway, Valencia, California. The station is located approximately 8-9 miles from the project site.

It is anticipated that the non-emergent response time to a request for service would be approximately 30-45 minutes. The priority response time would be approximately 10-15 minutes and the response time under emergent circumstances would be approximately 6-10 minutes. All response times are approximations, only, and would be dependent on both the deployment of area radio cars and traffic conditions.

This station serves an area of 656 square miles, which is made up of the City of Santa Clarita and unincorporated County area between the Los Angeles City Limits to the South, the Kern County Line to the North and involving all area between the Ventura County Line to the West and the township of Aqua Dulce to the East. The population served by our station is approximately 200,000 residents.

Our ideal officer to population ratio is one deputy per 1,000 residents and with our current staffing of 171 sworn deputies currently assigned, our ratio is less than ideal at one deputy per every 1,169 residents. Assuming a residential density of 3.01 persons per dwelling unit, this proposed project will generate a population increase of 4,346. Based on the above, this project located in the unincorporated area, would require four additional deputies to the station compliment.

Our primary concern is our ability to provide an adequate level of protection and service to all areas we police. Due to the rapidly expanding population of the Santa Clarita Valley and its record-setting home building, it is difficult to project the impact of this specific project on law enforcement.

Upon review of your documentation and our understanding of the Newhall Ranch area, there will be several more tracts proposed and ultimately built with a population increase of approximately 67,213, which would put our services in dire need of a new station facility located in the area, and an increase of 67 deputy personnel. Additionally, the increase in required field personnel will necessitate an increase in support resources such as detectives, front desk personnel, secretaries, administration, vehicles and portable radios.

While we do not oppose this project, or future projects for the Newhall Ranch area, we are seriously concerned about our ability to adequately police this valley with our current resources. Without a strong commitment from the Board of Supervisors to provide sufficient funding, we may face a situation where we cannot provide timely emergency services.

Adding this project and other projects in progress, either proposed, approved or committed in the Santa Clarita Valley, it is certain they will all significantly strain our departments ability to operate.

It is suggested, for the security and safety of the residents, that the following crime prevention measures be implemented during site and building layout design:

- Provide lighting in open areas and parking lots;
- Ensure the visibility of doors and windows from the street;
- Ensure that the required building address numbers are lighted and readily apparent from the street for emergency response agencies;

Should you have further questions, please feel free to call me at (661) 255-1121 extension 5102, or Deputy Patrick Rissler at extension 5159.

Sincerely,

LEROY D. BACA, SHERIFF

Patti A. Minutello, Captain
Santa Clarita Valley Station

PAM:par

Correspondence from the Department of California Highway Patrol, July 30, 2004

State of California—Business, Transportation and Housing Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
28648 The Old Road
Valencia, CA 91355
(661) 294-5540

(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)

July 30, 2004

File No.: 540.10868.11822

Ms. Julie Berger
Project Planner
Impact Sciences
30343 Canwood Street, Suite 210
Aguora Hills, CA 91301

Dear Ms. Berger:

Our office received your letter dated June 21, 2004, regarding the River Village project in northwestern Los Angeles County. The proposed project will be located in the unincorporated area of Los Angeles County and within the jurisdiction of the California Highway Patrol. Therefore, traffic enforcement, emergency incident management, public service, assistance and accident investigation will be the responsibility of our agency.

The Santa Clarita Valley (SCV) is the fastest growing region in Southern California and the fifth fastest growing region in the State. The city of Santa Clarita has grown from a population of 110,000 in 1990 to 187,000 in 2002. More recent estimates indicate a population of 226,346. The area has a projected population growth of 5.63% per year and is anticipated to increase to 353,733 by 2010. During that time period there are plans to build more than 34,000 new homes, most of which will occur in the unincorporated areas. In addition, there is currently 12 million feet of industrial space which is expected to grow at a rate of 16% a year.

In response to your specific questions regarding the California Highway Patrol's operations, the following information is provided:

1) Our current staffing level (position and numbers) at the Newhall CHP Area Office (uniform/non-uniform) is:

a) 1 Captain, 2 Lieutenants, 7 Sergeants, 64 Officers, 9 non-uniforms, 15 senior volunteers.

The Newhall CHP area of responsibility has seen a 15% increase in total number of traffic collisions since 2001. Year-to-date, we have an 11% increase in traffic collisions as compared to the same period in 2003. Even though the traffic in the Area has increased substantially in the last decade, it has been over twenty (20) years since there has been an increase in the personnel strength in the Newhall CHP Area. Accordingly, the Newhall CHP Area has asked for 20 additional officers and two additional sergeant positions; however, due to budgetary constrains, no additional personnel are anticipated in the near future.

2) The Newhall CHP Area issued 9,626 citations, investigated 445 traffic collisions, and affected 346 arrests within the proposed proximity of the River Village project.

3) The Newhall CHP Area is tasked with completing the mission of the Department with available staffing and equipment; however, additional resources are very desirable. There are no upgrades to the station that are planned.

4 & 5) The proposed project will directly affect the CHP's ability to serve the existing community. The amount of proposed dwelling units in the area is 1,444 units. The addition of these dwellings, coupled with the proposed commercial development sites and others, will undoubtedly strain existing resources.

6) The River Ranch project will increase traffic volume on SR-126, Interstate 5, The Old Road, and other bordering surface streets. The increased traffic will ultimately cause delays in emergency response times. Additionally, we have great concern for the proposed additional roadways which would necessitate additional resources and officers to provide traffic enforcement, emergency incident management, public service, assistance and accident investigation. The CHP is concerned with traffic disruption, congestion, and any proposed detours or reduction in lane widths during the construction phase.

7) The information provided to you previously by Lieutenant Hoose is correct with the exception of the information regarding the non-uniform layoffs and hiring freeze. The Department's academy has reopened and the hiring freeze was lifted.

Safety during the "borrow site" phase of the proposed construction in which dirt movers will be crossing the SR-126 several times daily is a safety concern for the CHP. The SR-126 is a heavily traveled state route, with two traffic lanes in each direction. The posted speed limit for the SR-126 in the Newhall CHP Area is 60 MPH. Due to the heavy traffic volume and the high speed limits in the area, several construction signs will need to be posted with a reduced construction zone speed limit. Another consideration to make this phase of construction safer would be to hire CHP officers on a reimbursable services contract to provide traffic control and additional traffic enforcement for the area.

Lieutenant M. Odle will be our Department's contact person for the project. If you have any questions or concerns, he may be reached at the above address or telephone number.

Thank you for allowing us the opportunity to comment on this project.

Sincerely,

for E. CONLEY, Captain
Commander
Newhall Area

Law Enforcement Facilities Mitigation Fee Recommendation Letter;
May 27, 2008

County of Los Angeles
CHIEF EXECUTIVE OFFICE
713 KENNETH HAHN HALL OF ADMINISTRATION
LOS ANGELES, CALIFORNIA 90012
(213) 974-1101
http://ceo.lacounty.gov

WILLIAM T FUJIOKA
Chief Executive Officer

Board of Supervisors
GLORIA MOLINA
First District

YVONNE B. BURKE
Second District

ZEV YAROSLAVSKY
Third District

DON KNABE
Fourth District

MICHAEL D. ANTONOVICH
Fifth District

May 27, 2008

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

LAW ENFORCEMENT FACILITIES MITIGATION FEE
FOR NORTH LOS ANGELES COUNTY
(SUPERVISORIAL DISTRICT 5)
(3 VOTES)

SUBJECT

Proposed ordinance amending Title 22 (Planning and Zoning) of the Los Angeles County Code to establish a law enforcement facilities mitigation fee for new residential, commercial, office, and industrial development in three defined areas located within the unincorporated areas of North Los Angeles County known as Santa Clarita, Newhall, and Gorman. Also, adoption of a resolution regarding establishment of the fee and approving Capital Improvement/Construction Plan for the Santa Clarita and Newhall Areas. Additional direction to the Chief Executive Officer to retain a consultant to assist in the development of capital improvement/construction plans for law enforcement facilities for North Los Angeles County and the update of the report entitled "Santa Clarita – North Los Angeles County Law Enforcement Facilities Fee Study" and the law enforcement facilities mitigation fees contained therein.

IT IS RECOMMENDED THAT YOUR BOARD:

1. Note and file the report entitled "Santa Clarita – North Los Angeles County Law Enforcement Facilities Fee Study" prepared by MuniFinancial dated October 29, 2007 which analyzes, prescribes a methodology, and defines law enforcement facilities fee structures for five areas within the North County area of Los Angeles County including the Santa Clarita, Newhall, Gorman, Lancaster, and Palmdale Areas.

2. Note and file for consideration on June 24, 2008, the proposed Ordinance adding Chapter 22.74 to Title 22 – (Planning and Zoning) to Establish a Law Enforcement Facilities Mitigation Fee prepared by County Counsel for the establishment and collection of a facilities impact fee in the Santa Clarita, Newhall, and Gorman Areas, and the Resolution of the Board of Supervisors Establishing a Law Enforcement Facilities Mitigation Fee and Approving a Capital Improvement/Construction Plan for the Santa Clarita and Newhall Areas.

3. Set June 24, 2008 as the date for a public hearing to consider the proposed Law Enforcement Facilities Mitigation Fee Ordinance and the Resolution Establishing the Law Enforcement Facilities Mitigation Fee for the Santa Clarita, Newhall, and Gorman Areas and Approving the Capital Improvement/ Construction Plan for the Santa Clarita and Newhall Areas.

4. Instruct the Executive Officer of the Board to provide notice of the June 24, 2008 public hearing on the proposed Law Enforcement Facilities Mitigation Fee Ordinance and Resolution Establishing the Fee and Approving the Capital Improvement/Construction Plan in accordance with Government Code Sections 66016, 66018 and 65090.

AT THE CONCLUSION OF THE HEARING, IT IS FURTHER RECOMMENDED THAT YOUR BOARD:

1. Find that adoption of the ordinance establishing the law enforcement facilities mitigation fee and the related resolution establishing the fee and capital improvement/construction plan are for the purpose of providing the additional funds necessary to provide law enforcement facilities in existing service areas and are, therefore, exempt from the California Environmental Quality Act (CEQA) pursuant to Section 21080(b)(8) of the Public Resources Code and Section 15273 of Title 14 of the California Code of Regulations (the State CEQA Guidelines).

2. Adopt the Resolution of the Board of Supervisors of the County of Los Angeles Establishing a Law Enforcement Facilities Mitigation Fee and Approving a Capital Improvement/Construction Plan for the Santa Clarita and Newhall Areas.

3. Adopt the Ordinance to Establish a Law Enforcement Facilities Mitigation Fee for the Santa Clarita, Newhall, and Gorman Areas of North Los Angeles County.

4. Authorize the Auditor-Controller to establish an interest-earning developer fee revenue account to include each of the developer fee areas for purposes of accounting for fees collected from developers, including interim fees, and instruct the Chief Executive Officer to include a summary of these funds in the annual County budget.

5. Direct the Chief Executive Officer to enter into a sole source contract in an amount not to exceed $100,000 with MuniFinancial to prepare an update to the "Santa Clarita – North Los Angeles County Law Enforcement Facilities Fee Study" and report back at a regular scheduled meeting of the Board within 270 days with recommendations that provide the following for all five areas included in the October 29, 2007 Report: (1) a capital improvement/construction plan and (b) an update and adjustment of the law enforcement facilities fees.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

In 2006, the County of Los Angeles, through the office of Supervisor Michael D. Antonovich, joined with the cities of Lancaster, Palmdale, and Santa Clarita to retain a consultant to:

- Analyze the need for law enforcement facitilies, including equipment and capital facilities, to support existing and future development within both incorporated and unincorporated areas of North Los Angeles County through 2025.

- Identify the share of the costs for law enforcement facilities required to serve the additional population, structures, and activities created by the new, future development; and

- Develop a methodology for calculating, and recommend a law enforcement facility impact fee to be imposed for the purpose of generating funds to mitigate the fiscal impacts created by the need for new law enforcement facilities in the three cities and unincorporated north Los Angeles County areas to accommodate growth in service populations.

The County and the three cities joined together because all four jurisdictions receive law enforcement services from the Los Angeles County Sheriff. The consulting firm MuniFinancial was retained by the four agencies and issued a report dated October 29, 2007 (Attachment I), recommending the adoption of law enforcement facility impact fees pursuant to Government Code Sections 66000 et seq, the State Mitigation Fee Act, unique to five distinct areas in North Los Angeles County: Gorman, Newhall, Santa Clarita, Palmdale, and Lancaster.

On October 9, 2007, the City Council of the City of Santa Clarita adopted a resolution implementing a law enforcement facilities impact fee within the City at the level recommended in the MuniFinancial Report. The fee took effect 60 days after the adoption of the Council resolution and has not been challenged.

Because three of the five areas encompass both an incorporated city and County unincorporated territory, it is essential for both the affected cities and the County to adopt similar ordinances establishing the law enforcement facility impact fees. Therefore, on December 18, 2007, a motion by Supervisor Antonovich was unanimously adopted by your Board instructing the Chief Executive Office (CEO) to work with County Counsel and the Sheriff's Department to prepare a proposed ordinance and any other required documentation for the creation of Law Enforcement Facilities Mitigation Fees for the North County.

In response to the Board motion, the CEO convened a work group composed of representatives of the Department of Regional Planning, Department of Public Works, Auditor-Controller, and County Counsel to review the MuniFinancial Report and determine how to proceed. The CEO also consulted with MuniFinancial to receive clarification on the source documents used to project future development within the five areas; and corresponding future law enforcement facility needs and cost estimates.

Based upon this evaluation, the CEO is recommending that the Board of Supervisors adopt an ordinance imposing law enforcement facilities mitigation fees as proposed in the MuniFinancial Report for three of the five areas and delay fee adoption in two of proposed areas until a capital improvement/construction plan (CI/CP) is developed and the MuniFinancial fee recommendations can be updated (Attachment II). The CEO is further recommending that your Board authorize a sole source contract with MuniFinancial to develop updated and new CI/CPs and law enforcement facilities mitigation fee recommendations for all five areas; and report back within 270 days.

Specifically the CEO is recommending:

- Adoption, after a noticed public hearing, of the Resolution Establishing a Law Enforcement Facilities Fee and Approving a Capital Improvement/Construction Plan for the Santa Clarita and Newhall Areas (Attachment III).

- Adoption, after noticed public hearing, of the Ordinance establishing a Law Enforcement Facilities Mitigation Fee for the Santa Clarita, Newhall, and Gorman Areas of North Los Angeles County (Attachment IV). The fees for these three Areas are shown in Attachment V.

- Delay the fee adoption for the Palmdale and Lancaster Areas pending development, in collaboration with the cities, of a CI/CP for future law enforcement facilities directly related to new projected development and the update of the fee based upon consideration of each CI/CP and the current costs of new facility construction and equipment acquisition.

- Authorize the CEO to enter into a sole source contract with MuniFinancial for an amount not to exceed $100,000 for purposes of developing updated and new CI/CPs and law enforcement facilities mitigation fee recommendations for all five areas.

- That the CEO report back within 270 days.

FISCAL IMPACT/FINANCING

In order to meet the service demands of population growth within the existing service areas of the Sheriff's Department in developing unincorporated areas of the County, and the need for new or expanded law enforcement facilities, it is recommended that separate law enforcement facility mitigation fee be established and imposed upon new development occurring in three

defined North County areas, which contain unincorporated areas: Santa Clarita, Newhall, and Gorman. As detailed in the MuniFinancial Report, each of the law enforcement facility areas will have a separate fee, and the amount of the fee will be set at a base level sufficient to provide, or contribute to, a turnkey law enforcement facility and corresponding equipment that is in direct proportion to the population increases from new development that warrant or contribute to the need for a new facility. In areas where a new building is not required, the fee will be used to augment existing service capacity through the purchase of equipment directly required to serve the new population.

The amount of the fee established by Section 22.74.030 shall be reviewed annually by the Sheriff's Department, in consultation with the County Auditor-Controller. On July 1 of each year, the fee in each law enforcement facilities fee area shall be adjusted based on the Engineering News Record-Building Construction Cost Index (ENR-BCCI).

The related Capital Improvement/Construction Plan setting forth the approximate location, size, time of availability, and estimates of cost for the facilities and improvements to be financed with the fee for the Santa Clarita and Newhall areas will be annually updated by the Board of Supervisors. It is anticipated that your Board will be asked to adopt a Capital Improvement/Construction Plan for the other areas covered by the MuniFinancial Report at a subsequent time following additional investigation.

Funding for the sole source contract with MuniFinancial will not exceed $100,000.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The Mitigation Fee Act, contained in Section 66000 et seq. of the Government Code, provides legal authority for imposing fees on development projects for the purpose of defraying the cost of pubic facilities related to new development. In addition, the California Environmental Quality Act requires mitigation of the impact of development projects on public infrastructure needs.

Pursuant to the Mitigation Fee Act, the law enforcement facilities mitigation fee may only be adopted after a noticed public hearing as provided in Government Code Section 66016 and 66018. The related Capital Improvement/Construction Plan may only be adopted after a noticed public hearing with notice being provided in accordance with Government Code Section 65090. Recommendation No. 4 instructs the Executive Officer of the Board to provide notice as required by the Government Code.

In accordance with the Mitigation Fee Act, the law enforcement facilities mitigation fee will provide sufficient revenues to pay for land acquisition, engineering, construction, installation, purchasing, or any other direct cost providing capital law enforcement facilities and equipment needed to serve the new development in unincorporated areas of the North County. All interest income earned shall be credited to each account, and shall be used solely for the purposes for

which the fee was collected. The fees will be collected at the time of building permit issuance for commercial, office, and industrial development, and also for single-family and multi-family residential development where a CI/CP has been adopted. In all other cases, the fee will be collected at the time of final inspection of the development or issuance of the certificate of occupancy, which ever occurs first.

New residential, commercial, office, and industrial development in high-growth unincorporated areas of north Los Angeles County has resulted in a demand for law enforcement services and facilities within the Sheriff's Department existing service area beyond the capacity of the County's existing law enforcement infrastructure. Projected population growth in the five targeted law enforcement facility impact areas by the year 2025 will increase from 660,800 residents to 1,112,300 residents for a net growth of 451,500 or 41 percent. The intense population growth will demand for expansion of the law enforcement infrastructure in order to provide adequate response to the public safety needs of north County residents and businesses.

The County General Plan requires that new development pay for the cost of public infrastructure that it generates. Adoption of a developer fee will establish financing mechanism to pay for the cost of law enforcement infrastructure needs required to serve new development in the north County. Therefore, the approval of this law enforcement impact fee program is intended to fully mitigate the impact of projected development on the County's law enforcement, and will require developers to pay for the new public infrastructure consistent with County General Plan policies.

ENVIRONMENTAL DOCUMENTATION

Adoption of the law enforcement facilities mitigation fee ordinance and the related resolution and capital improvement/construction plan are for the purpose of providing the additional funds necessary to provide law enforcement facilities in the developing North County portion of the Sheriff's Department existing service area and is exempt from the California Environmental Quality Act pursuant to Section 21080(b)(8) of CEQA and Section 15273 of the State CEQA Guidelines. Discretionary land use development projects which will be subject to the fee, and the construction or expansion of the law enforcement facilities to be financed by the fee will be the subject of additional environmental review when undertaken, as appropriate.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

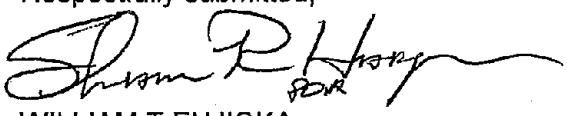
The law enforcement facilities mitigation fee ordinance will have a significant positive impact on the County's provision of law enforcement facilities and services to the high growth areas of North Los Angeles County. The current recommended ordinance, along with the future ordinance amendments to include the Palmdale and Lancaster Areas, provide CI/CPs for new facilities for all five areas, and update the impact fees for all five areas will result in an enhanced ability of the Sheriff's Department to provide and maintain adequate levels of critical law

enforcement services to new residents and businesses populating the unincorporated areas of North County as a result of new development. Without a permanent and adequate developer fee in place, population growth related to new development within the Sheriff's Department existing service area will expand without the financial means to provide for needed new law enforcement services and facilities, and high growth areas of north County will be underserved through inadequate law enforcement.

CONCLUSION

Please return one adopted copy of this letter to the Auditor-Controller, County Counsel, Chief Executive Office/Community and Municipal Services and Public Safety Clusters, and Sheriff's Department.

Respectfully submitted,



WILLIAM T FUJIOKA
Chief Executive Officer

WTF:LS
RDC:DC:os

Attachments (3)

c: Auditor-Controller
County Counsel
Sheriff's Department

SOLE SOURCE CHECKLIST

Check (✓)	JUSTIFICATION FOR SOLE SOURCE CONTRACTS *Identify applicable justification and provide documentation for each checked item.*
	➢ Only one bona fide source for the service exists; performance and price competition are not available.
	➢ Quick action is required (emergency situation).
	➢ Proposals have been solicited but no satisfactory proposals were received.
✓	➢ Additional services are needed to complete an ongoing task and it would be prohibitively costly in time and money to seek a new service provider.
	➢ Maintenance service agreements exist on equipment which must be serviced by the authorized manufacturer's service representatives.
	➢ It is more cost-effective to obtain services by exercising an option under an existing contract.
	➢ It is in the best interest of the County, e.g., administrative cost savings, excessive learning curve for a new service provider, etc.
	➢ Other reason. Please explain:

Dave Sheehan
Deputy Chief Executive Officer, CEO

5/15/08
Date

ATTACHMENT I

SANTA CLARITA – NORTH LOS ANGELES COUNTY

LAW ENFORCEMENT FACILITIES FEE STUDY

OCTOBER 29, 2007

Final Report

MuniFinancial

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EXECUTIVE SUMMARY

This report summarizes an analysis of the need for law enforcement facilities and capital improvements to support existing and future development within both incorporated and unincorporated areas of North Los Angeles County through 2025. It is the County's intent that the costs representing future development's share of these facilities be imposed on that development in the form of a development impact fee, also known as a public facilities fee. Any impact fees developed outside of this study for public facilities other than law enforcement facilities are additive to the fees presented here.

BACKGROUND AND STUDY OBJECTIVES

The primary policy objective of a law enforcement facilities fee program is to ensure that new development pays the capital costs of law enforcement facilities associated with growth. To fulfill this objective public agencies should review and update their fee programs periodically to incorporate the best available information. The primary purpose of this report is to create fees that incorporate current facility plans to serve a 2025 service population.

The County imposes law enforcement facilities fees in unincorporated areas, and each city imposes the fees within its jurisdictional boundaries under authority granted by the *Mitigation Fee Act*, contained in *California Government Code* Sections 66000 *et seq.* This report provides the necessary findings required by the *Act* for adoption of the fees presented in the fee schedules contained herein. Using the same statutory guidelines, this report also presents separate fee schedules for each law enforcement facilities fee zone within the North County area. Approval by the individual municipal governments will therefore be a required step in the fee implementation.

FACILITY STANDARDS AND COSTS OF GROWTH

This fee analysis uses standards based on the County's policy to determine the cost of facilities required to accommodate growth for law enforcement facilities. A standard for each jurisdiction considered in this study is derived from an examination of the existing standard of facilities and services as well as facility plans for 2025. Depending on the facility standard, the County currently may or may not have sufficient facilities to serve existing development. If the existing facilities are below standard, a deficiency exists. In this case, the portion of the cost of planned facilities associated with correcting the deficiency must be allocated to funding sources other than the development impact fee, to fund existing development's share of the facilities. Law enforcement facilities fees can only fund planned facilities needed to accommodate new development at the adopted standard.

Therefore, this study distinguishes between the share of planned facilities needed to accommodate growth and the share that serves existing residents and businesses. New development shall only fund its fair share of planned facilities. To ensure compliance with the law, this study ensures that there is a reasonable relationship between new development, the amount of the fee, and facilities funded by the fee.

Fee Schedules and Revenues

Table E.1 summarizes the schedule of maximum justified law enforcement facilities fees based on the analysis contained in this report.

Table E.1: Law Enforcement Development Impact Fees - Summary

Land Use	Santa Clarita Zone	Lancaster Zone	Palmdale Zone	Newhall Zone	Gorman Zone
Residential		*(Fee per Dwelling Unit)*			
Single Family Unit	$ 467	$ 487	$ 467	$ 863	$ 1,285
Multi-family Unit	337	359	373	652	971
Nonresidential		*(Fee per 1,000 Building Square Feet)*			
Commercial	$ 69	$ 78	$ 65	$ 129	$ 192
Office	87	97	82	161	240
Industrial	35	39	33	64	96

Sources: Tables 3.7, 4.7, 5.5, 6.5 and 7.5; MuniFinancial.

New Development's Capacity for Funding CIP Projects

Table E.2 details the extent to which new development can fund planned facilities costs. The City of Santa Clarita is seeking impact fee funding to expand the existing station to serve new development. Impact fees will partially fund completely new stations in the Newhall and Gorman zones to serve the major new developments in those areas. The City of Palmdale anticipates using the impact fee revenue to fund yet to be identified projects in its service area. The City of Lancaster anticipates using the fee revenue to build two storefront substations, and other yet to be identified facilities. The "Revenues to be Programmed (Deficit)" row identifies available impact fee funding to fund additional future facilities, or the amount of non-fee revenue needed to fund existing development's share of the facilities that are currently planned.

Table E.2: New Development's Capacity for Funding Planned Facilities

	Santa Clarita Zone	Lancaster Zone	Palmdale Zone	Newhall Zone	Gorman Zone
Total Projected Fee Revenues	$ 9,559,800	$ 16,594,900	$ 25,500,200	$ 15,300,800	$ 18,486,000
Less: Total Planned Facilities Costs	19,350,000	6,630,000	-	29,855,000	21,787,500
Revenues to be Programmed (Deficit)	$ (9,790,200)	$ 9,964,900	$ 25,500,200	$ (14,554,200)	$ (3,301,500)

Note: Initial fee revenues from all jurisdictions will fund a comprehensive law enforcement master plan study to identify all facility needs.

Sources: Tables 3.6, 4.6, 6.4 and 7.4; MuniFinancial.

1. INTRODUCTION

This report presents an analysis of the need for law enforcement facilities to accommodate new development in North Los Angeles County. This chapter explains the study approach and summarizes results under the following sections:

- Background and study objectives;
- Public facilities financing in California;
- Organization of the report;
- Facility standards approach; and
- Facility cost estimates.

BACKGROUND AND STUDY OBJECTIVES

The primary policy objective of a facilities fee program is to ensure that new development pays the capital costs associated with growth. To fulfill this objective public agencies should review and update their fee programs periodically to incorporate the best available information. The primary purpose of this report is to document fees that incorporate current facility plans to serve a 2025 service population for North Los Angeles County.

The County imposes law enforcement facilities fees under authority granted by the *Mitigation Fee Act*, contained in *California Government Code* Sections 66000 *et seq.* This report provides the necessary findings required by the *Act* for adoption of the revised fees presented in the fee schedules contained herein.

PUBLIC FACILITIES FINANCING IN CALIFORNIA

The changing fiscal landscape in California during the past 30 years has steadily undercut the financial capacity of local governments to fund infrastructure. Three dominant trends stand out:

- The passage of a string of tax limitation measures, starting with Proposition 13 in 1978 and continuing through the passage of Proposition 218 in 1996;
- Declining popular support for bond measures to finance infrastructure for the next generation of residents and businesses; and
- Steep reductions in federal and state assistance.

Faced with these trends, many cities and counties have had to adopt a policy of "growth pays its own way." This policy shifts the burden of funding infrastructure expansion from existing rate and taxpayers onto new development. This funding shift has been accomplished primarily through the imposition of assessments, special taxes, and development impact fees also known as law enforcement facilities fees. Assessments and special taxes require approval of property owners and are appropriate when the funded facilities are directly related to the developing property. Development fees, on the other hand, are an appropriate funding source for facilities that benefit all development jurisdiction-wide. Development fees need only a majority vote of the legislative body for adoption.

ORGANIZATION OF THE REPORT

The determination of a law enforcement facilities fee begins with the selection of a planning horizon and development of projections for population and employment. These projections are used throughout the analysis of different facility zones, and are summarized in Chapter 2.

Chapters 3 through 7 are devoted to documenting the maximum justified law enforcement facilities fee for each of the fee zones in which the fees will be charged. The fee revenue collected in each zone will only be spent on facilities within that zone. The fee zones are as follows:

- Santa Clarita station zone;
- City of Lancaster station zone;
- City of Palmdale station zone;
- Newhall Ranch station zone;
- Gorman/Centennial station zone.

Chapter 8 describes the fee implementation process. The five statutory findings required for adoption of the proposed law enforcement facilities fees in accordance with the *Mitigation Fee Act* (codified in *California Government Code* Sections 66000 through 66025) are summarized in Chapter 9.

FACILITY STANDARDS APPROACH

A facility standard is a policy that indicates the amount of facilities required to accommodate service demand. Examples of facility standards include building square feet per capita and park acres per capita. Standards also may be expressed in monetary terms such as the replacement value of facilities per capita. The adopted facility standard is a critical component in determining new development's need for new facilities and the amount of the fee. Standards determine new development's fair share of planned facilities and ensure that new development does not fund deficiencies associated with existing development.

The most commonly accepted approaches to determining a facility standard are described below:

- The **existing inventory method** uses a facility standard based on the ratio of existing facilities to existing development. Under this approach, new development funds the expansion of facilities at the same rate that existing development has provided facilities to date. By definition, the existing inventory method does not consider facility deficiencies attributable to existing development. To increase facility standards the jurisdiction must secure funding in addition to development fees.
- The **system plan method** calculates the standard based on the ratio of all existing plus planned facilities to total future demand (existing and new development). This method is used when (1) the local agency anticipates increasing its facility standard above the existing inventory standard discussed above, and (2) planned facilities are part of a system that benefits both existing and new development. Using a facility standard that is higher than the existing inventory standard creates a deficiency for existing development. The jurisdiction must secure non-fee funding for that portion of planned facilities required to correct the deficiency.

This study uses the existing inventory approach to determine facility standards for the Palmdale and Lancaster zones. The system standard is used to calculate the facility standards for the Santa Clarita, Newhall and Gorman zones. The projects that have been listed as planned projects throughout this report are those projects preliminarily identified by the County Sheriff's Planning Department, city staffs and MuniFinancial. While the system standard was used to calculate the fees, the planned project costs are subtracted from anticipated fee revenue to determine any additional revenue required from non-impact fee funding sources.

Facility Cost Estimates

Estimates of facility costs, both planned and existing, are based on information provided by the Los Angeles County Sheriff's Planning Department, input from each jurisdiction's staff, and MuniFinancial. MuniFinancial also developed the estimates of land values based on Internet searches of undeveloped land currently on the market, with input from city staff. Land values vary by fee zone. The Sheriff's Department also provided the cost of equipped vehicles.

The initial fee revenue from all zones will be used to fund a comprehensive law enforcement facilities master plan to identify all facility needs through the planning horizon. Should the master planning effort identify significantly different facility needs than those detailed here, the impact fee study should be revised accordingly.

2. Growth Projections

New development growth projections are used to assist in estimating facility needs. Projected new development is estimated using the existing service population in 2007 as a base year with a planning horizon through the year 2025.

Use of Growth Projections for Impact Fees

Estimates of the existing service population and projections of growth are critical assumptions used throughout this report. These estimates are used as follows:

- Estimates of total development at the 2025 planning horizon are used to determine the total amount of law enforcement facilities required to accommodate growth and to allocate those costs on a per capita basis.
- Estimates of service population growth from 2007 to 2025 are used to allocate to new development its fair share of total planned facility needs.

To measure existing service population and future growth, residential and worker population data are used for fee calculation in this report. These measures are used because numbers of residents and workers are reasonable indicators of the level of demand for law enforcement facilities. The County builds law enforcement facilities primarily to serve these populations and, typically, the greater the population the larger the facility required to provide a given level of service.

Service Population

Different types of new development use law enforcement facilities at different rates in relation to each other, depending on the services provided. In Chapters 3 through 7, a specific service population is identified for each facility zone to reflect total demand. The service population weights residential land use types against non-residential land uses based on the estimated variation in demand for services between residents and workers.

Land Use Types

To ensure a reasonable relationship between each fee and the type of development paying the fee, growth projections distinguish between different land use types. The land use types used in this analysis are defined below:

- **Single family:** Attached and detached one-family dwelling units.
- **Multi-family:** All attached single family dwellings such as duplexes and condominiums, plus mobile homes, apartments, and dormitories.
- **Commercial:** All commercial, retail, educational, and hotel/motel development.
- **Office:** All general, professional, and medical office development.
- **Industrial:** All manufacturing and warehousing development.

The participating jurisdictions should have the discretion to impose the law enforcement facilities fee based on the specific aspects of a proposed development regardless of zoning. The guideline to use is the probable occupant density of the development, either residents per dwelling unit or workers per building square foot. The fee imposed should be based on the land use type that most closely represents the probable occupant density of the development.

Growth Projections for North Los Angeles County

The base year for this study is 2007. The existing facilities in 2007 will make up the existing standard in our study for the Lancaster and Palmdale zones. The existing and planned facilities in 2025 will make up the system standard for the Santa Clarita, Newhall and Gorman zones. Base year residential estimates were supplied by the Los Angeles County Planning Department and adjusted with data from the California State Department of Finance (DOF). The estimates provided by Los Angeles County planning were derived from the 2005 Regional Transportation Plan (RTP), developed by the Southern California Association of Governments (SCAG), and interpolated to 2007. Base year and out year employment estimates were also derived from data provided by Los Angeles County Planning. **Table 2.1** shows estimates of the growth in terms of residents and workers.

Fee Zones

Law enforcement facilities in North Los Angeles County serve a large geographic area. The planned addition of law enforcement facilities in Newhall and in Gorman will allow each station to serve a smaller geographic area. As a result, this law enforcement facilities fee was developed such that the new development served by each station will fund the construction and improvements of that local station. Five fee zones, each independent, were used in this study to allocate facility costs to local development.

To investigate the impact fees in each zone, demographic data and growth forecasts were needed by zone. The demographic projections from the RTP described in the previous section were provided by census tract. The demographic data was allocated to the five fee zones using geographic information systems (GIS) analysis. A map of the fee zones is displayed in **Figure 1.** The fee zones are as follows:

- Santa Clarita station zone, bounded by the Gorman zone to the north, the Newhall zone to the west, and the Palmdale zone to the east;
- City of Lancaster station zone, bounded by the County border to the north and east, the Gorman zone to the west and the Palmdale zone to the south;
- City of Palmdale station zone, bounded by the County border to the south and east, the Santa Clarita Zone to the west and the Lancaster zone to the north;
- The Newhall zone, bounded by the Gorman zone to the north, the County border to the west and the Santa Clarita zone to the east;
- The Gorman zone, bounded by the Newhall zone to the south, the County Border to the north, and the Lancaster zone to the east.

Figure 1.

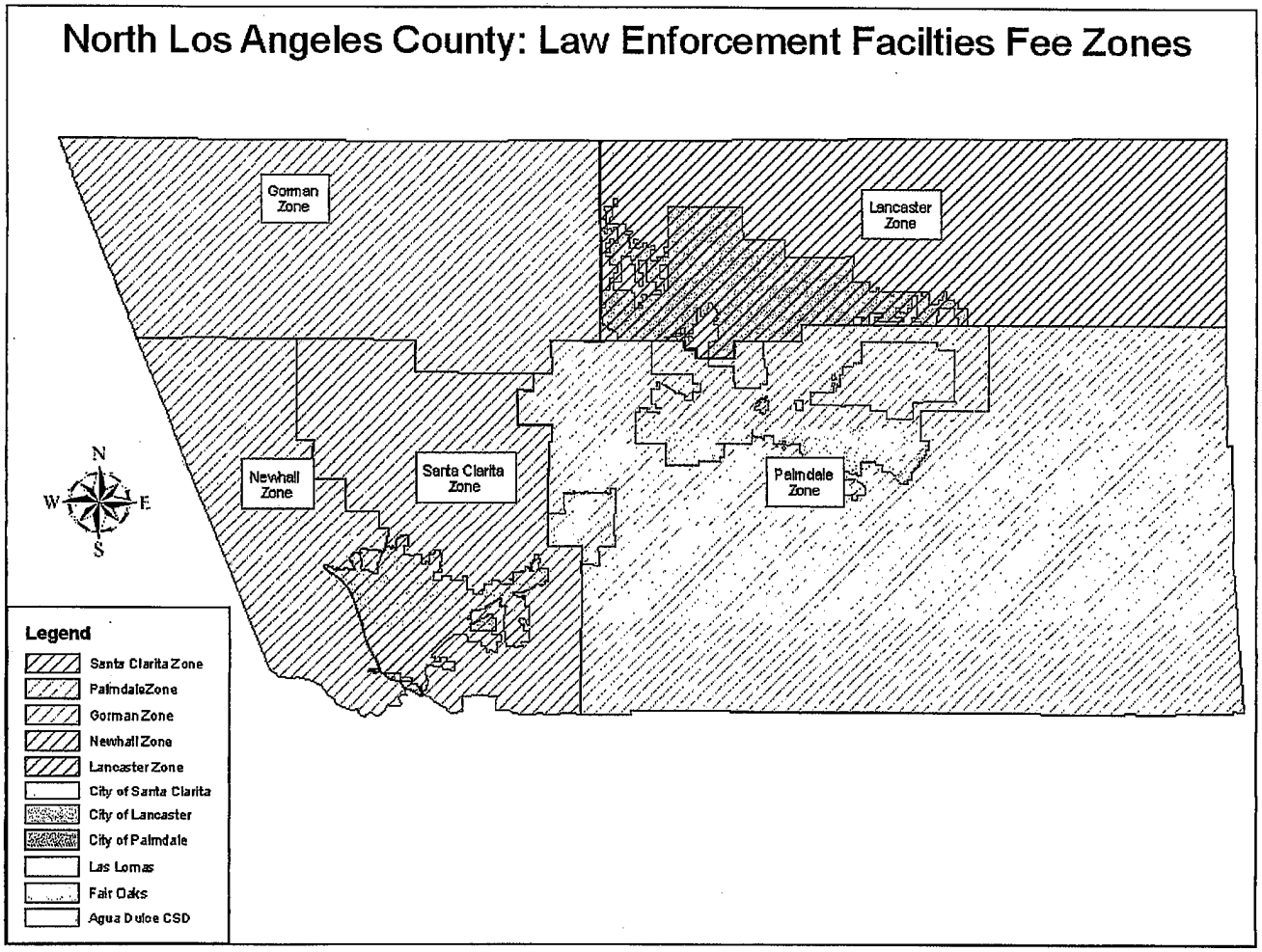

North Los Angeles County: Law Enforcement Facilties Fee Zones
Gorman Zone
Lancaster Zone
Newhall Zone
Santa Clarita Zone
Palmdale Zone
N
W
E
S
Legend
Santa Clarita Zone
Palmdale Zone
Gorman Zone
Newhall Zone
Lancaster Zone
City of Santa Clarita
City of Lancaster
City of Palmdale
Las Lomas
Fair Oaks
Agua Dulce CSD

Table 2.1: Population and Employment Estimates and Projections

	2007	2025	Net Growth 2007-2025
Population			
Santa Clarita Zone	204,400	268,200	63,800
Lancaster Zone	174,300	276,200	101,900
Palmdale Zone	221,000	402,500	181,500
Newhall Zone	54,000	111,300	57,300
Gorman Zone	7,100	54,100	47,000
Total	660,800	1,112,300	451,500
Employment [1, 2]			
Santa Clarita Zone	62,900	79,400	16,500
Lancaster Zone	59,200	75,200	16,000
Palmdale Zone	58,200	95,100	36,900
Newhall Zone	7,000	11,500	4,500
Gorman Zone	5,900	7,400	1,500
Total	193,200	268,600	75,400

Note: Totals may not add due to rounding. SCAG 2004 RTP data is the basis for all population, household, and employment projections listed. Los Angeles County Department of Regional Planning (LA DRP) has revised only unincorporated population and household data to 2025.

[1] Represents jobs located within the city/county (not employed residents).

[2] Excludes local government employees.

Sources: Adjusted SCAG 2004 RTP; Los Angeles County Planning Department; MuniFinancial.

Occupant Densities

Occupant density assumptions ensure a reasonable relationship between the development of housing units or building square footage and the increase in service population, and therefore the amount of the fee. Developers pay the fee based on the number of additional housing units or building square feet of nonresidential development, so the fee schedule must convert service population estimates to these measures of project size. This conversion is done with average occupant density factors by land use type for each zone, shown in **Table 2.2.**

Table 2.2: Occupant Density

	Santa Clarita	Lancaster	Palmdale	Newhall[3]	Gorman[3]
Residential[1]					
Single Family	3.24	3.04	3.42	3.23	3.23
Multi-family	2.34	2.24	2.73	2.44	2.44
Nonresidential[2]					
Commercial	2.00	2.00	2.00	2.00	2.00
Office	2.50	2.50	2.50	2.50	2.50
Industrial	1.00	1.00	1.00	1.00	1.00

[1] Residents per dwelling unit.

[2] Employees per 1,000 square feet

[3] Represents the average of the North County cities in lieu of specific unincorporated data.

Sources: United States 2000 Census (Tables H-31, H-32, H-33); California State Department of Finance E-5 report for Los Angeles County Jan. 1, 2006; The Natelson Company, Inc., Employment Density Study Summary Report, prepared for the Southern California Association of Governments, October 31, 2001; MuniFinancial.

The residential occupant density factors are derived from the 2000 U.S. Census Bureau's Tables H-31 through H-33. Table H-31 provides vacant housing units data, while Table H-32 provides information relating to occupied housing. Table H-33 documents the total 2000 population residing in occupied housing. The US Census numbers are adjusted by using the California Department of Finance ("DOF") estimates for January 1, 2006 found on DOF Table E.5, and the most recent State of California data available. The non-residential density factors are based on *Employment Density Study Summary Report*, prepared for the Southern California Association of Governments, October 2001 by The Natelson Company. For example, the industrial density factor represents an average for light industrial and heavy industrial uses likely to occur in the County.

3. Santa Clarita Zone

This chapter documents a reasonable relationship between new development and the funding for proposed law enforcement facilities in the Santa Clarita law enforcement facilities fee zone. This zone includes the City and the surrounding unincorporated areas as shown above in Figure 1.

Service Population

Both residents and workers in the Santa Clarita zone benefit from services provided by the County Sheriff's Department. Therefore, demand for law enforcement facilities is based on the zone's combined residential and worker populations. **Table 3.1** provides estimates of the resident and worker populations in the Santa Clarita zone, with projections for the year 2025. In calculating the service population, workers are weighted less than residents to reflect a lower per capita service demand. Nonresidential buildings are typically occupied less intensively than dwelling units, so it is reasonable to assume that average per-worker demand for services is less than average per-resident demand. The 0.24-weighting factor for workers is based on a 40-hour workweek divided by the total number of hours in a week (168).

Table 3.1: Law Enforcement Facilities Service Population - Santa Clarita Zone

	Residents	Workers[1]	Service Population[2]
Existing			
Estimate for 2007	204,400	62,900	219,500
Future (2025)			
Estimated Service Population 2025[3]	268,200	79,400	287,300
Projected Service Population Increase	63,800	16,500	67,800
Service Pop. Weighting Factor[3]	1.00	0.24	

Note: Totals may not add due to rounding.

[1] Excludes local government employees.

[2] Service population equals residents plus workers with each weighted by appropriate factor shown at the bottom of the table.

[3] Workers are weighted at 0.24 of residents based on a 40 hour work week out of a possible 168 hours in a week.

Sources: California Department of Finance, *Report E-5a 1/1/06*; Adjusted SCAG 2004 RTP Growth Forecasts; Los Angeles County Department of Regional Planning (LADRP); MuniFinancial.

Facility Inventories, Plans & Standards

The Santa Clarita zone uses the system standard to calculate the impact fees for law enforcement facilities. This standard is based on the investment per capita in both existing and planned law enforcement facilities in the Santa Clarita zone. The existing station in Santa Clarita was built in 1972. It is currently at capacity. The station currently serves the Newhall and Gorman areas due to a lack of facilities in those zones. The existing population in the Gorman and Newhall areas is not included in the Santa Clarita service population because it is recognized in those respective zones.

The lack of existing facilities in those zones indicates an existing deficiency in facilities for those zones (see chapters 6 and 7). The City of Santa Clarita is seeking impact fee funding to fund a portion of the needed expansion of the station to serve new development.

Table 3.2 presents a complete inventory of existing law enforcement facilities. Vehicles currently operating out of the Santa Clarita station are listed in **Table 3.3.** Values listed for vehicles are replacement costs.

Table 3.2: Existing Facilities

	Amount		Unit Cost	Total Cost
Santa Clarita Station				
Land	2.70	acres	$ 1,500,000	$ 4,050,000
Building	25,100	sq. ft.	485	12,173,500
Service Building	6,360	sq. ft.	175	1,113,000
Total				$ 17,336,500

Sources: Los Angeles County Sheriff's Department Facilities Planning Bureau; City of Santa Clarita; MuniFinancial.

Table 3.3: Existing Vehicle Inventory and Valuation

Vehicle Type	Units	Cost[1]	Total
Santa Clarita Station			
Black and White Patrol Cars	52	$ 48,000	$ 2,496,000
Black and White SUVs	4	50,000	200,000
Other Vehicles	26	38,000	988,000
Subtotal			$ 3,684,000

[1] Value based on current replacement value, per Sheriff's Department.

Sources: Los Angeles County Sheriff's Department Facilities Planning Bureau; MuniFinancial.

Table 3.4 shows the law enforcement facilities planned to serve the Santa Clarita zone. The notable planned facility is the approximately 24,900 square foot addition to the current station. The unit cost of $700 per square foot includes all construction costs and soft costs, including temporary staff relocation costs, for the expansion of the building, per the Santa Clarita Public Works Department.

Table 3.4: Planned Law Enforcement Facilities

	Amount		Unit Cost	Total Cost
Santa Clarita Expansion				
Building[1]	24,900	sq. ft.	$ 700	$ 17,430,000
Patrol Vehicles	40	vehicles	48,000	1,920,000
Subtotal				$ 19,350,000

[1] Building expansion costs estimated at 30% more than new construction costs from the Sheriff's Department, per Santa Clarita Public Works.

Sources: Los Angeles County Sheriff's Planning Department; City of Santa Clarita Public Works; MuniFinancial.

Table 3.5 shows per capita costs for law enforcement facilities based on existing and planned facilities for the 2025 service population. The total cost per capita of law enforcement facilities is determined by dividing the value of all facilities is by the future service population.

Table 3.5: Master Plan Law Enforcement Facilities Standard

Existing Law Enforcement Facilities	$ 21,020,500
Planned Law Enforcement Facilities	19,350,000
Total Law Enforcement Facilities	$ 40,370,500
Projected 2025 Service Population	287,300
Facility Standard per Capita	$ 141
Cost per Resident	$ 141
Cost per Worker[1]	34

[1] Worker weighting factor of 0.24 applied to cost per resident.

Sources: Tables 3.1, 3.2, 3.3 and 3.4; MuniFinancial.

Table 3.6 shows the allocation of planned facilities costs to new development based on the standard. New development's contribution is determined by multiplying the per capita facilities cost derived in Table 3.5 by the expected increase in service population from 2007 to 2025. Total anticipated impact fee revenue is subtracted from planned facility costs to determine the remaining value of planned facilities that must be funded by non-fee revenue to cover the remaining cost of the planned facilities. The City and County need to generate the non-fee revenue over the planning horizon of this study or new development will have paid too high a fee.

Table 3.6: Projected Impact Fee Revenue

Total Cost of Planned Facilities	$ 19,350,000
Value of Facility Standards per Capita	$ 141
Service Population Growth Within Zone *(2007-2025)*	67,800
Total Projected Impact Fee Revenue	$ 9,559,800
Additional non-impact fee funding required	$ 9,790,200

Sources: Tables 3.1 and 3.4; MuniFinancial.

FEE SCHEDULE

Table 3.7 shows the law enforcement facilities fees for the Santa Clarita zone. The cost per capita determined in Table 3.5 is converted to a fee per unit of new development based on dwelling unit and building space densities (persons per dwelling unit for residential development). The total fee includes an administrative charge of two percent of the base fee. The administrative charge component is designed to offset the costs of fee documentation, collection and required fee accounting and reporting.

Table 3.7: Law Enforcement Facilities Impact Fee

Land Use	A Cost Per Capita	B Density	C=AxB Base Fee[1]	D = C x 2% Admin Charge[1, 2]	E=C+D Total Fee	Fee/ Sq. Ft.
Residential						
Single Family	$ 141	3.24	$ 457	$ 9	$ 467	
Multi-family	141	2.34	330	7	337	
Nonresidential						
Commercial	$ 34	2.00	$ 68	$ 1	$ 69	$ 0.07
Office	34	2.50	85	2	87	0.09
Industrial	34	1.00	34	1	35	0.03

Note: Totals may not add due to rounding.

[1] Fee per dwelling unit for residential, per 1,000 square feet for nonresidential.

[2] Administrative charge of 2.0 percent of calculated base fee.

Sources: Tables 2.2 and 3.5; MuniFinancial.

4. LANCASTER ZONE

This chapter documents a reasonable relationship between new development and the funding for proposed law enforcement facilities in the Lancaster zone.

SERVICE POPULATION

Both residents and workers in the Lancaster zone benefit from services provided by the County Sheriff's Department. Therefore, demand for law enforcement facilities is based on the zone's combined residential and worker populations. **Table 4.1** provides estimates of the resident and worker populations in the zone, with projections for the year 2025. In calculating the service population, workers are weighted less than residents to reflect a lower per capita service demand. Nonresidential buildings are typically occupied less intensively than dwelling units, so it is reasonable to assume that average per-worker demand for services is less than average per-resident demand. The 0.24-weighting factor for workers is based on a 40-hour workweek divided by the total number of hours in a week (168).

Table 4.1: Law Enforcement Facilities Service Population - Lancaster Zone

	Residents	Workers[1]	Service Population[2]
Existing			
Estimate for 2007	174,300	59,200	188,500
Future (2025)			
Estimated Service Population 2025[3]	276,200	75,200	294,200
Projected Service Population Increase	101,900	16,000	105,700
Service Pop. Weighting Factor[3]	1.00	0.24	

Note: Totals may not add due to rounding.

[1] Excludes local government employees.

[2] Service population equals residents plus workers with each weighted by appropriate factor shown at the bottom of the table.

[3] Workers are weighted at 0.24 of residents based on a 40 hour work week out of a possible 168 hours in a week.

Sources: California Department of Finance, *Report E-5a 1/1/06*; Adjusted SCAG 2004 RTP Growth Forecasts; Los Angeles County Department of Regional Planning (LADRP); MuniFinancial.

FACILITY INVENTORIES, PLANS & STANDARDS

The Lancaster zone uses the existing standard to calculate the impact fees. This standard is based on the investment per capita in existing law enforcement facilities in the zone. The existing station in Lancaster was built in 1996. The City is seeking impact fee funding to fund a new full service station and two new storefront substations. **Table 4.2** presents a complete inventory of existing law enforcement facilities. Vehicles currently operating out of the Lancaster station are listed in **Table 4.3**. Values listed for vehicles are replacement cost as provided by the Sheriff's Department.

Table 4.2: Existing Facilities

	Amount		Unit Cost	Total Cost
Lancaster Station				
Land	6.90	acres	$ 300,000	$ 2,070,000
Building	40,713	sq. ft.	485	19,745,800
Crime Lab	5,300	sq. ft.	485	2,570,500
Service Building	4,818	sq. ft.	175	843,200
Total				$ 25,229,500

Sources: Los Angeles County Sheriff's Department Facilities Planning Bureau; City of Lancaster; MuniFinancial.

Table 4.3: Existing Vehicle Inventory and Valuation

Vehicle Type	Units	Cost[1]	Total
Lancaster Station			
Black and White Patrol Cars	56	48,000	$ 2,688,000
Black and White SUVs	3	50,000	150,000
Other Vehicles	42	38,000	1,596,000
Subtotal			$ 4,434,000

[1] Value based on current replacement value, per Sheriff's Department.

Sources: Los Angeles County Sheriff's Department Facilities Planning Bureau; MuniFinancial.

Table 4.4 shows the law enforcement facilities planned to serve the Lancaster zone. The planned facilities include two storefront substations, one in the east side of the zone and one in the west. Initial fee revenues will be used to fund a comprehensive law enforcement facility master plan study to identify facility needs through the planning horizon in North Los Angeles County. The master plan may identify facility needs not presented here. This study should be revised to incorporate any facility needs identified by the master planning effort once that effort is completed.

Table 4.4: Planned Law Enforcement Facilities

	Amount		Unit Cost	Total Cost
Lancaster				
Eastside Storefront				
Land	0.25	acres	$ 300,000	$ 75,000
Building	6,000	sq. ft.	540	3,240,000
Subtotal				$ 3,315,000
Westside Storefront				
Land	0.25	acres	$ 300,000	$ 75,000
Building	6,000	sq. ft.	540	3,240,000
Subtotal				$ 3,315,000
Total - Lancaster Planned Facilities				$ 6,630,000

Sources: City of Lancaster; Los Angeles County Sheriff's Planning Department; MuniFinancial.

Table 4.5 shows per capita costs for law enforcement facilities based on the investment in existing facilities relative to the 2007 service population. The total cost per capita of law enforcement facilities is determined by dividing the value of existing facilities is by the existing service population.

Table 4.5: Law Enforcement Facilities Existing Standard

Existing Law Enforcement Facilities	$	29,663,500
Existing Service Population		188,500
Facility Standard per Capita	$	157
Cost per Resident	$	157
Cost per Worker[1]		38

[1] Worker weighting factor of 0.24 applied to cost per resident.

Sources: Tables 4.1, 4.2 and 4.3; MuniFinancial.

Table 4.6 shows the allocation of planned facilities costs to new development based on the standard. New development's contribution is determined by multiplying the per capita facilities cost derived in Table 4.5 by the expected increase in service population from 2007 to 2025. The existing standard fee calculation methodology ensures that new development only funds law enforcement facilities at the same rate that existing development has funded them thus far. Approximately $6.6 million is anticipated to be used for two "storefront" stations (see Table 4.4). The previously described master planning effort will be used to determine the remaining facilities that will be funded by the unprogrammed fee revenues.

Table 4.6: Projected Impact Fee Revenue

Total Cost of Planned Facilities	$ 6,630,000
Value of Facility Standards per Capita	$ 157
Service Population Growth Within Zone *(2007-2025)*	105,700
Total Projected Impact Fee Revenue	$ 16,594,900
Unprogrammed Impact Fee Revenue	$ 9,964,900

Sources: Tables 4.1 and 4.4; MuniFinancial.

FEE SCHEDULE

Table 4.7 shows the law enforcement facilities fees for the Lancaster zone. The cost per capita determined in Table 4.5 is converted to a fee per unit of new development based on dwelling unit and building space densities (persons per dwelling unit for residential development). The total fee includes an administrative charge of two percent of the base fee. The administrative charge component is designed to offset the costs of fee documentation, collection and required fee accounting and reporting.

Table 4.7: Law Enforcement Facilities Impact Fee

Land Use	A Cost Per Capita	B Density	C=AxB Base Fee[1]	D = C x 2% Admin Charge[1, 2]	E=C+D Total Fee	Fee/ Sq. Ft.
Residential						
Single Family	$ 157	3.04	$ 477	$ 10	$ 487	
Multi-family	157	2.24	352	7	359	
Nonresidential						
Commercial	$ 38	2.00	$ 76	$ 2	$ 78	$ 0.08
Office	38	2.50	95	2	97	0.10
Industrial	38	1.00	38	1	39	0.04

Note: Totals may not add due to rounding.

[1] Fee per dwelling unit for residential, per 1,000 square feet for nonresidential.

[2] Administrative charge of 2.0 percent.

Sources: Tables 2.2 and 4.5; MuniFinancial.

5. PALMDALE ZONE

This chapter documents a reasonable relationship between new development and the funding for proposed law enforcement facilities in the Palmdale zone.

SERVICE POPULATION

Both residents and workers in the Palmdale zone benefit from services provided by the County Sheriff's Department. Therefore, demand for law enforcement facilities is based on the zone's combined residential and worker populations. **Table 5.1** provides estimates of the resident and worker populations in the zone, with projections for the year 2025. In calculating the service population, workers are weighted less than residents to reflect a lower per capita service demand. Nonresidential buildings are typically occupied less intensively than dwelling units, so it is reasonable to assume that average per-worker demand for services is less than average per-resident demand. The 0.24-weighting factor for workers is based on a 40-hour workweek divided by the total number of hours in a week (168).

Table 5.1: Law Enforcement Facilities Service Population - Palmdale Zone

	Residents	Workers[1]	Service Population[2]
Existing			
Estimate for 2007	221,000	58,200	235,000
Future (2025)			
Estimated Service Population 2025[3]	402,500	95,100	425,300
Projected Service Population Increase	181,500	36,900	190,300
Service Pop. Weighting Factor[3]	1.00	0.24	

Note: Totals may not add due to rounding.

[1] Excludes local government employees.

[2] Service population equals residents plus workers with each

[3] Workers are weighted at 0.24 of residents based on a 40 hour work

Sources: California Department of Finance, *Report E-5a 1/1/06*; Adjusted SCAG 2004 RTP Growth Forecasts; Los Angeles County Department of Regional Planning (LADRP); MuniFinancial.

FACILITY INVENTORIES, PLANS & STANDARDS

The Palmdale zone uses the existing standard to calculate the impact fees for law enforcement facilities. This standard is based on the investment per capita in existing law enforcement facilities in the zone. **Table 5.2** presents a complete inventory of existing facilities. Vehicles currently operating out of the Palmdale station are listed in **Table 5.3.**

Table 5.2: Existing Facilities

	Amount		Unit Cost	Total Cost
Palmdale Station				
Land	11.50	acres	$ 300,000	$ 3,450,000
Building	49,000	sq. ft.	485	23,765,000
Service Building	8,300	sq. ft.	175	1,452,500
Total				$ 28,667,500

Sources: Los Angeles County Sheriff's Department Facilities Planning Bureau; City of Palmdale; MuniFinancial.

Table 5.3: Existing Vehicle Inventory and Valuation

Vehicle Type	Units	Cost[1]	Total
Palmdale Station			
Black and White Patrol Cars	60	48,000	$ 2,880,000
Subtotal			$ 2,880,000

[1] Value based on current replacement value, per Sheriff's Department.

Sources: Los Angeles County Sheriff's Department Facilities Planning Bureau; MuniFinancial.

Table 5.4 shows per capita costs for law enforcement facilities based on the investment in existing facilities relative to the 2007 service population. The total cost per capita of law enforcement facilities is determined by dividing the value of existing facilities is by the existing service population.

Table 5.4: Law Enforcement Facilities Existing Standard

Existing Law Enforcement Facilities	$	31,547,500
Existing Service Population		235,000
Facility Standard per Capita	$	134
Cost per Resident	$	134
Cost per Worker[1]		32

[1] Worker weighting factor of 0.24 applied to cost per resident.

Sources: Tables 5.1, 5.2 and 5.3; MuniFinancial.

At this point, facilities needed to serve new development through the planning horizon for the Palmdale zone have not been identified. Initial fee revenues will be used to fund a comprehensive law enforcement facility master plan study to identify facility needs through the planning horizon in

North Los Angeles County. The master plan will identify facility needs not presented here. This study should be revised to incorporate any facility needs identified by the master planning effort.

FEE SCHEDULE

Table 5.5 shows the law enforcement facilities fees for the Palmdale zone. The cost per capita determined in Table 5.4 is converted to a fee per unit of new development based on dwelling unit and building space densities (persons per dwelling unit for residential development). The total fee includes an administrative charge of two percent of the base fee. The administrative charge component is designed to offset the costs of fee documentation, collection and required fee accounting and reporting.

Table 5.5: Law Enforcement Facilities Impact Fee - Existing Standard

Land Use	A Cost Per Capita	B Density	C=AxB Base Fee[1]	D = C x 2% Admin Charge[1, 2]	E=C+D Total Fee	Fee/ Sq. Ft.
Residential						
Single Family	$ 134	3.42	$ 458	$ 9	$ 467	
Multi-family	134	2.73	366	7	373	
Nonresidential						
Commercial	$ 32	2.00	$ 64	$ 1	$ 65	$ 0.07
Office	32	2.50	80	2	82	0.08
Industrial	32	1.00	32	1	33	0.03

Note: Totals may not add due to rounding.

[1] Fee per dwelling unit for residential, per 1,000 square feet for nonresidential.

[2] Administrative charge of 2.0 percent.

Sources: Tables 2.2 and 5.4; MuniFinancial.

6. NEWHALL ZONE

This chapter documents a reasonable relationship between new development and the funding for proposed law enforcement facilities in the planned Newhall development.

SERVICE POPULATION

Both residents and workers in Newhall will benefit from services provided by the County Sheriff's Department. Therefore, demand for law enforcement facilities is based on the zone's combined residential and worker populations. **Table 6.1** provides estimates of the resident and worker populations in the zone, with projections for the year 2025. In calculating the service population, workers are weighted less than residents to reflect a lower per capita service demand. Nonresidential buildings are typically occupied less intensively than dwelling units, so it is reasonable to assume that average per-worker demand for services is less than average per-resident demand. The 0.24-weighting factor for workers is based on a 40-hour workweek divided by the total number of hours in a week (168).

Table 6.1: Law Enforcement Facilities Service Population - Newhall Zone

	Residents	Workers	Service Population[1]
Existing			
Estimate for 2007	54,000	7,000	55,700
Future (2025)			
Estimated Service Population 2025[2]	111,300	11,500	114,100
Projected Service Population Increase	57,300	4,500	58,400
Service Pop. Weighting Factor[2]	1.00	0.24	

Note: Totals may not add due to rounding.

[1] Service population equals residents plus workers with each weighted by appropriate factor shown at the bottom of the table.

[2] Workers are weighted at 0.24 of residents based on a 40 hour work week out of a possible 168 hours in a week.

Sources: California Department of Finance, *Report E-5a 1/1/06*; Adjusted SCAG 2004 RTP Growth Forecasts; Los Angeles County Department of Regional Planning (LADRP); MuniFinancial.

FACILITY INVENTORIES, PLANS & STANDARDS

The Newhall zone uses the system standard to calculate the impact fees for law enforcement facilities. This standard is based on the investment per capita in both existing and planned law enforcement facilities in the Newhall project area. Approximately 21,500 residential dwelling units are expected to be built in the Newhall Ranch area through the 2025 planning horizon. Such large-scale development will require a new station, as there are no existing law enforcement facilities in the Newhall zone. In the absence of any closer station at the present time, the Santa Clarita Station

serves the Newhall area. An additional station is needed in the Newhall zone to serve the significant expected service population.

Table 6.2 shows the law enforcement facilities planned to serve the Newhall project area. The notable planned facility is an entirely new station. The unit cost estimates for land shown in Table 6.2 recognize that land costs are significantly higher in the Newhall area than in other North County cities, such as Lancaster and Palmdale.

Table 6.2: Planned Law Enforcement Facilities

	Amount		Unit Cost	Total Cost
Newhall Ranch Station				
Land	4.00	acres	$ 1,500,000	$ 6,000,000
Building	35,000	sq. ft.	540	18,900,000
Service Building	5,000	sq. ft.	175	875,000
Patrol Vehicles	85	vehicles	48,000	4,080,000
Subtotal				$ 29,855,000

Sources: Los Angeles County Sheriff's Planning Department; MuniFinancial.

Table 6.3 shows per capita costs for law enforcement facilities based on existing and planned facilities for the 2025 service population. The total cost per capita of law enforcement facilities is determined by dividing the value of all facilities by the future service population.

Table 6.3: Master Plan Law Enforcement Facilities Standard

Existing Law Enforcement Facilities	$ -
Planned Law Enforcement Facilities	29,855,000
Total Law Enforcement Facilities	$ 29,855,000
Projected 2025 Service Population	114,100
Facility Standard per Capita	$ 262
Cost per Resident	$ 262
Cost per Worker[1]	63

[1] Worker weighting factor of 0.24 applied to cost per resident.

Sources: Tables 6.1, and 6.2; MuniFinancial.

Table 6.4 shows the allocation of planned facilities costs to new development based on the standard. New development's contribution is determined by multiplying the per capita facilities cost derived in Table 6.3 by the expected increase in service population from 2007 to 2025. Total anticipated impact fee revenue is subtracted from planned facility costs to determine the remaining

value of planned facilities that must be funded by non-fee revenue to cover the remaining cost of the planned facilities. The County needs to generate the non-fee revenue over the planning horizon of this study or new development will have paid too high a fee.

Table 6.4: Projected Impact Fee Revenue

Total Cost of Planned Facilities	$ 29,855,000
Value of Facility Standards per Capita	$ 262
Service Population Growth Within Zone *(2007-2025)*	58,400
Total Projected Impact Fee Revenue	$ 15,300,800
Additional non-impact fee funding required	$ 14,554,200

Sources: Tables 6.1, 6.2 and 6.3; MuniFinancial.

FEE SCHEDULE

Table 6.5 shows the law enforcement facilities fees for the Newhall zone. The cost per capita determined in Table 6.3 is converted to a fee per unit of new development based on dwelling unit and building space densities (persons per dwelling unit for residential development).

Table 6.5: Law Enforcement Facilities Impact Fee

Land Use	A Cost Per Capita	B Density	C=AxB Base Fee[1]	D = C x 2% Admin Charge[1,2]	E=C+D Total Fee	Fee/ Sq. Ft.
Residential						
Single Family	$ 262	3.23	$ 846	$ 17	$ 863	
Multi-family	262	2.44	639	13	652	
Nonresidential						
Commercial	$ 63	2.00	$ 126	$ 3	$ 129	$ 0.13
Office	63	2.50	158	3	161	0.16
Industrial	63	1.00	63	1	64	0.06

Note: Totals may not add due to rounding.

[1] Fee per dwelling unit for residential, per 1,000 square feet for nonresidential.

[2] Administrative charge of 2.0 percent of calculated base fee.

Sources: Tables 2.2 and 6.3; MuniFinancial.

7. Gorman Zone

This chapter documents a reasonable relationship between new development and the funding for proposed law enforcement facilities in the Gorman zone.

Service Population

Both residents and workers in Gorman will benefit from services provided by the County Sheriff's Department. Therefore, demand for law enforcement facilities is based on the zone's combined residential and worker populations. **Table 7.1** provides estimates of the resident and worker populations in the zone, with projections for the year 2025. In calculating the service population, workers are weighted less than residents to reflect a lower per capita service demand. Nonresidential buildings are typically occupied less intensively than dwelling units, so it is reasonable to assume that average per-worker demand for services is less than average per-resident demand. The 0.24-weighting factor for workers is based on a 40-hour workweek divided by the total number of hours in a week (168).

Table 7.1: Law Enforcement Facilities Service Population - Gorman Zone

	Residents	Workers	Service Population[1]
Existing			
Estimate for 2007	7,100	5,900	8,500
Future (2025)			
Estimated Service Population 2025[2]	54,100	7,400	55,900
Projected Service Population Increase	47,000	1,500	47,400
Service Pop. Weighting Factor[2]	1.00	0.24	

Note: Totals may not add due to rounding.

[1] Service population equals residents plus workers with each weighted by appropriate factor shown at the bottom of the table.

[2] Workers are weighted at 0.24 of residents based on a 40 hour work week out of a possible 168 hours in a week.

Sources: California Department of Finance, *Report E-5a 1/1/06*; Adjusted SCAG 2004 RTP Growth Forecasts; Los Angeles County Department of Regional Planning (LADRP); MuniFinancial.

Facility Inventories, Plans & Standards

The Gorman zone uses the system standard to calculate the impact fees for law enforcement facilities. This standard is based on the investment per capita in both existing and planned law enforcement facilities in the Gorman project area. However, there are no existing law enforcement facilities in the Gorman zone. In the absence of any closer station at the present time, the Santa Clarita Station serves the Gorman area

Table 7.2 shows the law enforcement facilities planned to serve the Gorman zone. The Gorman area currently is a relatively sparsely populated portion of unincorporated Los Angeles County. Significant new growth is projected for the area that will require the construction of an entirely new station, known as the *Centennial Station.*

Table 7.2: Planned Law Enforcement Facilities

	Amount		Unit Cost	Total Cost
Centennial Station				
Land	4.00	acres	$ 300,000	$ 1,200,000
Building	30,000	sq. ft.	540	16,200,000
Service Building	4,500	sq. ft.	175	787,500
Patrol Vehicles	75	vehicles	48,000	3,600,000
Total				$ 21,787,500

Sources: Los Angeles County Sheriff's Planning Department; MuniFinancial.

Table 7.3 shows per capita costs for law enforcement facilities based on planned facilities for the 2025 service population. The total cost per capita of law enforcement facilities is determined by dividing the value of all facilities is by the future service population.

Table 7.3: Master Plan Law Enforcement Facilities Standard

Existing Law Enforcement Facilities	$ -
Planned Law Enforcement Facilities	21,787,500
Total Law Enforcement Facilities	$ 21,787,500
Projected 2025 Service Population	55,900
Facility Standard per Capita	$ 390
Cost per Resident	$ 390
Cost per Worker[1]	94

[1] Worker weighting factor of 0.24 applied to cost per resident.

Sources: Tables 7.1 and 7.2; MuniFinancial.

Table 7.4 shows the allocation of planned facilities costs to new development based on the standard. New development's contribution is determined by multiplying the per capita facilities cost derived in Table 7.3 by the expected increase in service population from 2007 to 2025. Total anticipated impact fee revenue is subtracted from planned facility costs to determine the remaining value of planned facilities that must be funded by non-fee revenue to cover the remaining cost of

the planned facilities. The County needs to generate the non-fee revenue over the planning horizon of this study or new development will have paid too high a fee.

Table 7.4: Projected Impact Fee Revenue

Total Cost of Planned Facilities	$ 21,787,500
Value of Facility Standards per Capita	$ 390
Service Population Growth Within Zone *(2007-2025)*	47,400
Total Projected Impact Fee Revenue	$ 18,486,000
Additional non-impact fee funding required	$ 3,301,500

Sources: Tables 7.1, 7.2 and 7.3 MuniFinancial.

FEE SCHEDULE

Table 7.5 shows the law enforcement facilities fees for the Gorman project area. The cost per capita determined in Table 7.3 is converted to a fee per unit of new development based on dwelling unit and building space densities (persons per dwelling unit for residential development).

Table 7.5: Law Enforcement Facilities Impact Fee

Land Use	A Cost Per Capita	B Density	C=AxB Base Fee[1]	D = C x 2% Admin Charge[1,2]	E=C+D Total Fee	Fee/ Sq. Ft.
Residential						
Single Family	$ 390	3.23	$ 1,260	$ 25	$ 1,285	
Multi-family	390	2.44	952	19	971	
Nonresidential						
Commercial	$ 94	2.00	$ 188	$ 4	$ 192	$ 0.19
Office	94	2.50	235	5	240	0.24
Industrial	94	1.00	94	2	96	0.10

Note: Totals may not add due to rounding.

[1] Fee per dwelling unit for residential, per 1,000 square feet for nonresidential.

[2] Administrative charge of 2.0 percent of calculated base fee.

Sources: Tables 2.2 and 7.3; MuniFinancial.

8. Implementation

Impact Fee Program Adoption Process

Impact fee program adoption procedures are found in the *California Government Code* section 66016. Adoption of an impact fee program requires the Board of Supervisors and City Councils of the participating jurisdictions to follow certain procedures including holding a public meeting. Fourteen day mailed public notice is required for those registering for such notification. Data, such as an impact fee report, must be made available at least 10 days prior to the public meeting. Legal counsel for the County and each city should provide guidance on any other procedural requirements as well as advice regarding adoption of an enabling ordinance and/or a resolution. Fees in the city's spheres of influence (unincorporated areas) will be collected by the County and passed on to the cities. In these situations, the two percent administration fee is to be split between the County and the city in whose sphere the fee was collected. After adoption there is a mandatory 60-day waiting period before the fees go into effect. This procedure must also be followed for fee increases.

Identify Non-Fee Revenue Sources

The use of the system plan method for calculating impact fees can identify revenue deficiencies attributable to the existing service population. As fees are only imposed under the Act to fund new development's fair portion of facilities, the County and participating cities should consider how deficiencies might be supplemented through the use of alternative funding sources. For the Santa Clarita, Newhall and Gorman zones additional revenue is needed or new development will have paid too high a fee. Potential sources of revenue include existing or new general fund revenues or the use of existing or new taxes. Any new special tax would require two-thirds voter approval, while new assessments or property-related charges would require majority property-owner approval.

Inflation Adjustment

Appropriate inflation indexes should be identified in a fee ordinance including an automatic adjustment to the fee annually. Separate indexes for land and construction costs should be used. Calculating the land cost index may require the periodic use of a property appraiser. The construction cost index can be based on the County's recent capital project experience or can be taken from any reputable source, such as the *Engineering News Record.* To calculate prospective fee increases, each index should be weighed against its share of total planned facility costs represented by land or construction, as appropriate.

Reporting Requirements

The County and participating cities should comply with the annual and five-year reporting requirements of the *Mitigation Fee Act* (the *Act*). For facilities to be funded by a combination of public fees and other revenues, identification of the source and amount of these non-fee revenues is

essential. Identification of the timing of receipt of other revenues to fund the facilities is also important.

Programming Revenues and Projects with the CIP

The County and participating cities should maintain a Capital Improvements Program (CIP) to adequately plan for future law enforcement infrastructure needs. The CIP should also program fee revenue to specific projects. The use of the CIP in this manner documents a reasonable relationship between new development and the use of those revenues.

The County and cities may decide to alter the scope of the planned projects or to substitute new projects as long as those new projects continue to represent an expansion of law enforcement facilities. If the total cost of facilities varies from the total cost used as a basis for the fees, the County and cities should consider revising the fees accordingly.

9. *MITIGATION FEE ACT* FINDINGS

Fees are assessed and typically paid when a building permit is issued. They are imposed on new development projects by local agencies responsible for regulating land use (cities and counties). To guide the imposition of facilities fees, the California State Legislature adopted the *Mitigation Fee Act* (the *Act*) with Assembly Bill 1600 in 1987 and subsequent amendments. The *Act*, contained in *California Government Code* §§66000 – 66025, establishes requirements on local agencies for the imposition and administration of fees. The *Act* requires local agencies to document five statutory findings when adopting fees.

The five findings in the *Act* required for adoption of the maximum justified fees documented in this report are: 1) Purpose of fee, 2) Use of fee Revenues, 3) Benefit Relationship, 4) Burden Relationship, and 5) Proportionality. They are each discussed below and are supported throughout the rest of this report.

PURPOSE OF FEE

- *Identify the purpose of the fee (§66001(a)(1) of the Act).*

We understand that it is the policy of the County and North County cities that new development will not burden the existing service population with the cost of facilities required to accommodate growth. The purpose of the fees proposed by this report is to implement this policy by providing a funding source from new development for law enforcement facilities to serve that development. The fees advance a legitimate County interest by enabling the County and three cities, Santa Clarita, Lancaster and Palmdale, to provide necessary services to new development.

USE OF FEE REVENUES

- *Identify the use to which the fees will be put. If the use is financing facilities, the facilities shall be identified. That identification may, but need not, be made by reference to a capital improvement plan as specified in §65403 or §66002, may be made in applicable general or specific plan requirements, or may be made in other public documents that identify the facilities for which the fees are charged (§66001(a)(2) of the Act).*

Fees proposed in this report, if enacted by the County and cities, would be available to fund law enforcement facilities to serve new development. Facilities funded by these fees are designated to be located within the five fee zones identified in this report. Fees addressed in this report have been identified by the County to be restricted to funding the law enforcement facilities identified in Chapters 3 through 7.

Summary descriptions of the planned facilities such as size and cost estimates were provided by the LA County Sheriff Planning Bureau and are included in Chapters 3 through 7 of this report. The County may change the list of planned facilities to meet changing needs and circumstances, as it deems necessary. The fees should be updated if these amendments result in a significant change in the fair share cost allocated to new development.

Planned facilities to be funded by the fees are described in the *Facilities Inventory, Plans & Standards* sections in each facility category chapter. Additionally, the initial use of fee revenue will be to fund a comprehensive North Los Angeles County law enforcement facilities master plan.

BENEFIT RELATIONSHIP

- *Determine the reasonable relationship between the fees' use and the type of development project on which the fees are imposed (§66001(a)(3) of the Act).*

We expect that the fee revenue will be restricted to the acquisition of land, construction of facilities and buildings, and purchase of related equipment, furnishings, vehicles, and services used to serve new development. Facilities funded by the fees are expected to provide a countywide network of facilities accessible to the additional residents and workers associated with new development. Under the *Act*, fees are not intended to fund planned facilities needed to correct existing deficiencies. Thus, a reasonable relationship can be shown between the use of fee revenue and the new development residential and non-residential use classifications that will pay the fees.

BURDEN RELATIONSHIP

- *Determine the reasonable relationship between the need for the law enforcement facilities and the types of development on which the fees are imposed (§66001(a)(4) of the Act).*

The need for facilities is based on a facility standard that represents the demand generated by new development for those facilities. Facilities demand is based on service population. The service population is established based upon the number of residents and workers, which correlates to the demand for law enforcement facilities.

Demand is measured by a single facility standard that can be applied across land use types to ensure a reasonable relationship to the type of development. Service population standards are calculated based upon the number of residents associated with residential development and the number of workers associated with non-residential development. To calculate a single, per capita standard, one worker is weighted less than one resident based on an analysis of the relative use demand between residential and non-residential development.

The standards used to identify growth needs are also used to determine if planned facilities will partially serve the existing service population by correcting existing deficiencies. This approach ensures that new development will only be responsible for its fair share of planned facilities, and that the fees will not unfairly burden new development with the cost of facilities associated with serving the existing service population.

Chapter 2, Growth Projections provides a description of how service population and growth projections are calculated. Facility standards are described in the *Facility Inventories, Plans & Standards* sections of in each facility category chapter.

PROPORTIONALITY

- *Determine how there is a reasonable relationship between the fees amount and the cost of the facilities or*

portion of the facilities attributable to the development on which the fee is imposed (§66001(b) of the Act).

The reasonable relationship between each facilities fee for a specific new development project and the cost of the facilities attributable to that project is based on the estimated new development growth the project will accommodate. Fees for a specific project are based on the project's size. Larger new development projects can result in a higher service population which results in higher fee revenue than smaller projects in the same land use classification. Thus, the fees can ensure a reasonable relationship between a specific new development project and the cost of the facilities attributable to that project.

See *Chapter 2, Growth Projections* for a description of how service population is determined. See the *Fee Schedule* section of each chapter for a presentation of the proposed facilities fees.

ATTACHMENT II

Proposed Newhall and Santa Clarita Sheriff's Stations Preliminary Construction Cost Estimates

Estimated Timing	Approximate Location	Anticipated Capital Project Costs				Approximate Size (Gross Sq. Ft)	Comments
Mid Point of Construction December 2013	Newhall Ranch Area (Near 125 Freeway)	**Facility**	**S. Ft**	**Per S.Ft.**		343,343 GSF	New facility designed for later expansion.
		Building	40,000	$ 478	$19,135,936		
		Vehicle Maintenance (3 Bays + carwash)	6,536	$ 393	$2,568,937		
		Service Building	3,000	$ 225	$676,429		
		Site Work	343,343	$ 25	$8,697,201		
		Helistop			$158,259		
		Total Construction Cost			**$31,236,761**		
Midpoint of Construction December 2013	North Santa Clarita	**Facility**	**S. Ft**	**Per S.Ft.**		440,000 GSF	New facility designed for later expansion.
		Building	70,000	$ 478	$33,487,888		
		Vehicle Maintenance (3 Bays + carwash)	6,536	$ 393	$2,568,937		
		Service Building	3,000	$ 225	$676,429		
		Site Work	440,000	$ 25	$11,145,614		
		Helistop			$158,259		
		Total Construction Cost			**$48,037,126**		

Notes:

(2) Duration to mid-point of construction assumed to be 3 years

(3) Projects start date assumed to be January 2011
(4) Recommend escalating construction cost by 5% per year for project start dates beyond January 2011

(5) Estimates are based on single story scheme.

(1) Project duration assumed to be 4 years

Exclusions:

(1) Hazardous material mitigation or cleanup

(2) Major demolition

ATTACHMENT III

RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF LOS ANGELES ESTABLISHING A LAW ENFORCEMENT FACILITIES MITIGATION FEE FOR THE SANTA CLARITA, NEWHALL AND GORMAN AREAS AND APPROVING A CAPITAL IMPROVEMENT/CONSTRUCTION PLAN FOR THE SANTA CLARITA AND NEWHALL AREAS

WHEREAS, the County of Los Angeles recognizes the need for expansion and development of law enforcement facilities in the unincorporated Santa Clarita, Newhall, and Gorman areas of north Los Angeles County area to accommodate new and existing law enforcement service populations; and

WHEREAS, future development within the above-identified unincorporated areas will result in law enforcement facilities requirements in excess of existing capacity, and the County of Los Angeles General Plan requires such development impacts to be mitigated; and

WHEREAS, in the absence of a law enforcement facilities mitigation fee upon new development, existing, and future sources of revenue will be inadequate to fund the provision of new law enforcement facilities in the unincorporated Santa Clarita, Newhall, and Gorman areas necessary to avoid unacceptable service levels; and

WHEREAS, a law enforcement facilities mitigation fee is a fair and equitable method of distributing the cost of law enforcement facilities among new developments in those areas which will generate the increased needs and usage; and

WHEREAS, developers of parcels in the involved areas should offset the additional costs and responsibilities imposed upon the County of Los Angeles to meet the demands for additional law enforcement facilities by the payment of law enforcement facility mitigation fees on new development; and

WHEREAS, a law enforcement facilities mitigation fee imposed upon new development will provide for the construction of new and expanded law enforcement facilities, including but not limited to the acquisition, installation, and equipping of law enforcement facilities, to accommodate population growth in the unincorporated Santa Clarita, Newhall, and Gorman areas; and

WHEREAS, unless a law enforcement facilities mitigation fee is imposed upon parcels at the time of development, the public safety and general welfare will be adversely affected; and

WHEREAS, the County of Los Angeles desires to establish a law enforcement facilities mitigation fee for the unincorporated Santa Clarita, Newhall, and Gorman areas of north Los Angeles County in accordance with California Government Code section 66000 et seq., to mitigate such impacts, and

WHEREAS, the County of Los Angeles, along with the cities of Santa Clarita, Lancaster, and Palmdale, prepared a fair share feasibility study entitled "Santa Clarita North Los Angeles County Law Enforcement Facilities Fee Study, October 29, 2007," ("Facilities Fee Study") which is incorporated by reference herein as Attachment "A" and which demonstrates the fair share of costs for the construction of new and expanded law enforcement facilities for new and expanded development in, among other areas, the unincorporated Santa Clarita, Newhall, and Gorman areas; and

WHEREAS, the City of Santa Clarita is similarly adopting a law enforcement facilities mitigation fee for development within the city's jurisdictional boundaries; and

WHEREAS, a capital improvement/construction plan which indicates the approximate locations, sizes, time of availability and cost estimates for the law enforcement facilities to be financed by the fee to serve the unincorporated Santa Clarita and Newhall Zones has been prepared and is attached hereto; and

NOW THEREFORE BE IT RESOLVED, that the Board of Supervisors of the County of Los Angeles resolves, finds, and determines that:

1. The forgoing recitals are true and correct.

2. The law enforcement facility mitigation fee is for the purpose of generating funds to mitigate the fiscal impacts created by the need for new law enforcement facilities in the unincorporated Santa Clarita, Newhall, and Gorman areas to accommodate growth in service populations, and is exempt under the California Environment Quality Act ("CEQA") pursuant to California Public Resources Code section 21080(b)(8) and section 15273 of the State CEQA Guidelines.

3. On _____, 2008, a public hearing was held to amend Title 22 of the Los Angeles County Code to adopt the Law Enforcement Facility Mitigation Fee Ordinance which imposes said fee on the privilege of constructing building units in the three designated law enforcement facility fee zones; to consider the Facilities Fee Study which describes the acquisition, construction, installation, and equipping of law enforcement facilities, and fee calculations for each law enforcement facility fee zones based on the estimated development costs for law enforcement facilities in each zone; and, to consider the adoption of the attached Capital Improvement/Construction Plan .

4. Based on the forgoing recitals, and the Facilities Fee Study, there are reasonable relationships between: 1) the use of the developer fees, and the type of development projects on which the developer fee is imposed; 2) the need for law enforcement facilities, and the types of development on which the developer fee is imposed; and 3) the amount of the fee and the cost of all, or a portion of the law enforcement facilities attributable to the development on which the developer fee is imposed.

5. The law enforcement facility mitigation fee imposed hereby represents the attendant benefit, and cost of providing adequate law enforcement facilities for new and expanded development upon parcels of property within the designated law enforcement facility fee zones in unincorporated north Los Angeles County.

6. The Board of Supervisors approves and adopts the Law Enforcement Facility Mitigation Fee Ordinance, the Facilities fee Study, and the amounts imposed on new and expanded development in the unincorporated Santa Clarita, Newhall and Gorman areas of north Los Angeles County.

7. The Board of Supervisors further approves and adopts the attached Capital Improvement/Construction Plan for the unincorporated Santa Clarita and Newhall areas.

The foregoing resolution was on the day of , 2008, adopted by the Board of Supervisors of the County of Los Angeles and ex-officio the governing body of all other special assessment and taxing districts, agencies, and authorities for which said Board so acts.

SACHI A. HAMAI, Executive Officer-Clerk
of the Board of Supervisors of the
County of Los Angeles

By _____
Deputy

APPROVED AS TO FORM:

RAYMOND G. FORTNER, JR.
County Counsel

By _____
TRACY SWANN
Deputy County Counsel

SAMPLE NOTICE

NOTICE OF PUBLIC HEARING
ON PROPOSED AMENDMENT TO TITLE 22 (ZONING ORDINANCE)
OF THE LOS ANGELES COUNTY CODE

LAW ENFORCEMENT FACILITY MITIGATION FEE ORDINANCE: The proposed ordinance will amend Title 22 (Zoning) of the Los Angeles County Code to establish a law enforcement facilities mitigation fee pursuant to Government Code section 66000 et seq. The fee shall be used to construct and equip law enforcement facilities in the unincorporated areas of north Los Angeles County of Santa Clarita, Newhall, and Gorman, necessitated by population growth in these areas and will be borne by developers of property. The fee shall apply to all new residential, office, industrial, and commercial development.

NOTICE IS HEREBY GIVEN that a public hearing will be held before the Board of Supervisors, Kenneth Hahn Hall of Administration, 500 West Temple Street, Room 381B, Los Angeles, California 90012 at 9:30 a.m. on June 24, 2008, pursuant to Title 7 of the Government Code of the State of California (Planning and Zoning Law) for hearing testimony relative to the adoption of the Law Enforcement Facilities Mitigation Fee Ordinance.

FURTHER NOTICE IS GIVEN that the Board of Supervisors may continue this hearing from time to time.

Data indicating the amount of cost, or estimated cost, the proposed capital improvement plan and nexus study required to provide for law enforcement facilities, shall be made available to the public at least ten (10) days prior to the hearing. The data will be available at the Los Angeles County Chief Executive Office, 500 West Temple Street, Los Angeles, California 90012.

Written comments may be sent to the Executive Office of the Board of Supervisors at 500 West Temple Street, Room 383, Los Angeles, California 90012. If you do not understand this notice or need more information, please contact Gary Tse at (626) 300-3003 between 8 a.m and 5 p.m, Monday through Friday, or by email at gtse@lasd.lacounty.gov.

Pursuant to Section 21080(b)(8) of the Public Resources Code and Section 15273 of the California Environmental Quality Act (CEQA) Guidelines, the proposed ordinance is exempt from the State CEQA requirements.

"ADA ACCOMMODATIONS: If you require reasonable accommodations or axillary aid and services such as material in alternate format or a sign language interpreter, please contact the Americans with Disabilities Act Coordinator at (213) 893-2476 (voice) or (213) 613-4796 (TTY) with at least three business days notice."

Si no entiende esta noticia o necesita más informatión, por favor llame este número (626) 300-3003.

SACHI A. HAMAI
EXECUTIVE OFFICER-CLERK OF
BOARD OF SUPERVISORS

ATTACHMENT IV

ANALYSIS

This ordinance adds Chapter 22.74 to Title 22 - Planning and Zoning of the Los Angeles County Code to establish a law enforcement facilities mitigation fee in the unincorporated Santa Clarita, Newhall, and Gorman areas of north Los Angeles County. The fee will be imposed upon new development projects to finance law enforcement facilities necessary to accommodate new development in those areas. Separate fees will be established within each of the three law enforcement facilities fee zones.

RAYMOND G. FORTNER, JR.
County Counsel

By
TRACY SWANN
Deputy County Counsel
Property Division

TS:gjh

11/06/07 (requested)

4/28/08 (revised)

482677_6

ORDINANCE NO. _____

An ordinance amending Title 22 - Planning and Zoning of the Los Angeles County Code, to establish a law enforcement facilities mitigation fee for new residential, commercial, office, and industrial development in the unincorporated Santa Clarita, Newhall, and Gorman areas of north Los Angeles County.

The Board of Supervisors of the County of Los Angeles ordains as follows:

SECTION 1. Based on the "Santa Clarita-North Los Angeles County Law Enforcement Facilities Fee Study, October 29, 2007," on file with the executive office of the board of supervisors of the county of Los Angeles, the board of supervisors find as follows:

A. Future residential, commercial, office, and industrial development within the unincorporated Santa Clarita, Newhall, and Gorman areas of north Los Angeles County will result in law enforcement facilities requirements in excess of existing capacity and that the County of Los Angeles General Plan requires such development impacts to be mitigated;

B. Without the revenue this ordinance will generate, existing and future sources of revenue will be inadequate to fund the facilities needed to provide acceptable law enforcement service levels in the identified areas;

C. The law enforcement facilities mitigation fee is a fair and equitable method of distributing the cost of law enforcement facilities among new developments which will generate the increased needs; and

D. The adoption of this ordinance complies with the requirements of the Mitigation Fee Act, Government Code section 66000, et seq.

SECTION 2. Chapter 22.74 is hereby added to read as follows:

Chapter 22.74

LAW ENFORCEMENT FACILITIES FEE

SECTIONS:

22.74.010 Purpose.

22.74.020 Definitions.

22.74.030 Establishment of law enforcement facilities mitigation fee.

22.74.040 Annual review of fee.

22.74.050 Applicability.

22.74.060 Time of payment of fee.

22.74.070 Exemptions from fee.

22.74.080 Deposit and use of fees collected.

22.74.090 Consideration in lieu of fee.

22.74.100 Reimbursement.

22.74.110 Alternative method.

22.74.010 Purpose.

The purpose of this chapter is:

A. To implement goals and policies of the County of Los Angeles General Plan with respect to the unincorporated urban expansion areas of Santa Clarita, Newhall, and Gorman, which goals and policies promote an equitable distribution of the

costs and benefits of governmental actions; promote a distribution of population consistent with service system capacity and resource availability; seek to maintain a balance between increased intensity of development and the capacity of needed public facilities; and give priority to upgrading existing public facilities in areas lacking adequate facilities;

B. To mitigate adverse impacts due to the inadequacy of law enforcement facilities that might otherwise occur due to new development; and

C. To comply with the procedures for adoption of developer fees contained in the Mitigation Fee Act, Government Code section 66000, et seq.

22.74.020 Definitions.

As used in this chapter:

A. "Appropriated" means authorization by the board of supervisors to make expenditures and incur obligations for specific purposes.

B. "Capital improvement plan" means a plan indicating the approximate location, size, time of availability, and estimates of cost for law enforcement facilities to be financed with law enforcement facilities mitigation fees. A capital improvement plan shall be adopted and annually updated by the board of supervisors in accordance with Government Code section 66002.

C. "Commercial" means retail, education, hotels/motels, places of religious worship, and other similar buildings.

D. "Industrial" means manufacturing, warehousing, and similar industrial buildings.

E. "Law enforcement facilities" means law enforcement improvements and amenities, the need for which is directly or indirectly generated by a residential, commercial, office, and/or industrial development project, including but not limited to acquiring, through purchase, lease, lease-purchase, installment purchase, or otherwise; improving, constructing, altering, repairing, augmenting, equipping, and furnishing real property, buildings and other structures, equipment, and materials for law enforcement purposes; and all other auxiliary work which may be required to carry out that work, such as administrative, engineering, architectural, and legal work performed in connection with establishing, implementing, and monitoring such projects, indirect costs, and other incidental expenses of providing those law enforcement facilities, or all or any combination thereof.

F. "Law enforcement facilities fee zone" means one of the three law enforcement facility fee zones, for the unincorporated Santa Clarita, Newhall, and Gorman areas, the boundaries of which are depicted in the "Santa Clarita-North Los Angeles County Law Enforcement Facilities Fee Study, October 29, 2007," on file in the executive office of the board of supervisors of the county of Los Angeles, each of which includes areas which are within the service area of the county of Los Angeles Sheriff's Department. The law enforcement facilities fee zones are:

Zone 1: Santa Clarita zone;

Zone 2: Newhall zone; and

Zone 3: Gorman zone.

G. "Mitigation fee" means a monetary exaction other than a tax or special assessment that is collected under the terms of this chapter to provide funds for law enforcement facilities related to a residential, commercial, office, and/or industrial development project.

H. "Multi-family" means attached single-family dwellings, multiple unit apartment buildings, condominiums, and similar multi-family residential buildings.

I. "New development project(s)" means any activity which requires approval by the county resulting in the issuance of grading, building, plumbing, mechanical or electrical permits, or certificates of occupancy to construct or change the use of a building, or property for residential, commercial, office, and/or industrial use.

J. "Office" means general, professional, or medical office building developments.

K. "Single-family" means detached one-family dwelling units, duplexes, condominiums, townhomes, and similar residential uses.

22.74.030 Establishment of law enforcement facilities mitigation fee.

A. There is hereby established a law enforcement facilities mitigation fee. The amount of the fee to be imposed on a new residential, commercial, office, and/or industrial development project is based upon the findings and conclusions set forth in the "Santa Clarita-North Los Angeles County Law Enforcement Facilities Fee Study, October 29, 2007," and shall not exceed the estimated reasonable cost of providing law enforcement facilities for such residential, commercial, office, and/or industrial

development projects.

B. The law enforcement facilities mitigation fee shall be a uniform fee within each law enforcement facilities fee zone based on the estimated cost of providing the projected law enforcement facility needs in each such zone, as follows:

Zone 1:	Santa Clarita zone	
	per single-family dwelling unit	$467.00
	per multi-family dwelling unit	$337.00
	per 1,000-square-foot commercial unit	$ 69.00
	or, per square-foot of commercial space	$ 0.07
	per 1,000-square-foot office unit	$ 87.00
	or, per square-foot of office space	$ 0.09
	per 1,000-square-foot industrial unit	$ 35.00
	or, per square-foot of industrial space	$ 0.03
Zone 2:	Newhall zone	
	per single-family dwelling unit	$863.00
	per multi-family dwelling unit	$652.00
	per 1,000-square-foot commercial unit	$129.00
	or, per square-foot of commercial space	$ 0.13
	per 1,000-square-foot office unit	$161.00
	or, per square-foot of office space	$ 0.16
	per 1,000-square-foot industrial unit	$ 64.00
	or, per square-foot of industrial space	$ 0.06

Zone 3:	Gorman zone	
	per single-family dwelling unit	$1,285.00
	per multi-family dwelling unit	$ 971.00
	per 1,000-square-foot commercial unit	$ 192.00
	or, per square-foot of commercial space	$ 0.19
	per 1,000-square-foot office unit	$ 240.00
	or, per square-foot of office space	$ 0.24
	per 1,000-square-foot industrial unit	$ 96.00
	or, per square-foot of industrial space	$ 0.10

22.74.040 Annual review of fee.

A. The amount of the fees established by Section 22.74.030 shall be reviewed annually by the county sheriff, in consultation with the county auditor-controller. On July 1st of each year, the fee in each law enforcement facilities fee zone shall be adjusted as follows: Calculate the percentage movement between April 1st of the previous year and March 31st of the current year in the Engineering Record-News Building Construction Cost Index–Los Angeles (ENR-BCCI), adjust the fee in each law enforcement facilities fee zone by said percentage amount and round to the nearest dollar. No adjustment shall result in a fee that is greater than the amount necessary to recover the cost of providing the applicable law enforcement facilities.

B. If it is determined that the reasonable amount necessary to recover the cost of providing the law enforcement facilities exceeds the fee as adjusted by subsection A, above, the county sheriff shall present an alternative fee proposal to the board of supervisors for consideration. Such alternative fee proposal may reflect changes in the actual cost of completed law enforcement facilities projects or, if such projects have not been completed, then the estimated cost of the proposed law enforcement facilities. The proposal may also reflect changes in the law enforcement facilities proposed as well as the availability or lack of other funds with which to provide such facilities.

C. The county sheriff may also present an alternative fee proposal to the board of supervisors for approval as may be necessary to insure that the law enforcement facilities mitigation fee is a fair and equitable method of distributing the costs of the law enforcement facilities necessary to accommodate the law enforcement needs generated by the development of land in the unincorporated areas of north Los Angeles County.

22.74.050 Applicability.

A. The provisions of this chapter shall apply to new development projects which, as of the effective date of the ordinance codified in this chapter, are yet to receive final discretionary approval and/or the issuance of a building permit or other development right. The fees provided in this chapter shall also be imposed upon a previously improved lot or parcel when a building permit is issued to add one thousand (1,000) square feet, or more, to an existing building unit upon such lot or parcel.

B. No tract map, parcel map, conditional use permit, building permit, other land use permit, or other entitlement for a new development project as defined in this chapter shall be approved unless payment of the law enforcement facilities mitigation fee is made a condition of approval for any such entitlement.

C. Additionally, the fees provided for in this chapter shall be imposed upon a parcel which has been previously improved with a building unit whenever a building permit is issued for a new building unit on an adjoining parcel under common ownership and which new unit constitutes, in effect, an addition of one thousand (1,000) square feet, or more, when constructed, or an expansion of use of the previously improved parcel. Such fee shall be calculated upon the total square footage of new construction and paid by every person, or entity to whom a building permit is issued therefor.

22.74.060 Time of payment of fee.

A. No building or similar permit for any new development project as defined in this chapter shall be issued until the applicant has paid the applicable law enforcement facilities mitigation fee to the county sheriff. In the event that an applicant desires to proceed only with development of a portion of the development project, the applicant may obtain building permits for that portion of the project after paying a proportional share of the total law enforcement facilities mitigation fee for the project to the satisfaction of the county sheriff.

B. Notwithstanding the provisions of subsection A, above, payment of the law enforcement facilities mitigation fee for a single-family or multi-family development project shall not be required prior to the date of the final inspection or the date the certificate of occupancy is issued for the first unit in the development, whichever occurs first, unless the county has previously adopted a capital improvement plan or proposed construction schedule and has established an account and appropriated funds for the law enforcement facilities to be financed by the fee, or unless the fee is intended to reimburse the county for expenditures already made. Additionally, notwithstanding the provisions of subsection A, above, payment of the law enforcement facilities mitigation fee for projects for occupancy by lower income households meeting the criteria set forth in Government Code section 66007(b)(2)(A) shall not be required prior to the date of the final inspection or the date the certificate of occupancy is issued for the first unit in the development, whichever occurs first. Where payment of the fees may only be collected on the date of final inspection or the date the certificate of occupancy is issued as provided in this subsection, execution of an agreement to pay the required fee or applicable portion thereof within the time specified herein shall be a condition of issuance of the applicable building or similar permit. Such agreement shall constitute a lien for the payment of the fee and shall be enforceable as provided in Government Code section 66007.

22.74.070 Exemptions from fee.

The following shall be exempt from the provisions of this chapter:

A. Notwithstanding the provisions of subsection A of Section 22.74.050, additions to residential structures that are less than two thousand (2,000) square feet in size shall not be subject to the fees otherwise required by this chapter.

B. No fee imposed by this ordinance shall be imposed upon the issuance of building permit for the restoration of existing buildings, or buildings damaged by fire, or natural disasters such as earthquake, wind, or flood, where the replaced building, or portion thereof, does not exceed the original gross floor area. For purposes of this section, "gross floor area" shall be determined by the director of public works, or his designee and excludes accessory structures such as decks, patios, barns, sheds, and kiosks.

22.74.080 Deposit and use of fees collected.

All law enforcement facilities mitigation fees received by the county shall be deposited in a special law enforcement capital facilities fund and expended solely for the purposes for which the fee was collected. A separate law enforcement capital facilities fund account shall be established for each of the three law enforcement facilities fee zones. All funds from the imposition of fees provided herein shall be deposited into such accounts to be used exclusively for the purpose of land acquisition, engineering, construction, installation, purchasing, or any other direct cost of providing law enforcement facilities as defined in subsection E of Section 22.74.020, and for no other purpose. All interest income earned shall be credited to each account, and shall be used solely for the purposes for which the fee was collected.

22.74.090 Consideration in lieu of fee.

A. The county sheriff may accept substitute consideration in lieu of the law enforcement facilities mitigation fee required pursuant to this chapter, provided the county sheriff finds that the proposed substitute consideration:

1. Has a value equal to or greater than the applicable law enforcement facilities mitigation fee otherwise due;

2. Is in a form acceptable to the county sheriff; and

3. Is within the scope of the applicable law enforcement facilities project.

B. The county sheriff may accept substitute consideration in lieu of a portion of the law enforcement facilities mitigation fee required pursuant to this chapter where he, or she finds that the substitute consideration proposed is less than the value of the required fee but is in a form acceptable to the county sheriff and is within the scope of the applicable law enforcement facilities project. Such substitute consideration may be accepted by the county sheriff only after payment of an amount equal to the difference between the value of the substitute consideration, as solely determined by the county sheriff, and the amount of the otherwise required fee.

22.74.100 Reimbursement.

The provisions of Section 22.74.090 shall not prevent the execution of a reimbursement agreement between the county and a developer for that portion of the cost of law enforcement facilities paid by the developer which exceeds the need for the law enforcement facilities attributable to and reasonably related to the development.

22.74.110 Alternative method.

This chapter is intended to establish an alternative method for the financing of public law enforcement facilities, the need for which is generated directly, or indirectly by new development projects. The provisions of this chapter shall not be construed to limit the power of the county to utilize any other method for accomplishing this purpose, but shall be in addition to any other fees, or requirements which the board of supervisors is authorized to impose as a condition to approving new development pursuant to state and local laws.

SECTION 3. Pursuant to Government Code section 66017(a) this ordinance shall become effective sixty (60) days after adoption.

[2274TSCC]

ATTACHMENT V

LAW ENFORCEMENT DEVELOPMENT IMPACT FEES - SUMMARY

Land Use	Santa Clarita Area	Newhall Area	Gorman Area
Residential			
Single Family Unit	$ 467	$ 863	$ 1,285
Multi-Family Unit	$ 337	$ 652	$ 971
Nonresidentail			
Commercial	$ 69	$ 129	$ 192
Office	$ 87	$ 161	$ 240
Industrial	$ 35	$ 64	$ 96

APPENDIX 4.14

Fire Protection Services

Correspondence from David R. Leninger, August 2, 2004

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294
(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

August 2, 2004

Ms. Julie Berger
Impact Sciences
30343 Canwood Street, Suite 210
Agoura Hills, CA 91301

Dear Ms. Berger:

QUESTIONNAIRE REGARDING DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE "RIVER VILLAGE" DEVELOPMENT PROJECT LOCATED IN NORTHWESTERN LOS ANGELES COUNTY – "SANTA CLARITA"(EIR #2042/2004)

The Questionnaire related to the Draft Environmental Impact Report for the aforementioned project has been reviewed by the Planning Division, Land Development Unit, and Forestry Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

The following are the closest existing fire stations to the project site, besides Station 76, the jurisdictional station for the area:

- Station 124, located at 25870 Hemingway Avenue, Stevenson Ranch. It has a 3-person engine company and a 2-person paramedic squad.
- Station 126, located at 26320 Citrus Avenue, Santa Clarita. It has a 3-person engine company and a 4-person quint (a combination engine/ladder truck apparatus). In addition, this station houses a battalion chief and a division chief.
- Station 149, located at 31770 Ridge Route, Castaic. It has a 3-person engine company, a 2-person paramedic squad, and a 1-person patrol that is staffed only during severe fire weather.

A 3-person fire company consists of a captain, a fire fighter specialist, and a fire fighter. A 4-person fire company has one (1) additional fire fighter. If the station houses a paramedic squad, one (1) fire fighter position on the engine is filled by a fire fighter paramedic.

We have no plans for any upgrades to these stations. There were no calls for services during the 2003 calendar year for the project area.

We would need a detailed map showing how the proposed roads intersect with existing roads in order to calculate response distances/times from existing fire stations.

As stated in your letter, discussions are underway with the applicant regarding fire protection mitigation measures for this project. Following are the requirements being discussed:

- Station at the Fire Department's "Del Valle" site needs to be constructed and operational prior to the issuance of the 723rd certificate of occupancy for the project.
- Applicant may desire to construct the fire station to the Fire District's specifications.
- If the applicant provides funding to the Fire Department to construct the station, the environmental review, architectural, and construction processes take 4± years upon receipt of funding.
- Size of fire station facility to be 8,250± square feet.
- Applicant must provide paved access acceptable to the Fire Department from the Del Valle fire station to Chiquito Canyon Road.

LAND DEVELOPMENT UNIT:
The County of Los Angeles Fire Department, Land Development Unit has no additional comments regarding this project. The conditions that were detailed in the letter dated December 31, 2002 (EIR #1535/2002) have not been changed at this time. See enclosed copy of letter. Should any questions arise regarding subdivision, water systems or access, please contact Inspector Marvin Dorsey at (323) 890-4243.

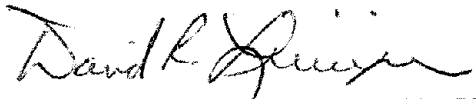
FORESTRY DIVISION:
The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. This property is located within the area described by the Forester and Fire Warden as a Very High Fire Hazard Severity Zone or Fire Zone 4. The development of this project must comply with all Very High Fire Hazard Severity Zone code and ordinance requirements for fuel modification.

As required by Section 1117.2.1 of the County of Los Angeles Fire Code, a fuel modification plan, a landscape plan, and an irrigation plan shall be submitted with any subdivision of land or prior to any new construction, remodeling, modification or reconstruction where such activities increase the square footage of the existing structure by at least 50% within a 12-month period and where said structure or subdivision is located within an area designated as a Very High Fire Hazard Severity Zone or within Fire Zone 4.

A fuel modification plan, a landscape plan, and an irrigation plan shall be developed and approved prior to construction. Said plans shall be reviewed and approved by the County of Los Angeles Fire Department, Forestry Division. Specific questions regarding fuel modification requirements should be directed to the Fuel Modification Office at (626) 969-5205. These items should be fully addressed in the Draft Environmental Impact Report.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,



DAVID R. LEININGER, CHIEF, FORESTRY DIVISION
PREVENTION BUREAU

DRL:sc

Enclosure

Correspondence from David R. Leninger, December 31, 2002

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

December 31, 2002

Rosemarie B. Mamaghani, AICP
Impact Sciences
12909 Abra Drive
San Diego, CA 92128

Dear Ms. Mamaghani:

REQUEST FOR INFORMATION -- VESTING TENTATIVE TRACT #53108, RIVER VILLAGE PROJECT, NEWHALL RANCH, "CITY OF SANTA CLARITA VALLEY" (EIR #1535/2002)

The request for information on the proposed River Village Project has been reviewed by the Planning Section, Land Development Unit, and Forestry Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

The terms "first alarm response stations" and "backup response stations" are undefined and should be avoided. The number and kind of response units dispatched in the first alarm depend on the incident type and the response policy. The response policy, as well as station staffing and equipment, can change over time. Thus, even the list of stations contributing units to a particular incident type, such as a single-family house fire, will change. The closest available units are always dispatched to an incident anywhere within the Fire Department's emergency response area. Therefore, it would be more accurate to identify certain stations as being the closest to the project and hence the likeliest to respond to an incident at the site.

The following changes in facilities, equipment, and staffing have occurred in the last two years. New Fire Station 126 is now in operation. It is temporarily located at 27400 Tourney Road, Valencia, CA 91355 until spring, 2003, when the permanent fire station will be opened on Citrus Street at Magic Mountain Parkway. Fire Station 126 is staffed by a 4-person engine company. Fire Station 73 now has one 3-person engine company as well as the truck company. Station 124 has been relocated to 25870 Hemingway Avenue, Stevenson Ranch, CA 91381.

The fire camps play a supportive role in wildland fire suppression. Camp crews are not staffed by firefighters. Unlike the fire stations and their staffing and equipment, the camps do not contribute to the Fire Department's emergency response capabilities in the project area.

Additional facilities, manpower, and equipment will be needed to serve this development. The Fire Department has negotiated an agreement with the developer of Newhall Ranch to provide new fire stations to adequately serve the project. In addition, the Department's 5-year plan currently includes two future stations in the surrounding area: one in the Hasley Canyon development and one in the Stevenson Ranch Phase V development.

SERVICE RESPONSIBILITY:
Due to the fact that only limited information is available on this project at the present time, we are not able to respond completely as to how this project will affect our Department. We would like to reserve the right to respond further at a future date when more specific information is available. In particular, we would need a detailed map showing the location of proposed land uses and existing and proposed roads to calculate response distances/times.

LAND DEVELOPMENT UNIT -- GENERAL REQUIREMENTS:
The proposed development may necessitate multiple ingress/egress access for the circulation of traffic, and emergency response issues. The Department may condition future development to provide additional means of access.

The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and hydrants. Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.

Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width, unobstructed, clear-to-sky. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building.

When a bridge is required, to be used as part of a fire access road, it shall be constructed and maintained in accordance with nationally recognized standards and designed for a live load sufficient to carry a minimum of 75,000 pounds.

The maximum allowable grade shall not exceed 15% except where the topography makes it impractical to keep within such grade, and then an absolute maximum of 20% will be allowed for up to 150 feet in distance. The average maximum allowed grade, including topography difficulties, shall be no more than 17%. Grade breaks shall not exceed 10% in 10 feet.

When involved with a subdivision, Fire Department requirements for access, fire flows and hydrants are addressed at the Los Angeles County Subdivision Committee meeting, during the subdivision tentative map stage.

Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is strongly suggested that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.

NON-RESIDENTIAL - COMMERCIAL - INSTITUTIONAL:
Development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used. Fire hydrant spacing shall be 300 feet and shall meet the following requirements:

1. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.

2. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant.

3. Additional hydrants will be required if hydrant spacing exceeds specified distances.

4. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid-block.

5. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use.

6. A Fire Department approved turning area shall be provided at the end of a cul-de-sac.

Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs. All on-site driveways shall provide a minimum unobstructed width of 26 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. Driveway width for non-residential developments shall be increased when any of the following conditions will exist:

1. Provide 28 feet in width, when a building has three or more stories, or is more than 35 feet in height, above access level. Also, for using fire truck ladders, the centerline of the access roadway shall be located parallel to, and within 30 feet of the exterior wall on one side of the proposed structure.

2. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure.

3. Provide 42 feet in width, when parallel parking is allowed on each side of the access roadway/driveway.

4. "Fire Lanes" are any ingress/egress, roadway/driveway with paving less than 34 feet in width, and will be clear-to-sky. All "Fire Lanes" will be depicted on the final map.

5. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

HIGH DENSITY RESIDENTIAL:

Development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used. Fire hydrant spacing shall be 300 feet and shall meet the following requirements:

1. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.

2. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced fire hydrant.

3. When cul-de-sac depth exceeds 200 feet, hydrants will be required at the corner and mid-block.

4. Additional hydrants will be required if the hydrant spacing exceeds specified distances.

Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs. When serving land zoned for residential uses having a density of more than four units per net acre:

1. A cul-de-sac shall be a minimum of 34 feet in width and shall not be more than 700 feet in length.

2. The length of the cul-de-sac may be increased to 1,000 feet if a minimum of 36 feet in width is provided.

3. A Fire Department approved turning area shall be provided at the end of a cul-de-sac.

All on-site driveways shall provide a minimum unobstructed width of 26 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The 26 feet width does not allow for parking, and shall be designated as a "Fire Lane," and have appropriate signage. The 26 feet in width shall be increased to:

1. Provide 34 feet in width when parallel parking is allowed on one side of the access way.

2. Provide 36 feet in width when parallel parking is allowed on both sides of the access way.

3. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.

4. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

SINGLE-FAMILY DWELLING UNITS:

Single-family detached homes shall require a fire flow of 1,250 gallons per minute at 20 pounds per square inch residual pressure for a two-hour duration. Fire hydrant spacing shall be 600 feet and shall meet the following requirements:

1. No portion of lot frontage shall be more than 450 feet via vehicular access from a public fire hydrant.

2. No portion of a structure should be placed on a lot where it exceeds 750 feet via vehicular access from a properly spaced public fire hydrant.

3. When cul-de-sac depth exceeds 450 feet on a residential street, hydrants shall be required at the corner and mid-block.

4. Additional hydrants will be required if hydrant spacing exceeds specified distances.

Fire Department access shall be provided to within 150 feet of all portions of the exterior walls of the first story of any single unit. If exceeding 150 feet, provide 20-feet, paved width "Private Driveway/Fire Lane" to within 150 feet of all portions of the exterior walls of the unit. Fire Lanes serving 3-4 units shall be increased to 24 feet in width, and if serving 5 or more units, the Fire Lane shall be increased to 26 feet. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs. Streets or driveways within the development shall be provided with the following:

1. Provide 36 feet in width on all collector streets and those streets where parking is allowed on both sides.

2. Provide 34 feet in width on cul-de-sacs up to 700 feet in length. This allows parking on both sides of the street.

3. Provide 36 feet in width on cul-de-sacs from 701 to 1,000 feet in length. This allows parking on both sides of the street.

4. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

5. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road.

6. A Fire Department approved turning area shall be provided, at the end of a driveway of 300 feet or more in length.

LIMITED ACCESS DEVICES (GATES ETC.):
All access devices and gates shall meet the following requirements:

1. Any single gate used for ingress and egress shall be a minimum of 26 feet in width, clear-to-sky.

2. Any gate used for a single direction of travel, used in conjunction with another gate, used for travel in the opposite direction, (split gates) shall have a minimum width of 20 feet each, clear-to-sky.

3. Gates and/or control devices shall be positioned a minimum of 50 feet from a public right-of-way, and shall be provided with a turnaround having a minimum of 32 feet of turning radius. If an intercom system is used, the 50 feet shall be measured from the right-of-way to the intercom control device.

4. All limited access devices shall be of a type approved by the Fire Department.

5. Gate plans shall be submitted to the Fire Department, prior to installation. These plans shall show all locations, widths and details of the proposed gates.

TRAFFIC CALMING MEASURES:
All proposals for traffic calming measures (speed humps/bumps, traffic circles, roundabouts, etc.) shall be submitted to the Fire Department for review, prior to implementation.

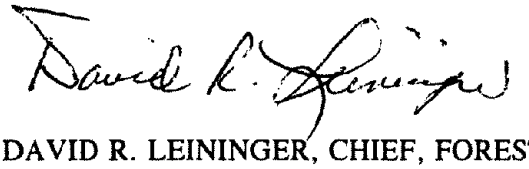
Should any questions arise regarding design and construction, and/or water and access, please contact Inspector J. Scott Greenelsh at (323) 890-4235.

FORESTRY DIVISION - OTHER ENVIRONMENTAL CONCERNS:

The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed in the Draft Environmental Impact Report.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,



DAVID R. LEININGER, CHIEF, FORESTRY DIVISION
PREVENTION BUREAU

DRL:lc

APPENDIX 4.15

Education

School Facilities Funding Agreement Between the Castaic Union School District and Newhall Land and Farming

CASTAIC UNION SCHOOL DISTRICT

31616 North Ridge Route • Castaic, California 91384
Phone: (805) 257-0551 • Fax: (805) 257-5737

Nora Emmons • Dirk Gosda • Tom Caesar • Lester M. Freeman • Irene L. Massey
President *Clerk* *Member* *Member* *Member*

December 1, 1997

Mr. James M. Harter, Senior Vice President
Newhall Land and Farming Company
23823 Valencia Boulevard
Valencia, California 91355

Dear Jim:

Enclosed is one original executed copy of the Newhall Ranch Mitigation Agreement between the Castaic Union School District which was approved at our November 20, 1997 Board of Trustees meeting.

Thank you for the article you sent to me, and thanks for your interest in our schools. We look forward to working with you in the future.

Sincerely,

Dr. Alan K. Nishino
Superintendent

AKN/kb
Enclosures

NEWHALL LAND

13 November, 1997

Dr. Alan K. Nishino
Superintendent
Castaic Union School District
31616 North Ridge Route
Castaic CA 91384

Re: School Facilities Funding Agreement Between The Castaic Union School District
And The Newhall Land And Farming Company (Agreement)

Dear Alan:

As partial consideration for the provision of full mitigation in the above Agreement, NLF agreed to dedicate to the Castaic Union School District a parcel of land approximately 300 feet by 359.8 feet (Property) immediately north of the "LDI" lot as shown on Exhibit E of the Agreement. The dedication is subject to the following terms, among others: the Property will be conveyed expressly subject to specified NLF reservations and any and all existing rights of way, easements, encumbrances, and other matters of record as of the date of the execution of the Agreement and is conveyed in an "as is" condition, "with all faults" as of that date and the Property will be subject to NLF standard Commercial and Industrial Covenants, Conditions, and Restrictions (CC&R's).

The District has expressed concern about the potential inability to physically utilize the Property for its intended purpose resulting from its existing elevation and drainage and/or NLF's imposition of the CC&R's. It is NLF's opinion that the Property can be utilized for the District's bus operations and that the drainage and adherence to the CC&R's will not physically prevent the use of the Property.

If the Property cannot be utilized for the stated purpose as a result of the drainage of the Property at its current elevation or at an elevation at or near that of the "LDI" lot or if the CC&R's physically make the Property not usable, NLF agrees to enter into an agreement with the District to amend the above Agreement to include NLF's payment of commercial and industrial fees pursuant to State law in addition to the existing provisions of the Agreement.

Sincerely,

James M. Harter
Senior Vice President
Newhall Ranch Division

JMH:mn

SCHOOL FACILITIES FUNDING AGREEMENT BETWEEN THE CASTAIC UNION SCHOOL DISTRICT AND THE NEWHALL LAND AND FARMING COMPANY

This School Facilities Funding Agreement ("Agreement") is made at Valencia, California, as of November 20, 1997, between the CASTAIC UNION SCHOOL DISTRICT ("District"), a school district organized and existing under the laws of the State of California, on the one hand, and THE NEWHALL LAND AND FARMING COMPANY ("NLF"), a California limited partnership, on the other hand, with respect to the following facts:

A. NLF is the owner, and is presently developing, a new community, the Newhall Ranch ("Newhall Ranch"), which is located in part within District's boundaries and which is described in Exhibit A, and is hereby incorporated. District provides elementary school facilities (Grades K-5) and middle school facilities (Grades 6-8).

B. Newhall Ranch is a proposed new town which will include approximately 24,000 dwelling units in addition to commercial and industrial facilities. Total build out of Newhall Ranch will take approximately 30 years or longer and the details, including the location and extent of land uses and the number of dwelling units, are expected to change over time to meet the needs of the market. Corresponding changes in governmental approvals are also expected. The portion of Newhall Ranch that is within District is called Riverwood ("Riverwood"). It includes approximately 2,333 acres and is proposed to have approximately 2,338 single family, and 1,686 multi-family units, for an overall total of 4,024 dwelling units. The land use plan is attached hereto as Exhibit B and made a part hereof.

C. Historically, the State of California has provided a substantial portion of the money necessary to build new school facilities ("State Funding"). However, over the last several years funds have not been available from the State for this purpose and District does not believe that funds will be available from the State for this purpose in the near future.

D. District has determined, in cooperation with NLF, a financing method to mitigate the impacts below a level of significance of Riverwood on District's educational

facilities in the absence of State Funding ("Mitigation Payments").

E. Both District and NLF desire to provide a financing schedule ("Financing Schedule") and a financing plan ("Financing Plan"), as set out in this Agreement, in combination with certain Mitigation Payments, which will provide permanent facilities, including land, buildings, furnishings and equipment, ("School Facilities") to house the grades K-5 and 6-8 students who will reside in Riverwood ("Riverwood Students") and which will mitigate below a level of significance the direct and cumulative impacts on District's educational facilities. Temporary facilities to house NLF students while new School Facilities are being constructed will be provided, consistent with the provisions of Paragraph 4 hereafter. School Facilities will be constructed in accordance with the requirements and specifications contained in the Education Code and the Applicant Handbook for State School Building Lease-Purchase Program put out by the Office of Public School Construction as those requirements and specifications exist at any given time ("State Requirements and Specifications"). A copy of the State Requirements and Specifications as they currently exist is attached as Exhibit C which is hereby incorporated.

F. The construction of the first K-5 School Facility will be accomplished through the use of funds advanced by NLF in response to requests from District ("Construction Draws"). The Financing Schedule will ensure that District will always have sufficient capacity to house every Riverwood Student; the Financing Plan will minimize the financial impacts on NLF while at the same time maximizing the opportunity to obtain funds from the State for funding School Facilities or the repayment, without interest, of the funds advanced by NLF for the cost of School Facilities necessary to house Riverwood Students.

G. The Financing Schedule and the Financing Plan will ensure that the development of Riverwood, either individually or cumulatively with other projects within District's boundaries, will have no adverse impacts on District's ability to provide adequate

educational opportunities to every student in District. In particular, the Financing Schedule and the Financing Plan guarantees to District that there will be adequate School Facilities available to house every Riverwood Student.

H. District has determined that the development of Riverwood presents a unique opportunity for District to provide for mitigation of the impacts to below a level of significance that the Riverwood development is likely to have on District's educational facilities and that the Financing Schedule and the Financing Plan will provide all of the land and money necessary to provide all needed School Facilities without the need to collect any fees which might otherwise be available to District in connection with the construction of commercial or industrial buildings within Riverwood.

I. The development of Riverwood will result in a need for at least one elementary school and approximately one half of a middle school. If State funding is available, NLF's per student contribution to the acquisition and construction of the school(s) would be one half of the total per student cost. NLF is willing to take the risk that State funding will not be available to complete the acquisition and funding of these school facilities, in which case it will contribute the total per student cost. NLF will provide the site and advance funds for the construction of at least one elementary school in Riverwood and will contribute funds as set out in this Agreement to District for middle school facilities outside of Riverwood.

J. District will build the future permanent elementary K-5 school to house Riverwood Students to the State Requirements and Specifications. District may build the size school its deems appropriate ("New Elementary School"). NLF will provide a school site and funds to construct an elementary school that would house 837 students based on a traditional, single track, nine month schedule school program. Under the State program this school would house 1,004 students under a multi-track year round school system. Therefore, for the purposes of this Agreement, NLF will receive credit for providing full funding for School

Facilities for 1,004 students. The methodology to determine the construction cost of the 837 student traditional, single track, nine month schedule school program K-5 school is shown in Exhibit D, which is attached hereto and made a part hereof.

K. If the residential projects in Riverwood result in more than 1,260 K-5 Riverwood Students, NLF will provide a second elementary K-5 school site in Riverwood as further set out in this Agreement.

L. If District constructs the New Elementary School for less than 837 students on a traditional, single track, nine month schedule school program and the construction cost of the New Elementary School is less than the cost that NLF would have funded for the 837 student school under the methodology as set out in Exhibit D, then NLF will pay that difference in the method and amount as set out in this Agreement in paragraph 11, below. District shall house 1,004 Riverwood Students by housing the additional Riverwood Students at the New Elementary School or at any other District school by either, in its sole discretion, adding relocatable classrooms or, without adding relocatable classrooms, by operating the New Elementary School on a multi-track year round schedule.

M. The New Elementary School will be built on a ten acre school site or, in NLF's sole discretion, on a seven acre school site for joint use with an adjoining local public park containing at least five acres ("New Elementary School Site"). If there is a combination school site and a local park, there shall be available as part of the local park at least three useable acres for use by the school and the park design and location shall be acceptable to District. The local public park adjacent to a seven acre New Elementary School Site shall be improved and available for joint use in connection with the operation of the New Elementary School at the time that it opens for operation and shall remain available for as long afterwards as it remains in operation.

N. It is intended that the future permanent middle school to house Riverwood

Students will be built to the State Requirements and Specifications and will house a minimum of 800 students on a traditional, single track, nine month schedule, on a 20 acre site and this represents the appropriate size middle school to house Riverwood Students ("New Middle School"). District will operate the New Middle school to house 980 total students by housing the additional 180 students at the New Middle School or at any other District school by either, in its sole discretion, adding relocatable classrooms or, without adding relocatable classrooms, by operating the New Middle School on a multi-track, year-round schedule. The cost for the New Middle School shall be determined using the methodology contained in Exhibit D, and which cost includes an additional $450,000.00 to provide the permanent relocatables necessary to house the 180 students that are above the 800 students set out above. NLF shall also make a voluntary contribution of $500,000.00 to District, which District may use at its discretion for any purpose it deems necessary and appropriate. The payment of $500,000, shall be paid as follows: 1) $250,000.00 shall be paid at the time the first residential building permit is issued for Riverwood; and, 2) the remaining $250,000.00 shall be paid at the same time as paying the fees over approximately the first 2,000 units in Riverwood at the rate of $166 additional payment per single family detached dwelling unit and $68 per multifamily dwelling unit until such time as the total of $250,000.00 is paid, in addition to the fee calculated using the methodology contained in Exhibit D. The total cost for the New Middle School shall be calculated using the methodology set out in Exhibit D. The cost per student, based on a 980 student capacity, shall be calculated as set out in Paragraph 12 and represents the total cost per student for each student generated from Riverwood that NLF will pay pursuant to the terms and conditions set out in this Agreement. The cost per single family and multi-family unit is also determined thereafter pursuant to Paragraph 12.

IN LIGHT OF THE FOREGOING FACTS, IT IS MUTUALLY AGREED THAT:

1. District shall build the New Elementary School necessary to house Riverwood

Students pursuant to the terms of this Agreement and NLF will advance all of the funds needed by District to build the New Elementary School pursuant to the terms of this Agreement.

2. District shall provide NLF with written notice ("District Notice") for the New Elementary School when District reasonably determines that at least 420 Riverwood Students are estimated to exist within the next 30 months of the District Notice and that the New Elementary School is reasonably required to house Riverwood Students.

A. At such time that NLF receives the District Notice, NLF will advance as part of the Construction Draw sufficient funds for the design of the New Elementary School.

B. Within 90 days of providing District Notice to NLF, District shall provide NLF with further documentation which shall contain a description of the New Elementary School and a schematic footprint showing the location of all proposed buildings, parking lots, and other improved areas ("Project Layout") and shall state District's estimated cost to construct the New Elementary School and the amount needed for the remainder of the first Construction Draw.

3. District shall use its best efforts to provide the New Elementary School, open for operation, at the time when 420 Riverwood Students are available to be housed in the New Elementary School. NLF shall advance to District the funds required to construct the New Elementary School to a maximum as determined pursuant to the methodology set out in Exhibit D and adjusted annually to account for inflation based on the statewide cost index for Class D construction as determined by the State Allocation Board at its quarterly meetings, which adjustment shall be effective as of the date of each meeting ("Maximum Construction Cost"). If the State Allocation Board stops determining the adjustments, the adjustments shall be made using the Marshall and Swift Class D Wood Frame Cost Index for the Western United States, or another mutually agreed upon index, as of January 1 of each calendar year.

NLF shall, in its sole discretion, post an improvement bond, in a form, and by a surety, reasonably acceptable to District, or a letter of credit in favor of District in the lesser of the amount of the cost of construction set forth in District Notice or the Maximum Construction Cost and shall advance the funds required for the first Construction Draw to District within 60 calendar days of receipt of District Notice. Thereafter, District shall submit subsequent written Construction Draw requests to NLF and NLF shall advance the funds required by each subsequent Construction Draw request to District within 30 calendar days of receipt of the Construction Draw request up to the lesser of the amount of the cost of construction set forth in District Notice, plus any change orders or actual reasonable extra costs, or the Maximum Construction Cost. District shall confer with NLF as to any change orders involving extra costs in excess of 5% of the Maximum Construction Cost.

4. District shall be responsible for notifying NLF in writing that there is a necessity for installation of relocatable classrooms which are to be used to house Riverwood Students before the New Elementary School is open and that District is eligible to lease State emergency relocatable classrooms. NLF will provide the necessary funds to lease state emergency relocatable classrooms to house up to 420 Riverwood Students if the District applies for and is eligible for state emergency relocatable classrooms and the state does not have the funding or relocatable classrooms available. NLF would lease the classrooms to or for the District at no cost to the District until the opening of the New Elementary School or until the District is no longer eligible for emergency relocatable classrooms, whichever is earlier. When state matching funds are received by the District for the New Elementary School, NLF would be reimbursed for the lease costs incurred by NLF along with payment for the land, pursuant to Paragraph 10 below.

5. District and NLF shall consult with each other on the planning, design, layout, and grading of the New Elementary School and each New Elementary School Site to

maximize architectural compatibility with surrounding development and to minimize construction and maintenance costs to District to the greatest extent possible while still conforming to the State Requirements and Specifications. All decisions regarding the planning, design, layout, and grading of the New Elementary School and New Elementary School Site shall be in District's sole discretion and it is not intended that District be required to do anything that will increase its current or future costs of operation or maintenance.

6. NLF shall provide the New Elementary School Site to District in a construction ready condition within 180 calendar days of receipt of the information set out in Paragraph 2.B. The District and NLF will consult regarding the New Elementary School Site and the grading and utility plans for the Site and both parties must concur on this matter. It is the intent of District and NLF that plans, drawings, and construction documents will have been prepared and approved by the Office of the State Architect and the State Allocation Board and that a construction contract will have been awarded, or will be concurrently awarded, so that construction of the New Elementary School can begin at the time the New Elementary School Site is provided to District.

7. The New Elementary School Site shall be provided to District in a construction ready condition with all-weather access to public roads and utilities, which shall consist of one potable water line, one fire water line, one electrical line, one natural gas line, one telephone line, and up to two sewer lines, stubbed to the hook-up location indicated for each utility on pages 3-B-40-41 of Exhibit C and shown on the Project Layout, sufficient to service the New Elementary School, in place. The New Elementary School Site shall have no more than two pads with no more than a 2% grade as to each pad, including any park land being utilized. Each pad shall be compacted to the degree required by a geotechnical engineer to support the uses shown on the Project Layout without additional cost to District. If there are two pads, there shall not be a distance of more than five vertical feet between each pad.

8. NLF shall provide the New Elementary School Site to allow the construction of the New Elementary School (currently estimated to be one) in the Riverwood area of Newhall Ranch. The location of the New Elementary School Site is to be reasonably determined by NLF subject to the consent of District, which consent shall not be unreasonably withheld, the concurrence of the State Department of Education and, if required, the County of Los Angeles.

9. NLF shall lease the New Elementary School Site to District as needed by District on the terms and conditions of this Agreement. The lease shall commence 60 calendar days after receipt of District Notice. The lease for the New Elementary School Site shall be for a period of 30 years ("Lease Term") at a rental of $1 per year. The lease shall terminate if the New Elementary School is not open for operation within five years of the commencement of the lease, provided that NLF has advanced all required funds for the New Elementary School to District, or if, after the New Elementary School has opened for operation, it ceases to operate as an elementary school for five years in any seven year period. District, upon termination of the lease, shall, at District's sole expense, demolish all improvements constructed by it on the New Elementary School Site and return it to the condition it was in at the commencement of the lease and shall refund to NLF any funds advanced to District, together with interest actually earned by District, for the construction of the New Elementary School which have not been paid, irrevocably committed, or required to terminate any applicable contract.

10. The lease shall contain an option which allows District to purchase the New Elementary School Site and which District shall exercise immediately if District is able to obtain money for construction or land acquisition from any State or federal agency. The purchase price shall be the appraised value at the time of the exercise of the option or at such other time as required by applicable State or federal law plus the amount of funds advanced

by NLF pursuant to Paragraph 4. If the money received from any State or federal agency is less than the purchase price, then District shall pay NLF the amount received and any additional amounts received for the New Elementary School Sites from any State or federal agency thereafter. To the extent that District receives funds for construction or land acquisition from any state or federal agency for School Facilities acquired or constructed pursuant to this agreement and such funds are sufficient to repay NLF the full appraised value of the New Elementary School Site, such amount shall be paid. However, to the extent that District is not left with $500,000.00 in funds from the funds received from state and federal agencies, NLF shall reduce the amount it receives to ensure that District is able to retain $500,000.00 for District's use. If District is unable to exercise its purchase option during Lease Term, District shall purchase the New Elementary School Site for $1 at the end of the Lease Term. Any purchase of a New Elementary School Site which does not include the payment of the full amount of the appraised value shall be subject to a power of termination, as that term is defined in Civil Code 885.010, in favor of NLF which will require District to deed the New Elementary School Site back to NLF, to demolish all improvements constructed by it on the New Elementary School Site, and to return it to the condition it was in at the commencement of the lease if the New Elementary School fails to operate as an elementary school for five years in any seven year period. Upon exercise of the power of termination, NLF shall pay District the amount of the purchase price, without interest, paid to NLF. The power of termination shall become ineffective at such time as NLF receives the full amount of the appraised value.

11. If District constructs a New Elementary School with a capacity of less than 837 students based on a traditional, single track, nine month schedule school program as set out in recital paragraph K., then NLF will pay the balance of the funds on a pro rata basis up to the full cost of the 837 student school as set out in Exhibit D pursuant to the following

formula:

Fee	=	[(A - B)/(1004 - C)] x SGR/SF or SGR/MF
A	=	Cost of 837 Student Traditional, Single Track, Nine Month Schedule School Program as set out in Exhibit D
B	=	Cost of New Elementary School of less than 837 students actually built by District
C	=	Student Capacity of New Elementary School based on multi-track year round schedule.
SGR/SF	=	Student Generation Rate for single family units based on the number of K-5 students living in single family units in Riverwood divided by the total number of single family units in Riverwood as of the date that the total number of students exceeds the number represented by C.
SGR/MF	=	Student Generation Rate for multi family units based on the number of K-5 students living in multi family units in Riverwood divided by the total number of multi family units in Riverwood as of the date that the total number of students exceeds the number represented by C.

Such fee will be payable by NLF at issuance of and for each building permit issued in excess of the number of units that would be required to be built to generate the number of students represented by C in the formula. Such fee will be paid by NLF until 1,004 students have been generated.

12. The cost of the New Elementary School and the New Middle School shall be calculated using the methodology set out in Exhibit D. The cost per K-5 student shall be calculated by dividing the cost of the New Elementary School by 1004 students. The cost per 6-8 student shall be calculated by dividing the cost of the New Middle School by 980 students.

The SGR shall be calculated at the time the 1500th building permit has been issued for each residential unit in Riverwood, excluding therefrom all units for which an occupancy permit has been issued in the prior three years. For the purpose of calculating the SGR, a recognized demographer shall be utilized by District to determine the actual number of students residing within Riverwood, excluding, however, the housing units for which building permits had been issued for the prior three years. That SGR shall be utilized in determining all fees being paid until all residential units have been constructed in Riverwood. At such time, the SGR shall be calculated for each of the two categories of housing by dividing the number of K-5 students and 6-8 students existing in Riverwood in each of the two categories of housing by the number of single family and multi-family units respectively, within Riverwood for each of the two categories of housing. Multi-family units shall be defined to include apartment units, condominium units, cooperative apartments, units in stock cooperatives, and single family attached units. Single family and multi-family units subject to age restrictions which require that all permanent residents be over 55 years of age ("Age-Restricted Units") shall not be counted. The single family SGR and the multi-family SGR so calculated shall be used in determining the fees per unit to be paid pursuant to this agreement. The appraisal value of land for the property required for the New Elementary School Site and New Middle School Site shall be redone every two years and the fees per unit revised to reflect the new appraised values. The fee per unit shall be calculated for the New Elementary School by multiplying the cost per K-5 student times the K-5 single family SGR and the multi-family SGR, respectively. The fee per unit shall be calculated for the New Middle School by multiplying the cost per 6-8 student times the 6-8 single family SGR and the multi-family SGR, respectively.

A. At such time that District prepares to purchase the New Elementary School Site pursuant to Paragraph 10, the District shall have a fair market appraisal of the New

Elementary School Site prepared and presented to NLF for review and approval. District shall, at such time that NLF is required to pay fees to be used for the New Middle School, provide a fair market appraisal of the New Middle School Site, or a fair market appraisal of the site upon which the last District middle school was constructed if a New Middle School Site is not known at that time, and present it to NLF for review and approval. District shall have the Sites appraised by an MAI appraiser to determine the fair market value of the Sites. Such appraisal values shall then be used in all calculations pursuant to Paragraph 12.

B. If District and NLF have not been able to reach agreement on a fair market appraised value of the Sites pursuant to Paragraph 12.A., after meeting in good faith to reach agreement, then the following method shall be used to establish the appraised value. The District and NLF shall each appoint one appraiser and the two appraisers appointed shall select a third appraiser. All appraisers shall be independent and shall have at least five years' experience in the appraisal of real property substantially similar to the Sites, and shall be members of professional organizations such as MAI or equivalent. For the purpose of such appraisal, the term "fair market value" shall mean the price that a ready and willing buyer would pay to a ready and willing seller of the Sites, with the Sites able to be used for normal development at their highest and best use, as of the date of the appraisal, if the property were exposed for sale on the open market for a reasonable period of time. The fair market value of each Site shall be deemed to be the arithmetic average of the two appraisals closest in value to each other and the third appraisal shall be disregarded.

C. Every two years after the initial appraised value of the Sites has been established pursuant to Paragraphs 12.A or 12.B., the Sites shall have the appraised value updated, which updated value shall be used for the calculations in Paragraph 12. District and NLF shall jointly select an MAI appraiser acceptable to each and such appraiser shall be provided with all previous appraisal material, shall update the material and then provide an

updated appraisal of the Site(s) and deliver such updated appraisal to District and NLF. If District and NLF have not been able to jointly agree on an appraiser, then the procedures set out in Paragraph 12.B. shall be followed to determine an updated appraised value of the Site(s).

13. If more than 1,004 K-5 students are generated by projects from Riverwood, for those students in excess of 1,004, NLF shall pay a fee per dwelling unit. Such fee is to be paid at the time of issuance of a building permit. The fee per dwelling unit shall be determined as set out in Paragraph 12. Half of any fee paid by NLF to District pursuant to this paragraph shall be treated as a loan to District, bearing no interest, and is repayable to NLF within thirty days of such time that District receives any State funds for School Facilities. Such repayment to NLF shall only be required to the extent and in the amount received by District up to the total amount of the NLF loan. Said loan shall terminate at such time as District is no longer eligible for State matching funds.

14. If more than 1,260 K-5 students are generated from NLF projects in Riverwood, then NLF will reserve a second New Elementary School Site in Riverwood. District shall have full discretion to determine whether it desires to build a second New Elementary School in Riverwood on the land reserved by NLF. District has one year from the date that the number of elementary students generated from Riverwood exceed 1,260 to notify NLF in writing that District will utilize and acquire the New Elementary School Site. District shall then complete the acquisition from NLF within one year of the notification to NLF of District's desire to acquire the New Elementary School Site, by paying a purchase price of the appraised value of the New Elementary School Site as of the date of District's written notice. District shall use the funds paid by NLF from those fees set out in paragraph 13 above to pay for the acquisition of the New Elementary School Site from NLF. NLF shall provide the New Elementary School Site as set out in paragraph 7 above. NLF shall continue to pay those fees

set out in paragraph 13 above for the remainder of the residential units built in Riverwood. NLF shall provide written notice to District when all projects in Riverwood are completed. The written notice shall also, after consultation with District, specify the number of K-5 Riverwood Students residing in District or are expected to be generated from the Riverwood project based upon the SGR determined after the 1500th building permit has been issued. If the number of K-5 Riverwood Students is less than 1,260 as of the date of the written notification, NLF's obligation to provide the second New Elementary School Site in Riverwood shall automatically terminate.

15. District shall use its best efforts to maximize its eligibility to obtain funding for the New Elementary School(s) and the New Elementary School Site(s) from any State or federal agency and shall take all reasonable efforts to obtain such funding, subject to the provisions of Section 23 of this Agreement. Toward this end, District and NLF will, upon NLF's request, revise this Agreement to provide a different procedure, including design/build and Public/Private Partnership concepts, which will increase the opportunity to obtain funding from any State or federal agency as long as there is no increased cost to either District or NLF. District shall, in any event, use its best efforts to ensure that NLF receives any funds received from any State or federal agency in connection with the acquisition of the New Elementary School Site. District shall be entitled to retain funds received from any State or federal agency up to the cost of six permanent relocatable classrooms for the New Elementary School, if District paid the cost and installed six permanent relocatable classrooms for the New Elementary School. However, if the law is changed to allow local bond issues to be approved by a majority of the voters, District shall use its best efforts to put a local bond issue on the ballot and have it approved. If such a local bond issue passes, then NLF shall be reimbursed for the appraised value of the New Elementary School Site before District retains funds received from the State or any federal agency for permanent relocatable classrooms, for which

it paid.

16. District shall provide the County of Los Angeles with information for the County's Development Monitoring System based on a capacity of 1004 K-5 students for the New Elementary School and 980 for the New Middle School.

17. The initial SGR to be used for the New Middle School shall be .148 for each single family unit and .061 for each multi-family unit. Multi-family units shall be defined to include apartment units, condominium units, cooperative apartments, units in stock cooperatives and single family attached units. Single family and multi-family units subject to age restrictions which require that all permanent residents be over 55 years of age ("Age-Restricted Units") shall not be counted. Said initial rate shall remain in place until such time as a new SGR is calculated pursuant to paragraph 12 above.

18. District shall determine the cost for the New Middle School pursuant to the methodology set out in Exhibit D. The cost per student of the New Middle School shall be determined by dividing the cost by 980 students to be housed in the school. The school mitigation fee for each of the two categories of housing shall be determined as set out in Paragraph 12 and using the methodology in Exhibit D (the "School Mitigation Fee"). The School Mitigation Fee shall be adjusted annually to reflect the change in the cost of the New Middle School to account for inflation based on the statewide cost index for Class D construction as determined by the State Allocation Board at its quarterly meetings, which adjustment shall be effective each meeting ("Maximum Construction Cost"). If the State Allocation Board stops determining the adjustments, the adjustments shall be made using the Marshall and Swift Class D Wood Frame Cost Index for the Western United States, or another mutually agreed upon index, as of January 1, of each calendar year.

19. The School Mitigation Fee for grades 6-8 shall be paid to District at the same time that an application for a building permit for the construction of a single family or multi-

family unit, other than an Age-Restricted Unit, is submitted to the County of Los Angeles, or any other governmental entity which has the authority to issue building permits. Fifty percent of the School Mitigation fee shall be treated as a loan to District by NLF. The loan shall bear no interest, but shall be immediately due and payable to NLF within thirty (30) days of District's receipt of any money received from the State that is designated for the acquisition or construction of any or all of the New Middle School. Such repayment to NLF shall only be required to the extent and in the amount received by District up to the total amount of the NLF loan.

20. All School Mitigation fees shall be deposited into a separate interest bearing account maintained by District. All School Mitigation Fees and the interest on those Fees shall be used only for the acquisition and construction of School Facilities and/or leasing interim facilities. However, the additional payment of $500,000.00, payable pursuant to paragraph N above, may be used solely at the discretion of the District.

21. District shall, immediately upon receipt of the School Mitigation Fee for each single family or multi-family unit, other than an Age-Restricted Unit, provide any written certification required to obtain building permits or other development approvals to the County of Los Angeles, or any other governmental entity which requires such certification. The certification shall be in writing and shall be provided for whatever number of single family or multi-family units are requested by NLF or any assignee of NLF at any time.

22. District shall, immediately upon request by NLF or any of its assignees and without the payment of any fees whatsoever, provide any written certification required to obtain building permits or other development approvals for the construction of an Age-Restricted Unit or a commercial or industrial building to the County of Los Angeles, or any other governmental entity which require such certification. The certification shall be in writing and shall be provided for whatever number of Age-Restricted Units or commercial or

industrial buildings are requested by NLF or any of its assignees at any time.

23. District agrees to actively seek state funding for facilities to house Riverwood students under the Leroy E. Greene Act or any similar state program and shall maintain an active, up-to-date priority one application with the office of Public School Construction for new State funding. District, when using relocatable classrooms shall, to the best of its ability, lease such classrooms rather than purchase relocatable classrooms. District shall not, however, be precluded from taking title to leased classrooms at the end of a lease term. District shall not be precluded from submitting applications for state funding for other facilities needed by District.

24. District shall not, under any circumstances:

A. Exercise any power or authority under current or future law to levy or impose an exaction of land, goods, money, or services, whether denominated a fee, charge, dedication, or tax, against any development of Riverwood except as to any District-wide general tax, special tax, or assessment for School Facilities;

B. Require, request, or cooperate with the County of Los Angeles, the City of Santa Clarita, or any other governmental entity to exercise its power or authority to levy or impose an exaction of land, goods, money, or services, whether denominated a fee, charge, dedication, or tax, as to Riverwood Property;

C. Oppose the development of either Riverwood or Newhall Ranch, except as it pertains to the health, safety and welfare of the school operations, as a whole; or

D. Sponsor, or require the formation of, a Communities Facilities District, except on a District-wide basis, for Riverwood without the express, written consent of NLF which consent may be given or withheld in NLF's sole discretion. District shall not unreasonably refuse to act as sponsor for a Community Facilities District if requested to do so by NLF.

25. As further consideration for the provisions of full mitigation in this Agreement, NLF will dedicate a parcel of land approximately 300 feet by 359.8 feet (Property) immediately north of the "LDI" lot to the Castaic Union School District, with the Property and the "LDI" lot shown on Exhibit E, attached to this Agreement, under the following terms:

A. Conveyance of the Property will be in fee at no cost to the District for the land.

B. The Property will be conveyed expressly subject to the NLF reservations as summarized below and any and all existing rights of way, easements, encumbrances, and other matters of record as of the date of the execution of this Agreement and is conveyed in an "AS IS" condition, "WITH ALL FAULTS" as of such date.

C. The dedication shall be subject to a power of termination as that term is defined in Civil Code Section 885.010, for a period of eight years plus seven days from the date of execution of the Newhall Ranch mitigation agreement or ten years from the issuance of the first grading permit within Newhall Ranch, whichever is sooner. The power of termination is to be recorded against the property so that title reverts back to NLF if the property is not used for School District purposes for a continuous period of two years within the next four years or if the adjacent "LDI" property is not acquired by the District within seven years of the execution of the Newhall Ranch mitigation agreement. NLF shall have the sole right to decide whether to accept the property back or not. If NLF decides to take back the property, NLF will compensate the District for the District's remaining undepreciated cost of the improvements constructed on the dedicated property, using straight line depreciation of those costs over a fifteen year life.

D. The property will be subject to NLF standard Commercial and Industrial Covenants, Conditions, and Restrictions.

E. Any title insurance is entirely up to the District to acquire, if it so

desires.

F. NLF will retain all water, mineral, and oil and gas rights underlying the Property.

G. District's use of the Property is subject to existing Southern California Edison Company easements. NLF makes no guarantee of the use of the Property and District is responsible for determining the uses acceptable under existing zoning, easements, etc.

H. Close of escrow shall be sixty (60) days after the final approval by the County of Los Angeles after expiration of all applicable appeal periods without appeal or entry of final judgment after exhausting all appeal rights affirming the approval of the Newhall Ranch Specific Plan, certification of the Environmental Impact Report (EIR), and Development Agreement for the development of Newhall Ranch in substantial compliance with Newhall's application for the Specific Plan.

I. Other standard terms to be negotiated in a formal purchase and sale agreement.

26. The funds and land to be provided to District by NLF pursuant to the terms of this Agreement constitute the entire extent of NLF's obligation to provide School Facilities for Riverwood. District shall not require or accept any fees in connection with the development of Riverwood which might otherwise be available to it under current or future State law, the Valley-Wide Joint School Fee Resolution, or by any other means. Further, the District shall not be entitled to collect any fees from NLF in connection with the construction of commercial or industrial buildings within Riverwood. District shall inform the William S. Hart Union High School District that the amount of any such fees that would be otherwise available to District shall not be collected. NLF agrees that upon unification by District and subject to any agreement between the District and Hart, a mitigation for 9-12 students generated after unification occurs will be paid to the new District equivalent to that agreed to with the Hart

District for grades 9-12 mitigation, if any, but subject to an appropriate land value adjustment.

27. District shall provide written certification upon written request from NLF that adequate School Facilities for District's K-8 needs either exist, or that the Financing Schedule and the Financing Plan provided by this Agreement guarantee their availability as needed, to house Riverwood Students. This written certification shall be given to the County of Los Angeles, or any other governmental entity which may have development approval authority over Riverwood as requested by NLF.

28. No development, change of development, governmental approval, nor change in any governmental approval of Riverwood shall constitute the basis for any change or termination of this Agreement because this Agreement provides for the mitigation of all impacts, direct and cumulative, of Riverwood on District's ability to provide adequate educational opportunities to every student in District.

29. District, immediately upon request by NLF, shall provide any written certification required to obtain building permits or other development approvals for Riverwood within the District. The written certifications shall be provided for whatever number of residential dwelling units or commercial or industrial buildings are requested by NLF at any time.

30. NLF shall have the right, in its sole discretion, to sell or encumber Riverwood, improved or unimproved and in whole or in part, by any deed, mortgage, deed of trust, or other security device. No sale, transfer, or encumbrance of Riverwood shall affect NLF's obligations under this Agreement, except as provided in paragraph 33. Neither this Agreement nor any breach of this Agreement shall defeat, invalidate, diminish, or impair the lien or priority of any deed, mortgage, deed of trust, or other security device.

31. District and NLF, within 30 calendar days of the written request, shall perform any acts and prepare, sign, deliver, file, and record any documents reasonably required to

obtain the goals, and to satisfy the conditions, contained in this Agreement. This includes, but is not limited to, providing the requesting party with a written statement certifying that:

A. This Agreement is unmodified and in full force and effect or, if there have been modifications, that this Agreement, as modified, is in full force and effect, stating the date and nature of any modifications; and

B. There are no current uncured defaults under this Agreement or, if there are any, the dates and natures of the defaults.

32. Any District Notice, request for a Construction Draw, information as to District's determination of student generation factors, or other document which would impose a duty on NLF or change the extent of NLF's obligations under this Agreement shall be accompanied by reasonable supporting documentation at the time that it is provided to NLF by District.

33. NLF is acting as the master developer of NLF's Land and intends to sell portions of NLF's Land to builders who will construct and sell residential, commercial, and industrial buildings to the public. NLF shall have the unconditional right to assign any right or obligation under this Agreement to anyone at any time. Whenever this Agreement provides NLF with a right, that right may be exercised by an assignee of that right to the same extent that NLF could have exercised that right. The assignment of any right or obligation under this Agreement shall be in writing and a copy of the assignment shall be provided to District. No such assignment shall relieve NLF of any of its obligations under this Agreement without District's written consent which consent shall not unreasonably be withheld.

34. This Agreement is entered into solely for the benefit of District and NLF and their successors, transferees, and assigns. Other than District and NLF and their successors, transferees and assigns, no third person shall be entitled, directly or indirectly, to base any claim or to have any right arising from, or related to, this Agreement.

35. This Agreement contains the entire agreement and understanding concerning the funding of educational facilities to house Riverwood Students and supersedes and replaces all prior negotiations and proposed agreements, written or oral. District and NLF acknowledge that neither the other party nor its agents or attorneys has made any promise, representation, or warranty whatsoever, express or implied, not contained herein to induce the execution of this Agreement and acknowledges that this Agreement has not been executed in reliance upon any promise, representation, or warranty not contained herein.

36. This Agreement may not be amended except in writing and signed by District and NLF.

37. District and NLF acknowledge that each has conducted an independent investigation of the facts concerning the development of Riverwood, the impact that Riverwood Students will have on District's educational facilities, and the costs of housing Riverwood Students.

38. District and NLF desire to resolve any disputes as to the meaning of any portion of this Agreement or the rights or obligations of District or NLF under it as quickly as possible. Therefore any such disputes shall be resolved by binding arbitration conducted by a mutually agreed upon retired judge of the Los Angeles Superior Court. If District and NLF are unable to agree on the arbitrator within 30 calendar days of the receipt of a request for arbitration, they shall request that the presiding judge of the Los Angeles Superior Court designate one. District and NLF shall each pay half of the cost of the arbitration and each shall be responsible for its own costs as to any such arbitration.

39. Except as provided in paragraph 38, if it becomes necessary to enforce any of the terms of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees and other costs of litigation in addition to any other relief to which it may be entitled.

40. In interpreting this Agreement, it shall be deemed that it was prepared by the

parties jointly and no ambiguity shall be resolved against either party on the premise that it or its attorneys was responsible for drafting this Agreement or any provision hereof.

41. Each individual signing this Agreement warrants and represents that he or she has been authorized by appropriate action of the party which he or she represents to enter into this Agreement on behalf of the party.

42. All notices, demands, and communications between District and NLF shall be given by personal delivery, registered or certified mail, postage prepaid, return receipt requested, Federal Express or other reliable private express delivery, or by facsimile transmission. Such notices, demands, or communications shall be deemed received upon delivery if personally served or sent by facsimile or after three business days if given by other approved means as specified above. Notices, demands, and communications shall be sent:

To District:	Castaic Union School District Attn: Superintendent 31616 North Ridge Route Castaic, Ca 91384 Fax No: (805) 257-5737
To NLF:	The Newhall Land and Farming Company Attn: President 23823 Valencia Blvd. Valencia, CA 91355 Fax No: (805) 255-3960
With a copy to:	Steven D. Zimmer Rupp, Holmberg & Zimmer Post Office Box 1426 Oxnard, California 93032-1426 Fax No: (805) 385-8891

The foregoing names, addresses, and fax numbers may be changed at any time by a written notice given as provided above.

43. This Agreement and all rights and obligations arising out of it shall be construed in accordance with the laws of the State of California.

44. Any litigation arising out of this Agreement shall be conducted only in Los Angeles County, California.

45. This Agreement may be signed in one or more counterparts and which, taken together, shall constitute one original document.

46. Recitals A through N are true and correct and are hereby incorporated.

47. The terms and conditions of this Agreement shall be incorporated in every environmental impact report, environmental monitoring program, general plan amendment, specific plan, and tentative subdivision map approval given by Los Angeles County or any other approving agency for Riverwood and Newhall Ranch.

48. NLF agrees to fund school facilities which are built to State Requirements and Specifications pursuant to the terms set out in this agreement. If the State formally amends the State Requirements and Specifications to include the State's new "class size reduction program", the costs and fees in the agreement will be adjusted appropriately. However, prior to adjustments to the costs and fees, all State allowances and/or contributions to District for capital outlay purposes to offset the costs of the "class size reduction program" shall be deducted from the costs and fees to be paid by NLF. If the "class size reduction program" remains a voluntary State program, NLF shall only pay such fees and costs as otherwise set out in the agreement.

Dated: November 20, 1997

BOARD OF TRUSTEES OF THE
CASTAIC UNION SCHOOL DISTRICT

By: _____
PRESIDENT OF THE BOARD OF
TRUSTEES OF THE CASTAIC
UNION SCHOOL DISTRICT

[Signatures continued on next page]

(Signatures continued from previous page)

ATTEST:

CLERK OF THE BOARD OF TRUSTEES
OF THE CASTAIC UNION SCHOOL DISTRICT

Dated: November 20, 1997

THE NEWHALL LAND AND FARMING COMPANY (A California Limited Partnership)

By: NEWHALL MANAGEMENT LIMITED PARTNERSHIP
Managing General Partner

By: NEWHALL MANAGEMENT CORPORATION
Managing General Partner

By: _____
Its: President

By: _____
Its: Sr. V.P.

SIKAND
Engineering
Planning
Surveying

15230 Burbank Blvd. Van Nuys, CA 91411
Telephone:(818) 787-8560 (213) 873-5853

Written by	DAN MAY	Date	6-8-94	Work Order No.	1020-234-11
Checked by		Date		Description No.	5496
Client	THE NEWHALL LAND AND FARMING COMPANY			Area	

LEGAL DESCRIPTION

WEST RANCH

GENERAL PLAN AMENDMENT BOUNDARY

THOSE PORTIONS OF THE RANCHO SAN FRANCISCO, IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA PER MAP RECORDED IN BOOK 1, PAGES 521 AND 522, OF PATENTS, RECORDS OF SAID COUNTY AND THOSE PORTIONS OF THE RANCHO SIMI PER MAP RECORDED IN BOOK 39 PAGE 77 OF MISCELLANEOUS RECORDS, RECORDS OF SAID COUNTY AND THOSE PORTIONS OF FRACTIONAL SECTIONS 15, 21 AND 22 IN TOWNSHIP 4 NORTH, RANGE 17 WEST, SAN BERNARDINO MERIDIAN AND THE NORTHEAST QUARTER OF SECTION 16 IN SAID TOWNSHIP AND RANGE DESCRIBED AS A WHOLE AS FOLLOWS: BEGINNING AT THE NORTHWESTERLY CORNER OF LOT 11 OF LICENSED SURVEYOR'S MAP RECORDED IN BOOK 27 PAGES 22 TO 26, OF RECORDS OF SURVEYS, RECORDS OF SAID COUNTY, SAID CORNER IS AT THE INTERSECTION OF THE NORTHERLY LINE OF SAID RANCHO SAN FRANCISCO WITH THE SOUTHWESTERLY BOUNDARY OF THE COUNTY OF LOS ANGELES; THENCE

1. EASTERLY ALONG SAID NORTHERLY LINE TO THE WESTERLY LINE OF THE EAST 2.16 ACRES OF GOVERNMENT LOT 4 IN SAID FRACTIONAL SECTION 21 AS DESCRIBED IN DEED RECORDED MAY 23, 1967 AS INSTRUMENT NO. 164, OF SAID OFFICIAL RECORDS; THENCE
2. NORTHERLY ALONG LAST SAID WESTERLY LINE TO THE NORTHERLY LINE OF SAID FRACTIONAL SECTION 21; THENCE
3. EASTERLY ALONG SAID NORTHERLY LINE TO THE SOUTHWESTERLY CORNER OF SAID FRACTIONAL SECTION 15; THENCE
4. NORTHERLY ALONG THE GENERAL WESTERLY LINE OF PARCEL TWO OF CERTIFICATE OF COMPLIANCE NO. 101,171 FOR LOT LINE ADJUSTMENT RECORDED OCTOBER 1, 1992 AS INSTRUMENT NO. 92-1838357 OF OFFICIAL RECORDS, RECORDS OF SAID COUNTY; THENCE
5. NORTHERLY ALONG LAST SAID GENERAL WESTERLY LINE TO THE SOUTHERLY LINE OF THE NORTHEAST QUARTER OF SAID SECTION 16; THENCE

SIKAND
Engineering
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15230 Burbank Blvd. Van Nuys, CA 91411
Telephone:(818) 787-8550 (213) 873-5853

Written by	DAN MAY	Date	6-8-94	Work Order No.	1020-234-11
Checked by		Date		Description No.	5496
Client	THE NEWHALL LAND AND FARMING COMPANY			Area	

LEGAL DESCRIPTION

6. WESTERLY, NORTHERLY AND EASTERLY ALONG THE SOUTHERLY, WESTERLY AND NORTHERLY LINES, RESPECTIVELY, OF SAID NORTHEAST QUARTER TO THE NORTHWEST CORNER OF SAID FRACTIONAL SECTION 15; THENCE
7. EASTERLY AND SOUTHERLY ALONG THE NORTHERLY AND EASTERLY LINES, RESPECTIVELY, OF SAID PARCEL TWO TO THE CENTERLINE OF HENRY MAYO DRIVE (SAUGUS-VENTURA ROAD); THENCE
8. EASTERLY ALONG SAID CENTERLINE OF HENRY MAYO DRIVE TO THE NORTHERLY PROLONGATION OF THE WESTERLY BOUNDARY OF PARCEL MAP NO. 15541 AS SHOWN ON MAP FILED IN BOOK 177 PAGES 58 TO 60, INCLUSIVE, OF PARCEL MAPS, RECORDS OF SAID COUNTY; THENCE
9. SOUTHERLY, NORTHEASTERLY AND NORTHWESTERLY ALONG THE WESTERLY, SOUTHEASTERLY AND NORTHEASTERLY BOUNDARY OF SAID PARCEL MAP NO. 15541 AND ITS NORTHWESTERLY PROLONGATION TO SAID CENTERLINE OF HENRY MAYO DRIVE; THENCE
10. NORTHEASTERLY ALONG SAID CENTERLINE NORTH 50°28'02" EAST 386.59 FEET; THENCE
11. LEAVING SAID CENTERLINE SOUTH 39°55'04" EAST 1554.40 FEET; THENCE
12. NORTH 47°50'17" EAST 611.85 FEET; THENCE
13. NORTH 29°20'00" EAST 838.84 FEET; THENCE
14. NORTH 64°49'31" EAST 275.84 FEET; THENCE
15. SOUTH 79°52'05" EAST 306.42 FEET; THENCE
16. SOUTH 64°22'57" EAST 428.58 FEET; THENCE
17. SOUTH 84°14'30" EAST 484.01 FEET; THENCE
18. SOUTH 03°11'11" WEST 363.11 FEET; THENCE
19. SOUTH 30°09'49" EAST 756.85 FEET; THENCE
20. SOUTH 00°15'46" EAST 330.84 FEET; THENCE
21. SOUTH 81°09'51" EAST 570.60 FEET; THENCE
22. SOUTH 41°36'19" EAST 381.30 FEET; THENCE
23. SOUTH 08°02'56" WEST 996.00 FEET; THENCE

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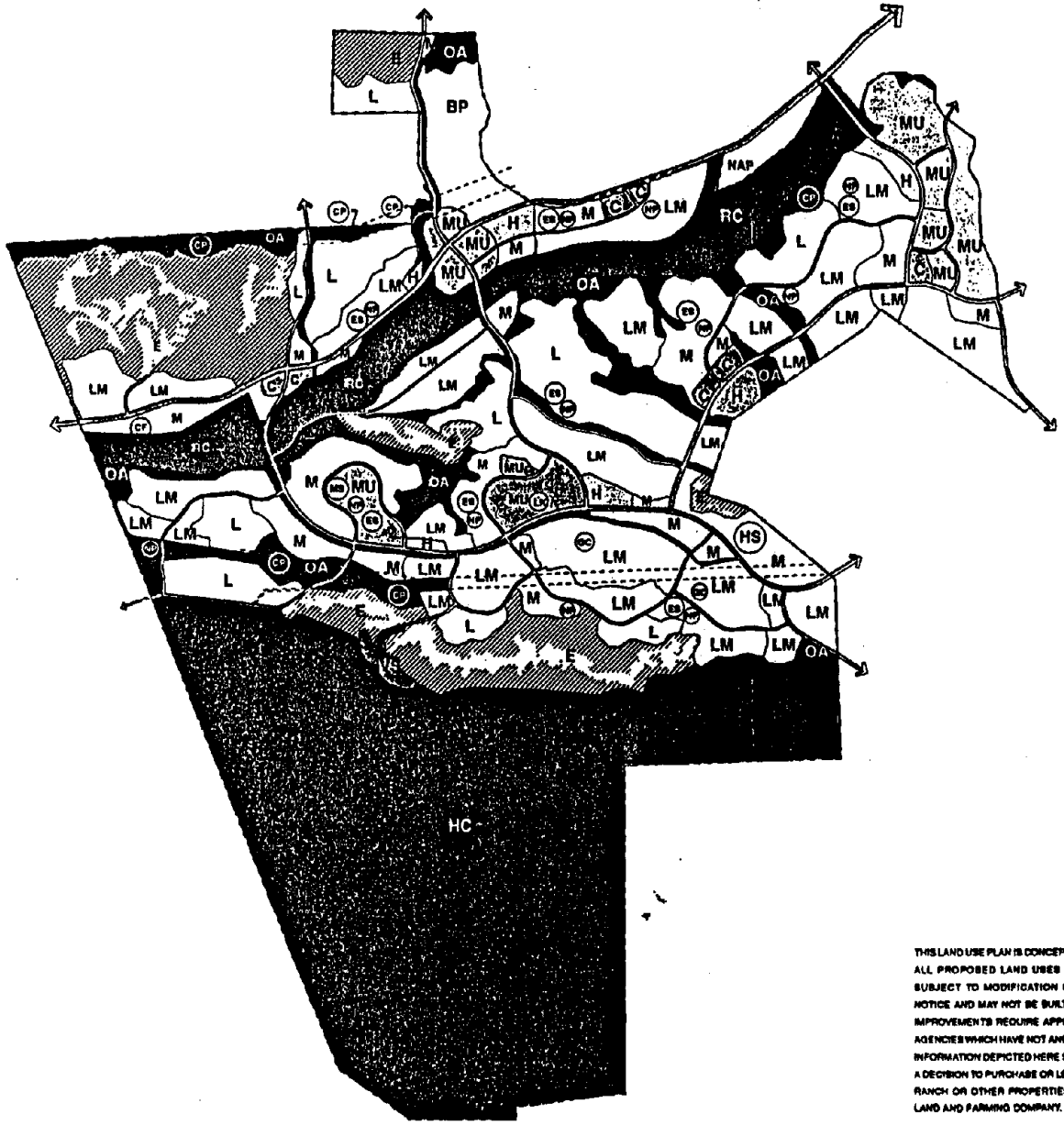
Written by	DAN MAY	Date	6-8-94	Work Order No.	1020-234-11
Checked by		Date		Description No.	5496
Client	THE NEWHALL LAND AND FARMING COMPANY			Area	

LEGAL DESCRIPTION

24. SOUTH 29°49'25" EAST 572.21 FEET; THENCE
25. SOUTH 03°42'18" EAST 1595.64 FEET; THENCE
26. SOUTH 24°41'31" EAST 939.41 FEET; THENCE
27. SOUTH 07°49'47" EAST 3173.03 FEET; THENCE
28. SOUTH 25°21'02" EAST 529.33 FEET; THENCE
29. SOUTH 42°13'08" EAST 708.10 FEET TO THE NORTHWESTERLY LINE OF THE EASEMENT TO SOUTHERN CALIFORNIA EDISON CO. DESCRIBED IN DOCUMENT RECORDED JULY 12, 1966 AS INSTRUMENT NO. 2217 IN BOOK D3363-475 OF SAID OFFICIAL RECORDS; THENCE
30. SOUTHWESTERLY ALONG SAID NORTHWESTERLY LINE 293.14 FEET, MORE OR LESS, TO THE NORTHEASTERLY BOUNDARY OF PARCEL MAP NO. 15955 AS SHOWN ON MAP FILED IN BOOK 188 PAGES 90 TO 95 OF SAID PARCEL MAPS; THENCE
31. NORTHWESTERLY, SOUTHWESTERLY AND SOUTHEASTERLY ALONG THE NORTHEASTERLY, NORTHWESTERLY AND SOUTHWESTERLY LINES OF SAID PARCEL MAP TO THE NORTHERLY TERMINUS OF THAT COURSE IN THE WESTERLY LINE OF SAID PARCEL MAP SHOWN AS NORTH 02°21'36" WEST 2121.55 FEET ON SAID MAP; THENCE
32. SOUTHERLY ALONG SAID WESTERLY LINE AND ITS SOUTHERLY PROLONGATION TO THE SOUTHWESTERLY CORNER OF SAID PARCEL MAP; THENCE
33. WESTERLY ALONG THE SOUTHERLY BOUNDARY OF SAID RANCHO SAN FRANCISCO TO THE EASTERLY BOUNDARY OF SAID RANCHO SIMI; THENCE
34. SOUTHERLY ALONG SAID EASTERLY BOUNDARY TO THE SOUTHERLY LINE OF LOT 13 OF LICENSED SURVEYOR'S MAP RECORDED IN BOOK 27 PAGES 19 TO 21, INCLUSIVE, OF SAID RECORDS OF SURVEYS; THENCE
35. WESTERLY, SOUTHERLY AND NORTHWESTERLY ALONG THE SOUTHERLY, EASTERLY AND SOUTHWESTERLY LINES OF SAID LOT 13 AND ALONG THE SOUTHWESTERLY LINE OF LOT 15 OF LAST SAID MAP TO SAID SOUTHWESTERLY BOUNDARY OF THE COUNTY OF LOS ANGELES; THENCE
36. NORTHWESTERLY ALONG SAID BOUNDARY TO THE POINT OF BEGINNING

CONTAINING 11,958 ACRES, MORE OR LESS.



THIS LAND USE PLAN IS CONCEPTUAL AND PRELIMINARY, AND ALL PROPOSED LAND USES AND IMPROVEMENTS ARE SUBJECT TO MODIFICATION OR ELIMINATION WITHOUT NOTICE AND MAY NOT BE BUILT. THE LAND USE PLAN AND IMPROVEMENTS REQUIRE APPROVALS BY GOVERNMENTAL AGENCIES WHICH HAVE NOT AND MAY NOT BE OBTAINED. THE INFORMATION DEPICTED HERE SHOULD NOT BE A BASIS FOR A DECISION TO PURCHASE OR LEASE PROPERTY IN NEWHALL RANCH OR OTHER PROPERTIES OWNED BY THE NEWHALL LAND AND FARMING COMPANY. MAY, 1996.

NEWHALL RANCH™
A Community By Nature
Newhall Ranch Company

- E — ESTATE RESIDENTIAL
- L — LOW RESIDENTIAL
- LM — LOW-MEDIUM RESIDENTIAL
- M — MEDIUM RESIDENTIAL
- H — HIGH RESIDENTIAL
- MU — MIXED USE
- C — COMMERCIAL (RETAIL/OFFICE)
- BP — BUSINESS PARK
- VS — VISITOR SERVING
- OA — OPEN AREA
- RC — RIVER CORRIDOR SPECIAL MANAGEMENT AREA
- HC — HIGH COUNTRY SPECIAL MANAGEMENT AREA
- ROADS
- SCE/UTILITY EASEMENTS

POTENTIAL LOCATIONS:

- CP — COMMUNITY PARK
- NP — NEIGHBORHOOD PARK
- ES — ELEMENTARY SCHOOL
- MS — MIDDLE SCHOOL
- HS — HIGH SCHOOL
- CF — COMMUNITY FACILITIES
- GC — GOLF COURSE
- LK — LAKE

SCALE:

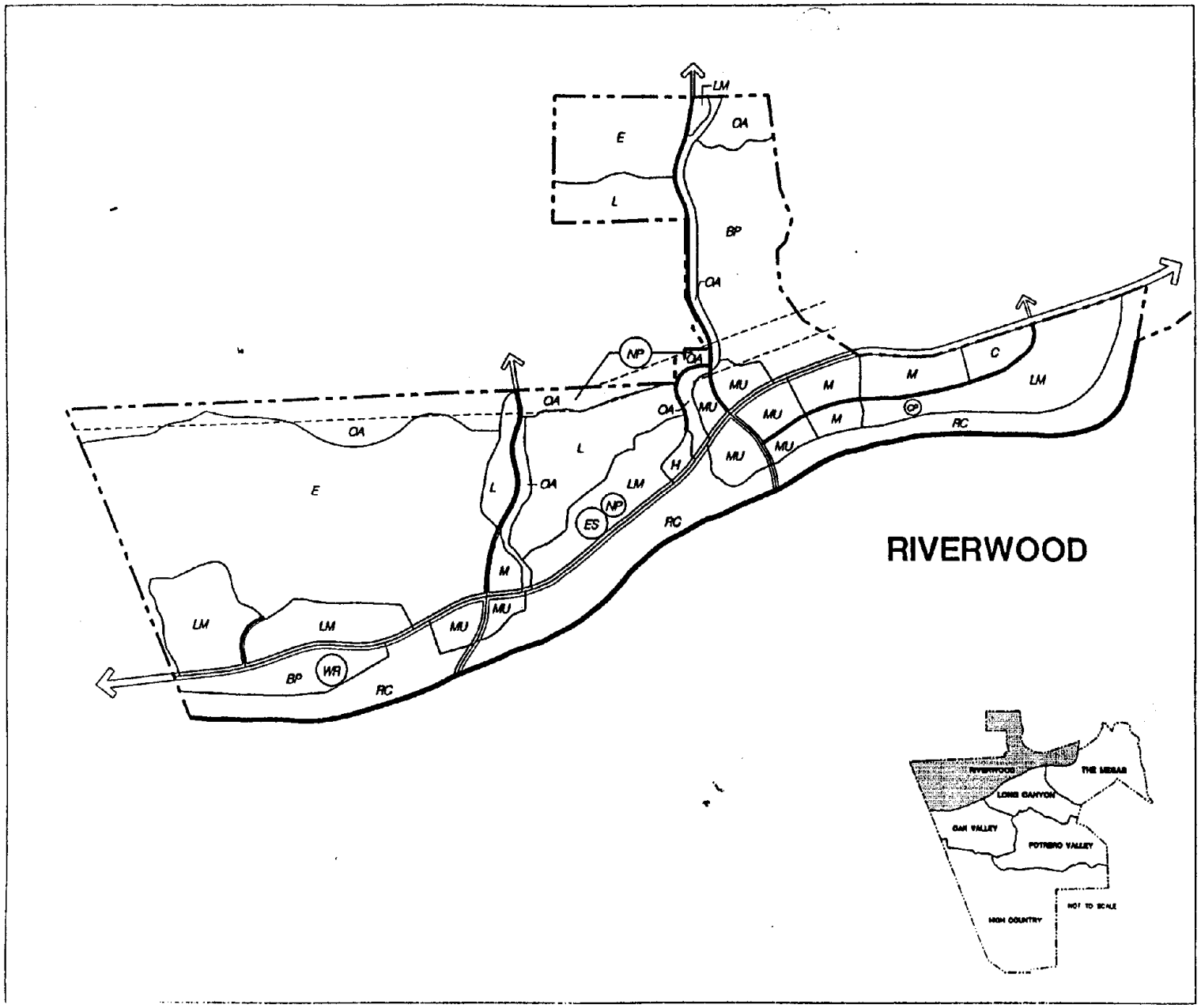
100 Acres

English

Metric

LAND USE PLAN

FORMA



NEWHALL RANCH.
SPECIFIC PLAN

Prepared For Newhall Ranch Company

LEGEND

- E — ESTATE RESIDENTIAL
- L — LOW RESIDENTIAL
- LM — LOW-MEDIUM RESIDENTIAL
- M — MEDIUM RESIDENTIAL
- H — HIGH RESIDENTIAL
- MU — MIXED-USE
- C — COMMERCIAL (RETAIL/OFFICE)
- BP — BUSINESS PARK
- VS — VISITOR SERVING
- OA — OPEN AREA
- RC — RIVER CORRIDOR SPECIAL MANAGEMENT AREA
- HC — HIGH COUNTRY SPECIAL MANAGEMENT AREA
- ROADS
- SCE/UTILITY EASEMENTS

LAND USE OVERLAYS (POTENTIAL LOCATIONS)

- CP — COMMUNITY PARK
- NP — NEIGHBORHOOD PARK
- ES — ELEMENTARY SCHOOL
- MS — MIDDLE SCHOOL
- HS — HIGH SCHOOL
- LIB — LIBRARY
- GC — GOLF COURSE
- LK — COMMUNITY LAKE
- FS — FIRE STATION
- S — ELECTRICAL SUBSTATION
- WR — WATER RECLAMATION PLANT

10 ACRES 40 ACRES

NORTH

EXHIBIT 2.3-3
RIVERWOOD VILLAGE PLAN

EXHIBIT B

Exhibit C
Applicant Handbook
State School Building Lease-Purchase Program
Office Of Local Assistance
Dated January, 1992

Applicant Handbook

State School Building Lease-Purchase Program

PUBLISHED BY THE QUALITY CONTROL AND PUBLIC RESPONSE UNIT

Office of Local Assistance

STATE OF CALIFORNIA · DEPARTMENT OF GENERAL SERVICES

Assigning "Units of ADA"/State Loading Standards

Assigning Units of ADA

Units of average daily attendance (ADA) are assigned to each school facility as follows:

- Compute the number of ADA for all existing teaching stations at full capacity according to State loading standards (see *State Loading Standards, pages 3-A-33 through 33-A-35*). This number represents the number of ADA adequately housed.
- When all existing facilities have been reported to capacity, the remaining projected ADA must be reported as "to be housed".
- The total number of ADA "adequately housed" and "to be housed" cannot exceed the applicable enrollment projection as specified on the *Form SAB 411, Enrollment Projection.*

Note: When teaching stations are less than 800 square feet, determine the loading by dividing the actual size of the teaching station by 30 for elementary or 32 for secondary facilities. Round the quotient to the next highest whole number.

Interdistrict Enrollment Adjustment

Education Code Section 48204 allows students to enroll in a school district other than the district in which they reside. This interdistrict attendance agreement is contingent upon consideration and approval of both districts. However, the SAB does not provide an area allowance for these students.

SAB Policy

An interdistrict adjustment is required only when the "students living in but attending out" of the district, *exceeds* the "students living out but attending in" the district. The area reserved for these students is reported on the Form SAB 500. This adjustment does not apply to students attending continuation high schools and special education facilities.

Required Document

The district reports interdistrict students in Section A of the *Form SAB 411B, Enrollment Certification.*

Continued on the next page

Procedure

IF...	THEN...
the maximum amount of students "living within the district but attending outside" exceeds the amount of students "living outside the district but attending within".	calculate the interdistrict adjustment by subtracting the amount of students "living outside the district but attending within" from those students "living within the district but attending out".

Note: The interdistrict adjustment cannot exceed two percent of the district's current enrollment.

State Loading Standards

"Units of ADA" must be reported in accordance with SAB loading standards. The state loading standards are designated as follows:

ELEMENTARY GRADES K - 6 and K - 8 (when not a separate school)	
GRADE LEVEL	LOADING STANDARD
Kindergarten (double session)	55
Kindergarten (single session) *	29
1 - 3	29
4 - 8 (7 - 8 not departmentalized)	33
7 - 8 (departmentalized)	30
Lab (7 - 8 only)	26

Note: Evidence of a single session kindergarten may include teacher contracts, school board minutes or other documentation. However, the single session loading must have been in effect prior to January 1, 1987.

Continued on the next page

State Loading Standards, continued

SPECIAL DAY CLASS (SDC)			
	CLASSIFICATION	ABBREVIATION	LOADING STANDARD
NON-SEVERE HANDICAP	Severely Learning Disabled	SLD	12
	Mildly Mentally Retarded	MMR	12
	Severe Disorder of Language	SDL	10
SEVERE HANDICAP	Deaf and Hard of Hearing	DHH	10
	Visually Handicapped	VH	10
	Autistic	AUT	6
	Severely Emotionally Disturbed	SED	6
	Severely Mentally Retarded	SMR (Elementary)	12
	Severely Mentally Retarded	SMR (Secondary)	12
	Deaf-Blind/Multi	DBM	5
	Developmentally Handicapped	DH	10
	Orthopedically and Other Health Impaired	OOH	12

Special Day Class

The allowable area for special day class at each site is computed on a per classroom basis according to a specific handicap:

SPECIAL DAY CLASS			
	CLASSIFICATION	ABBREVIATION	AREA ALLOWANCE (SQ. FT.) PER CLASSROOM
NON-SEVERE HANDICAP	Severely Learning Disabled	SLD	1,080
	Mildly Mentally Retarded	MMR	1,080
	Severe Disorder of Language	SDL	1,080
SEVERE HANDICAP	Deaf and Hard of Hearing	DHH	1,080
	Visually Handicapped	VH	1,330
	Autistic	AUT	1,160
	Severely Emotionally Disturbed	SED	1,160
	Severely Mentally Retarded	SMR (Elementary)	1,750
	Severely Mentally Retarded	SMR (Secondary)	2,150
	Deaf-Blind/Multi	DBM	1,400
	Developmentally Handicapped	DH	2,000 + therapy *
	Orthopedically and Other Health Impaired	OOH	2,000 + therapy *

* DH and OOH classrooms receive additional square footage for therapy as follows:

- For therapy purposes, the first classroom receives 3,000 square feet and each additional classroom receives 750 square feet.

Maximum Computed Allowable Area: Seven Percent Area Allowance

Introduction

Education Code Section 17746.7 allows a seven percent increase in allowable area per ADA "to be housed". The seven percent increase in the allowance is restricted to unhoused ADA and not provided for those pupil units within the district's continuation high schools and special day class program.

New School Projects

For each ADA housed in a proposed project, use the following chart to calculate the seven percent area increase in the maximum computed allowable. Identify the increase with a 'seven percent' (7%) notification.

PROPOSED SCHOOLS	
GRADE LEVEL	CALCULATION
K – 6 (districts with less than 300 projected K – 6 ADA	0.07 x computed allowable (excluding any area bonuses)
K – 6 (districts with 300 or more projected K – 6 ADA)	4 sq. ft. x ADA
7 – 8	5 sq. ft. x ADA
9 – 12	0.07 x computed allowable (excluding any area bonuses)
Special Day Class	none
Continuation High School	none

Continued on the next page

Additions to Existing Schools

For each proposed addition, use the following chart to calculate the seven percent area increase in the maximum computed allowable for those ADA "to be housed". Identify the increased with a 'seven percent' notification.

ADDITIONS TO EXISTING SCHOOLS		
GRADE LEVEL	CALCULATION	
K – 6 (districts with less than 300 projected K – 6 ADA)	5 sq. ft. x per ADA	
K – 6 (districts with 300 or more projected K – 6 ADA)	4 sq. ft. x per ADA	
Grades 6 (when part of a 6 – 8 school)	4 sq. ft. x per ADA	
7 – 8	5 sq. ft. x per ADA	
Continuation High	none	
Special Education	none	
9 – 2 and 9, 10 (when part of a 7 – 9 or 7 – 10 school)	IF the 9 – 12 total ADA is . . .	THEN the multiplier is . . .
(Including grade 9 when part of a 7 – 9 or 7 – 10 project; determine the capacity of the school plant, both "adequately housed" and "to be housed" and allow the additional area according to the adjacent table for the units of ADA "to be housed" at that location).	1 – 50	0 sq. ft.
	51 – 00	11 sq. ft.
	101 – 200	7 sq. ft.
	201 – 300	4 sq. ft.
	301 – 600	4 sq. ft.
	601 – 1800	6 sq. ft.
	over 1800	6 sq. ft.

Maximum Computed Allowable Area: Resource Specialist Program

Introduction

Any project not approved for Phase II prior to January 1, 1987, may include a building area allowance for a resource specialist program (RSP). The RSP enrollment is reported on the *Form SAB 411B, Enrollment Certification* document.

RSP Entitlement

The maximum number of pupils per project for which an allowance will be provided is limited to four percent of the ADA to be housed in the project. Districtwide, the allowance allotted for a resource specialist program may not exceed the RSP enrollment reported on the Form SAB 411B or four percent of the actual unhoused ADA, whichever is less.

RSP Area Allowance

Use four percent of the project's ADA "to be housed" to determine the area allowance for an RSP facility.

RSP UNITS	AREA ALLOWANCE (SQ. FT.)
1–8	240
9–28	480
29–37	720
38–56	960
57–65	1200
66–85	1440
86–94	1680
95–112	1920

Note: The RSP area allowance must be exclusively dedicated to the RSP facility.

Maximum Computed Allowable Area: Relocatable Teaching Station Bonus Area

Introduction

Education Code Section 17749 (e) allows for a relocatable bonus area allowance for those projects including relocatable teaching stations.

Relocatable Requirement

The relocatable requirement is determined as follows:

- A minimum of 30 percent of all proposed teaching stations must be relocatable buildings.
- The structures must meet the definition of a relocatable (see *Portable/Relocatable Buildings, page 3-A-26*).

Calculation of Relocatable Teaching Stations Requirement

Thirty percent of the proposed teaching stations must be relocatable as determined below:

Example

Total proposed teaching stations	30 percent of proposed teaching stations	Minimum number of relocatable teaching stations required
11	3.3	4

Note: The number of teaching stations must be rounded up to the next whole number.

Calculation of Bonus Area

Before determining the relocatable teaching station bonus area, verify that the "30 percent relocatable teaching station requirement" has been met. Use the following steps to calculate the "relocatable bonus area" for *each* project:

IF...	THEN...
• a minimum of 30 percent of all proposed teaching stations are relocatable buildings and,	multiply the ADA "to be housed" in the project by three square feet.
• 10 percent of the total proposed building area is comprised of relocatable buildings	

Continued on the next page

Reductions in Relocatable Requirement

All reductions to this requirement are subject to SAB approval. Reductions of the 30 percent relocatable teaching station requirement may be permitted under the following circumstances:

CIRCUMSTANCE A
Delivery of the relocatable structures by the manufacturer would cause a delay in the completion of the overall project
CIRCUMSTANCE B
Inclusion of the relocatable structure in the project is prohibited due to either one of the following: • excessive site preparation costs are inevitable • the utilization of relocatables would create a hazardous site condition for the pupils • transportation of the relocatable structures to the site is extremely dangerous due to road conditions • climatic conditions exist that severely affect the proper operation of the structure
CIRCUMSTANCE C
The usable site acreage of the facility is less than 75 percent of the recommended site size as determined by the California Department of Education.
CIRCUMSTANCE D
The relocatable structures are acquired by the district up to two years prior to the Phase III construction approval of the project, provided that the following conditions are met: • the area of the relocatable is included in the district's existing adequate area; and • the relocatable may be on the same site or another site within the attendance area the application is applied under, and • the relocatable is not be used to satisfy a requirement or condition on a previous project.
CIRCUMSTANCE E
When the proposed project has less than four teaching stations and the SAB finds that it would be to the benefit of the pupils affected to do so.

Note: Those projects containing less than ten percent of the total building area in relocatable structures are not eligible for the three square foot bonus per proposed ADA.

Form SAB 533, Agreement Between Client and Architect

Introduction

The district acts as the agent of the State in selecting a licensed architect who will provide professional services in the design development and construction phases of a project. Once an architect is selected, a *Form SAB 533, Agreement Between Client and Architect* must be completed.

Selection of an Architect

The district should solicit proposals from several architects known by reputation as being well qualified and experienced in the design and construction of public schools.

The district is expected to act on the behalf of the State in negotiating the best possible terms for the architectural services.

Architect's Fee Schedule

The following fee schedule may not be exceeded under any circumstances.

STANDARD ARCHITECTURAL FEE SCHEDULE		
% RATE	CONTRACT AMOUNT	FEE (100% OR FRACTION THEREOF)
9%	first $500,000.00	$45,000.00
8½%	next $500,000.00	$42,500.00
8%	next $1,000,000.00	$80,000.00
7%	next $4,000,000.00	$280,000.00
6%	next $4,000,000.00	$240,000.00
5%	excess of $10,000,000.00	

The architect fee is only an estimate through Phases I, II, and III. The final determination of the fee is made at the time of the bid approval. Adjustments to this fee will be calculated if approvable change orders arise.

Continued on the next page

Factory-built Portables

A factory-built portable is a manufactured facility. Factory-built portable building plans are prepared by the manufacturer for submission by the project architect to the Office of the State Architect.

FACTORY MANUFACTURED PORTABLE FEE SCHEDULE	
PERCENT RATE	CONTRACT AMOUNT
4 %	of factory built portable

This fee schedule applies to the manufactured portable building costs only. All other construction costs are calculated from the standard architect fee schedule.

A fee is calculated per contract to include the cost of all approved additive change orders with the exception of items resulting from errors and omissions on the part of the architect.

Budgetary Constraints

The architect must exercise his best judgement in determining the balance between the size, type and quality of construction to achieve a satisfactory solution within the project's construction allowance.

It is the duty of the architect to design a project *within* SAB cost standards. If a construction bid exceeds these standards, the architect is responsible for making the necessary changes in the approved plans, specifications and bid documents at no additional cost to the client.

Rate of Apportionments

The SAB apportions architect fees at the following rate:

PROJECT PHASE	PERCENTAGE OF TOTAL ESTIMATED ARCHITECT FEE (CUMULATIVE)
Phase I	25%
Phase II	80%
Bid Approval	100%

Continued on the next page

Phase I Apportionment: Feasibility Studies

Overview

When all necessary documentation has been received (see *Required Documents, pages 3-A-2 and page 3-A-3)*, the OLA will submit a recommendation to the SAB that the project application be approved and apportioned for Phase I feasibility studies costs as follows:

CATEGORY	TYPE	MAXIMUM COSTS
A. SITE (for projects including site acquisition)	Appraisals	$2,000.00
	Escrow/Title Reports	$2,000.00
	Surveys	$3,000.00
	Note: Appraisal costs may be increased upon district request and justification.	
B. PLANS	Architect Fee	The fee is a sum of the following calculations: • $90.00 per sq. ft. x proposed permanent area x .08 * • $50.00 per sq. ft. x proposed relocatable area x .08 * Multiply the total calculated above by .25.
	Preliminary Tests	$5,000.00
G. CONTINGENCIES	Contingencies	$5,000.00

* Represents an average architect's fee rate.

Continued on the next page

Environmental Impact Documents (EID)

Introduction

Prior to the SAB approving an application beyond the feasibility stage (Phase I), a set of environmental impact documents (EID) must be prepared. The district has sole responsibility for meeting all California Environmental Quality Act (CEQA) requirements as administered by the State of California, Office of Planning and Research (OPR)/State Clearinghouse. The OLA verifies that the CEQA requirements have been addressed.

Every application requires either a:

- categorical exemption
- negative declaration
- environmental impact report (EIR)

California Environmental Quality Act (CEQA) Officer

The district's governing board is required to appoint a CEQA officer. All correspondence, consultation, and documentation relating to an EID must be coordinated through the district's CEQA officer. The *Form SAB 508, Authorized Signatory* is used for this purpose.

Title 14 of the California Administrative Code (CAC), incorporates the *CEQA: Statutes and Guidelines (Stock No. 7540-931-1022-0)* of the Office of Planning and Research/State Clearinghouse. This publication may be obtained at a nominal cost from:

Department of General Services
Documents Section
P.O. Box 1015
North Highlands, CA 95660
(916) 973-3700

Consultation with OLA CEQA Officer

If either a negative declaration or a draft EIR is being prepared, the district is required to consult with the OLA CEQA officer. It is advised that districts preparing categorical exemptions also consult with OLA's CEQA officer.

Site Selection

Introduction

Selection of a school site is critical to both a safe and supportive environment for the curriculum and learning process. The area acquired is limited to the minimum land area necessary to conduct an adequate educational program.

Criteria

The following criteria will be considered by the California Department of Education (CDE), School Facilities Planning Division (SFPD) when selecting a site:

- safety
- location
- environment
- soils
- topography
- size and shape
- accessibility
- public services
- utilities
- land/development costs
- availability
- political implications

Role of the California Department of Education

The California Department of Education, School Facilities Planning Division, is required to review and recommend approval of all new school sites and additions to school sites regardless of the funding source. To ensure that the best possible site selection is made with a balance of educational and financial considerations, the district must comply with the following procedures:

- The district must identify a minimum of *three approvable* sites to be reviewed with the SFPD. These sites must be identified on the California Department of Education's *Form SFPD 4.0, Approval Procedures and Site Report*. If the SFPD finds that one of the three proposed sites is not approvable, another approvable site must be added to the list for consideration.

- If there are not three approvable sites in the area in which the new school is to be located, *the SFPD must state this fact in a site review letter addressed to the Office of Local Assistance.*

The final selection of the proposed site must be approved and certified by the CDE.

Form SAB 509, Site Ownership Certification

Introduction

This document is a certification made by the district representative that the school district holds legal title to the site contained in the application. The title must be free of any liens and encumbrances which would adversely affect the use of the site for school purposes. All land related to a project is subject to a 40-year lease-purchase agreement between the State and the school district.

District Owned Site

For those projects being constructed on a district owned site, the *Form SAB 509, Site Ownership Certification*, is required prior to the Phase II SAB recommendation.

Sites Not Previously District Owned

For those projects which include the acquisition of real property not previously owned by the district, a grant deed to the property or the *Form SAB 509, Site Ownership Certification*, is required prior to the Phase III SAB recommendation.

County Superintendent of Schools Building Project

In the event a facility is to be constructed by a County Superintendent of Schools on property owned by a school district, it is not necessary for the county to acquire land. In lieu of the site ownership certification, a 40-year ground lease from the district to the county must be executed. In addition, the district that is leasing the site to the County Superintendent of Schools must provide the *Form SAB 509, Site Ownership Certification.*

Form SAB 510, School District Compliance Certification (Education Code Section 39002)

Introduction

Prior to the planning of a new school facility, the district must investigate the prospective school site for geological hazards per Education Code 39002. The geological characteristics of the site must be such that the construction effort required to make the site safe for occupancy is economically feasible.

Geological Study and Soils Analysis

The geological study and soils analysis are conducted to provide an assessment of the prospective site's geological condition and potential for earthquake or other geological hazard damage if the site is located within:

- the boundaries of any special study zone; or
- an area is designated as geologically hazardous in the safety element of the local general plan as provided in Government Code, Section 65302.

Note: The California Department of Education, School Facilities Planning Division, may request geological studies and soil analysis on school sites located outside the study zones if there is evidence to suggest such studies are warranted. However, no studies are required if the sites under consideration have been subject to prior adequate studies.

In addition to the geological hazards studies and soil analysis, the evaluation may include location of the site with respect to:

- population
- transportation
- water supply
- waste disposal facilities
- utilities
- traffic hazards
- surface drainage conditions
- other factors affecting the operating costs

Geological Fault

A school building cannot be built on the trace of a geological fault along which surface rupture can be reasonably expected to occur within the life of the school building.

Eligible Expenditures

The cost of site investigation and related reports pertaining to geological hazards are eligible project expenditures (see *B. Plans, Preliminary Tests, page 3-B-38*).

Real Property Appraisals

Definition

A real property appraisal is a written estimate of the fair market value of a real property.

Appraisal Specifications

Appraisal specifications must comply with those established by the Appraisal Institute.

Appraisal Options

To ensure that site acquisition conforms to law and that fair market value is properly determined, the district must comply with the SAB real property appraisal process.

Either one or two appraisals may be obtained to meet site acquisition requirements. A comparison of appraisal options is provided in the table below:

COMPARISON OF APPRAISAL OPTIONS	
One Appraisal	Two Appraisals
• One appraisal per parcel • The appraisal must be reviewed by the Office of Real Estate and Design Services (OREDS) • For valuations approved by OREDS, the appraisal fee is an eligible project cost	• Two appraisals per parcel • Appraisal fees are eligible project costs • OREDS must review the appraisals only in the event that the valuation(s) are relatively disparate

Appraisal Costs

The costs associated with the preparation of required appraisals are eligible State funded expenditures.

Continued on the next page

Updates

Updates to an appraisal are permissible under the following circumstances:

CIRCUMSTANCE A
The valuation date of the appraisals will exceed 60 days at the time of the district's request for a site apportionment and no more than 150 days at the time of the site apportionment. However, an appraisal exceeding 60 days at the time of the site apportionment may be updated. The appraisal update is an eligible project expenditure.
CIRCUMSTANCE B
Upon the initiation of eminent domain proceedings, the appraisal update is an eligible project expenditure.
CIRCUMSTANCE C
A court has ordered an updated appraisal due to a condemnation action. Only the appraisal which the site apportionment was based will be updated and considered an eligible project expenditure. Appraisals cannot be updated as a basis for negotiation toward a stipulated judgement.

Time Extension

When a settlement cannot be successfully negotiated and the district has not filed condemnation proceedings within the 60 day (single parcel) or 90 day (multiple parcel) time limit, a written time extension must be requested by the district and obtained from the OLA Executive Officer. If a written extension is not granted, the SAB will hold the district responsible for any increased costs exceeding the approved appraised value.

Cost Estimates: Forms SAB 506A and SAB 506B

Introduction

This topic focuses on the preparation of *Form SAB 506A, Estimated Project Cost Detail* and *Form SAB 506B, Summary of Estimated Costs.* The cost estimate details the expenditures associated with the following categories:

- Site
- Plans
- Construction
- Tests
- Inspection
- Furniture and Equipment
- Contingencies

The cost estimates are used to develop a construction budget in preparation for the Phase II SAB recommendation.

Form SAB 506A

The *Form SAB 506A, Estimated Project Cost Detail,* provides an itemized breakdown of all project costs. This form may be expanded to support the scope of the project as depicted on the project plans (see *Exhibits 2, 2A and 2B, pages 3-B-78 through 3-B-80 respectively*).

Form SAB 506B

The *Form 506B, Summary of Estimated Costs,* provides a summation of the costs detailed on the Form SAB 506A (see *Exhibit 1 on page 3-B-77*).

Cost Itemization

All items listed on the cost estimate must be clearly itemized by unit size, quantity and unit cost. *Lump sums are not permitted.*

Overhead and Profit

All costs associated with overhead and profit must be integrated into the unit cost itemization.

Updates

New cost estimates must be prepared if those previously submitted are older than 90 days.

Required Signatures

The cost estimates must contain the original signatures of a licensed architect or structural engineer.

Continued on the next page

A. Site

Description

The eligible costs and fees associated with the *site* classification are defined as follows:

ITEM	DESCRIPTION
Purchase Price of Property	The eligible State funded costs associated with the acquisition of real property.
Appraisals	Costs associated with securing real property appraisals and necessary updates as mandated (see *Real Property Appraisals, page 3-B-14 and Site Purchase, page 3-B-16 through 3-B-20*).
Escrow Fees	All charges normally included in the escrow agreement such as: • escrow charges • title insurance • loan fees Note: Property taxes are ineligible.
Surveys	If required, a certified survey of the site must include: • grades and lines of streets, pavements, and adjoining properties • right-of-way, restrictions, easements, boundaries and contours of the building site • locations, dimensions and floor elevations of existing buildings • other improvements and trees • full information as to available service and utility lines, both public and private
Site Support (85%)	See *Site Support Costs, page 3-B-10*.
Relocation Assistance	Actual costs related to the displacement of any person, business, farm operation, or non-profit organization in conjunction with the acquisition of real property (see *Relocation Assistance, page 3-B-21*).
Other	Justified fees which may include but are not limited to the following: • court costs • legal services (i.e., review of contracts, legal documents) • condemnation proceedings

B. Plans

Description

The eligible costs and fees associated with the *plans* classification are defined as follows:

ITEM	DESCRIPTION
Architect Fees	Fees as negotiated in the Architect's Agreement (see *Architect Fee Schedule, page 3-A-58*).
OSA/ACU Plan Check Fee	Fees as determined by the Office of the State Architect for the review of plans as required by law. Refer to the *California Administrative Code, Title 21 (Public Works).*
SDE Plan Check Fee	Fees as determined by the California Department of Education, School Facilities Planning Division, as required by law.
Energy Analysis Fee	Fees as determined by the SAB (see *Calculation of Energy Consultant Fee, page 3-B-68*).
Preliminary Tests	Includes the following costs: • soil tests, foundation tests, exploratory borings, and similar testing required prior to construction • site investigation and reports pertaining to geological hazards where required by Education Code, Section 39002 (see *Form SAB 510, School District Compliance Certification, page 3-B-13*).
Administrative Costs	Refer to *Administrative Cost Allowance, page 3-A-55.*
Other	Other plan costs such as: • advertising construction bids • printing limited to twenty-five plan sets for bidding and construction purposes

C. Construction

Description

Every project receives an allowance to provide for the full development of a school site. The State's cost standard for site development is based on the current *Lee-Saylor Construction Cost Manual*. The eligible costs associated with the *construction* classification include the broad categories of site development, new construction, energy conservation, and supplemental funding for multi-story construction.

Topic Items

This topic discusses the following items:

ITEM	SEE PAGE
Utility Services	3-B-40
Capital Development Fees	3-B-43
Off-Site Development	3-B-44
Service Site Development	3-B-46
General Site Development	3-B-49
Demolition	3-B-51
Building Cost Standards	3-B-52
Interfacing	3-B-60
Multi-Story Construction	3-B-61
Energy Conservation	3-B-67
Deferred Items	3-B-70

Continued on the next page

Utility Services

Introduction

Utility services development includes improvements such as water, sewer, gas, electric and telephone. This improvement provides service from a utility connection to the project site. Fees associated with the utility connection may also be allowed.

Eligible Utility Services Expenditures

The following utility services may be included as eligible project expenditures:

SERVICE	DESCRIPTION
Water	• The installation of a main supply line (domestic water only) from the utility company connection to the meter. One incidental fire hydrant is also eligible. • Meters not provided by the serving utility. • Installation of a domestic water system, to include a well, pump and necessary appurtenances (except a pump house), from the main supply line to the first building lateral. • Connection fee (defer for future release).
Sewage	• The installation of main sewage disposal line from the utility company connection to the first building lateral. • The installation of a sewage treatment/disposal system and a main disposal line from the treatment system to the nearest building lateral of the collection system. • Connection fee (defer for future release).
Gas	• The installation of main supply line from utility company to the meter. • The installation of meters not provided by the serving utility. • Connection of a liquefied petroleum gas system from the main supply line to the first building lateral. • Connection fee (defer for future release).

Continued on the next page

Eligible Utility Services Expenditures, continued

SERVICE	DESCRIPTION
Electric	• The installation of service from the serving utility to the meter. Primary electric service runs from the utility company's point of connection to the transformer. Secondary electric service runs from the transformer to the meter. Distribution panels or switch gear is considered building construction items. • The installation of meters not provided by the serving utility. • Transformers, transformer pads and protective bollards. • Connection fee (defer for future release).
Telephone	• The installation of service from the serving telephone company to the nearest distribution system.

Additions to Existing Schools

For additions to existing schools, all utility services must connect to the nearest available site source. If it is necessary to do otherwise, a registered engineer must certify that the existing lines will not adequately support the new facilities and that new routing is therefore required.

Connection Fees

Connection fees that are eligible (see *Eligible Utility Services Expenditures, page 3-B-40)* must be delineated on the cost estimate. At the time of bid, these connection fees will be deferred for future release. Upon receipt of an itemized invoice issued by the serving utility, these funds will be released to the district.

Continued on the next page

Ineligible Utility Services Expenditures

The following items are not eligible as utility service improvements:

- any portion of a utility which can be supplied by a utility company without charge,
- all heating systems and school communication systems, including public address systems,
- cable television,
- any a) electrical, water or gas service beyond the meter; b) sewer service beyond the building lateral; and c) telephone service to the distribution center, and
- fences, concrete pads, or other protective structures relating to utility systems on school grounds.

Capital Development Fees

Introduction

Public utility agencies have the authority to levy user fees for the cost of capital development facilities to provide service to schools. Capital development facilities fees may be included in a project as eligible costs but are limited to facilities which provide power, water, light, heat, communications, garbage services, drainage, flood control, or the collection, treatment, and disposal of sewage.

State Funding Limitations

Capital development fees levied by a local agency for those service capacities already provided for in the lease-purchase project are not eligible for State funding and must be reduced on a dollar-for-dollar basis. State funding is available *only* for service capacities that meet the needs of the lease-purchase project. Reimbursement agreements for service capacities beyond the need of the State-funded project are not allowed.

Required Documents

All requests for the funding of capital development fees as a component of a lease-purchase project must include the following information:

- written evidence from the serving utility that the capital facilities fee does not exceed amounts charged to comparable non-public users (i.e., county/city ordinance). In addition, any fee assessed to the district must not exceed the proportionate share of the public utility facilities benefiting the lease-purchase project (i.e., per acre assessment),
- a written statement prepared by the serving utility itemizing all fees levied against the lease-purchase project,
- for fees imposed/paid between July 21, 1986 and March 24, 1988: . . . "a written opinion from district legal counsel stating that the imposition of the fee was in conformance with Government Code Sections 54999 through 54999.6",
- for service to be provided after March 24, 1988: . . ." a written agreement which summarizes the negotiations between the district and serving utility company". The district cannot enter into an agreement until authorized by the Executive Officer of the State Allocation Board.

Note: Capital development fees *are not* connection fees.

Off-Site Development

Introduction

Off-site development improvements located along the perimeter of the site include roads, streets, storm drainage lines, curbs, gutters, sidewalks, and street lighting. These improvements are commonly dedicated for public use.

Eligible Off-Site Development

Development of a site, including existing improvements, may not exceed the State's established standards. Any off-site development may not be performed on more than two sides immediately adjacent to the site. The following are off-site development State standards:

IMPROVEMENT	STATE STANDARDS
Paving of streets, curbs & gutters (includes existing improvements)	One-half of the width of a standard residential street not to exceed 20 feet from the top face of curb to centerline of street less any existing paving. Note: For roadways of a width or standard greater than those of a normal subdivision, the ineligible improvement costs may be funded by local municipality (Street and Highway Code, Section 2117) or may be included as general site development improvements for the project.
Sidewalks	Five foot width of sidewalk Note: Any portion of a sidewalk in excess of the five foot width is not eligible as an off-site development improvement but may be funded as a general site development improvement.
Street lighting, planting areas, street signs, traffic signals, street trees	Eligible only when mandated by local ordinance or is currently so developed.

Note: Local entities having jurisdiction of areas where the off-site development is proposed, must approve the related plans and specifications.

Continued on the next page

Rough Grading

When a project includes rough grading of off-site development improvements for the balancing of cut and fill, rough grading may be funded as service site development costs. The cost estimate must specify that a balancing of cut and fill is necessary and must also be indicated in the specifications.

Ineligible Off-Site Development

Costs relating to off-site development improvements which benefit adjacent properties without those properties equitably sharing in the cost are ineligible for State funding. Therefore, the State will not fund the associated costs (i.e., planning, testing, inspection services, etc.).

Service Site Development

Introduction

Service site development improvements are performed on-site and may include site clearance, rough grading, soil compaction, drainage and eligible erosion control. This portion of the site preparation is accomplished prior to the general site development and the construction of buildings.

Eligible Service-Site Development

Eligible service site development improvements are described in the following table:

IMPROVEMENT	DESCRIPTION
Site Clearance	Removal of trees, brush, debris, etc. Also includes demolition.
Rough Grading	Grading of required contours, including cut and fill, leveling and terracing operations. May include off-site cut and fill operations (see *Off-Site Development, Rough Grading, page 3-B-45*).
Soil Compaction	Soil compaction adhering to common engineering practices.
On-Site Drainage Facilities	Below grade drainage facilities. Note: Does not include the surface drainage of football fields and running tracks.
Erosion Control/Embankment Improvements	For embankments having a slope of 2:1 and a vertical height greater than six feet, erosion control improvements such as plant material, sprinkler systems, jute mesh and straw are eligible. When the above slope and height conditions exist, stairways, handicap ramps and retaining walls are also eligible.
Removal/Relocation of Utility Service	Removal and rerouting of existing utility service which lie in the footprint of a proposed building or proposed parking lot.
Demolition	Demolition of existing buildings and site improvements which lie in the footprint of a proposed building or general site development improvements.

Continued on the next page

Eligible Service-Site Development, continued

IMPROVEMENT	DESCRIPTION
Portable Facilities Relocation	Relocation of existing portable buildings which lie in the footprint of a proposed building or proposed parking lot to a permanent site. A portable building may be moved to a permanent on-site location one time only during construction. Note: The replacement of general site development items which were displaced as a result of a building relocation must be funded as general site development costs.
All-weather Fire Service Roads/Site Access Gates	All-weather fire service roads and site access gates necessary to meet the State Fire Marshal requirements and which do not provide a dual use. An all-weather road not exceeding 20 feet in width and composed of two inches of asphalt concrete over a maximum of six inches of aggregate base.

Bid Options

Several options are available for bidding service site development contracts:

NEW SCHOOL	
CIRCUMSTANCE	ACTION
Site development not exceeding $100,000.00 of architect's preliminary estimate, or	Site development bid in concert with building contract. The bid may not exceed the project's cost allowance established prior to the bid.
Site development in excess of $100,000.00 or 10% of architect's preliminary estimate.	Site development bid independently of building contract.

Continued on the next page

Bid Options, continued

ADDITIONS TO EXISTING SCHOOL		
CIRCUMSTANCE	OPTION A	OPTION B
Site development in excess of $100,000.00 of architect's preliminary estimate.	Site development bid independently of building contract.	Site development bid in concert with building contract. The bid may not exceed the project's allowance established prior to the bid.

Separate Bids

When the service site development is bid independent of the building contract, the work must be accomplished as a separate contract rather than as an alternate to the building contract.

When bid separately, site development may include utility and off-site development, service site development and general site development.

General Site Development

Introduction

General site development improvements encompass the finishing detail of the site. This development is normally performed on-site. However, under certain circumstances, general site improvements may include disallowed off-site development.

Eligible General Site Development

Eligible general site development improvements are described in the following table:

IMPROVEMENT	DESCRIPTION
Finish grading	Final design grade.
Roads/driveways, walks, parking area, curbs and gutters	On-site facilities for vehicle and foot traffic.
Turfed/paved play area, permanent playground equipment, outdoor classrooms and places of assembly, tennis and handball courts, baseball fields, construction and surface drainage of football fields and running tracks	Outdoor instruction and play facilities.
V-gutters	Drainage of on-site parking lots.
Planting/sprinkling, aesthetic terracing	Landscaping of building frontages, courtyards, and parking areas.
Sprinkling system, topsoil and turf	Outdoor teaching stations and play areas.
Construction/surface drainage	Football fields and running track.
Fencing, outdoor walls/screens, flagpoles, utility enclosures, incinerators, pump houses, outdoor safety lighting and on-site fire lines and hydrants	Protective and service facilities.
Erosion Control	For embankments having a vertical height of less than six feet, erosion control improvement such as plant material, jute mesh and straw are eligible. Related improvements on these embankments including stairways, retaining walls and handicap ramps are also eligible.

General Site Development Allowance

All new construction projects are eligible for a general site development allowance. The allowance is generated from a standardized calculation derived from the established building allowance and the net gross site acreage, excluding any street easements, as recommended by the CDE.

The general site development allowance derived from the established building allowance is determined as follows:

GRADE LEVEL	ALLOWANCE
Elementary/Special Education (K-6), (K-8)	Eight percent of the building allowance.
Intermediate/Special Education (6-8, 7-8 and 7-9)	Same as above.
Continuation High Schools	Same as above.
District Administration	Same as above.
High Schools/Special Education (9-12 and 10-12)	Five percent of the building allowance.

Additionally, an allowance based on the gross site acreage, excluding any easements, is determined by the following circumstances:

	CIRCUMSTANCE	ALLOWANCE
A	A new school wherein site acreage is acquired as part of the project application or a new school built on a district- owned site.	$15,000.00 per acre.
B	Addition of building(s) to an existing school located on a district-owned site or acquisition of additional acreage at a district-owned site.	$15,000.00 per acre not to exceed the difference between the capacity of the existing facility and the master-planned capacity of the school.
C	Acquisition of additional acreage at a district-owned site wherein the existing acreage and proposed agreage addition is less than 75 percent of that recommended by the CDE.	Special consideration will be given to those projects wherein a need for additional general site development improvements is justified. In this instance, the site development contract must be bid separate from the building construction contract.

Demolition

Description

Costs associated with the removal of building(s) which stand in the footprint and/or inhibits access to the proposed building are considered demolition costs. All itemized demoltion costs will be given individual funding consideration.

Building Cost Standards

Introduction

The SAB has established cost standards for the construction of eligible school building facilities. The building construction cost standards may not be exceeded.

Building Types B & D

The following chart describes the building types utilized under the State School Building Lease-Purchase Program:

	BUILDING TYPE	
COMPONENT	CLASS B	CLASS D
Floors/Roofs	• reinforced concrete on steel decking; or • formed slabs resting on the frame; or • poured to become an integral part of frame • composed of prefabricated panels which may be mechanically stressed	• supported on wood or steel joists or trusses • ground floor may be concrete slab • upper floors may be concrete plank, steel deck or wood
Exterior Walls	• masonry or reinforced concrete, metal, glass, or stone	• closely-spaced wood; or steel studs • skeleton wood frame on which some form of curtain wall is applied (includes pre-engineered pole buildings), • load-bearing or non-bearing (non-bearing walls may be supported by columns, bents, or arches constructed of concrete, steel or wood)
Interior Partitions	• masonry, reinforced concrete or gypsum • light-weight & movable partitions are used as non-bearing walls	no specific attribute

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Adjustment Indices

The following adjustment factors, where applicable, are made to the base building cost allowance:

TYPE OF ADJUSTMENT	BUILDING TYPE	
	CLASS B	CLASS D
Construction Cost Index	✓	✓
Geographic Area	✓	✓
Small Building	✓	✓
Urban	✓	✓
Security Allowance		✓

Construction Cost Index

The current construction cost index for Class B or Class D, as applicable, is applied to the base building cost allowance.

The Class B construction cost index adjustment is derived from the Marshal-Swift index. The Class D construction cost index adjustment is derived from the Lee Saylor index.

Geographic Area Adjustment

An adjustment factor for the geographic area in which a project is located is applied to the base building cost allowance (see, *Appendix 11, Geographic Adjustment Factors*).

Continued on the next page

Small Building Area Adjustment

A building area adjustment factor is applied to projects containing less than 12,000 square feet of building area. Use the following chart to determine the appropriate small building adjustment:

BUILDING AREA (SQUARE FEET)	MULTIPLIER	BUILDING AREA (SQUARE FEET)	MULTIPLIER
Under 800	1.15	6,400 – 7,199	1.07
800 – 1,599	1.14	7,200 – 7,999	1.06
1,600 – 2,399	1.13	8,000 – 8,799	1.05
2,400 – 3,199	1.12	8,800 – 9,599	1.04
3,200 – 3,999	1.11	9,600 – 10,399	1.03
4,000 – 4,799	1.10	10,400 – 11,199	1.02
4,800 – 5,599	1.09	11,200 – 11,999	1.01
5,600 – 6,399	1.08	12,000 or more	none

Urban Adjustment

An urban adjustment is applied to the building cost allowance accordingly:

CLASS B	CLASS D
An urban adjustment factor of 24 percent will be applied to the Class B building cost allowance for those projects located in areas of high property values and high population density.	An urban adjustment factor of one percent will be applied to the building cost allowance in areas of high population density.

In either case, the district must provide justification describing the necessity of this adjustment. The circumstances which would warrant this adjustment include:

- existing site is less than 75 percent of the California Department of Education's recommended site size,
- extent of development on surrounding property, and
- existence and extent of traffic congestion.

Continued on the next page

Security Adjustment

In areas where high crime rates exist, a security allowance may be provided for those projects requiring security fencing, other protective structures and a watchperson. These items must be described in the plans and/or specifications. The district must provide justification describing the necessity of these security measures. The circumstances which would necessitate this adjustment include:

- lack of site space for contractor to work and store materials;
- high risk of vandalism and theft (materials must be delivered to and from the site daily);
- twenty-four hour, seven day, around the clock watchperson is required;
- union agreement of basic trades requires contractor to provide parking for tradesmen; and
- increased premiums for insurance during construction in high density areas.

Final Adjustment to the Building Cost Allowance

A final cost allowance is determined as an outcome of OLA's review of the final plans. The allowance is adjusted according to the construction cost index in effect as of the date of the issuance of the bid authorization. The allowance is adjusted for the final time based on the construction cost index in effect as of the date of the bid opening.

Continued on the next page

Mainstream Education Facilities

The Class B and Class D building cost standards are identified on the schedule which follows. Please note, each building area is priced at the facility classification most nearly represented in the plans.

FACILITY CLASSIFICATION		UNIT COST PER SQUARE FOOT	
		CLASS B	CLASS D
TEACHING STATIONS	Arts and crafts, high school & intermediate	$81.78	$78.86
	Business machines	81.21	78.31
	Homemaking	92.14	88.85
	Kindergarten	82.24	79.30
	Music, high school & intermediate	91.90	88.62
	Science, General	85.98	82.91
	Science laboratory (above grade 6)	117.33	113.14
	Shop, high school & intermediate	85.94	82.87
	Standard, elementary	81.16	78.26
	Standard, high school & intermediate	77.68	74.91

Continued on the next page

Mainstream Education Facilities, continued

	FACILITY CLASSIFICATION	UNIT COST PER SQUARE FOOT	
		CLASS B	CLASS D
NON-TEACHING STATIONS	Administrative spaces	91.23	87.97
	Corridor, enclosed	71.55	68.99
	Corridor, covered unenclosed/shelters	NA	34.68
	Gymnasium	111.26	107.29
	Kitchen	136.63	131.75
	Food Service	79.71	76.86
	Library	88.29	85.14
	Multi-purpose, Type I	91.51	88.34
	Multi-purpose, Type II	78.48	75.68
	Performing Arts Facility	116.32	112.17
	Resources Specialist Program (RSP)	83.10	80.14
	Shower/Locker	101.15	97.54
	Staff Workroom	87.19	84.08
	Storage, Mechanical and Janitor	67.73	65.31
OTHER FACILITIES	Toilets	187.12	180.44
	Warehouses and Agricultural	40.45	39.01
	Parking basements *	40.45	NA
	District Maintenance	68.35	65.91
	Other	87.19	84.08

* Employee parking basements are Class B construction only.

Continued on the next page

Special Day Class Teaching Stations

The Class B and Class D building cost standards for special day class teaching stations are identified on the schedule which follows. These costs include allowances for such special building items as additional electrical and plumbing improvements, wider doors and grab bars.

	FACILITY CLASSIFICATION	ABBREV.	UNIT COST PER SQUARE FOOT	
			CLASS B	CLASS D
NON-SEVERE HANDICAP	Specific Learning Disability	SLD	$83.10	$80.14
	Mildly Mentally Retarded	MMR	83.10	80.14
	Severe Disorder of Language	SDL	83.10	80.14
SEVERE HANDICAP	Deaf and Hard of Hearing	DHH	92.51	89.21
	Visually Handicapped	VH	89.38	86.18
	Orthopedically and Other Health Impaired	OOH	83.10	80.14
	Autistic	AUT	89.38	86.18
	Severely Emotionally Disturbed	SED	89.38	86.18
	Severely Mentally Retarded	SMR	89.38	86.18
	Developmentally Handicapped	DH	89.38	86.18

Continued on the next page

Special Day Complex

A special day complex consists of at least one special day class teaching station as well as a medical therapy unit. In addition to instruction space, the teaching station and/or medical therapy unit may include toilets, showers, changing areas, large equipment storage and daily living skills space.

The medical therapy unit may also include clinic/administrative areas, waiting areas for out patients and clients and space for physical and occupational therapy activities.

The Class B and Class D building cost standards for a special day class complex are identified on the schedule as follows:

FACILITY CLASSIFICATION		ABBREV.	UNIT COST PER SQUARE FOOT	
			CLASS B	CLASS D
SEVERE HANDICAP	Severely Mentally Retarded	SMR	$90.50	$87.26
	Orthopedically and Other Health Impaired	OOH	88.70	85.54
	Developmentally Handicapped	DH	94.08	90.72
	Deaf-Blind/Multi	DBM	94.08	90.72

Interfacing

Description

Eligible interfacing costs include those costs associated with the connection of electrical, intercom, fire alarm and communication systems of an existing building to a new building area. All itemized interfacing costs will be given individual funding consideration.

Supplemental Funding

Introduction

Supplemental funding is available to those projects wherein the actual pupil density of the project site exceeds that recommended by the California Department of Education, School Facilities Planning Division.

Form SAB 502

Using the *Form SAB 502, Supplemental Funding Calculation,* determine the amount of supplemental funding available to a project accordingly:

STEP	FORMULA
1	The actual pupil density of the project site takes into consideration: • ADA capacity of existing (if applicable) and proposed teaching stations; and • usable existing (if applicable) and proposed acreage.
2	Determine the threshold pupil density using the existing (if applicable) and proposed acreage.
3	When the actual pupil density, as calculated in step 1, exceeds the threshold pupil density as calculated in Step 2, there is eligibility for supplemental funding.
4 and 5	The lesser of steps 4 and 5 as described on the Form SAB 502 determines the amount of supplemental funding.

Form SAB 506

All school districts applying for supplemental funding must formally request the apportionment on the *Form SAB 506, Application for Apportionment.*

Along with the complete description of proposed facilities as outlined in the "description and scope of project" section of the application, a statement requesting a supplemental funding allowance must be included. In addition, the "amount of apportionment requested" must include the supplemental funding allowance as determined on the *Form SAB 502, Supplemental Funding Calculation.*

Letter Appraisals

For purposes of establishing an approximate cost for the acquisition of real property and completing the *Form SAB 502, Supplemental Funding Calculation,* the district must submit two letter appraisals for each parcel to be acquired.

Continued on the next page

Form SAB 500

The *Form SAB 500, Lease-Purchase Justification Document* must identify all building area to be funded with the supplemental allowance calculation of the district's adequate building area.

Justification Letter

The district must provide a justification letter detailing the allocation of the supplemental funding allowance in relieving the effect resulting from a less than adequate site size.

Preliminary and/or Final Project Plans

All items to be funded from the supplemental funding allowance must be clearly identified on the plans. These enhancements must be noted on the plans as "supplemental funding" items.

Cost Estimates

A delineation of all items to be funded with the supplemental funding allowance must be identified on the cost estimates (Forms SAB 506A and SAB 506B). In addition, separate cost estimates identifying *only* the supplemental funding allowance expenditures must be submitted.

Eligible Supplemental Funding Expenditures

The following table describes eligible supplemental funding expenditures:

TYPE	DESCRIPTION
Enhancements	Construction items which will enhance the project in such a way as to mitigate the small site size.
Additional Building Area	Building area funded solely with the "Supplemental Funding" allowance.
Miscellaneous Items	These items may include but are not limited to: • fire safety • handicapped acess • playground apparatus • duct shafts, utility tunnels and pipe conduit chases • security features

Continued on the next page

Eligible Supplemental Funding Expenditures, continued

Additionally, the district must reserve monies from the supplemental funding allowance to fund those support expenditures related to the items identified in the previous table. These expenditures may include:

- architectural services
- Office of State Architect fee
- California Department of Education, SFPD, fee
- construction tests
- inspection
- change orders (limited to those items funded with the supplemental funding allowance)

Deferment of Supplemental Funding Allowance

The district may opt to defer a portion of the supplemental funding allowance for specific expenditures to be completed subsequently to the project's main construction contract. These items and the associated costs must be identified prior to the acceptance of main construction bid.

Deferred Items

Introduction

Construction items that are excluded from a construction contract and are to be performed at a later date may be deferred for the future. In order for a reservation of funds to be made, these items must be clearly identified on the cost estimates and plans.

D. Tests

Description

The school district, as the agent of the State, and in accordance with Title 21, California Administrative Code, is responsible for funding all necessary tests during the project's construction phase.

Tests performed during construction may include soil compaction/fill tests, materials testing, etc.

E. Inspection

Description

In accordance with Title 21, California Administrative Code (CAC), inspection services are required during the construction of all new facilities. The school district, as the agent of the State, must solicit proposals from several OSA certified inspectors known by reputation as being well qualified and experienced in the construction of public schools. The district is also responsible for negotiating an agreement with the inspector which is most favorable to the State in regard to compensation for professional services.

Inspector's Salary

The estimate for the inspector's salary must be in accordance with prevailing wages for comparable services. Inspection costs will be approvable for a period not exceeding the legal duration of the construction contract. The contract period is terminated upon the filing of the *Notice of Completion*.

Additional inspectors fees may be approved for those contracts in which a time extension was granted through the OLA change order process.

Inspection fees for a period not exceeding 35 calendar days after the filing of the *Notice of Completion* are eligible for work the district has deemed incomplete at the close of the construction contract period.

Inspector's Role

The inspector shall act under the direction of the project architect or registered engineer in assuring compliance with the approved plans and specifications. The inspector must inspect every part of the work. In no case, shall the inspector have or assume any duties which would prohibit continuous inspection.

Note: A school district official/employee may not provide inspection services for their own school project regardless of qualifications.

F. Furniture and Equipment

Description

A furniture and equipment allowance is provided to each project to adequately equip all spaces and functions within the facility with the proper movable furniture and equipment items. The furniture and equipment allowance is generated by the eligible building area and facility classifications.

Ineligible Expenditures

Built-in or fixed equipment (fixtures) and supplies are not considered movable furniture and equipment items, and are generally funded with the building construction allowance. In addition, furniture and equipment funds may not be utilized for the purchase of equipment for adult education, community use, or for intramural or inter-school sports as distinguished from the required physical education program of the district.

Schedule of Allowance

The following chart is used to determine a preliminary estimate at Phase II for the furniture and equipment allowance. The final allowance will be determined by the OLA upon approval of the bid.

GRADES SERVED	ALLOWANCE PER SQUARE FOOT
K–6,K–8	$5.00
6–8,7–8,and7–9	6.00
9–12,10–12	7.00
Continuation High	8.00
Special Education	10.00

Furniture and Equipment Cost Index

Once a furniture and equipment allowance has been determined apply the current furniture and equipment cost index factor. The furniture and equipment cost index factor is adjusted quarterly.

Furniture and Equipment Included in the Contract

If the construction contract includes eligible furniture and equipment items, the district must submit an itemization of proposed purchases and the associated unit costs. The cost of these items will be transferred from the furniture and equipment allowance to the project's construction allowance. In addition, the architect fee, calculated at eight percent of the cost of these items, will be reduced from the furniture and equipment allowance.

Continued on the next page

Maximum Allowance

The maximum furniture and equipment allowance, as established at the bid approval, is as follows:

- new construction is limited to 100 percent of the calculated allowance; and/or
- replacement of abandoned facilities is limited to 50 percent of the calculated allowance.*

* The allowance provided for the replacement of abandoned facilities is limited to 50 percent of the maximum allowance because inventory remains from the original facilities.

OLA Review

Upon the district's request, the OLA will conduct a courtesy review of the district's anticipated furniture and equipment purchases.

Audit of Furniture and Equipment Expenditures

Upon completion of the project, an audit of the district's furniture and equipment expenditures is conducted wherein any ineligible expenditures are reduced from the project. If prior to the final audit, the district has not completed purchasing all the furniture and equipment necessary the district must submit a list of anticipated expenditures. This action will reserve funds for future furniture and equipment expenditures.

District Certification for Central Kitchens

An allowance is provided to those projects including a central kitchen which services:

- at least two satellite serving kitchens in addition to its central kitchen site.

In order to receive a central kitchen allowance, the district must provide:

- identification of the schools which house the satellite serving kitchens; and
- the number of pupils to be served by the central kitchen.

G. Contingencies

Description

Contingencies in the project budget provide a means for financing eligible unforeseen costs necessary to complete the project.

Calculations of Contingencies

The contingency amount is calculated at 1½ percent of Items A through F as delineated on the cost estimate. In addition, an amount of $2,000.00 is allocated to this category.

Eligible Expenditures

Upon a bid approval and authorization by the Local Assistance Officer, expenditures from the contingency fund are allowable under the following circumstances:

TYPE OF EXPENDITURE	CIRCUMSTANCE
Non-Construction	For cost increases *not* involving changes to a construction contract (i.e., inspection, tests, etc.), a transfer of funds to the budget item requiring the increase may be requested when: • Prior to 90 percent construction completion (building), the District Representative must submit a written statement requesting a transfer of funds from the contingency fund to the specific budget item requiring the increase. • After 90 percent construction completion (building), funds will be automatically transferred based on the project's expenditure reports as submitted to the OLA.
Construction	For cost increases involving the construction contract (i.e., site development, building construction, etc.), a formal change order must be submitted to the OLA (see *Change Orders, page 3-D-11*).

Continued on the next page

Ineligible Expenditures

The contingency fund is not available for the following types of expenditures:

ITEM	DESCRIPTION
New Construction (Building)	Cost increases associated with the building portion of the construction contract that exceed the difference between the "bid allowance" and the "acceptable low bid" as established at the time of the bid approval.
General Site Development	Cost increases associated with general site development that exceed the general site development allowance as established by law and as calculated at the time of the bid approval (see *Bid Approval, pending development*).
Purchase Price of Property	Increases in the purchase of real property.

Change Orders

Introduction

Once a project is under construction any changes or alternations to the OSA-approved plans and specifications can be accomplished only through the "change order" process.

Approval Criteria

In order for a change order to be approved, at least one of the following criteria must be met:

- the change is necessary for the health, welfare, and/or safety of the children; or
- the change is required by the State Architect/State Fire Marshal; or
- the change is necessary to complete the project as approved by the SAB.

Restrictions

Under the following circumstances, changes or alterations will not be approved:

- SAB cost standards are exceeded; or
- performance is subsequent to the filing of the "notice of completion"; or
- performance is subsequent to acceptance by the governing body of the district; or
- items in the change order were included as a deductive alternate in the construction contract and the alternate was accepted by the district.

Continued on the next page

Components

It is suggested that change orders be prepared according to the American Institute of Architects (AIA) Change Order G701 document. Change orders must include the following components:

COMPONENT	DESCRIPTION/REQUIREMENT
Application Number	Identify project's application number as assigned by OLA.
School District/School Name	Identify school district and name of project.
Contractor	Identify the contractor.
Documentation	A detailed description of the change required including unit/cost itemization, drawings and any other supporting documents (i.e. videos, etc.).
Justification	Provide a reason why changes are necessary.
Requester	Party requesting change.
Change in Price	Identify dollar amount of each item (add/deduct).
Architect's Statement	Architect must certify that: • the changes are necessary; and • the district has reviewed and accepted the change order; and • the request is valid; and • approval is recommended.
Signatures	The following signatures are required: • contractor • school district • architect • Office of the State Architect (OSA): Structural Safety, Access Compliance and the State Fire Marshal, as required.
Local Agency	If requirements are made by a local agency after the project bid date, those requirements must be submitted for review. Furthermore, an explanation as to why the item was not included in the original plans and specifications is required.
Multi-Story Construction	Identify those projects which obtained a multi-story construction supplemental allowance.

Advance Approvals

Advance approvals may be obtained if immediate action is necessary to prevent extensive and unwarranted delay or to determine funding eligibility.

Maximum Funding

Funding of approved change orders for the following categories is limited to:

CATEGORY	MAXIMUM FUNDING
Utility Services, Off-Site Development, Service-Site Development or Demolition	Amount justified.
General Site Development	Allowance established prior to bid (see *General Site Development, page 3-B-49*).
New Construction (Building)	Project's bid savings (difference between bid allowance and approved contract).
Multi-Story Construction	Allowance established prior to bid (see *Multi-Story Construction, page 3-B-61*).

Note: Any item contained in a change order which exceeds ten percent of the original contract amount must be competitively bid or comply with the requirements set forth in the Public Works Code Section 20118.4.

Architect Fees

Architect fees will be calculated for all approved additive contract change order items with the exception of items resulting from errors and omissions on the part of the architect. Architect fees for change orders will be calculated based on the fees negotiated in the *Form SAB 533, Agreement Between Client and Architect.*

Fund Release

Once a change order has been approved by OLA, a fund release will be issued. However, if the contingency balance is insufficient to fund the changer order, OLA must prepare a recommendation to the SAB to obtain an additional apportionment to fund the change order. Subsequent to SAB approval a fund release will be issued.

Continued on the next page

Form SAB 521

The district will receive notification via the *Form SAB 521, Authorization to Expend Funds,* which specifically identifies the funding categories and costs which are currently being released and authorized for expenditure.

Form SAB 184 and Form SAB 184A

Upon the district's receipt of the fund release, a *Form SAB 184, Summary of Expenditures and Construction Progress, and a Form SAB 184A, Detailed Listing of Warrants by the District,* must be completed and returned to the OLA within 90 days.

Where to Submit

Submit change orders to the appropriate field representative at the Office of Local Assistance.

Audit

Introduction

All districts must submit expenditure reports detailing all project costs. These reports provide the OLA with an up-to-date project financial status.

Required Documents

All expenses incurred by the district are reported on expenditure reports as follows:

DOCUMENT NUMBER	DESCRIPTION
☐ SAB 184	Summary of Expenditures and Construction Progress
☐ SAB 184A	Detailed Listing of Warrants Issued by the District

Frequency of Reporting Expenditures

Within 90 days of the district's receipt of any State warrant, an expenditure report must be prepared by the district and submitted to the OLA. Failure to report expenditures in a timely manner may delay the release of future State funds.

Assistance

For assistance in preparing expenditure reports, contact the OLA Fiscal Services Section.

Topic Items

This topic discusses the following items:

ITEM	SEE PAGE
Preliminary Audit	3-D-16
Final Audit	3-D-17

Continued on the next page

Preliminary Audit of Expenditures

Introduction

The preliminary project audit is initiated when the building construction contract is 90 percent complete. The district is responsible to report all expenditures incurred on the project as well as any anticipated expenditures.

Form SAB 184A

The *Form SAB 184A, Detailed Listing of Warrants Issued by the District*, provides an itemization of all project expenditures.

In addition, the site and planning categories require a cost itemization by sub-Category (*see A. Site, page 3-B-37 and B. Plans, page 3-B-38*).

Form SAB 184

The *Form SAB 184, Summary of Expenditures and Construction Progress*, provides a summation of the costs detailed on the Form SAB 184A.

Final Building Construction Fund Release (10%)

The final ten percent of the building construction contract will be released when the district has reported the following information:

- actual expenditures, and
- anticipated expenditures

Final Site Development Fund Release (10%)

In the event the district has contracts other than building construction (i.e., site development) for which only 90 percent of the contract amount has been released, the district may request that the balance (ten percent) be disbursed upon submittal of the following documents:

- Notice of Completion, or
- Evidence that the contract has been performed to the satisfaction of the district. For example, evidence of satisfactory performance may be documented through a district board resolution.

In addition, the district must identify any other expenditures not authorized on the *Form SAB 521, Authorization to Expend Funds*. These expenditures must be reported on the Form SAB 184 and Form SAB 184A expenditure reports. The Form SAB 184 and Form SAB 184A must be accompanied by invoices and/or other documentation supporting the expenditures.

Final Audit of Expenditures

Introduction

A final project audit is initiated when all project expenditures with the possible exception of furniture and equipment, have been reported by the district.

Form SAB 184A

When all expenditures have been incurred, those which were not previously reported must be provided on the *Form SAB 184A, Detailed Listing of Warrants Issued by the District.*

Form SAB 184

All expenditures reported on the final *Form SAB 184A, Detailed Listing of Warrants Issued by the District,* must be summarized on the *Form SAB 184, Summary of Expenditures and Construction Progress.* If all furniture and equipment expenditures have not been completed, the remaining amount to be expended must also be identified on a separate Form SAB 184.

Notice of Completion

A notice of completion for each construction contract relative to the project must accompany the Form SAB 184A and Form SAB 184, expenditure reports.

Fund Reconciliation and Cost Analysis

When a complete audit of all expenditures reported by the district has been conducted by the OLA, a *"Fund Reconciliation and Cost Analysis"* report will be issued. This report reflects a summary of the total eligible State-funded project costs. In addition, any adjustments made to the district's Form SAB 184 and Form SAB 184A, will also appear in this report.

During this process, the district is required to review the report and respond to any inquiries made by the OLA.

Continued on the next page

Closing Action/Release of Funds

The project's final closing action consists of one of the following:

IF...	THEN...
the final eligible State funded costs are within the eligible costs authorized by the SAB	the closing action will be executed administratively.
the final eligible costs are in excess of the eligible costs authorized by the SAB	the closing action will require SAB approval.

Once the final closing action has been completed by the OLA, no additional expenditures will be recognized.

Release of Funds/Refund

Any funds due to the district as a result of the closing action will be disbursed.

If the closing action determines that a refund is due to the State, a request will be made to the district for the refund.

Field Audit

Project records are subject to a field audit up to four years after the project's final closing action.

Closing Action/Release of Funds

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IF	THEN
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the final eligible costs are in excess of the eligible costs authorized by the SAB	the closing action will require SAB approval.

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Any funds due to the district as a result of the closing action will be disbursed.

If the closing action determines that a refund is due to the State, a request will be made to the district for the refund.

Field Audit

Project records are subject to a field audit up to four years after the project's final closing action.

EXHIBIT D
School Facility Cost Methodology For K-5 and 6-8 Schools

This exhibit sets out the methodology to be used for determining the cost for the District to build (1) a K-5 school which would house 837 students on a traditional, single track, nine month schedule education program; and (2) a 6-8 middle school which would house 800 students on a traditional, single track, nine month schedule education program. The cost of the K-5 school will include the 30% State required relocatables. The cost of the full 6-8 school will include the 30% State required relocatables, plus $400,000.00 for additional relocatables sufficient to house those 160 students in excess of 800, plus an additional allowance of $500,000.00 which District may use at its discretion for any purpose it deems necessary and appropriate.

The School Facilities and the application to the State for funding the School Facilities shall be in accordance with State standards and meet the following requirements:

> District shall file an application for both schools with the State as early as practically possible. If the applications are not accepted or approved by the State, District shall use all due diligence to have the State approve the costs listed in the application for the construction of the K-5 and 6-8 schools. Such approval of the costs listed in the application will provide District and NLF with an approved school cost which will be used to determine mitigation fees. If District is not able to get the State to approve the school construction costs, then District and NLF shall meet and confer to mutually agree upon the school construction costs. Such School Facilities shall be constructed in accordance with the requirements and specifications contained in the Education Code, the applicable rules and regulations adopted by the State Allocation Board and the Applicant Handbook for State School Building Lease-Purchase Program put out by the Office of Public School Construction as those requirements and specifications exist at any given time ("State Requirements and Specifications").

A copy of the State Requirements and Specifications as they currently exist is attached as Exhibit C.

The application filed with the State as set out above shall include a cost estimate showing the costs which would meet the State Requirements and Specifications. Such amount shall then be used in the calculation of fees set out in this Agreement.

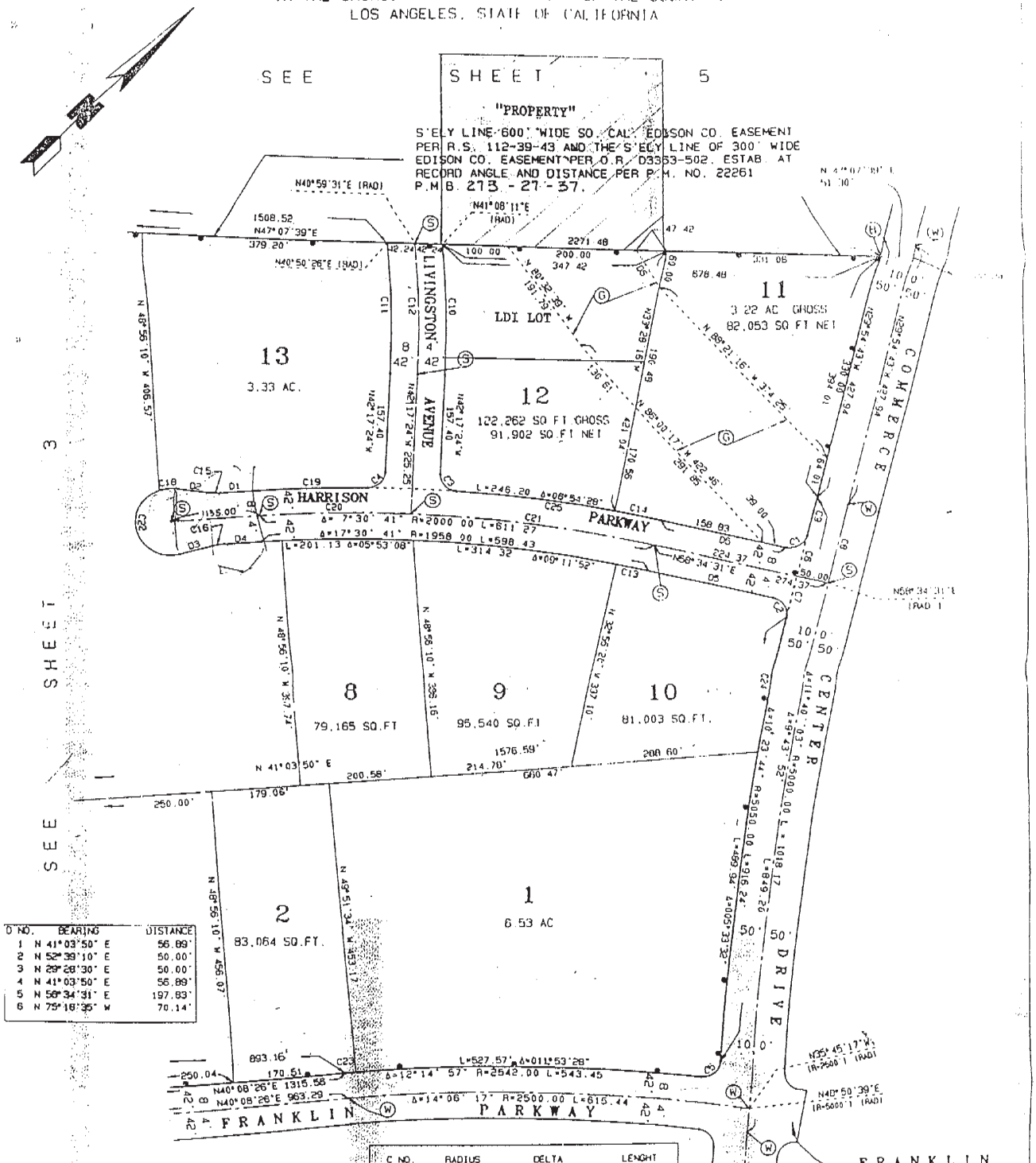
SCALE 1" = 100'

EXHIBIT E

019403

VESTING
PARCEL MAP NO. 20839

IN THE UNINCORPORATED TERRITORY OF THE COUNTY OF
LOS ANGELES, STATE OF CALIFORNIA



C NO.	BEARING	DISTANCE
1	N 41°03'50" E	56.89'
2	N 52°39'10" E	50.00'
3	N 29°28'30" E	50.00'
4	N 41°03'50" E	56.89'
5	N 58°34'31" E	197.83'
6	N 75°18'35" W	70.14'

C NO.	RADIUS	DELTA	LENGHT
1	27.00'	089°13'16"	42.04'
2	27.00'	089°13'17"	42.04'
3	27.00'	088°05'20"	41.51'
4	27.00'	088°05'20"	41.51'
5	27.00'	092°41'50"	43.68'
6	5049.99'	000°46'43"	68.64'
7	5049.99'	000°46'43"	68.63'
8	4999.99'	001°30'45"	132.00'
9	5050.41'	000°44'02"	64.69'
10	1792.00'	006°34'25"	205.60'
11	1708.00'	006°52'10"	204.78'
12	1750.00'	006°43'04"	205.19'
13	1958.00'	001°29'51"	51.18'
14	2042.00'	002°02'47"	72.93'
15	90.00'	011°35'20"	18.20'

C NO.	RADIUS	DELTA	LENGHT
16	90.00'	011°35'20"	18.20'
17	55.00'	027°10'44"	20.00'
18	2042.00'	004°44'06"	168.75'
19	2000.00'	006°36'46"	231.80'
20	2000.00'	010°51'55"	378.27'
21	55.00'	203°10'40"	195.04'
22	2542.00'	000°21'20"	15.00'
23	5050.00'	002°32'43"	224.33'
24	2042.00'	008°57'15"	319.12'

(B) 2" I.P. TO BE SET, FLUSH

(G) RESTRICTED USE AREA

(W) LOCATION OF S.W. & T. TO BE SET PER PARCEL MAP NO. 22261 P.M.B. 273 - 27 - 37

(S) S.W. & T. TO BE SET

PORTIONS OF PARCELS 11 AND 12 ARE SUBJECT TO GEOLOGICAL HAZARD

SUPPLEMENTAL SCHOOL FACILITIES FUNDING AGREEMENT BETWEEN THE CASTAIC UNION SCHOOL DISTRICT AND THE NEWHALL LAND AND FARMING COMPANY

This Supplemental School Facilities Funding Agreement ("Supplemental Agreement") is made at Valencia, California, as of November 20, 1997, between the CASTAIC UNION SCHOOL DISTRICT ("District"), a school district organized and existing under the laws of the State of California, on the one hand, and THE NEWHALL LAND AND FARMING COMPANY ("NLF"), a California limited partnership, on the other hand, with respect to the following facts:

A. Concurrently with the execution of this agreement, the District and NLF executed a master funding agreement for mitigation of the impacts of Newhall Ranch/Riverwood.

B. It is desired, by the execution of this Supplemental Agreement, to reach an agreement as to the other lands owned by NLF other than Newhall Ranch/Riverwood.

IN LIGHT OF THE FOREGOING FACTS, IT IS MUTUALLY AGREED THAT:

1. NLF also has other land which it is developing which includes a number of projects, listed on Exhibit A, attached hereto and made a part hereof, (the "Valencia Projects"), which are subject to an agreement dated January 16, 1992, between the William S. Hart Union High School District ("Hart"), NLF, District, and the County of Los Angeles which required that NLF pay presently a total of $2.84 for each square foot of new residential construction, adjusted for inflation, to Hart and District. The terms of the Agreement shall continue to govern the development of the Valencia Projects. In addition, NLF is also developing a residential project called the Presley Tract which has 64 residential family units covered by Tract Map Number 36668. NLF desires and District agrees that the approved Tract Map Number 36668, to the extent of 64 single family residential units, shall be covered under the same terms and conditions as are in the January 16, 1992 agreement in so far as such agreement applies to District and NLF.

2. Furthermore, NLF has other properties in and around Castaic (the "Castaic

Projects") which NLF intends to take through the entitlement process. Such properties are listed on Exhibit B, attached hereto and made a part hereof. To the extent that NLF is able to obtain entitlements on these properties, NLF agrees to pay the same economic fees that it is paying per unit as set forth in paragraphs 12, 13, 17, 18, and 19 of the agreement dated November 20, 1997, and all other terms and conditions of the agreement establishing conditions on District shall be met. Concurrently, for the impact of Newhall Ranch/Riverwood, and for that purpose that portion of the impact fees which consists of non-cash payments, such as land, shall have a dollar value assigned to any such non-cash payments and converted to a unit price so that the total mitigation for the Castaic Projects shall be the economic equivalent of the mitigation for Riverwood. In addition, non-residential projects listed on Exhibit B shall pay the statutory commercial and industrial fees. Notwithstanding any unification, District only waives the first $50,000 of such fees.

3. The District shall use its best efforts to enter into an agreement with the Saugus Union School District ("Saugus") whereby Saugus will provide classrooms and educational services to the students from that portion of the NLF property, known as the North River area, hereinafter defined as the Castaic Area ("Castaic Area"),which is depicted in Exhibit "C" to this agreement. This shall occur, if at all, through an interdistrict transfer agreement or some similar agreement to the mutual satisfaction of the District and Saugus. The terms of this agreement shall apply to those portions of the NLF property set out in this agreement which are within the District's boundaries regardless of the outcome of District's best efforts to successfully complete the annexation or reorganization set forth in this paragraph. District agrees that if the students go to Saugus as a result of this provision, then such fees paid by NLF as school fees shall be paid to Saugus.

Dated: November 20, 1997

BOARD OF TRUSTEES OF THE
CASTAIC UNION SCHOOL DISTRICT

(Signatures continued on next page)

(Signatures continued from previous page)

By: _____
PRESIDENT OF THE BOARD OF
TRUSTEES OF THE CASTAIC
UNION SCHOOL DISTRICT

ATTEST:

_____
CLERK OF THE BOARD OF TRUSTEES
OF THE CASTAIC UNION SCHOOL DISTRICT

Dated: November 20, 1997

THE NEWHALL LAND AND FARMING
COMPANY (A California
Limited Partnership)

By: NEWHALL MANAGEMENT LIMITED
PARTNERSHIP
Managing General Partner

By: NEWHALL MANAGEMENT
CORPORATION
Managing General Partner

By: _____
Its: President

By: _____
Its: Exec. V.P.

EXHIBIT A

"Valencia Projects" as defined in SETTLEMENT AGREEMENT BETWEEN WILLIAM S. HART UNION HIGH SCHOOL DISTRICT, CASTAIC UNION SCHOOL DISTRICT, COUNTY OF LOS ANGELES AND NEWHALL LAND AND FARMING COMPANY

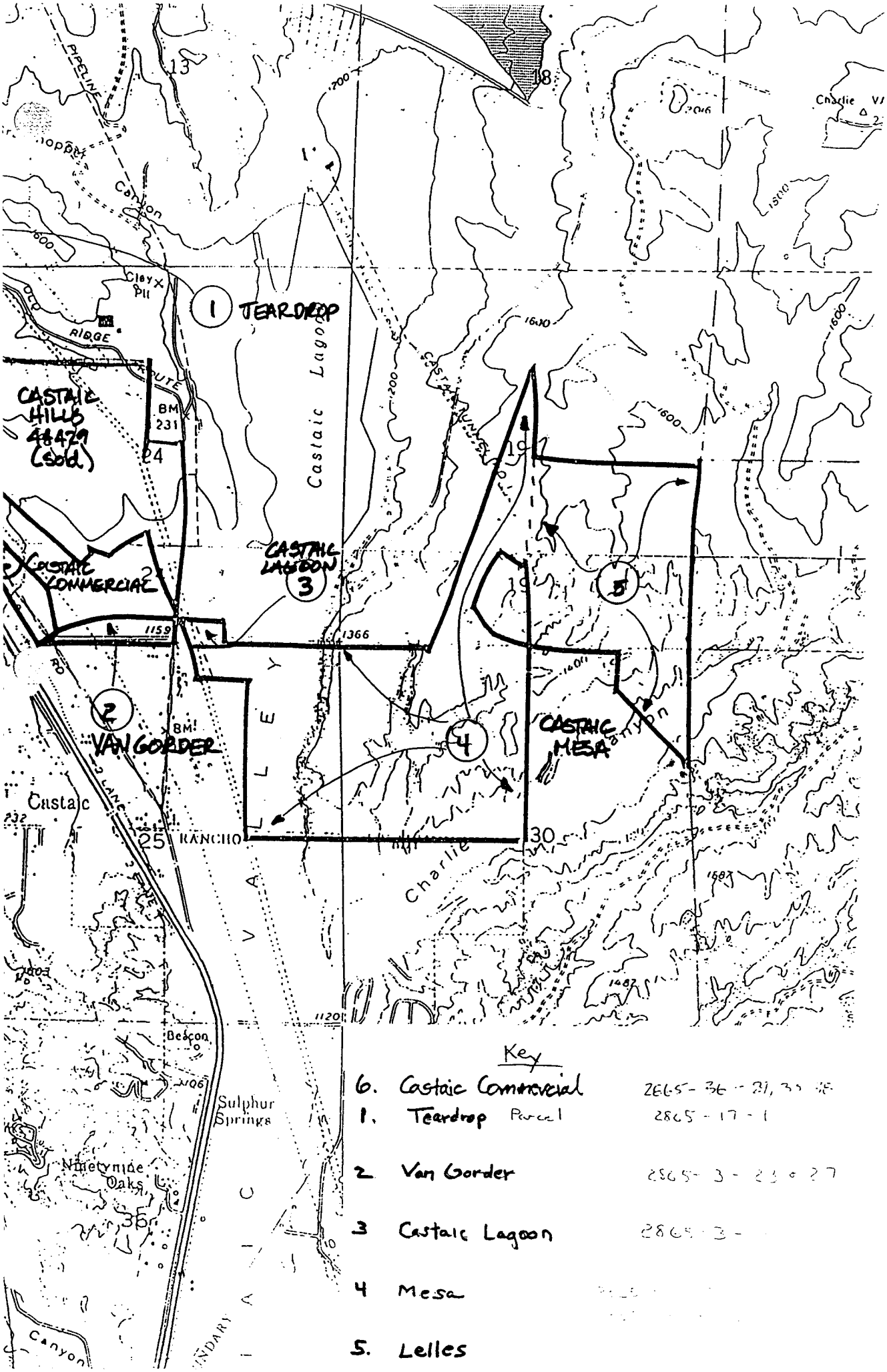
Tentative Tract No.	44429
Tentative Tract No.	44800
Tentative Tract No.	45084
Tentative Tract No.	45433
Tentative Tract No.	45440
Tentative Tract No.	44823
Tentative Tract No.	46389

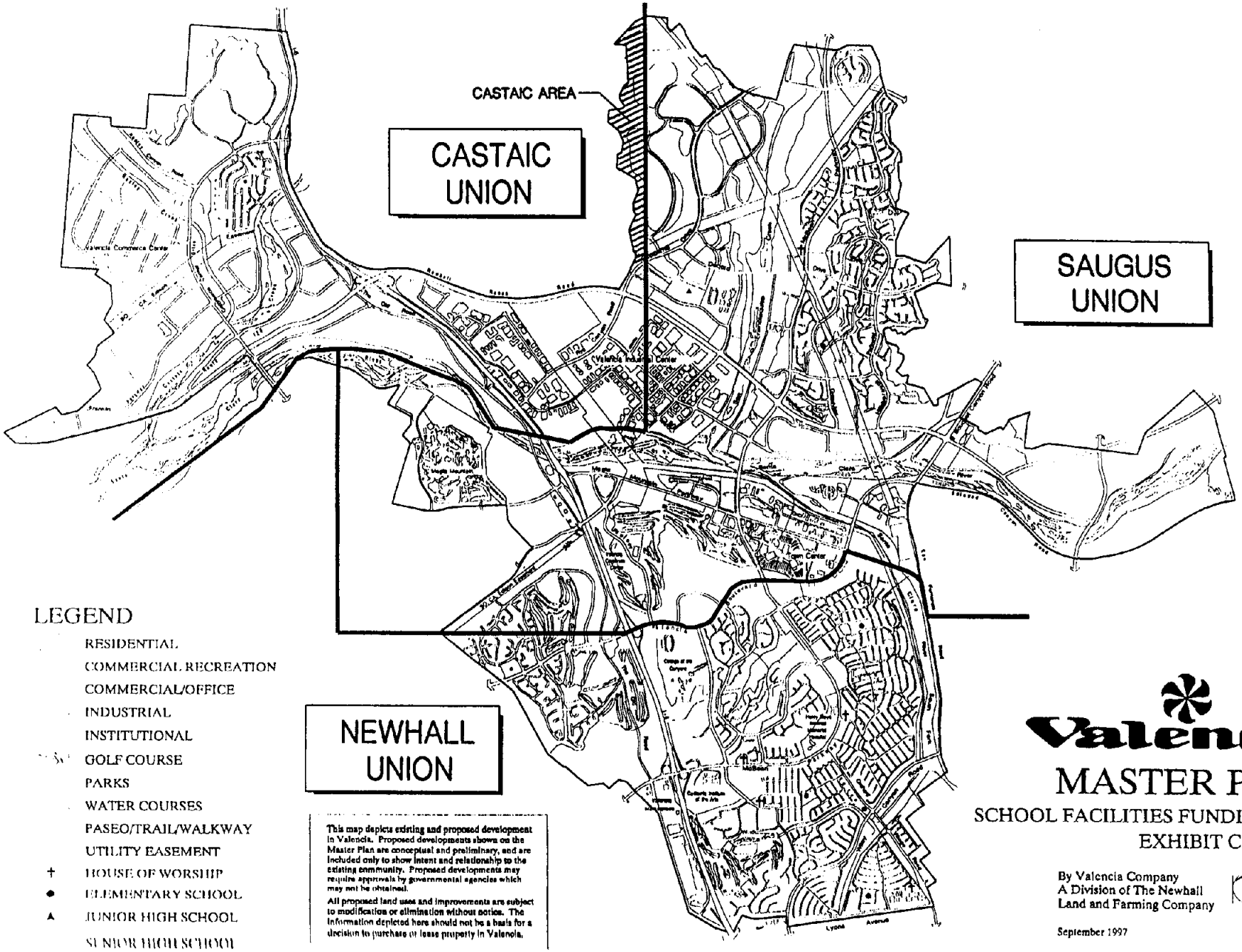
EXHIBIT B

"Castaic Projects"

NLF Common Name	APN
Teardrop parcel	2865-17-1
Van Gorder	2865-3-23
	2865-3-27
Castaic Lagoon	2865-3-11
Mesa	2865-4-1
	2865-5-12
	2865-5-13
	2865-5-14
	2865-7-8
	2865-7-9
	2865-11-15
Lelles	2865-5-23
	2865-4-14
	2865-4-15
	2865-4-16
	2865-4-17
Castaic Commercial	2865-36-29
	2865-36-33
	2865-36-34
	2865-36-35
	2865-36-36
	2865-36-37
	2865-36-38

The attached map shows their approximate locations.


1 TEARDROP
CASTAIC HILLS 48479 (sold)
CASTAIC COMMERCIAL
CASTAIC LAGOON 3
2 VAN GORDER
4
CASTAIC MESA
5
Castaic Lagoon
Castaic
RANCHO
Charlie
Sulphur Springs
Ninetynine Oaks
Beacon
Canyon
Key
6. Castaic Commercial 2865-36-21, 3
1. Teardrop Parcel 2865-17-1
2. Van Gorder 2865-3-23 & 27
3 Castaic Lagoon 2865-3-
4 Mesa
5. Lelles



LEGEND

- RESIDENTIAL
- COMMERCIAL RECREATION
- COMMERCIAL/OFFICE
- INDUSTRIAL
- INSTITUTIONAL
- GOLF COURSE
- PARKS
- WATER COURSES
- PASEO/TRAIL/WALKWAY
- UTILITY EASEMENT
- † HOUSE OF WORSHIP
- ● ELEMENTARY SCHOOL
- ▲ JUNIOR HIGH SCHOOL
- SENIOR HIGH SCHOOL

This map depicts existing and proposed development in Valencia. Proposed developments shown on the Master Plan are conceptual and preliminary, and are included only to show intent and relationship to the existing community. Proposed developments may require approvals by governmental agencies which may not be obtained.

All proposed land uses and improvements are subject to modification or elimination without notice. The information depicted here should not be a basis for a decision to purchase or lease property in Valencia.

Valencia

MASTER PLAN

SCHOOL FACILITIES FUNDING AGREEMENT
EXHIBIT C

By Valencia Company
A Division of The Newhall
Land and Farming Company

September 1997

School Facilities Funding Agreement Between the William S. Hart School District and Newhall Land and Farming

William S. Hart Union High School District

Date: October 21, 1998

To: Mr. Gary Cusumano

From: Mr. Bob Lee

Subject: **MITIGATION AGREEMENT**

==========

Enclosed is the Newhall Land and Farming Company's official copy of the signed Mitigation Agreement. Also, per your request, we have authorized our legal counsel to submit a letter of support for the Westridge Project. The letter should be sent by October 27.

I will be out of the office from October 27 through November 2. I am hoping that Jim Harter and I can get together to work on Exhibit A in order that I may fully understand all the parcels included within the boundary of the Valencia development.

Finally, as per your letter, the District understands that a copy of the Mitigation Agreement will be formally filed with your Newhall Ranch application.

As of this date, we have not heard from Alex Bowie regarding the celebration. I will be encouraging him to work on the date, time, and place as soon as possible.

The journey that we have traveled over the past two years in formulating this Mitigation Agreement has been one which, from our standpoint, has provided greater insight into your needs as a developer and the challenges that come with your attempt to seek approvals for a project of this size. I truly believe that over time, this Mitigation Agreement will serve both the students and the Newhall Ranch community well.

Thanks for your commitment and patience.

RCL:gct
Enc.
cc: Governing Board
Mr. Bowie

SCHOOL FACILITIES FUNDING AGREEMENT BETWEEN THE WILLIAM S. HART UNION HIGH SCHOOL DISTRICT AND THE NEWHALL LAND AND FARMING COMPANY

This School Facilities Funding Agreement ("Agreement") is made as of October 15, 1998, between the WILLIAM S. HART UNION HIGH SCHOOL DISTRICT ("Hart"), a school district organized and existing under the laws of the State of California, on the one hand, and THE NEWHALL LAND AND FARMING COMPANY ("Newhall"), a California limited partnership, on the other hand, with respect to the following facts:

RECITALS

A. Newhall is the owner of approximately seventeen thousand (17,000) acres of land, as shown on Exhibit "A", ("Newhall Land") located within Hart's boundaries some of which is located in the City of Santa Clarita ("City") and all of which is in the County of Los Angeles ("County"), which Newhall currently is in the process of master planning for development and obtaining land use Entitlements either by itself or by others.

B. The current plans for development of Newhall Land envision the construction of an estimated thirty five thousand (35,000) residential dwelling units ("DU") and an estimated twenty seven million (27,000,000) square feet of commercial and industrial development ("Commercial/Industrial Development") over approximately thirty (30) years.

C. The provisions herein are applicable to whatever development occurs on Newhall Land, including the proposed Westridge Project (Tentative Map 45433) of County and the Newhall Ranch Project as described in the Specific Plan ("Newhall Ranch Project Specific Plan") now being considered therefor by the County. Subject to the provisions of Section 15 of this Agreement, development which occurs on the Newhall Land in the projects listed on Exhibit "B" ("Excluded Development") are subject to the agreements or conditions of approval or

mitigation measures applicable thereto and are excluded from the obligations herein provided as to Fair Share School Impact Mitigation Payments as hereinafter defined.

D. Hart and Newhall recognize that the planned development of DU on Newhall Land will generate additional junior high and senior high school students (collectively, "Newhall Students") which in turn, will require the construction of new junior high schools ("JHS") and senior high schools ("SHS").

E. Historically, the State of California ("State") has provided a substantial portion of the funds necessary to build additional school facilities needed by school districts. However, over the last several years the amount of funds available from the State for the construction of new school facilities has been limited. The method of apportioning such funds to Hart and other school districts has been varied and uncertain, and it is unclear what amount of funds, if any, will be available to Hart in the future from the State for such purposes.

F. Hart does not have school facility capacity to accommodate the Newhall Students. Accordingly, Hart will require, as applicable, substantial additional grade 7-12 interim and permanent school facilities, including land, buildings, furnishings and equipment, as well as interim classrooms, permanent classrooms, central and administration facilities, including such facilities to accommodate students considered as being accommodated in lieu of using the school facilities of Hart on a year-round multi-track ("YRE") basis which presently is required to obtain funding for school facilities from the State ("School Facilities"). Newhall and Hart desire to enter into this Agreement to set forth Newhall's obligations to mitigate the development of Newhall Land as to Hart, and the respective obligations of Hart relating to the provision of additional School Facilities for Newhall Students.

G. Hart and Newhall agree that the present anticipated development of the Newhall Land will result in a need for an estimated three (3) additional JHS and two (2) additional SHS. If, and only if, funding from the State ("State Funding") is received by Hart for the cost of the additional School Facilities to accommodate Newhall Students, the parties intend that Newhall, as herein provided, shall receive reimbursement without interest to the extent provided in this Agreement to be paid only from the herein specified portion of State Funding for a portion of

Newhall's herein specified payment to Hart per DU ("Fair Share School Impact Mitigation Payments") as defined in Section 3 of this Agreement. Newhall hereby assumes the risk that State Funding will not be available to assist in funding School Facilities necessary to mitigate the impact of development of Newhall Land. In such case, Newhall will have contributed one hundred percent (100%) of the cost to mitigate the impact of development of the Newhall Land on the School Facilities of Hart. In consideration of Newhall's obligations provided for in this Agreement, to the extent herein specified, Hart will take all reasonable actions to seek to maximize its priorities for obtaining State Funding for needed School Facilities. If Hart determines that it would be advantageous to do so in order to obtain State Funding for additional School Facilities, Hart may request that Newhall advance funds to Hart but Newhall shall have no obligation to advance such funds.

H. Hart has determined that the Fair Share School Impact Mitigation Payments which Newhall will pay to Hart pursuant to this Agreement will allow Hart to fully mitigate any adverse impacts which might otherwise result from the development of Newhall Land. Hence, except as to Excluded Development, there will be no need to collect any fees from development of the Newhall Land which might otherwise be collected by Hart in connection with the construction of DU which meet the requirements of Government Code §65995.1 ("Age-Restricted DU") or Commercial/Industrial Development.

I. The procedure set forth in this Agreement will ensure that the development of Newhall Land, either individually or cumulatively with other projects within Hart's boundaries, will have no adverse impacts on Hart's ability to provide adequate School Facilities to all students of Hart.

IN LIGHT OF THE FOREGOING FACTS, IT IS MUTUALLY AGREED THAT:

1. ***Incorporation of Recitals.*** Recitals A through I are hereby incorporated in this Agreement.

2. ***Mitigation Requirements.*** The cost of Hart's School Facilities as of January 1, 1997, calculated on a per student basis, is estimated to be as set forth in Exhibit "C". The cost of Hart's School Facilities as of January 1, 1997, through December 31, 1998, as calculated on per DU basis, is set forth in Exhibit "D".

3. ***Mitigation Obligation.*** The Fair Share School Impact Mitigation Payment determined by the impact of future development on the School Facilities of Hart, calculated on a per DU basis as shown on Exhibit "D" as of January 1, 1997, in current dollars, are $5,600 for each such single-family detached DU, ("SFDU") and $2,100 for each multi-family attached DU ("MFDU") located within the boundaries of Hart but outside of the boundaries of the Castaic Union School District ("CUSD"). A SFDU is any DU which is a single family residence with no common walls. A MFDU (including apartments) is a DU in a building or buildings in which all of the DU have one or more supporting, above-ground vertical common walls establishing a substantial connectivity between two (2) or more DU, or a second unit ("Second Unit"). A Second Unit may be either detached or attached construction but shall be only those DUs specified and defined in the Newhall Ranch Project Specific Plan, as the proposed terms thereof exist on the date of this Agreement. All Second Units shall be located within the Newhall Ranch Project portion of the Newhall Land as shown in Exhibit "A." A Second Unit constructed on an attached basis to what otherwise would be a SFDU does not recategorize the basic SFDU as a MFDU by reason of a Second Unit being constructed on an attached basis as to what otherwise would be a SFDU. As to SFDU and MFDU, or a Second Unit, located in the CUSD portion of Hart where Hart provides educational facilities for grades 9-12, the Fair Share School Impact Mitigation Payment as of January 1, 1997, through December 31, 1998, shall be $3,640 for each SFDU and $1,360 for each MFDU and Second Unit.

As previously described herein, Hart intends to seek State Funding for future School Facilities that, prospectively, may allow repayment as a special fund obligation of Hart to Newhall only from such funding as is received by Hart and allocated to Newhall as herein provided as to a portion of the Fair Share School Impact Mitigation Payments required by reason of the residential development of Newhall Land. Newhall acknowledges that Hart has entered,

and will enter into similar agreements with others ("Fair Share Mitigation Payment Participants"). Newhall acknowledges that there is no assurance that such State Funding will be received by Hart and available for allocation to Newhall and other Fair Share Mitigation Payment Participants as provided for in this Agreement. Accordingly, Newhall will be responsible for paying to Hart the entire amount of the Fair Share School Impact Mitigation Payment relative to development of the Newhall Land on the basis provided for in this Agreement. The Fair Share School Impact Mitigation Payment shall be paid to Hart prior to the time that an application for a building permit for the construction of a DU, other than an Age-Restricted DU, a DU in an Excluded Development or a DU subject to the provisions of the Annexation Agreement, as that term is defined in Section 6.c of this Agreement, is submitted to the County, the City, or any other governmental entity which has the authority to issue building permits for the development of Newhall Land.

4. ***Adjustments To Mitigation Obligation***. The Fair Share School Impact Mitigation Payment shall be reviewed and, if appropriate, increased or decreased by Hart, from the base date, at the times, and in accordance with the methodologies set forth in this Section 4. The adjustments shall be based on variations in student generation factors ("SGF"), land value of school sites ("Land Value Component") and costs of construction, furnishings, equipment and related costs ("Non-Land Value Component") as follows:

a. *Student Generation Factors.* As set forth in Exhibit "E", certain initial SGF have been used in determining the initial amounts of the Fair Share School Impact Mitigation Payment. The SGF to be used until January 1, 1999, shall be: 0.171 SHS students for each SFDU, 0.064 SHS students for each MFDU or Second Unit, 0.098 JHS students for each SFDU, and 0.037 JHS students for each MFDU or Second Unit. Effective each January 1, commencing January 1, 1999, as provided in this Section 4, the amount of Fair Share School Impact Mitigation Payments shall be increased or decreased based upon the recalculation of the SGF for Hart determined in accordance with the methodology set forth in Exhibit "E" and the other provisions of this Section 4 of this Agreement, all as set forth in Exhibit "F".

b. *Land Value Component.* A Land Value Component of Three Hundred Seventy-five Thousand Dollars ($375,000) per net usable acre, as of January 1, 1997, assuming a construction-ready condition, with dedicated and improved public roads and utilities, including storm drainage facilities, has been used in calculating the initial Fair Share School Impact Mitigation Payment as of January 1, 1997. The parties acknowledge this value per acre may vary as the Newhall Land is developed. Consequently, effective each January 1st, commencing January 1, 1999, the Fair Share School Impact Mitigation Payment shall be increased or decreased based upon the Land Value Component determined as of a valuation date of the preceding October 15th. This adjustment shall be determined by the appraised per acre value of the sites then under consideration by Hart for the next JHS site and the next SHS site ("Proposed Sites"). If Hart identifies more than one (1) JHS Proposed Site or more than one (1) SHS Proposed Site, the Land Value Components for the JHS and for the SHS shall be based on the average of the appraised per acre values of all JHS Proposed Sites and the average of the appraised per acre values of all SHS Proposed Sites.

Appraisals at Hart's cost payable from Fair Share School Impact Mitigation Payment or interest earned thereon shall be conducted by a member of the Appraisal Institute ("AI") which person shall be selected by Hart ("Hart Appraiser"). The Proposed Sites shall be appraised on the basis that each Proposed Site satisfies the site requirements set forth in Section 7.b. of this Agreement and shall be on the basis of the highest and best use of the Proposed Sites as determined by the Hart Appraiser. If Newhall does not concur as to the Hart Appraiser, or its opinion of value, Newhall may designate, at its own expense, an appraiser that is currently a member of the AI ("Developer Appraiser") to independently appraise the Proposed Sites and prepare a report establishing and supporting the Developer Appraiser's opinion of the fair market value of each of the Proposed Sites. If the opinions of value of the Hart Appraiser and the Developer Appraiser differ by ten percent (10%) or less from each other, the appraised fair market value of the Proposed Sites shall be deemed to be the average of the two (2) appraisals as to each of the Proposed Sites. If the opinions of value of the Hart Appraiser and the Developer Appraiser differ by more than ten percent (10%), the Hart Appraiser and the Developer Appraiser

shall be instructed to agree upon a third appraiser who shall be a member of the AI ("Supplemental Appraiser"). The cost of the Supplemental Appraiser shall be shared equally by Hart and Newhall. The Supplemental Appraiser also shall independently appraise the Proposed Sites and prepare a report establishing and supporting his or her opinion of the fair market value of each of the Proposed Sites. In that event, the appraised fair market value of each of the Proposed Sites shall be deemed to be the average of the two (2) appraisals having the closest opinions of value. In the event the appraisal of each of the Proposed Sites conducted by the Supplemental Appraiser equals the average of the Hart Appraiser and the Developer Appraiser, then the appraised fair market value of each of the Proposed Sites shall be deemed to be the value determined by the Supplemental Appraiser. In the event other Fair Share Mitigation Payment Participants also desire to designate a Developer Appraiser, such appraiser shall be the appraiser designated by a majority of Newhall and the other Fair Share Mitigation Payment Participants whose mitigation agreements contain a Land Value Component adjustment substantially similar to the provisions of this Agreement. Newhall agrees to bear its pro rata share of the cost of the Developer Appraiser and the Supplemental Appraiser designated by a majority of the parties executing such mitigation agreements with Hart. If the parties are unable to agree on the Developer Appraiser, Hart shall designate the Developer Appraiser from a list of appraisers submitted by Newhall and other Fair Share Mitigation Payment Participants.

c. *Non-Land Value Component.* Effective January 1, 1999, the Non-Land Value Component shall be increased or decreased based upon the percentage change in the Marshall & Swift Class D Wood Frame Index for the Western United States ("Index"), for the period of November 1, , 1996 to October 31, 1998. Each January 1st subsequent to January 1, 1999, the Non-Land Value Component shall be increased or decreased based on the percentage change in the Index for the prior twelve (12) month period ending on the preceding October 31st. If the Index is no longer published, an equivalent index shall be reasonably determined by Hart.

d. *Adjustment Process.* The annual adjustment of the Fair Share School Impact Mitigation Payment shall be accomplished in the manner set forth in Exhibit "F" and in accordance with the procedure set forth in this Section 4.d.

Not later than November 15th of each year, Hart shall prepare and submit to Newhall an analysis of the proposed Fair Share School Impact Mitigation Payment adjustments described in Subsections (a) through (c) above ("Annual Adjustment Analysis") and Hart shall provide Newhall with all supporting documentation used for the Annual Adjustment Analysis. Hart shall therein state the proposed revised Fair Share School Impact Mitigation Payment to be applicable for the next succeeding calendar year effective on the next January 1st. Hart shall meet with Newhall to review and discuss the Annual Adjustment Analysis not later than December 10th of each year. Hart shall take into account any information provided by Newhall with respect to the Annual Adjustment Analysis, either before or after completion of the Annual Adjustment Analysis, in determining adjustment of the Fair Share School Impact Mitigation Payment. Any disputes between Newhall and Hart with respect to the Annual Adjustment Analysis not resolved to each party's satisfaction shall be resolved in accordance with Section 24 of this Agreement, but only after either Hart or Newhall determine no other alternative is feasible. Pending such resolution, any revised Fair Share School Impact Mitigation Payments that becomes due may be paid under protest and, if any amount subsequently is determined to have been improperly applied by Hart, such additional amount shall be returned by Hart to Newhall with interest at the average rate paid by the Los Angeles County Local Agency Investment Fund accruing from the date of payment to the date of repayment by Hart to Newhall.

5. ***Notice of Annual Adjustment***. No later than November 15th of each year, Hart shall forward to Newhall the Annual Adjustment Analysis provided for in Section 4.d of this Agreement. The Adjustment Analysis shall serve as notice from Hart as to any determination of the Student Generation Rate, Land Value Component, Non-Land Value Component, Fair Share School Impact Mitigation Payment, or any other determination or document which would impose a duty on Newhall or change the extent of Newhall's obligations under this Agreement.

6. ***Reimbursement From State Funding***. Prior to any allocation of State Funding to Newhall as provided for in this Agreement, Hart shall have received State Funding for a JHS and a SHS. This amount as to such JHS and SHS shall be equal to at least one hundred percent (100%) of fifty percent (50%) of the cost of site acquisition and improvement, design inspection,

construction, furnishing and equipment of a JHS and of a SHS for which State Funding is received by Hart. State Funding presently is provided, when available, for site acquisition and planning ("Phase P") and construction ("Phase C") of School Facilities. If only Phase P or Phase C, or however such funding is subsequently designated, is funded by the State, but not both, as to a given JHS or SHS, to be allocated to Hart as herein provided the unfunded portion of Phase P or Phase C, or if a JHS or SHS is designed and constructed at a lesser capacity than designated in Exhibit "C", such unfunded minimum amount as to a JHS or SHS shall carry forward as to State Funding and be reserved for Hart pursuant to this Agreement to the next JHS or SHS for which State Funding is received by Hart, prior to any allocation of State Funding to Newhall. The total amount of State Funding for a JHS and for a SHS to be allocated pursuant to the terms of this Agreement shall be determined on the basis equal to what would be apportioned and funded by the State for the actual completed total cost of such JHS or SHS based on a JHS of 1,000 students and a SHS of 2,000 students on a traditional school year calendar. This amount is not intended to include any cost for accommodating students in lieu of operating such JHS or SHS on a YRE. Subject to the foregoing, State Funding for future JHS and SHS, shall be apportioned to Newhall as follows:

a. Hart shall keep a cumulative total, which shall be adjusted as set forth herein, of JHS and SHS Newhall Students resulting from DU constructed as the result of building permits issued after Hart has received the Fair Share School Mitigation Payments provided for in this Agreement beginning on the day after this Agreement becomes effective based on the SGF in effect at the time each Fair Share School Impact Mitigation Payment for a SFDU, MFDU or Second Unit is paid to Hart ("Newhall Reimbursable Students").

i. If the total number of Newhall Reimbursable Students and students generated by DU subject to agreements with Fair Share Mitigation Payment Participants for a new JHS or SHS, as the case may be, is less than the design capacity of such JHS or SHS herein assumed to be 1,200 for a JHS or 2,400 for a SHS ("Capacity"), Hart shall divide the number of Newhall Reimbursable Students by the Capacity of that school ("Newhall Reimbursement Fraction"). Hart shall then pay an amount equal to the Newhall Reimbursement Fraction times

the amount of State Funding received by Hart to Newhall within thirty (30) days of Hart's receipt of such State Funding. Upon payment, Hart shall reduce the number of JHS or SHS Newhall Reimbursable Students, as the case may be, by a number equal to the Capacity of the applicable JHS or SHS multiplied by the Newhall Reimbursement Fraction.

ii. If the total number of Newhall Reimbursable Students and students generated by DUs subject to agreements with Fair Share Mitigation Payment Participants ("Total Number of Reimbursable Students") for a New JHS or SHS, as the case may be, is equal to or exceeds the Capacity of the school, Hart shall divide the number of Newhall Reimbursable Students by the Total Number of Reimbursable Students ("Newhall Adjustment Fraction"). Hart shall then pay an amount equal to the Newhall Adjustment Fraction times the amount of State Funding received by Hart to Newhall within thirty (30) days of Hart's receipt of such State Funding. Upon payment, Hart shall reduce in its records the number of JHS or SHS Newhall Reimbursable Students, as the case may be, by a number equal to the Capacity of that school multiplied by the Newhall Adjustment Fraction.

b. If Hart has requested and received advanced funds from Newhall, Newhall shall designate those funds as advance payment of Fair Share School Impact Mitigation Payments for SFDU, MFDU or Second Unit as it determines in its sole discretion. The number of Newhall Reimbursable Students associated with the number and type of DU specified by Newhall shall be increased immediately upon receipt by Hart of the advanced funds and Newhall shall be credited as herein provided in Section 6c with having paid the Fair Share School Impact Mitigation Payments for the number and type of DU specified.

c. Hart has entered into a school facilities funding agreement with Newhall, dated December 16, 1997, a copy of which is attached as Exhibit "G", which governs the school impact mitigation measures required for land designated therein that is to be annexed to the City ("Annexation Agreement"). At the time that the Proposed Junior High School Site, as that term is defined in the Annexation Agreement, is transferred to Hart and all required improvements completed on a lien-free basis, Newhall shall specify the number and type of DU as to which it will be deemed to have paid the Fair Share School Impact Mitigation Payments. In determining

the number of Newhall Reimbursable Students, Hart shall apply the initial SGF set forth on Exhibit "E" to this Agreement and the SFDU or MFDU designated by Newhall at the time of such payment to Hart. The number of Newhall Reimbursable Students associated with the number and type of DU specified by Newhall shall be increased immediately upon receipt by Hart of the Proposed JHS Site provided for in the Annexation Agreement and Newhall shall be credited with having paid the Fair Share School Impact Mitigation Payments for the number and type of DU specified by Newhall.

d. Attached as Exhibit "H" are examples of some possible scenarios of the foregoing which are attached only as explanatory material and are not intended to and do not affect or change any of the provisions of this Section 6 of this Agreement.

7. ***New School Facilities.***

a. *School Size.* Each additional JHS will be considered to have been designed and constructed to accommodate approximately one thousand two hundred (1,200) students on a traditional, single track, nine month school schedule and each additional SHS will be considered to have been designed and constructed to accommodate approximately two thousand four hundred (2,400) students, on a traditional, single track, nine month school schedule.

b. *Site Requirements.* Each additional JHS will be built on a site containing approximately twenty five (25) net usable acres, and each additional SHS will be built on a site containing approximately forty five (45) net usable acres. Net useable acres shall be exclusive of slopes which exceed two percent (2%) assuming a construction-ready condition.

c. *Construction of New Schools.* Hart, subject to availability of funds for such purposes, will build as many additional JHS and SHS as are necessary to house Newhall Students. Hart will use its best efforts to locate only two (2) additional JHS and one (1) additional SHS on Newhall Land. Hart, on a best efforts basis, will seek to locate such additional JHS and SHS as shown on Exhibit "A." The precise location of such JHS and SHS to be built on Newhall Land will be mutually agreed upon between Hart and Newhall and acceptable to the State. In the absence of such mutual agreement, the precise location of such

JHS or SHS shall be determined by Hart subject to approval by the State. In the event Hart reasonably determines that additional JHS or SHS should be located on Newhall Land, it may acquire the sites for the additional schools either through negotiations or by means of an eminent domain action. Hart shall pay Newhall the fair market price for all school sites it acquires from Newhall except for the JHS site transferred to Hart pursuant to the Annexation Agreement as to which the fair market value has been agreed upon and the consideration therefor is as provided for in the Annexation Agreement.

8. ***Certification of Mitigation.***

a. Immediately upon receipt from Newhall or any of its assignees of the required school impact mitigation fee or mitigation payment in the required amount for each DU and Commercial/Industrial Development in an Excluded Development or the Fair Share School Impact Mitigation Payment for each DU subject to this Agreement, Hart shall provide any written certification required to obtain building permits or other approvals for the construction of DU from the County, the City, or any other governmental entity which requires such certification. The certification shall be in writing and shall be provided for whatever number of DU are requested and paid for by Newhall or by any assignee of Newhall at any time.

b. As to the Newhall Land, immediately upon request by Newhall or any of its assignees without the payment of any fees whatsoever, Hart shall provide any written certification required to obtain building permits or other development approvals for the construction of Age-Restricted DU, or Commercial/Industrial Development and the construction of DU subject to the Annexation Agreement specified by Newhall from the County, the City, or any other governmental entity which requires such certification. The certification shall be in writing and shall be provided for whatever number of Age-Restricted DU, or Commercial/Industrial Development and DU subject to the Annexation Agreement are requested by Newhall or any of its assignees at any time. The foregoing is not applicable to the Excluded Development portion of the Newhall Land which is subject to the obligations and requirements applicable thereto .

9. ***Maximization of Priorities to Receive State Funding***. If it has not already done so, Hart shall submit applications for State Funding for a JHS and for a SHS to the Office of Public School Construction within thirty (30) days of the signing of this Agreement. Hart shall thereafter take all reasonable steps available to Hart to pursue and obtain State Funding and federal funding, if any, for a JHS and a SHS. Hart may pursue such funding on the basis of what is presently designated as Priority Two for one hundred percent (100%) funding or Priority One for fifty percent (50%) funding of State eligible area and costs of a JHS or SHS. Pending legislation may be enacted providing only for fifty percent (50%) of such funding except for greater amounts under specified circumstances. If Hart elects to not pursue the highest priority for the first JHS or the first SHS for State Funding and the greater amount based on what presently is a Priority Two or hardship basis is not received by Hart and the lesser amount, herein assumed fifty percent (50%), would have been received by Hart on the basis of a Priority One application, such amount, if not received, will be credited against and reduce the priority allocation of State Funding to Hart provided for in Section 6 of this Agreement. As to any subsequent JHS or SHS, Hart shall pursue the highest priority for State Funding unless otherwise agreed by the Parties. Neither Party shall unreasonably withhold such consent. Hart shall take no actions which would deny or delay obtaining State Funding as provided for in this Agreement. Provided Hart has the local matching funds or, as provided for herein, Newhall, in its sole discretion. has advanced the necessary funds, Hart. subject to the foregoing, shall maintain an active, up-to-date application for the first available State Funding. Hart shall pursue similar appropriate action if State law or policy changes in regard to future State Funding. Hart shall not acquire other chargeable space which substantially adversely affects its eligibility for future State Funding except as provided in this Agreement (i.e., facilities for students in lieu of YRE as referred to in Recital F). Newhall and Hart acknowledge that leases of portable classrooms for less than five (5) years prior to an application for State Funding are not existing school building capacity under Chapter 407 of the 1998 Statutes (Section 17071.30(a) of the Education Code) if existent and applicable to Hart at any point in time relevant to the Newhall Land. Further, Hart shall obtain any interim or temporary school facilities, including, but not limited to, relocatable

and portable, classrooms in such manner so as not to unreasonably reduce the number of unhoused students relative to Hart's eligibility for future State Funding. Except as set forth herein, this Agreement shall not in any manner be asserted by Newhall to interfere in any way with, or to limit, Hart's Board of Trustees in determining what educational and school facilities policies will best further the interests of Hart's students or the construction or operation of its educational facilities.

10. ***Support of Land Use Applications***. Hart shall, within ten (10) days of receipt of written request from Newhall as to adequacy of School Facilities for development of the Newhall Land, express, orally and in written form, its support for any request for a land use approval, whether legislative or administrative, sought for the development of any portion of Newhall Land from the County, the City, or any other governmental entity which has the right to grant such an approval. Such action by Hart shall relate only to the adequacy of school facilities for such development and not the desirability or undesirability of approval except as related to adequacy of School Facilities for such proposal.

11. ***Certification of Adequacy of Mitigation***. Hart shall provide written certification within ten (10) days of receipt of a written request from Newhall or any Newhall assignee that adequate educational facilities exist, or that the financing provided by this Agreement guarantees their availability as needed, to house Newhall Students. This written certification shall be given to the California Department of Real Estate, the County, the City, or any other governmental entity which may have development approval authority over any portion of Newhall Land. Each such certification shall be based on each JHS having the capacity to serve the needs of 1200 students and each SHS having the capacity to serve the needs of 2400 students.

12. ***Equal Treatment Provisions***. Not later than November 15th of each year, or upon Newhall's written request at any other time, Hart shall provide Newhall with copies of all mitigation agreements entered into with other developers or landowners that have not previously been provided to Newhall. Hart shall, at the same time, provide any analyses of such agreements prepared by Hart or its consultants and all other materials in Hart's possession reasonably

necessary for the evaluation of the economic terms of such agreements to the extent such documents are not subject to the attorney-client privilege.

If Hart enters into any such agreement which is more economically advantageous than this Agreement, as agreed upon by parties or as determined pursuant to Section 24 of this Agreement, this Agreement shall be modified to make the obligations of this Agreement consistent with, and no greater than, the obligation imposed by any such agreement. Any such modification shall not require an amendment to this Agreement but may be described in an addendum signed by Hart and Newhall. Any modification to the obligations imposed on Newhall by this Agreement shall be effective as of the date of Hart's approval of any such agreement and Newhall shall be entitled to a refund of the amount of the Fair Share School Impact Mitigation Payments in excess of the modified amount plus interest on the refunded amount at the average interest rate paid by the Los Angeles County Local Agency Investment Fund accruing from the date of each payment to the date of refund.

An agreement requiring a lesser mitigation payment per DU, but requiring other consideration of equal or greater value, such as land, shall not be considered a more economically advantageous agreement. A subsequent agreement shall not be deemed more economically advantageous if it is the result of a condition of approval imposed prior to the effective date of this Agreement which explicitly limits the amounts payable to Hart imposed by a prior action of a public agency (other than Hart) or due to a change in applicable law including but not by way of limitation Chapter 407 of the Statutes of 1998.

13. ***No Further Exactions***. Hart shall not, under any circumstances:

a. Exercise any power or authority under current of future law to levy or impose an exaction of land, goods, money, or services, whether denominated a fee, charge, dedication, or otherwise, against any development of Newhall Land;

b. Require, request, or cooperate with the County, the City, or any other governmental entity to exercise any power or authority to levy or impose an exaction of land, goods, money, or services, whether denominated a fee, charge, dedication, or otherwise, for Hart's benefit;

c. Oppose the development of any portion of Newhall Land or any governmental approval, whether legislative or administrative, or any change in any governmental approval on any basis whatsoever; or

d. Sponsor or require the formation of a Communities Facilities District ("CFD"), except for a CFD or multiple CFDs which together include all of the land within Hart's boundaries, for any of Newhall Land without the express, written consent of Newhall which consent may be given or withheld in Newhall's sole discretion. Hart shall not unreasonably refuse to act as a sponsor for a CFD or similar public financing procedure if requested to do so by Newhall. Hart may accomplish any general obligation bond election that it desires on a District-wide basis or by one or more school facilities improvement districts.

14. ***Adequacy of Newhall's Mitigation Obligation***. The school fees and payments as well as the Fair Share School Impact Mitigation Payments to be provided to Hart by Newhall pursuant to the terms of this Agreement constitute the entire extent of Newhall's obligation to provide the funds necessary for Hart to obtain the School Facilities needed to house Newhall Students.

15. ***Changes in Excluded Developments***. If the number or type of DU, other than Age-Restricted DU, in an Excluded Development is changed ("Changed Project") so that the total number of Newhall Students from a Changed Project is increased, the number of JHS and SHS students generated by the Excluded Development then under consideration, without taking into consideration the Changed Project. shall be determined using the then existing SGF ("Excluded Development Students"). Thereafter, the number of JHS and SHS students from the Changed Project shall be determined by using the then existing SGF ("Changed Project Students"). The difference shall be determined between the total number of Changed Project Students and the Excluded Development Students for both JHS students and SHS students ("Additional JHS Students" and "Additional SHS Students", collectively "Additional Students"). The cost of School Facilities for the Additional Students shall be determined as provided in Exhibit "D" adjusted as provided for in this Agreement. Such cost shall be apportioned proportionately to all DU in the Changed Project in addition to whatever obligation is otherwise

applicable to each such DU. Attached as Exhibit "I" are examples of some possible scenarios of the foregoing which are attached only as explanatory material and are not intended to and do not affect or change any provisions of this Section 15 of this Agreement.

16. ***Agreement Not Terminated By Change In Law.*** No development, change of development, governmental approval, nor change in any governmental approval of any portion of Newhall Land shall constitute the basis for any change or termination of this Agreement because this Agreement provides for the complete mitigation of all impacts, direct and cumulative, to the development of Newhall Land on Hart's ability to provide adequate educational opportunities to every student within Hart's boundaries. The provisions of this Agreement shall not be affected by any existing applicable law or subsequent legislation enacted by the State of California acting through the legislative or initiative process, or any subsequent judicial decisions relating to the matters provided for in this Agreement. The Fair Share School Impact Mitigation Payments provided for in this Agreement are hereby appropriated and dedicated to the costs related to future acquisition, construction and financing of the School Facilities and other such related costs of Hart for purposes of housing Newhall Students.

17. ***Transfer and Encumbrance.*** Newhall shall have the right, in its sole discretion, to sell or encumber Newhall Land, improved or unimproved and in whole or in part, by any deed, mortgage, deed of trust, or other security device. No sale, transfer, or encumbrance of any portion of Newhall Land shall affect Newhall's obligations under this Agreement. Neither this Agreement nor any breach of this Agreement shall defeat, invalidate, diminish, or impair the lien or priority of any deed, mortgage, deed of trust, or other security device.

18. ***Mutual Cooperation.*** Unless this Agreement provides to the contrary, Hart and Newhall shall, within ten (10) days of receipt of a written request from the other party, perform any acts and prepare, sign, deliver, file, and record any documents reasonably required to obtain the goals, and to satisfy the conditions, contained in this Agreement. This includes, but is not limited to, providing the requesting party with a written statement certifying that:

a. This Agreement is unmodified and in full force and effect, or, if there have been modifications, this Agreement, as modified, is in full force and effect, stating the date and nature of any modification; and

b. There are no current uncured defaults under this Agreement or, if there are any, the dates and natures of the defaults.

19. ***Assignability of Agreement.*** Newhall is acting as the master developer of Newhall Land and intends to sell portions of Newhall Land to builders who will construct and sell residential, commercial, and industrial buildings to the public. Newhall shall have the unconditional right to assign any right or obligation under this Agreement to anyone at any time which assignee shall proportionally assume all applicable provisions of this Agreement. Whenever this Agreement provides Newhall with a right, that right may be exercised by an assignee of that right to the same extent that Newhall could have exercised that right. The assignment of any right or obligation under this Agreement shall be in writing and a copy of the assignment shall be provided to Hart. No such assignment shall relieve Newhall of any of its obligations under this Agreement without Hart's written consent which consent shall not unreasonably be withheld.

20. ***No Third Party Beneficiaries.*** This Agreement is entered into solely for the benefit of Hart and Newhall and their successors, transferees, and assigns. Other than Hart and Newhall and their successors, transferees, and assigns, no third person shall be entitled, directly or indirectly, to base any claim or to have any right arising from, or related to, this Agreement.

21. ***Entire Agreement.*** Except as to the Excluded Development this Agreement contains the entire agreement and understanding concerning the funding of School Facilities as to the Newhall Land as described on Exhibit "A" and supersedes and replaces all prior negotiations and proposed agreements, written or oral, except as they are included in this Agreement. Excluded Development, except as herein specified in Section 15 of this Agreement, shall be subject to the applicable fees or Mitigation Payments identified in Exhibit "B". Hart and Newhall acknowledge that neither the other party nor its agents nor attorneys has made any promise, representation, or warranty whatsoever, express or implied, not contained herein to

induce the execution of this Agreement and acknowledge that this Agreement has not been executed in reliance upon any promise, representation, or warranty not contained herein.

22. ***Amendments Must Be In Writing.*** This Agreement may not be amended except by a writing signed by Hart and Newhall.

23. ***Acknowledgment of Independent Investigation.*** Hart and Newhall acknowledge that each has conducted an independent investigation of the facts concerning the development of Newhall Land (including the development of the Excluded Projects), the impacts that Newhall Students will have on Hart's educational facilities, and the costs of housing Newhall Students.

24. ***Disputes To Be Arbitrated.*** Hart and Newhall desire to resolve any disputes as to the meaning of any portion of this Agreement, the validity of any determination or calculation, or the rights or obligations of Hart or Newhall under it as quickly as possible. Therefore, any such disputes shall be resolved by binding arbitration conducted by a mutually agreed upon retired judge of the Los Angeles Superior Court. If Hart and Newhall are unable to agree on the arbitrator within thirty (30) days of the receipt of a request for arbitration, they shall request that the presiding judge of the Los Angeles Superior Court designate one. Hart and Newhall shall each pay one-half the cost of the arbitration and each shall be responsible for its own attorneys' fees and costs as to any such arbitration.

25. ***Recovery Of Litigation Expenses.*** Except as provided in Section 24 above, if it becomes necessary to enforce any of the terms of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees and other costs of litigation in addition to any other relief to which it may be entitled.

26. ***Venue for Resolving Disputes.*** Any arbitration or litigation arising out of this Agreement shall be conducted only in Los Angeles County, California.

27. ***Interpretation Guides.*** In interpreting this Agreement, it shall be deemed it was prepared by the parties jointly and no ambiguity shall be resolved against either party on the premise that it or its attorneys was responsible for drafting this Agreement or any provision hereof.

28. ***Due Authority of Signatories.*** Each individual signing this Agreement warrants and represents that he or she has been authorized by appropriate action of the party which he or she represents to enter into this Agreement on behalf of the party.

29. ***Notices.*** All notices, demands, and communications between Hart and Newhall shall be given by personal delivery; registered or certified mail, postage prepaid, return receipt requested; Federal Express or other reliable private express delivery; or by facsimile transmission. Such notices, demands, or communications shall be deemed received upon delivery if personally served or sent by facsimile or after three business days if given by other approved means as specified above. Notices, demands, and communications shall be sent:

To Hart:	William S. Hart Union High School District Attn: Superintendent 21515 Redview Drive Santa Clarita, CA 91350 Fax No. (805) 254-8653
With a copy to:	Alexander Bowie, Esq. Bowie, Arneson, Wiles & Giannone 4920 Campus Drive Newport Beach, CA 92660 Fax No. (949) 851-2014
To Newhall:	The Newhall Land and Farming Company Attn: President 23823 Valencia Boulevard Valencia, CA 91355 Fax No. (805) 255-3960
With a copy to:	Kenneth B. Bley, Esq. Cox, Castle & Nicholson LLP 2049 Century Park East, 28th Floor Los Angeles, CA 90067 Fax No. (310) 277-7889

The foregoing names, addresses, and fax numbers may be changed at any time by a written notice given as provided above.

30. ***California Law Governs.*** This Agreement and all rights and obligations arising out of it shall be construed in accordance with the laws of the State of California.

31. ***Counterparts.*** This Agreement may be signed in one or more counter-parts which, taken together, shall constitute one original document.

32. ***Exhibits.*** All Exhibits attached hereto are incorporated into this Agreement.

33. ***Incorporation Into Subsequent Approvals.*** These obligations shall be deemed to be obligations that relate to the Newhall Land Development Entitlements and shall run with the land as obligations of its future development, including all provisions and requirements hereof relating to any SRDU. This Agreement shall be included in the technical appendices of the EIRs for the Westridge Project and Newhall Ranch Project, and be included in the mitigation measures and monitoring programs of the EIRs for both such projects.

34. ***Effective Date.*** This Agreement shall become effective on the date of the last signature by a party.

DATED: October 15, 1998

BOARD OF TRUSTEES OF THE WILLIAM S. HART UNION HIGH SCHOOL DISTRICT

By: Paul C. Olivas

President of the Board of Trustees of the WILLIAM S. HART UNION HIGH SCHOOL DISTRICT

[Signatures continued on following page.]

copy of KBBLEY 22932 409981
AB/pks/50016 v17
8028 B65 - 10/09/98

[Signatures continued from previous page.]

Attest:

Clerk of the Board of Trustees of the WILLIAM S. HART UNION HIGH SCHOOL DISTRICT

DATED: October 15, 1998

THE NEWHALL LAND AND FARMING COMPANY (a California Limited Partnership)

By: NEWHALL MANAGEMENT LIMITED PARTNERSHIP Managing General Partner

By: NEWHALL MANAGEMENT CORPORATION
Managing General Partner

By: Tony M. Cerasuolo
Its: President
By: James M. Ogden
Its: Sr. V.P.

[Signatures continued on following page.]

copy of KBBLEY 22932 409981
AB/pks/50016 v17
8028 B65 - 10/09/98

[Signatures continued from previous page.]

APPROVED AS TO FORM:

DATED: October 12, 1998

BOWIE, ARNESON, WILES & GIANNONE

By: _____
ALEXANDER BOWIE, ESQ.
Attorneys for the WILLIAM S. HART UNION HIGH SCHOOL DISTRICT

APPROVED AS TO FORM:

DATED: October 13, 1998

COX, CASTLE & NICHOLSON LLP

By: _____
KENNETH B. BLEY
Attorneys for THE NEWHALL LAND AND FARMING COMPANY

copy of KBBLEY 22932 409981
AB/pks/50016 v17
8028 B65 - 10/09/98

DMS Inventory Information

Net Increase in
Student/Classroom/School Generation Using
District Provided Student Generation Rates
River Village EIR

District	Housing Units by Type			Student Generation Rate			Students
	Single Fam.	Multi-Fam.	Apartment	Single Fam.	Multi-Fam.	Apartment	
Castaic Union Elementary	5,026	2,806		0.506	0.134	0.196	2,919
Castaic Union Middle	5,578	3,884		0.143	0.045	0.055	972
Hart Senior High	24,039	14,688		0.2432	0.0559	0.0841	6,667
						Totals	10,559

Prepared By Impact Sciences, Inc.
D. Builder
July 11, 2004

Student Generation Calculations

Net Increase in
Student/Classroom/School Generation Using
District Provided Student Generation Rates
Landmark Village EIR

District	Housing Units by Type			Student Generation Rate			Students
	Single Fam.	Multi-Fam.	Apartment	Single Fam.	Multi-Fam.	Apartment	
Castaic Union Elementary	308	685	451	0.506	0.134	0.196	336
Castaic Union Middle	308	685	451	0.143	0.045	0.055	100
Hart Senior High	308	685	451	0.2466	0.0559	0.0367	131
						Totals	**567**

Prepared By Impact Sciences, Inc.
S. Tebo
October 9, 2009

APPENDIX 4.17

Library Services

Written Correspondence from Malou Rubio, Head of Staff Services
County of Los Angeles Public Library, Library Headquarters,
August 11, 2004

County of Los Angeles Public Library
7400 East Imperial Hwy., P.O. Box 7011, Downey, CA 90241-7011
(562) 940-8461, TELEFAX (562) 803-3032

Library

MARGARET DONNELLAN TODD
COUNTY LIBRARIAN

August 11, 2004

Julie Berger
Impact Sciences Inc
30343 Canwood Street, Suite 210
Agoura Hills, California 91301

REQUEST FOR INFORMATION
DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)
RIVER VILLAGE PROJECT

Dear Ms. Berger:

This is in response to your specific questions to assist you in preparing the Library Services section of the draft EIR for the Newhall Ranch Project.

If you have any questions or require additional information regarding this matter, please contact Malaisha Hughes at (562) 940-8455.

Sincerely,

Malou Rubio

Malou Rubio
Head, Staff Services

MR:MH
U:\STAFFSERVICES\DEVELOPER FEE\EIR\Centennial - Impact Sciences Cover Let.doc

c: David Flint, Assistant Director, Finance & Planning, Public Library
Robert Seal, Public Library
Malaisha Hughes, Public Library

COUNTY OF LOS ANGELES PUBLIC LIBRARY

IMPACT SCIENCES
RIVER VILLAGE DRAFT ENVIRONMENTAL IMPACT REPORT
LIBRARY SERVICE QUESTIONNAIRE

1. **Would you please describe the service area within which River Village would be located? (Boundaries and/or communities/cities.) Also, what is the population (number of people) the Library considers to be within the service area?**

   The River Village project is currently within the Santa Clarita Valley Bookmobile (SCVB) Service Area. The Bookmobile serves the population of Castaic, Acton, Agua Dulce, Val Verde and the Friendly Valley Senior Community. Based on the 2000 Census, the total population for this area is 34,866. By the year 2020, population in the SCVB Service Area is expected to increase by 57,349.

2. **Would you please describe staffing (paid and volunteer, full time and part time), and holdings at the Valencia, Canyon Country Jo Anne Darcy, and Newhall libraries and the bookmobile. I have the locations and hours from the internet but know that information regarding staffing and holdings may not be as current as the information you have.**

Library	Full Time Staff		Part Time Staff		COLLECTION (Books and other Materials)
	Paid	Volunteer	Paid	Volunteer	
Valencia	14	0	40	0	284,928
Canyon Country Jo Ann Darcy	4	0	18	0	101,439
Newhall	4	0	8	5	81,243
Santa Clarita Valley Bookmobile	2	0	1	0	14,350

3. **What is the current number of books and square feet of library space per capita in the project service area? Does the Library consider the project area adequately served?**

   The current number of books per capita for the SCVB Service Area is .41 (14,350 ÷ 34,866). There is no library facility within the SCVB Service Area. Therefore, the square feet per capita cannot be calculated.

   The Library Service Area, where the project will be located, is underserved and will be significantly impacted by future population growth. Based on current service level guidelines of the County Library the appropriate collection size is 95,882 (34,866 x 2.75) and the appropriate facility size is 17,433 (34,866 x 0.5) square feet.

   Our service area population projection by the year 2020 will require an additional 46,108 square feet of library space and 239,241 books and other materials.

4. **What will the library fee, currently of $647.00 per unit of residential development, increase to on July 1?**

   Effective July 1, 2004, the fee for Planning Area 1 is $677.00 per dwelling unit.

5. **What will the special tax, currently $24.76 per parcel, increase to on July 1?**

   Effective July 1, 2004, the special tax is $25.22 per parcel.

6. **Please confirm the Library's planning standards for service: 0.50 gross square feet of facilities, 2.75 items and 1.0 computers per capita. Please confirm what is applicable to River Village. At the time the EIR was written, the standards were 0.35 gross square feet of facilities and 2.0 items per capita.**

   The current service level guidelines of the County Library involve, but are not limited to the following:

   - 0.5 Square Feet per Capita for Library Facilities
   - 2.0 Items per Capita for New Libraries (Opening Day Collection)
   - 2.75 Items per Capita for Community Libraries (Built-Out Collection)
   - 3.0 Items per Capita for Regional Libraries
   - 1.0 Computer for every 1,000 served
   - 4:1 Land To Building Ratio

7. **Mitigation is included in the Newhall Ranch Specific Plan EIR (SCH# 95011015) that requires the applicant to provide funding for a maximum of two public libraries including site dedication, construction, furniture, fixtures, equipment and materials. The total library building square footage will not exceed 0.35 net square feet per person. Other mitigation measures contained in the Newhall Ranch Specific Plan and EIR (provided below) are being evaluated further for application to the proposed project. I understand the applicant and the County Library are in discussions regarding this project. Based upon the mitigation in the EIR, a new library will not be required at this time. Please clarify mitigation applicable to the River Village portion of the Newhall Ranch Specific Plan.**

Consistent with Section 4.19 of the Mitigation Monitoring Plan of the Newhall Ranch Specific Plan EIR, the following mitigation measures/conditions of approval applies to the River Village portion of the Newhall Ranch Specific Plan:

"Prior to County's issuance of the first residential building permit of Newhall Ranch to the developer, the County Librarian and the developer will mutually agree upon the library construction requirements (location, size, funding and time of construction) based upon the projected development schedule and the population of Newhall Ranch based on the applicable number of average persons per household included in the library facilities mitigation fee in effect at the time. Such mutual agreement regarding the library construction requirements ("Library Construction Plan") and the criteria for timing the completion of the library(s) will be defined in a Memorandum of Understanding between the developer and the County Librarian. Such Memorandum of Understanding shall include an agreement by the developer to dedicate sufficient land and pay the agreed amount of fees on a schedule to allow completion of the library(s) as described below. The developer's funding for library facilities shall not exceed the developer's fee obligation at the time of construction under the developer fee schedule.

If two libraries are to be constructed, the first library will be completed and operational by the time of County's issuance of the 8,000th residential building permit of Newhall Ranch, and the second library will be completed and operational by the time of County's issuance of the 15,000th residential building permit of Newhall Ranch. If the County Librarian decides that only one library will be constructed, the library will be completed and operational by the time of County's issuance of the 10,000th residential building permit of Newhall Ranch.

No payment of any sort with respect to library facilities will be required under Section 2.5.3.d of the Specific Plan in order for the developer to obtain building permits for nonresidential buildings."

Library Calculations

River Village
Library Impact Analysis

River Village - Library Standards

Land Use	Number of Units	Persons/ Household	Number of Persons	Library (0.5 gsf)	Library Items 2.0 at Opening	Library Items 2.75 at Buildout	Computers
Single Family Units – Detached	308	3.17	976.36	488	1,953	2,685	1
Single Family Units – Attached	629	2.38	1,497.02	749	2,994	4,117	1
Apartments	451	2.38	1,073.38	537	2,147	2,952	1
Mixed Use Units	56	2.38	133.28	67	267	367	0
	1,444	**Totals**	**3,680**	**1,840**	**7,360**	**10,120**	**4**

L.A. County Public Library Adopted Standard: 0.50 g.s.f./capita
L.A. County Public Library Adopted Standard: 2.0 books/capita at library opening
L.A. County Public Library Proposed Guideline: 2.75 books/capita at Project buildout
L.A. County Public Library Proposed Guideline: 1.0 computer/1,000 capita

Household estimates are based upon County of Los Angeles provided estimates of 3.17 persons per single family dwelling, and 2.38 persons per multi-family dwelling and per apartment.

River Village - Santa Clarita Valley Cumulative Buildout without Project

Land Use	Number of Units	Persons/ Household	Number of Persons	Library (0.5 gsf)	Library Items 2.0 at Opening	Library Items 2.75 at Buildout	Computers
Single Family Units	93,281	3.17	295,700.77	147,850	591,402	813,177	296
Multi Family Units	48,013	2.38	114,270.94	57,135	228,542	314,245	114
Mobile Home	2,699	2.38	6,423.62	3,212	12,847	17,665	6
	143,993	Totals	416,395	208,198	832,791	1,145,087	416

L.A. County Public Library Adopted Standard: 0.50 g.s.f./capita
L.A. County Public Library Adopted Standard: 2.0 books/capita at library opening
L.A. County Public Library Proposed Guideline: 2.75 books/capita at Project buildout
L.A. County Public Library Proposed Guideline: 1.0 computer/1,000 capita

Household estimates are based upon County of Los Angeles provided estimates of 3.17 persons per single family dwelling, and 2.38 persons per multi-family dwelling, per apartment, and per mobile home.

River Village - Santa Clarita Valley Cumulative Buildout with Project

Land Use	Number of Units	Persons/ Household	Number of Persons	Library (0.5 gsf)	Library Items 2.0 at Opening	Library Items 2.75 at Buildout	Computers
Single Family Units	93,589	3.17	296,677.13	148,339	593,354	815,862	297
Multi Family Units	49,149	2.38	116,974.62	58,487	233,949	321,680	117
Mobile Home	2,699	2.38	6,423.62	3,212	12,847	17,665	6
	145,437	Totals	420,075	210,038	840,151	1,155,207	420

L.A. County Public Library Adopted Standard: 0.50 g.s.f./capita
L.A. County Public Library Adopted Standard: 2.0 books/capita at library opening
L.A. County Public Library Proposed Guideline: 2.75 books/capita at Project buildout
L.A. County Public Library Proposed Guideline: 1.0 computer/1,000 capita

Household estimates are based upon County of Los Angeles provided estimates of 3.17 persons per single family dwelling, and 2.38 persons per multi-family dwelling, per apartment, and per mobile home.

Written Correspondence from Malou Rubio, Head, Staff Services,
County of Los Angeles Public Library, Library Headquarters,
June 28, 2004

County of Los Angeles Public Library
7400 East Imperial Hwy., P.O. Box 7011, Downey, CA 90241-7011
(562) 940-8461, TELEFAX (562) 803-3032

Library

MARGARET DONNELLAN TODD
COUNTY LIBRARIAN

June 28, 2004

Julie Berger
Impact Sciences Inc
30343 Canwood Street, Suite 210
Agoura Hills, California 91301

REQUEST FOR INFORMATION
DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)
CENTENNIAL PROJECT

Dear Ms. Berger:

This is in response to your specific questions to assist you in preparing the Library Services section of the draft EIR for the Centennial Project.

If you have any questions or require additional information regarding this matter, please contact Malaisha Hughes at (562) 940-8455.

Sincerely,

Malou Rubio
Head, Staff Services

MR:MH
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c: David Flint, Assistant Director, Finance & Planning, Public Library
Robert Seal, Public Library
Malaisha Hughes, Public Library

COUNTY OF LOS ANGELES PUBLIC LIBRARY
INFORMATION REQUESTED BY IMPACT SCIENCES INC
CENTENNIEL PROJECT SPECIFIC PLAN

1. What is the current County adopted library impact fee? What is the fee expected to be effective July 1, 2004? Does the fee vary according to the type of dwelling unit? (E.g. condo, townhome, apartment, single family home.)

The Centennial Project is located in the County Library's Planning Area 2, Antelope Valley. The current library impact fee for Area 2 is $647 per dwelling unit. Effective July 1, 2004 the new fee is $658 per dwelling unit. The fee is subject to an annual CPI adjustment and the actual amount of the fee will be that in effect at the time the building permits for the project are issued. The fee does not vary based on dwelling type.

2. Have the new library planning standards been approved? If not, are they still proposed and when might they be approved? In April 2003, the planning standard for library space and items was 0.50 gross square feet and 2.0 items per capita. The revised standards proposed by the Library were 2.75 items per capita and one computer per 1,000 capita served. The library space standard of 0.50 gross square feet of space per capita was not proposed for revision at that time.

The current service level guidelines of the County Public Library have not yet been approved. However, efforts are currently underway to have them approved by the Board of Supervisors within the next year.

Summary of Current Service Level Guidelines		
Library Planning Facility Standards:	Facility Size:	0.5 square foot per capita
	Building Efficiency:	75% net-to-gross efficiency ratio
Collection Size:	Community Libraries	2.75 items per capita (Built-out Collections)
	Regional Libraries	3.0 items per capita (Built-out Collections)
	New Libraries	2.0 items per capita (Opening Day Collection)
Public Access Computers:	1.0 Computer per 1,000 served	

3. Does the Library have a formula to define the lot area for a library? I will use the gross square feet per capita figure to identify the size of the library building that would be needed to serve the Centennial community.

The current land requirement for a library facility is calculated by using a land-to-building ratio of 4:1, four times the amount of land for every gross square foot of building.

4. Proposition L was passed in June 1997 and assesses a special yearly tax per parcel for library services. In April 2003, this special tax was $23.79 per parcel. Has it now or will it soon increase?

The Special Tax is currently $24.76 per parcel. Effective July 1, 2004, the new rate is $25.22 per parcel. This amount is subject to an annual CPI or 2% adjustment, whichever is less.

APPENDIX 4.19

Utilities

Utilities Technical Report
Landmark Village

November 2009

Prepared for:

Newhall Land
Valencia, CA

Prepared by:

ENVIRON International Corporation
Emeryville, CA

ENVIRON
www.environcorp.com

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Tables

Table 1 Summary of Electricity Usage for Landmark Village

Table 2 Summary of Natural Gas Usage for Landmark Village

Acronyms

BARBD	Building America Research Benchmark Definition
CEC	California Energy Commission
CEUS	California Commercial End-Use Survey
DU	dwelling unit
kWh/yr	kilowatt hours per year
LVCCTR	Landmark Village Climate Change Technical Report
MMBTU/yr	million British Thermal Units per year
SCE	Southern California Edison
SCGC	Southern California Gas Company

1.0 EXECUTIVE SUMMARY

Landmark Village is a proposed mixed use community within the approved Newhall Ranch Specific Plan area. This community would be located in northern, unincorporated Los Angeles County, within the Santa Clarita Valley planning area. The Landmark Village development would contain 1,444 residences, including 308 single-family homes and 1,136 multi-family units, as well as up to 1,033,000 square feet of commercial and mixed-use space, an elementary school, fire station, public and private recreation facilities, trails, and various road improvements.

In this report, ENVIRON summarizes the overall electricity and natural gas use for Landmark Village reported in the Landmark Village Climate Change Technical Report (LVCCTR), dated September 2009. Close reference to the LVCCTR should be made when reviewing this report to better understand the energy use estimations presented below.

Buildout of Landmark Village would place new demands on electrical and natural gas services provided by Southern California Edison (SCE) and Southern California Gas Company (SCGC). Tables 1 and 2 show the Landmark Village annual electricity and natural gas usage. These tables show two scenarios: the baseline energy use (i.e., the standard energy use associated with buildout of residential and non-residential buildings in compliance with the 2008 Title 24 standards,[1] and the standard operation of recreation center pools), and the Landmark Village energy use (i.e., the energy use associated with buildout of residential and non-residential buildings that are 15 percent more energy efficient than required by the 2008 Title 24 standards, and the use of solar heating at all recreation center pools). The Landmark Village scenario results in future electricity and natural gas use of 31,151,393 kWh/yr and 90,147 MMBTU/yr, respectively. The baseline scenario results in future electricity and natural gas use of 33,646,878 kWh/yr and 138,573 MMBTU/yr, respectively. Some of the electricity reported here, for both the Landmark Village and baseline scenarios, is for water conveyance that will not be spent in the area; therefore, infrastructure for that need not necessarily be included.

2.0 ESTIMATION OF ANNUAL ELECTRICITY AND NATURAL GAS USAGE FROM RESIDENTIAL BUILDINGS

Residential buildings include single-family homes, attached homes, apartments, and condominiums. This section describes the methods used to estimate the electricity and natural gas use associated with activities in those buildings.

ENVIRON calculated annual electricity and natural gas use for each residential building type as described in the LVCCTR. The project applicant has committed to (i) a 15 percent improvement over 2008 Title 24 standards for all residential buildings and (ii) a renewable electricity equivalent for all single-family detached homes. In this Utilities Technical Report, ENVIRON incorporated the 15 percent improvement over Title 24, but did not account for renewable energy, as it is uncertain if the renewable energy commitment made by the project applicant would come from the utility provider or from local distributed generation. If this renewable energy was to come from the utility provider, the transmission and distribution systems needed to deliver the electricity would be the

[1] Title 24 – California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code

same as if there were no renewable electricity. Therefore, in an effort to be conservative, ENVIRON estimated the electricity use assuming the renewable portion would come from the utility provider.

To calculate overall electricity and natural gas usage, ENVIRON multiplied the number of dwelling units for each housing type by the annual electricity and natural gas usage per dwelling unit. The total electricity and natural gas usage from these three housing types is given in Tables 1 and 2.

If the residential units at Landmark Village are minimally compliant with the 2008 Title 24 standards (i.e., the baseline scenario), the total electricity and natural gas use is estimated to be 7,108,266 kWh/yr and 47,113 MMBTU/yr, respectively. The total electricity and natural gas use in residential buildings in Landmark Village, assuming the residential dwellings are 15 percent more efficient than the 2008 Title 24 standards require, is estimated to be 6,616,526 kWh/yr and 41,089 MMBTU/yr, respectively.

3.0 ESTIMATION OF ANNUAL ELECTRICITY AND NATURAL GAS USAGE FROM NON-RESIDENTIAL BUILDINGS

Non-residential buildings include all structures, except residences, that may exist in a development, such as government, municipal, commercial, retail, and office space. This section describes the methods used to estimate the electricity and natural gas use associated with activities in those buildings.

As detailed in the LVCCTR, the overall electricity and natural gas use for Landmark Village non-residential buildings was calculated based on data provided in the 2006 California Commercial End-Use Survey (CEUS), as developed by the California Energy Commission (CEC); see the LVCCTR for detailed calculations and methodologies.

ENVIRON calculated annual electricity and natural gas use for each type of non-residential building as described in the LVCCTR. The project applicant has committed to (i) a 15 percent improvement over the 2008 Title 24 standards for all non-residential buildings, and (ii) a renewable electricity equivalent for every 1,600 square feet of roof space (approximately 8% of the rooftop building space). In this Utilities Technical Report, ENVIRON incorporated the 15 percent improvement over Title 24, but did not account for renewable energy, as it is uncertain if the renewable energy commitment made by the project applicant would come from the utility provider or from local distributed generation. If this renewable energy was to come from the utility provider, the transmission and distribution systems needed to deliver the electricity would be the same as if there were no renewable electricity. Therefore, in an effort to be conservative, ENVIRON estimated the electricity use assuming the renewable portion would come from the utility provider.

To calculate overall electricity and natural gas usage, ENVIRON multiplied the building type-specific annual electricity and natural gas usage per square footage by the total square footage for that building type. The total electricity and natural gas usage from these three housing types is given in Tables 1 and 2.

If the non-residential buildings at Landmark Village are minimally compliant with the 2008 Title 24 standards (i.e., the baseline scenario), the total electricity and natural gas use is estimated to be 23,015,456 kWh/yr and 51,099 MMBTU/yr, respectively. The total electricity and natural gas use

in non-residential buildings in Landmark Village, assuming the residential dwellings are 15 percent more efficient than 2008 Title 24 requires, is estimated to be 21,011,712 kWh/yr and 49,058 MMBTU/yr, respectively.

4.0 ESTIMATION OF ANNUAL ELECTRICITY AND NATURAL GAS USAGE FROM MUNICIPAL SOURCES

Municipal sources include public lighting and the supply, treatment, and distribution of water and wastewater. These sources use electricity, but do not use natural gas. The LVCCTR calculates electricity usage for these sources based upon CEC data. Landmark Village municipal sources will use 2,062,959 kWh/yr. Here, we conservatively list baseline and Landmark Village electricity use as the same value. Most of the municipal electricity use is for water conveyance, and most of that will not be spent in the area. Therefore, infrastructure for water conveyance electricity use need not necessarily be included.

5.0 ESTIMATION OF ANNUAL ELECTRICITY AND NATURAL GAS USAGE FROM RECREATIONAL CENTERS (POOLS)

As described in the LVCCTR, ENVIRON assumed that outdoor competition-size swimming pools would be the main sources of energy use in Landmark Village recreation centers. The project applicant has committed to using solar heating to heat the pools; pools will not use natural gas for heating. The baseline scenario, which uses traditional natural gas heating, would use 40,362 MMBTU/yr, as calculated in the LVCCTR. Table 1 lists electricity required to run the pool filter pumps as calculated in the LVCCTR. The Landmark Village pools' electricity usage is equivalent to the baseline electricity usage, a total of 1,460,196 kWh/yr.

6.0 OVERALL ELECTRICITY AND NATURAL GAS USE

Tables 1 and 2 show the future electricity and natural gas use at Landmark Village. These tables present two scenarios: the baseline scenario represents Landmark Village without certain energy efficiency project design features, and the Landmark Village scenario incorporates energy efficient project design features. The baseline total electricity and natural gas use are 33,646,878 kWh/yr and 138,573 MMBTU/yr, respectively. Landmark Village total electricity and natural gas use are 31,151,393 kWh/yr and 90,147 MMBTU/yr, respectively. Landmark Village, therefore, uses 7% less electricity and 35% less natural gas than the baseline scenario.

Residential buildings, if minimally compliant with the 2008 Title 24 standards, would account for electricity and natural gas use of 7,108,266 kWh/yr and 47,113 MMBTU/yr, respectively. Residential buildings, if 15% more efficient than the 2008 Title 24 standards require, would account for electricity and natural gas use of 6,616,526 kWh/yr and 41,089 MMBTU/yr, respectively. Therefore, residential buildings use 7% less electricity and 13% less natural gas than minimally Title 24 compliant buildings.

Non-residential buildings, if minimally compliant with the 2008 Title 24 standards, would account for electricity and natural gas use of 23,015,456 kWh/yr and 51,099 MMBTU/yr, respectively. Non-residential buildings, if 15% more efficient than the 2008 Title 24 standards require, would

account for electricity and natural gas use of 21,011,712 kWh/yr and 49,058 MMBTU/yr, respectively. Therefore, non-residential buildings use 9% less electricity and 4% less natural gas than minimally Title 24 compliant buildings.

Recreation centers (pools) would use of 40,362 MMBTU/yr of natural gas if the pools were heated using traditional natural gas heaters. If heated with solar heating systems, as proposed, the pools would require no natural gas. This is a 100% natural gas savings over the baseline scenario.

7.0 UNCERTAINTIES IN ELECTRICITY AND NATURAL GAS CALCULATIONS

It should be noted that that the calculations presented above rely on assumptions made in the LVCCTR. These assumptions, and the uncertainties that result from them, are restated below:

Residential

- Although all buildings in the development will be Title 24 compliant, Title 24 does not specify building dimensions (e.g., size, height, or orientation). Title 24 also provides significant flexibility for window types, window amounts, insulation choice, and other parameters. This uncertainty is expected to neither over- nor underestimate emissions. Title 24 grants enough flexibility that if a designer puts in more windows than is "allowed" under the prescriptive measures, the energy efficiency losses can be offset by improving the window quality, or installing a more efficient HVAC system. Although it is unknown how exactly the buildings will be designed, each home will be Title 24 compliant, and thereby all design features of the home that make it less energy efficient will be offset by design features that make it more energy efficient.
- Energy use will vary considerably depending upon the design of the home. The residential units to be built in Landmark Village will vary considerably in size, layout, and overall design. The parameters used here are intended to represent the upper quartile of homes relative to sizes in each category. As such, energy use from the homes that will actually be built in Landmark Village are anticipated to be lower.
- Built environment energy use will vary considerably depending upon the homeowners' habits regarding energy use. For instance, homeowners determine the set point of thermostats, the duration of showers, the usage of lights, if they are to have a second refrigerator, and the temperature of the refrigerator, among other things. The project applicant will have little, if any, influence over homeowner behavior. Current median behavior attributes are presented here. To the extent that individuals are becoming more energy conscious, this will tend to overestimate energy use in the future.
- Plug-in energy use will vary considerably depending upon the appliances, lights, and other plug-ins installed by the homeowner. The project applicant will have little, if any, influence over these choices made by the homeowner. As above, the current median behavior attributes are presented here. To the extent that individuals are becoming more energy conscious, or appliances are becoming more energy efficient, this will tend to overestimate energy use in the future.

Non-Residential

- For new developments, the exact types of buildings are typically unknown. As such, not all building categories that may actually exist in Landmark Village are represented in this analysis. However, all of the non-residential building area is accounted for and the best available assessment of the building type composition of Landmark Village was used. The tables provided in this section present the differences in energy intensities from building type to building type.
- Although it is unknown exactly how the buildings will be designed, each building will be Title 24 compliant. Therefore all design features of the building that make it less energy efficient will be offset by design features that make it more energy efficient.

Table 1
Summary of Electricity Usage for Landmark Village
Landmark Village
Newhall, California

Source	Annual Electricity Usage			Improvement over Baseline
	Unit	Baseline[4]	Landmark Village[4]	
Residential[1]	kWh/yr	7,108,266	6,616,526	7%
Non-Residential[1]		23,015,456	21,011,712	9%
Municipal[2]		2,062,959	2,062,959	0%
Recreational (Pools)[3]		1,460,196	1,460,196	0%
Total		**33,646,878**	**31,151,393**	**7%**

Notes:

1. Baseline annual electricity usage reflects the electricity usage from residential and non-residential buildings which are minimally compliant with 2008 Title 24 standards. The calculation of Landmark Village annual electricity usage incorporates Newhall's commitment to 15% better than 2008 Title 24 for residential and non-residential buildings. Although Newhall committed to using renewable electricity equivalent to putting photovoltaic systems on all single family detached residences, ENVIRON did not incorporate this electricity savings in this Utilities Technical Report, as it is uncertain if the renewable energy would come from the utility provider or from local distributed generation.
2. Baseline Municipal electricity usage is equivalent to the Landmark Village Municipal electricity usage. Most of the municipal energy use is for water conveyance, and most of that will not be spent in the area, therefore, infrastructure for that need not necessarily be included.
3. Recreation Center (Pools) electricity usage reflects the amount of electricity required to run the pool filter pumps. The Landmark Village electricity usage is expected to be equivalent to the Baseline electricity usage.
4. See individual category footnotes for the definitions of Baseline and Landmark Village annual electricity usage.

Abbreviations:

kWh - kilowatt-hour
Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code
yr - year

Table 2
Summary of Natural Gas Usage for Landmark Village
Landmark Village
Newhall, California

Source	Annual Natural Gas Usage			Improvement over Baseline
	Unit	Baseline[3]	Landmark Village[3]	
Residential[1]	MMBTU/yr	47,113	41,089	13%
Non-Residential[1]		51,099	49,058	4%
Recreational (Pools)[2]		40,362	0	100%
Total		**138,573**	**90,147**	**35%**

Notes:

1. Baseline annual natural gas usage reflects the natural gas usage from residential and non-residential buildings which are minimally compliant with 2008 Title 24 standards. The calculation of Landmark Village annual natural gas usage incorporates Newhall's commitment to 15% better than 2008 Title 24 for residential and non-residential buildings.

2. Baseline annual natural gas usage reflects the amount of natural gas required to heat Recreation Center pools using traditional heaters. The calculation of Landmark Village annual natural gas usage incorporates Newhall's committment to using solar heating rather than natural gas heating for all Recreation Center pools.

3. See individual category footnotes for the definitions of Baseline and Landmark Village annual natural gas usage.

Abbreviations:

MMBTU - Million British Thermal Units
Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code
yr - year

APPENDIX 4.21

Environmental Safety

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September 27, 2004

File No.: 104012

Mr. Mark Dillon
Counsel for Newhall Land
1921 Palomar Oaks Way, Suite 200
Carlsbad, California 92008

Reference: River Village
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

Subject: Report
Phase I Environmental Site Assessment

Dear Mr. Dillon:

BA Environmental is pleased to submit this Phase I Environmental Site Assessment (ESA) report regarding the above-referenced property to Newhall Land. The objective of this Phase I ESA was to assess the potential for contamination at the subject property caused by hazardous materials. To accomplish this, a reconnaissance of the subject property and vicinity was performed, available relevant regulatory records were reviewed, and the property history was researched.

The subject property consists of an approximate 280-acre parcel of land that has been graded and utilized for agricultural production; numerous dirt roads traverse the subject site. Approximately four small buildings exist on the site and are used in activities related to the on-site agricultural production. The subject site is also occupied by several irrigation wells. This project also includes the two borrow sites where fill material will be derived to be placed on the subject property. Borrow Site "A" is approximately 400 acres and Borrow Site "B" is approximately 300 acres. The two borrow sites are primarily in their native states with some dirt roads traversing them. A portion of Borrow Site "A" appears to have been used in the past for agricultural purposes. Mr. John Frye, General Manager, Agriculture and Natural Resources for Newhall Land and Farming, stated that this area was briefly used to grow hay, and that no pesticides were used in this area. There was also some evidence of past oil exploration in this area. An electrical transmission tower is located in Borrow Site "B," as well as evidence of past oil wells. Primary vehicular access to the subject site is from private driveways to the north. Primary vehicular access to Borrow Site "A" is from a dirt road to the south of the subject site or from a dirt road from Potrero Canyon to the south. Primary vehicular access to Borrow Site "B" is from a dirt road to the east of Chiquito Canyon Road.

The review of historical documents indicates that portions of the subject site have been vacant undeveloped land or used as agricultural land from prior to 1903 until the present.

From prior to 1903 until prior to 1991, Southern Pacific Railroad tracks ran along the northern boundary of the subject property. Since at least 1969, the eastern portion of the subject property has been located within the Castaic Junction Oil Field. Several small structures have been located throughout the subject property from prior to 1947 through the present. The configurations and locations of these structures have changed several times since 1947. Since 1947, at least two oil wells, possibly three, have been located near the eastern property boundary. No oil wells currently exist on-site. Sometime prior to 1952, three oil ASTs (located within a containment berm) were also located near the eastern property boundary. By 1968, these ASTs had been removed. A circular AST was located approximately 555 feet south of Highway 126 and approximately 1,000 feet east of the intersection of Walcott Way and Highway 126, from prior to 1952 until prior to 1968. The purpose of this AST is unknown. An oil well has been located in the central portion of the subject property, approximately 555 feet south of the intersection of Walcott Way and Highway 126 from prior to 1952 until prior to 1994. This area has also been occupied by an equipment storage area between 1952 and 1972, and between approximately 1994 to the present. An airstrip occupied the central portion of the subject property since prior to 1968 until prior to 1994, when it was removed. The Indian Dunes Motorcycle Park also occupied the central portion of the subject property from prior to 1972 until prior to 1994, when it was abandoned and subsequently removed. By 1994, the subject property was used for agricultural purposes.

BA Environmental performed a site reconnaissance of the subject property. The site reconnaissance addressed three areas: Subject Property (Tentative Tract Map No. 53108), Borrow Site "A" and Borrow Site "B."

Subject Property (Tentative Tract Map No. 53108)

At the time of the site visit, the subject property was used primarily for agricultural production. Crops included what was believed to be green beans, beets, carrots and other vegetables. Some land appeared to be out of production or fallow. The far western end was occupied by undeveloped land covered by native vegetation. Concrete and asphalt debris was observed scattered throughout the fields. A large pile of asphalt and concrete debris was observed along the northern property boundary. Included in this debris were concrete pipes, an old pickup truck body, old telephone poles and other miscellaneous debris. Approximately 200 feet south-southwest of this pile was a pile of wood debris. Old trash piles and construction debris piles were observed in the western portion of the subject property and along the old railroad easement. The trash observed in these piles appeared to household trash. Old piping was observed scattered in the western portion of the subject property. Some of this piping appeared to be sections of old oil pipelines and some appeared to be transite concrete pipe.

An equipment storage area was observed approximately 50 feet south of the intersection of Walcott Way and Highway 126. This storage area was observed to contain various farm equipment. Two ASTs mounted on trailers were observed in this area. These trailers appeared to be empty. Several empty and partially full 55-gallon steel drums were observed on-site. These drums appeared to contain oil or petroleum products. Staining was observed on the soil throughout this area. One sheet metal building is located in the fenced storage area, and consists of approximately 400 square feet. This building is used to store equipment and grain. This building was formerly an aircraft

hangar, which was associated with an airstrip that was formerly located on the subject site. It is likely that this area was formerly used to fuel and maintain the aircraft and may have been an area used to mix pesticides.

The eastern storage area consists of three buildings and a plastic-sheeting hothouse. The buildings are used for storage and packaging. Farm equipment was observed to be stored in this area. Several small ASTs were observed in this area, as well as agricultural chemical mixing. Several 55-gallon drums and smaller five-gallon buckets were observed. None of these containers were labeled. Some staining was observed on the dirt in this storage area.

Several ASTs containing liquid fertilizers and various other agricultural chemicals were observed in the eastern portion of the subject property. Minor staining was observed on the dirt beneath these ASTs.

One portable diesel-powered pump was observed near the eastern property boundary. Associated with this pump was a small 100-gallon AST on a trailer and an approximate 500-gallon AST sitting on a wooden pallet. The 500-gallon AST was labeled as containing diesel fuel, likely for the pump. Staining was observed on the outside of the AST, as well as on the soil beneath the AST.

An old railroad easement was observed along the northern property boundary, paralleling Highway 126. The railroad tracks have been removed; however, some ballast materials still remain. Debris and trash piles were observed along this easement.

During the site visit, evidence of underground storage tanks (USTs) or wastewater clarifiers was observed on the subject site. The only hazardous materials observed on-site were agricultural chemicals (i.e., pesticides and fertilizers) and petroleum products (i.e., diesel fuel, oil and lubricants).

Four small diameter groundwater monitoring wells (piezometers) were observed on-site. According to Newhall Land personnel, these wells are utilized by Seward Engineering for groundwater elevation data used for engineering purposes.

Several pipelines were observed crossing the subject site. The pipelines were identified visually by either marker signs, or visible piping or pipeline vents. A Southern California Gas pipeline was observed running along the northern property boundary in the railroad easement, and crossing the western end of the subject property. These pipelines are believed to be 18" to 20" in diameter and likely carry natural gas. Where visible, these pipelines appeared to be coated with a tar-like material to prevent corrosion.

A Shell Oil Company petroleum pipeline was also observed to run along the northern property boundary, parallel to the old railroad easement. The size of this pipeline is unknown; however, it is likely to contain crude oil. Approximately 250 feet southeast of the intersection of Chiquito Canyon Road and Highway 126 is a fenced enclosure. This enclosure is adjacent to the Shell Oil Company pipeline and a Shell Oil pipeline vault. A sign on the gate of the enclosure indicates that the enclosure is owned by Eouilon Pipeline Company, and is the Del Valle Booster Station. This is likely a booster station for an oil pipeline. Inside of the enclosure was a pump, a 100-gallon AST likely

containing diesel fuel and two electrical transformers. The pump and AST were observed to be in a concrete containment.

An unidentified pipeline was observed running along the southern edge of the old railroad easement. Where exposed, the pipeline appeared to be approximately 18" to 20" in diameter and was coated with a tar-like substance to prevent corrosion. Two vents, similar to those used in oil pipelines, were observed associated with this pipeline.

Damaged piping was observed on the surface in the old railroad easement. It appeared that this pipeline had been removed. It is uncertain if this pipeline was replaced or completely removed. The pipeline appeared to be 16" to 18" in diameter. Oil staining was observed in the areas where this pipeline was exposed.

A Unocal pipeline was observed to run across the western end of the subject property. The size of this pipeline is unknown; however, the pipeline likely carried oil. Reportedly, this pipeline is currently idle, and not being used.

Borrow Site "A"

This parcel was observed to be primarily undeveloped at the time of the site reconnaissance. The site is covered with native vegetation, which consists of brush, oak trees and native plants. The floor of a small valley/canyon, which runs east to west across the borrow site, appears to have been used in the past for agricultural purposes. Mr. John Frye, General Manager, Agriculture and Natural Resources for Newhall Land and Farming, stated that this area was briefly used to grow hay, and that no pesticides were used in this area. Concrete and wood debris were observed scattered in the agricultural field on the floor of the small valley/canyon. This concrete and wood debris may be the indications of either a former structure or oil exploration activities. An abandoned road was observed running along the northern boundary of this borrow site. A flat, roughly graded dirt pad was observed along this road. This is the location of what is believed to have been an exploratory oil well. At the eastern end of this small valley/canyon is a graded dirt pad with what appears to be a filled-in concrete vault. This is likely the location of a former oil well. No oil staining was observed on this graded pad.

During the site visit, no hazardous substances, or evidence of USTs, ASTs or wastewater clarifiers were observed on this site.

Borrow Site "B"

This parcel was observed to be primarily undeveloped at the time of the site reconnaissance. The site is covered with native vegetation, which consists of brush and native plants. A dirt road crosses the subject property and leads to a Southern California Edison (SCE) transmission tower. Along this dirt road, a concrete pad was observed. This pad had a configuration similar to that used for an oil derrick and a cable tool-drilling rig. It is believed that this was the location of a former oil exploration well. No staining was noted around the concrete pad. Approximately 500 feet up a small access road was a second flat dirt pad. Soil in this area was observed to be stained by what is

believed to be crude oil. This may have been the location of a second exploratory oil well.

During the site visit, no hazardous substances, or evidence of USTs, ASTs or wastewater clarifiers were observed on this site.

Four small diameter groundwater-monitoring wells (piezometers) were observed on Tentative Tract Map 53108. Reportedly, these wells are utilized for groundwater elevation data used for engineering purposes.

Three water wells were observed in the western portion of the subject property. One was observed in the central portion near the intersection of Walcott Way and Highway 126. Approximately six water wells were observed along the eastern property boundary. All of these water wells are used to supply irrigation water to the agricultural crops on the subject site.

Three oil wells have been documented on the subject property. In addition, evidence of three possibly four oil wells has been noted in Borrow Site "A." Evidence of two oil wells has also been noted in Borrow Site "B."

BA Environmental completed limited soil sampling at the above-referenced site to assess whether past use of pesticides or herbicides has impacted the shallow soils beneath the previously cultivated areas on Tentative Tract No. 53108.

Sixty-nine shallow hand auger borings were advanced to depths of between one and two feet below ground surface (bgs).

Field observations of soil samples collected from all of the borings revealed no unusual odors or discoloration. Groundwater was not encountered in any of the shallow borings.

Samples collected were composited at the laboratory in groups of four, except one sample which was composited from five samples. The composited samples were analyzed for Organochlorine Pesticides (OCP), Organophosphorous Pesticides (OPP) and Chlorinated Herbicides (CH) using Environmental Protection Agency (EPA) Method Nos. 8081 (OCP) , 8141 (OPP) and 8151 (CH).

All of the soil samples analyzed were reported not to contain detectable concentrations of OPP or CH.

Several OCPs were detected in the soil samples analyzed. Soil samples G11, G13, G14, G15 and G17 were reported to contain concentrations of alpha-chlordane ranging from 0.001 to 0.018 milligrams per kilogram (mg/kg). Samples G3, G11, and G13, G14, G15 and G17 were reported to contain concentrations of gamma-chlordane ranging from 0.001 to 0.027 mg/kg. 4,4-DDD was detected in samples G13 through G15 at a concentration of 0.001 mg/kg. Samples G11 and G13 thorough G17 were reported to contain 4,4-DDE in concentrations ranging from 0.002 to 0.034 mg/kg. 4,4-DDT was detected in samples G7 and G11 through G17 in concentrations ranging from 0.002 to 0.023 mg/kg. Dieldrin was detected in samples G6 and G14 at 0.002 and 0.003 mg/kg, respectively. Endosulfan I was detected in sample G14 at a concentration of 0.001

mg/kg. Samples G11 and G17 contained concentrations of Endosulfan II at 0.018 and 0.034 mg/kg, respectively. Endosulfan Sulfate was detected in sample G14 at a concentration of 0.005 mg/kg. Samples G9 through G17 were reported to contain Endrin at concentrations ranging from 0.001 to 0.136 mg/kg. Sample G13 was reported to contain Heptachlor Epoxide at a concentration of 0.001 mg/kg.

The concentrations of OCPs detected on the subject site were compared with the Preliminary Remediation Goals (PRGs) set up by the United States Environmental Protection Agency (EPA) for various compounds and metals. This comparison revealed that none of the OCPs detected at the subject site exceeded the residential or industrial use PRGs for those compounds.

BA Environmental performed a review of available government database records. The subject property is not listed on any of the searched databases. The closest off-site facility is located to the north across Henry Mayo Drive (Highway 126). This facility is located in an assumed cross-gradient location relative to the regional groundwater flow direction. No impact from these facilities is likely. Based on the status and distances of the remaining facilities, there is a low potential for environmental impact due to off-site sources.

BA Environmental has performed a Phase I ESA, in conformance with the scope and limitations of ASTM Practice E 1527-00, of the vacant parcel of land, which is located south of the intersection of Henry Mayo Drive (Highway 126), north of the Santa Clara River, east of the intersection of Henry Mayo Drive (Highway 126) and Chiquito Canyon Road, and west of Castaic Creek, which is referred to as River Village, Tentative Tract Map No. 53108, Highway 126, and the two borrow sites, in Newhall Ranch, California. Any exceptions to, or deletions from, this practice are described in the Introduction section of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property, except the following:

- Up to three oil wells and associated production area may exist on the subject property, and several on Borrow Sites "A" and "B";
- Several ASTs, likely associated with oil production, existed on-site in the 1950s;
- Several pipelines cross the subject property, and one pipeline crosses Borrow Site "B";
- Scattered suspect ACM debris was observed in the central and western portions of the subject property;
- Staining was observed beneath what appeared to be an abandoned pipeline along the old railroad easement, and near what was believed to be a former oil well on Borrow Site "B." In addition, staining was observed beneath a diesel AST associated with a portable water pump located in the eastern portion of the subject property; and
- Two equipment storage areas were observed on the subject site, one located in the eastern portion of the subject property and one in the central portion. The storage area in the central portion was associated with a former airstrip. Agricultural

chemical storage and mixing was observed or may have taken place at these areas in the past. Soil staining was observed in both areas.

BA Environmental recommends the following:

- If disturbed, or if located within an area of redevelopment, all former oil wells located on the subject property or on either borrow site should be reabandoned according to all applicable local and state regulations;
- If the pipelines on the subject site and Borrow Site "B" are not to be used in the future, they should be abandoned and soils beneath them assessed for petroleum hydrocarbon leakage. If the pipelines are planned to remain in use, the pipelines should be assessed for possible hydrocarbon leakage;
- Properly dispose of scattered suspect ACMs; and
- The areas of former ASTs, current agricultural storage areas and current soil staining observed on the subject site or Borrow Site "B" should be assessed for potential impact to the subject site.

Although not a recognized environmental condition, it is recommended that all groundwater monitoring wells or production water wells be abandoned according to applicable local and state regulations, prior to redevelopment.

If you have questions regarding this project or report, please contact us at (818) 500-1898.

Respectfully submitted,
BA ENVIRONMENTAL

Russell M. Cote, M. Sc., R.G. No. 7139
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PHASE I ENVIRONMENTAL SITE ASSESSMENT
River Village
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

INTRODUCTION

BA Environmental is pleased to submit this Phase I Environmental Site Assessment (ESA) report to Newhall Land. This report is regarding the parcel of land located south of the intersection of Henry Mayo Drive (Highway 126), north of the Santa Clara River, east of the intersection of Henry Mayo Drive (Highway 126) and Chiquito Canyon Road, and west of Castaic Creek, which is referred to as River Village, Tentative Tract Map No. 53108, Highway 126, in Newhall Ranch, California.

This report was prepared in accordance with the Proposal and Contract between BA Environmental and Newhall Land, dated January 15, 2004 and Purchase Authorization PA-PL20237.

The purpose of the ESA is to identify, to the extent feasible, recognized environmental conditions, which can be defined as, "The presence or likely presence of any hazardous substance or petroleum products under conditions that indicate an existing release, a past release or a material threat of any hazardous substances or petroleum products."

This Phase I ESA meets the general requirements of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: E 1527-00. The ASTM standard practice defines good commercial and customary practice for conducting ESAs using reasonable inquiry. The scope of services for this Phase I ESA consisted of several tasks, including:

- A reconnaissance of the site and its vicinity;
- Interviews with current owners and occupants of the subject property, and personnel at local government agencies;
- A compilation of the property history, including the review of previous environmental reports regarding the subject property (if available);
- An agency list search of facilities with recorded environmental issues located within the radii required by ASTM; and
- A summary of our findings, conclusions and recommendations.

Additional services that were provided include:

- A visual survey of asbestos containing materials (ACMs)
- A visual survey and review of map of designated wetlands;
- A review of a survey and map of radon zones; and
- Collection of soil samples for pesticide and herbicide screening.

As per ASTM Practice E 1527-00, there are no deviations from, or deletions of, the general requirements of this standard practice contained in this report.

A Phase I ESA is a non-intrusive examination. As such, it is not a full and complete assessment of all environmental conditions. Adverse conditions may exist that could not be discovered by such an assessment. BA Environmental has made every reasonable effort to discover and interpret the information and current conditions regarding the site within the time available. We will recommend prudent additional investigations, if deemed necessary.

This report must not be regarded as a guarantee that no further contamination exists beyond that which may have been detected within the building or beneath the property. If additional relevant information about the property is brought to our attention, the conclusions and recommendations contained in the report may not be valid.

This assessment relied upon information obtained from the site reconnaissance and from relevant regulatory agencies. BA Environmental believes that the information contained herein is reliable. However, BA Environmental cannot guarantee the accuracy of information provided by others.

SITE LOCATION

The subject property is a parcel of land located south of Henry Mayo Drive (Highway 126), north of the Santa Clara River, east of the intersection of Henry Mayo Drive (Highway 126) and Chiquito Canyon Road, and west of Castaic Creek, which is referred to as River Village, Tentative Tract Map No. 53108, Highway 126, in Newhall Ranch, California. This project also includes the two borrow sites where fill material will be derived to be placed on the subject property. Borrow Site "A" is located south of the Santa Clara River and west of Interstate 5 and consists of approximately 400 acres. Borrow Site "B" is located northeast of the intersection of Chiquito Canyon Road and Henry Mayo Drive and consists of approximately 300 acres. The subject property may be reached from the Interstate Freeway 5 (Golden State Freeway), exit Highway 126. Proceed west approximately 4.2 miles to the western end of the subject property. Primary vehicular access to the subject site is from private driveways to the north.

The subject property consists of an approximate 280-acre parcel of land that has been graded and utilized for agricultural production, and numerous dirt roads traverse the subject site. Approximately four small buildings exist on the site and are used in activities related to the on-site agricultural production. The subject site is also occupied by several irrigation wells. The borrow sites are primarily in their native states with some dirt roads traversing them. A portion of Borrow Site "A" has been used in the past for agricultural purposes as well as having some evidence of past oil exploration. An electrical transmission tower is located in Borrow Site "B," as well as evidence of past oil wells.

Adjacent land use to the subject site includes agricultural land and undeveloped land to the west, Castaic Creek to the east, the Santa Clara River to the south, and Highway 126 followed by Chiquita Canyon Landfill to the north (Figures 1 and 2).

Topographic Map Review

The property is depicted on the Val Verde, California Topographic Quadrangle map of the United States Geological Survey (USGS).[1] Tentative Tract Map No. 53108 encompasses portions of Sections 14, 22 and 23 Township 4 North, Range 17 West of the San Bernardino Base and Meridian. Borrow Site "A" encompasses portions of Sections 22 and 23, Township 4 North, Range 17 West of the San Bernardino Base and Meridian. Borrow Site "B" encompasses portions of Sections 15 and 22 Township 4 North, Range 17 West of the San Bernardino Base and Meridian. The subject site is located in a valley formed by the Santa Clara River. Borrow Area "A" is located on the eastern flank of Adobe Canyon. A smaller canyon cuts across Borrow Site "A." Borrow Area "B" is located on the northeastern edge of the intersection of Chiquito Canyon and the valley formed by the Santa Clara River.

Tentative Tract Map No. 53108 is located south of Henry Mayo Drive (Highway 126), north of the Santa Clara River, east of the intersection of Henry Mayo Drive (Highway 126) and Chiquito Canyon Road, and west of Castaic Creek. The subject property is depicted as being vacant undeveloped land. Several small structures are depicted on the subject site. A landing strip is depicted on the subject property, approximately 200 feet south of Highway 126. This landing strip extends across the eastern half of the subject property. Southern Pacific Railroad tracks are also depicted, approximately 20 to 50 feet south of Highway 126.

Borrow Site "A" is located south of the Santa Clara River and west of Interstate 5 and is depicted as undeveloped land with several dirt trails traversing it. Borrow Site "B" is located northeast of the intersection of Chiquito Canyon Road and Highway 126 and is depicted as undeveloped land with several dirt trails traversing it.

A portion of Tentative Tract Map No. 53108 is part of the Castaic Union Oil Field. Borrow Site "A" is part of the Newhall-Portero Oil Field. Borrow Site "B" is located on the eastern end of the Del Valle Oil and Gas Field. Oil wells are depicted in the eastern and central portions of the subject site. Water wells are depicted in the eastern and western portions of the subject property.

The subject site is located in a valley formed by the Santa Clara River. Borrow Sites "A" and "B" are located in the hills along the flanks of this valley. The topography of the site and the surrounding area slopes toward the Santa Clara River or moderately on the flanks of the valley. The site generally slopes to the west-southwest at a gradient of approximately 50 feet per mile. The elevation at the site is approximately 420 feet above mean sea level (msl). The elevation ranges from 900 feet above msl at the west end of Tentative Tract Map No. 53108 to 1,200 feet above msl in Borrow Site "A."

The Santa Clara River is located adjacent to the south of River Village Tentative Tract Map No. 53108, and Castaic Creek is adjacent to the east. Several intermittent streams which drain into the Santa Clara River are located within a one-mile radius of the subject site and the two borrow sites. No other major bodies of surface water (i.e., oceans, lakes, rivers, streams, etc.) are located within a one-mile radius of the site.

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1 USGS Map, Newhall, California Quadrangle, 1952, photo-revised 1988.

A review of the topographic map and oil and gas maps indicates that several oil or gas wells are located on the subject site, or in the site vicinity.[2] These wells were listed as "abandoned uncompleted."

GEOLOGY AND HYDROGEOLOGY

The subject site is located on the alluvial plain of the Santa Clara River and tributaries. Underlying sediments consist of alluvial and flood plain deposits of silt, sands and gravels. Sand is medium to coarse grained, and cobbles are found to increase in size with depth. The Plio-Pleistocene Saugus Formation, a thin to moderately thick bedded non-marine deposit, ranging from reddish-brown siltstones, silty sandstones to conglomerates, underlies the Quaternary alluvial sediments and outcrops in the northern and eastern portion of the subject property. The Newhall Segment of the San Gabriel Fault, which is classified as a late Quaternary fault which cuts strata of Pleistocene age, is located within 500 feet of the subject site.[3]

According to the County of Los Angeles, Department of Public Works, Hydraulic Conservation Division, which maintains information on groundwater depth from the county-owned wells, the closest well to the subject property, listed with their department, is located approximately 1,500 feet west of the confluence of the Santa Clara River and Castaic Creek. This well is identified as #6967, and was last measured on June 19, 2003. The data indicates that from the ground surface depth to groundwater surface was 24.3 feet, and that the ground surface elevation at the well head is 949.7 feet above msl. Groundwater flow direction is expected to flow to the south/southwest following topography.[4] A groundwater monitoring well located approximately 200 feet north of the subject property, associated with the Chiquito Canyon Landfill, was reported to have groundwater at approximately 32 to 36 below ground surface (bgs).

HISTORICAL REVIEW

As part of the Historical Review, BA Environmental reviewed historical aerial photographs, historical fire insurance maps, oil and gas well maps, city records, and building department records.

Historical Aerial Photographs

Historical aerial photographs of the site were reviewed for the years 1928 (earliest photograph available), 1947, 1952, 1968, 1972, 1976, 1980, 1988, 1989, 1990, 1993, 1994, 1995 and 1999.[5] Copies are included in Appendix B.

1928
The portion of the subject site (Tentative Tract Map No. 53108) appeared to be an undeveloped river channel with native vegetation, while the eastern portion appeared to

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2 Munger Map Book of California/Alaska Oil and Gas Fields, 37th Edition, June 1993.

3 1994 Fault Activity Map of California and Adjacent Areas (1:750,000 scale), California Department of Conservation, Division of Mines and Geology.

4 County of Los Angeles Department of Public Works, Hydrologic Records, records request October 14, 2003.

5 The EDR Aerial Photograph Print Service, Inquiry No. 1108642-9, January 15, 2004 and Continental Aerial Photography, Cypress, California 1952, 1972, 1980, 1988, 1990, 1993, 1995 and 1999.

be occupied by agricultural land. Railroad tracks ran along the northern property boundary, parallel to Highway 126. Borrow Sites "A" and "B" appeared to be undeveloped land covered by native vegetation. A small valley or canyon cuts across Borrow Site "A," from east to west. Adjacent properties to the subject property include Castaic Creek to the east, the Santa Clara River Channel to the west and south, and Highway 126 to the north. Adjacent properties to Borrow Site "B" include undeveloped land covered by native vegetation to the north, east and west, and Highway 126 to the south. Adjacent properties to Borrow Site "A" include undeveloped land covered by native vegetation to the north, south, east and west.

1947

There were no significant changes in the subject property, except near the eastern property boundary. Near the eastern property boundary, four small structures and what appeared to be an oil well were observed. Borrow Site "B" was still observed to be undeveloped land; however, a dirt road was observed to traverse it. What appeared to be a concrete pad for an oil well was observed next to this road. At the end of the road was what appeared to be the location of a possible second oil well. There were no significant changes in Borrow Site "A." There were no significant changes in the properties adjacent to the subject site. There were no significant changes to the properties adjacent to Borrow Site "B," except that there appeared to be an oil field to the west. There were no significant changes to the properties adjacent to Borrow Site "A," except to the west, which was occupied by agricultural land, and to the south, which appeared to be an oil field.

1952

The subject site remained either an undeveloped river channel or agricultural land. A dirt road was observed to traverse north to south across the central portion of the subject property, in the area of the present intersection of Wolcott Way and Highway 126. In this same area, south of Highway 126, were what appeared to be a storage area and several structures. Near the eastern property boundary were what appeared to be one structure, two wells (possibly water wells), one oil well (located within a bermed containment), and three aboveground storage tanks (AST), likely wash tanks in a bermed containment. Located between the eastern property boundary and the present intersection of Wolcott Way and Highway 126 (approximately 555 feet south of Highway 126 and approximately 1,000 feet east of the intersection of Walcott Way and Highway 126) was a circular structure interpreted to be an AST. Railroad tracks were still present south of Highway 126. There appeared to be no significant changes in properties adjacent to the subject property, or the two borrow sites.

1968

There were no significant changes to the subject property, except that an airstrip was present in the central portion of the subject property. The storage area was still present in the central portion of the subject property. Two structures were observed near the eastern property boundary. These structures are believed to be related to the agricultural activities. The three ASTs and oil well observed in this area in 1952 were not present. There were no significant changes in the two borrow sites, except that a dirt road was observed to traverse west to east across Borrow Site "B." There were no significant changes in the properties adjacent to the subject site or the two borrow sites.

1972

There were no changes in the eastern or western portions of the subject property, except that the airstrip had been extended to the east. The central portion of the property was still occupied by the airstrip; however, a significant part of the central portion of the

subject property was occupied by a motorcycle park (Indian Dunes Motorcycle Park). In addition, the railroad tracks along the northern property boundary appeared to have been removed. There were no significant changes in the two borrow sites. There were no significant changes in the properties adjacent to the subject property or the two borrow sites, except that Chiquito Canyon Land Fill was located north of Highway 126.

1976, 1980, 1988, 1989 and 1990
There were no significant changes in the subject property. In 1976, there were two small structures near the airstrip. Two small structures and what was believed to be an oil well were located neat the eastern property boundary. What is believed to be four water wells were also located along the eastern property boundary. In 1980, there were four small structures near the eastern property boundary. There were no significant changes in Borrow Site "A," except that in 1989 a dirt road ending in a rectangular disturbed area (possibly an exploratory oil well) was observed in the small valley/canyon located in this borrow site. There were also no significant changes in Borrow Site "B," except that in 1976 there appeared to be an electrical transmission tower on the borrow site and a transmission line traversed from west to east across the site. There were no significant changes in the adjacent properties.

1993, 1994, 1995 and 1999
The eastern and western portions of the property show no significant changes. In 1994, the airstrip in the central portion of the subject property appears to have been removed, and the motorcycle park (Indian Dunes Motorcycle Park) appeared to have been abandoned. One small structure remains in the central portion of the property near the location of the former airstrip, and two structures are located near the eastern property boundary. By 1996, there were three small structures near the eastern property boundary, along with equipment storage. In 1993, the small valley/canyon in Borrow Site "A" was observed to have several dirt roads crossing it, as well as an area of disturbed vegetation (possible oil exploration activities). In 1994, the floor of this small valley/canyon appeared to be graded and used for agricultural purposes. There were no significant changes in Borrow Site "B." There were no significant changes in the adjacent properties.

Historical Fire Insurance Maps

Historical fire insurance maps have been primarily used by insurance underwriters to determine the risk involved in insuring individual buildings in urban areas against loss due to fire. When available, these maps can provide information regarding the historical use of a particular site and its adjacent properties. Historical fire insurance maps were not available for the subject property.[6]

Munger Map Review

A review of relevant Munger oil and gas field maps indicates that the subject site is located within Castaic Junction Oil Field on Tentative Tract Map No. 53108. Several oil wells were reported to have been drilled on the subject property or within 0.25 miles of the subject property. The approximate locations are plotted on Figure 2 and 3. No indication of oil wells was observed during the reconnaissance of the subject property or

6 EDR Sanborn® Map Report, Inquiry No. 1108642.5s, January 8, 2004.

adjacent properties.[7] Indications of two oil wells on Borrow Site "B," and possibly one on Borrow Site "A" were observed on the day of the site reconnaissance.

Historical Topographic Maps

BA Environmental reviewed the Santa Susana and Val Verde, California Topographic Quadrangle maps for the years 1903, 1916, 1941, 1943, 1947, 1952, 1969, 1988, 1991 and 1995.[8] Copies are included in Appendix C.

1903 and 1916
The subject site (Tentative Tract Map No. 53108) and Borrow Site "B" and Borrow Site "A" and surrounding areas were depicted as vacant, undeveloped land in the Santa Clara River Valley. The Southern Pacific Railroad was depicted along the northern boundary of the subject property (Tentative Tract Map No. 53108). A highway was depicted in the general vicinity of Highway 126. The Santa Clara River was depicted to the south of the subject site and Castaic Creek was depicted to the east of the subject property. The small community of Castaic was depicted to the east.

1941, 1943 and 1947
Significant changes were not observed on the subject property or adjacent properties to the north, south, east or west. In 1941, dirt trails were observed to cross the subject site. Some wooded areas are also depicted on the map. There appears to have been two oil wells located on Borrow Site "A," and two more located just north of the northern boundary of area "A." The Del Valle Oil Field was located west of Borrow Site "B," and the Newhall-Potrero Oil Field was located to the west and south of Borrow Site "A." Newhall Ranch was located near the intersection of Highway 126 and Highway 99 (Interstate Highway 5). The small community of Val Verde was visible to the north of the subject property. Chiquito Canyon Road was visible for the first time on the 1941 map. A dirt road extended from Chiquito Canyon south in the vicinity of Borrow Site "A."

1952
The subject site was still depicted as vacant land with some wooded areas. Two water wells and two small structures were depicted near the western boundary of the subject property. One oil well was depicted in the central portion of the subject property, near the current farm equipment storage area observed on the day of the site visit. Four water wells, one oil well and three oil tanks were depicted near the eastern boundary of the subject property. Significant changes were not observed on Borrow Site "A" or Borrow Site "B." Significant changes were not observed in the adjacent properties. Highway 126 was labeled "Saugus Ventura Road."

1969
Significant changes were not observed on the subject property, except that a landing strip extended across the subject property and terminated approximately 3,000 feet to the northeast. The eastern portion of the subject site is labeled as being in the Castaic Junction Oil Field. The oil tanks depicted on the 1952 topographic map were not depicted on this map. The wells and structures observed on the 1952 map were still present. Four rectangular shaped buildings were depicted near the southern boundary of the subject property on what is believed to be an adjacent property. Additional dirt trails

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7 Munger Map Book of California/Alaska Oil and Gas Fields, 37th Edition, June 1993.

8 The EDR Historical Topographic Map Report, Inquiry No. 1063369-5, October 16, 2003.

were observed in the vicinity of Borrow Sites "A" and "B." The Del Valle Oil and Gas Field is located to the west of the subject site and the Newhall-Potero Oil Field is located to the south and west of the subject site.

1988 and 1991
Significant changes were not observed on the adjacent properties to the north, south, east or west. The present day Chiquita Canyon Landfill was labeled "gravel pit" on this map.

1995
Significant changes were not observed on the subject property, except that a small structure was depicted next to the oil well located in the central portion of the subject property. This structure appears to be in the same location as the structure associated with the equipment storage area in this same area, observed on the day of the site visit. Several dirt trails are depicted traversing the subject property, and the Southern Pacific Railroad tracks were no longer depicted. There were no significant changes in the two borrow sites or the adjacent properties. The Chiquita Canyon Landfill had been expanded between 1991 and 1995. The landing strip that was first observed in 1969 had been removed by 1995.

Building Records

The Los Angeles County Department of Public Works Building and Safety Department and Tax Assessors office were contacted regarding building permits and certificates of occupancy for the site.[9] According to the Los Angeles County Department of Public Works Building and Safety Department, no permits existed for the subject property.

Historical Summary

The review of historical documents indicates that portions of the subject site have been vacant undeveloped land or used as agricultural land from prior to 1903 until present. From prior to 1903 until prior to 1991, Southern Pacific Railroad tracks ran along the northern boundary of the subject property. Since at least 1969, the eastern portion of the subject property has been located within the Castaic Junction Oil Field. Several small structures have been located throughout the subject property from prior to 1947 through present. The configurations and locations of these structures have changed several times since 1947. Since 1947, at least two oil wells, possibly three, have been located near the eastern property boundary. No oil wells currently exist on-site. Sometime prior to 1952, three oil ASTs (located within a containment berm) were also located near the eastern property boundary. By 1968, these ASTs had been removed. A circular AST was located approximately 555 feet south of Highway 126 and approximately 1,000 feet east of the intersection of Walcott Way and Highway 126, from prior to 1952 until prior to 1968. The purpose of this AST is unknown. An oil well has been located in the central portion of the subject property, approximately 555 feet south of the intersection of Walcott Way and Highway 126, from prior to 1952 until prior to 1994. This area has also been occupied by an equipment storage area between 1952 and 1972, and between approximately 1994 to the present. An airstrip occupied the central portion of the subject property since prior to 1968 until prior to 1994 when it was removed. The Indian Dunes Motorcycle Park also occupied the central portion of the subject property from

9 County of Los Angeles Public Works Department, Building and Safety Division, and http://assessor.co.la.ca.us/DataMaps/pais.asp., October 23, 2003.

prior to 1972 until prior to 1994 when it was abandoned and subsequently removed. By 1994, the subject property was used for agricultural purposes.

Borrow Sites "A" and "B" have primarily been undeveloped since prior to 1903 until the present. Two oil wells were located near the northern boundary of Borrow Site "A" in 1941. There is no evidence of production from these wells. In 1989 and in 1993, visual evidence of possible oil exploration activities were observed on the floor of a small valley/canyon located on Borrow Site "A." No oil wells currently exist on Borrow Site "A." The floor of the small valley/canyon located in Borrow Site "A" appears to have been used for agricultural purposes from around 1994 through the present.

Some time prior to 1947, a dirt road was constructed across Borrow Site "B," and what appeared to be two oil wells were drilled on this site. No evidence of production was observed. In addition, evidence of a possible oil pipeline was noted to cross Borrow Site "B," along its southern boundary. Evidence of this possible pipeline was noted as early as 1952. Sometime prior to 1976, electrical transmission lines were noted to cross from west to east across Borrow Site "B," and a transmission tower is located on the site.

SITE RECONNAISSANCE AND IMPROVEMENTS

Between January 28, 2004 to February 4, 2004, BA Environmental performed a visual reconnaissance of the subject property located south of Henry Mayo Drive (Highway 126), north of the Santa Clara River, east of the intersection of Henry Mayo Drive (Highway 126) and Chiquito Canyon Road, and west of Castaic Creek, which is referred to as River Village, Tentative Tract Map No. 53108, Highway 126, in the unincorporated portion of Los Angeles County. Planned usage for the subject property will include residential and commercial developments, parks and a school (see Figure 4). This project also includes the two borrow sites where fill material will be derived to be placed on the subject property. Borrow Site "A" is located south of the Santa Clara River and west of Interstate 5 and consists of approximately 400 acres. Borrow Site "B" is located northeast of the intersection of Chiquito Canyon Road and Henry Mayo Drive and consists of approximately 300 acres. Mr. Russell M. Cote of BA Environmental performed the site reconnaissance, unescorted.

The subject property consists of an approximate 280-acre parcel of land that has been graded and utilized for agricultural production; numerous dirt roads traverse the subject site. Approximately four small buildings exist on the site and are used in activities related to the on-site agricultural production. The subject site is also occupied by several irrigation wells. This project also includes the two borrow sites where fill material will be derived to be placed on the subject property. Borrow Site "A" is located south of the Santa Clara River and west of Interstate 5 and consists of approximately 400 acres, and Borrow Site "B" is located northeast of the intersection of Chiquito Canyon Road and Henry Mayo Drive and consists of approximately 300 acres. The two borrow sites are primarily in their native states with some dirt roads traversing them. A portion of Borrow Site "A" appears to have been used in the past for agricultural purposes. Mr. John Frye, General Manager, Agriculture and Natural Resources for Newhall Land and Farming, stated that this area was briefly used to grow hay, and that no pesticides were used in this area. There was also some evidence of past oil exploration in this area. An electrical transmission tower is located in Borrow Site "B," as well as evidence of past oil wells. Primary vehicular access to the subject site is from private driveways to the north. Primary vehicular access to Borrow Site "A" is from a dirt road to the south of the subject

site or from a dirt road from Potrero Canyon to the south. Primary vehicular access to Borrow Site "B" is from a dirt road to the east of Chiquito Canyon Road.

The site reconnaissance section is separated into three sub-sections: Subject Property (Tentative Tract Map No. 53108), Borrow Site "A" and Borrow Site "B."

Subject Property (Tentative Tract Map No. 53108)

At the time of the site visit, the subject property was used primarily for agricultural production. Crops included what was believed to be green beans, beets, carrots and other vegetables. Some land appeared to be out of production or fallow. The far western end was occupied by undeveloped land covered by native vegetation. Concrete and asphalt debris was observed scattered throughout the fields. A large pile of asphalt and concrete debris was observed along the northern property boundary. Included in this debris were concrete pipes, an old pickup truck body, old telephone poles and other miscellaneous debris. Approximately 200 feet south-southwest of this pile is a pile of wood debris. Old trash piles and construction debris piles were observed in the western portion of the subject property and along the old railroad easement. The trash observed in these piles appeared to household trash. Old piping was observed scattered in the western portion of the subject property. Some of this piping appeared to be sections of old oil pipelines and some appeared to be transite concrete pipe.

An equipment storage area was observed approximately 50 feet south of the intersection of Walcott Way and Highway 126. This storage area was observed to contain various farm equipment. Two ASTs mounted on trailers were observed in this area. These trailers appeared to be empty. Several empty and partially full 55-gallon steel drums were observed on-site. These drums appeared to contain oil or petroleum products. Staining was observed on the soil throughout this area. One sheet metal building is located in the fenced storage area, and consists of approximately 400 square feet. This building is used to store equipment and grain. This building was formerly an aircraft hangar, which was associated with an airstrip that was formerly located on the subject site. It is likely that this area was formerly used to fuel and maintain the aircraft and may have been an area used to mix pesticides.

The eastern storage area consists of three buildings and a plastic-sheeting hothouse. The buildings are used for storage and packaging. Farm equipment was observed to be stored in this area. Several small ASTs were observed in this area, as well as agricultural chemical mixing. Several 55-gallon drums and smaller five-gallon buckets were observed. None of these containers were labeled. Some staining was observed on the dirt in this storage area.

Several ASTs containing liquid fertilizers and various other agricultural chemicals were observed in the eastern portion of the subject property. Minor staining was observed on the dirt beneath these ASTs.

One portable diesel-powered pump was observed near the eastern property boundary. Associated with this pump was a small 100-gallon AST on a trailer and an approximate 500-gallon AST sitting on a wooden pallet. The 500-gallon AST was labeled as containing diesel fuel, likely for the pump. Staining was observed on the outside of the AST, as well as on the soil beneath the AST.

Several pumps were observed associated with water wells in the western and eastern portions of the subject property. These pumps are used to supply irrigation water to the

fields under cultivation. Minor staining was observed beneath the pumps.

An old railroad easement was observed along the northern property boundary, paralleling Highway 126. The railroad tracks have been removed; however, some ballast materials still remain. Debris and trash piles were observed along this easement.

During the site visit, evidence of underground storage tanks (USTs) or wastewater clarifiers were observed on the subject site. The only hazardous materials observed on-site were agricultural chemicals (i.e., pesticides and fertilizers) and petroleum products (i.e., diesel fuel, oil and lubricants).

Four small diameter groundwater monitoring wells (piezometers) were observed on-site. According to Newhall Land personnel, these wells are utilized by Seward Engineering for groundwater elevation data used for engineering purposes.

Several pipelines were observed crossing the subject site. The pipelines were identified visually by either marker signs, or visible piping or pipeline vents. A Southern California Gas pipeline was observed running along the northern property boundary in the railroad easement, and crossing the western end of the subject property. These pipelines are believed to be 18" to 20" in diameter and likely carry natural gas. Where visible, these pipelines appeared to be coated with a tar-like material to prevent corrosion.

A Shell Oil Company petroleum pipeline was also observed to run along the northern property boundary, parallel to the old railroad easement. The size of this pipeline is unknown; however, it is likely to contain crude oil. Approximately 250 feet southeast of the intersection of Chiquito Canyon Road and Highway 126 is a fenced enclosure. This enclosure is adjacent to the Shell Oil Company pipeline and a Shell Oil pipeline vault. A sign on the gate of the enclosure indicates that the enclosure is owned by Eouilon Pipeline Company, and is the Del Valle Booster station. This is likely a booster station for an oil pipeline. Inside of the enclosure was a pump, a 100-gallon AST likely containing diesel fuel and two electrical transformers. The pump and AST were observed to be in a concrete containment.

An unidentified pipeline was observed running along the southern edge of the old railroad easement. Where exposed, the pipeline appeared to be approximately 18" to 20" in diameter and was coated with a tar-like substance to prevent corrosion. Two vents, similar to those used in oil pipelines, were observed associated with this pipeline.

Damaged piping was observed on the surface in the old railroad easement. It appeared that this pipeline had been removed. It is uncertain if this pipeline was replaced or completely removed. The pipeline appeared to be 16" to 18" in diameter. Oil staining was observed in the areas where this pipeline was exposed.

A Unocal pipeline was observed to run across the western end of the subject property. The size of this pipeline is unknown; however, the pipeline likely carried oil. Reportedly, this pipeline is currently idle, and not being used.

The Santa Clara River, an intermittent seasonal stream, is located adjacent to the south of the subject property. Castaic Creek a tributary to the Santa Clara River, is located to the east of the subject property. Storm water sheet flows across the subject property to the south into the Santa Clara River and to the east into Castaic Creek.

Borrow Site "A"

This parcel was observed to be primarily undeveloped at the time of the site reconnaissance. The site is covered with native vegetation, which consists of brush, oak trees and native plants. The floor of a small valley/canyon, which runs east to west across the borrow site, appears to have been used in the past for agricultural purposes. Mr. John Frye, General Manager, Agriculture and Natural Resources for Newhall Land and Farming, stated that this area was briefly used to grow hay, and that no pesticides were used in this area. Concrete and wood debris was observed scattered in the agricultural field on the floor of the small valley/canyon. This concrete and wood debris may be the indication of either a former structure or oil exploration activities. An abandoned road was observed running along the northern boundary of this borrow site. A flat roughly graded dirt pad was observed along this road. This is the location of what is believed to have been an exploratory oil well. At the eastern end of this small valley/canyon is a graded dirt pad with what appears to be a filled-in concrete vault. This is likely the location of a former oil well. No oil staining was observed on this graded pad. Storm water sheet flows across the subject property to the west into the unnamed tributary and to the north into the Santa Clara River.

During the site visit, no hazardous substances, or evidence of USTs, ASTs or wastewater clarifiers were observed on this site.

Borrow Site "B"

This parcel was observed to be primarily undeveloped at the time of the site reconnaissance. The site is covered with native vegetation, which consists of brush and native plants. A dirt road crosses the subject property and leads to a Southern California Edison (SCE) transmission tower. A concrete pad was observed along this dirt road. This pad had a configuration similar to that used for an oil derrick and a cable tool-drilling rig. It is believed that this was the location of a former oil exploration well. No staining was noted around the concrete pad. Approximately 500 feet up a small access road was a second flat dirt pad. Soil in this area was observed to be stained by what is believed to be crude oil. This may have been the location of a second exploratory oil well. Chiquito Canyon Road is located adjacent to the west of this parcel. Highway 126 is located adjacent to the south. Storm water flows across the subject property to the east into Chiquito Canyon and south into the Santa Clara River.

During the site visit, no hazardous substances, or evidence of USTs, ASTs or wastewater clarifiers were observed on this site.

Soil Sampling for Pesticides and Herbicides

Scope of Services

The objective of the limited soil sampling was to assess whether past use of pesticides or herbicides have impacted the shallow soils beneath the previously cultivated areas on Tentative Tract No. 53108. BA Environmental proposed to collect up to 15 composite soil samples at a depth of approximately one to two feet below ground surface (bgs).

In order to complete the limited soil sampling activities, BA Environmental performed the following tasks:

a. Collected up to 69 soil samples based upon designated use (agricultural production, grazing, etc.). The locations of the soil samples from which the composites were made are included on Figure 5;

b. Submitted 69 soil samples to a State of California, Department of Health Services (DHS)-certified laboratory to be composited. These samples were composited in the laboratory into 15 composite samples. The 15 composite samples were to be analyzed for Organochlorine Pesticides (OCP), Organophosphorous Pesticides (OPP) and Chlorinated Herbicides (CH), using Environmental Protection Agency (EPA) Method Nos. 8081, 8141 and 8151, respectively;

c. Provided all of the necessary equipment and materials to perform the required services. This equipment included soil sampling equipment.

Soil Sampling Procedures

Between January 29, 2004 and February 5, 2004, BA Environmental conducted limited soil sampling investigation using hand auger equipment. Coordination and supervision of soil sampling activities were performed by a Registered Geologist from BA Environmental.

Sixty-nine shallow soil borings were advanced to a depth of between one and two feet bgs (Figure 3).

Following retrieval of the samples, the samples were labeled with the sample number, collection date and project number, placed in a cooler chilled to approximately 4° C (40° F), and retained for laboratory analyses.

Field observations of soil samples collected from all of the borings revealed no unusual odors or staining.

Decontamination

Quality assurance/quality control (QA/QC) procedures were performed to prevent cross contamination between the samples. Only clean sampling equipment was used for this drilling project. A three-stage tap water wash was used to clean equipment between boring and sampling events. New nitrile gloves were used while obtaining the samples. The soil samples were collected in clean liners.

Sample Handling and Transport

The soil samples collected from the hand auger borings to be used for chemical analyses were placed in a cooler, chilled to approximately 4° C (40° F), and transported to Enviro Chem Inc. of Pomona, California, a State of California DHS-certified laboratory, under a strict chain-of-custody prepared at the time of sampling. The samples were composited by the laboratory.

Quality Assurance/Quality Control (QA/QC)

To increase the confidence levels in the data obtained, a QA/QC program was implemented. QA refers to management of actions designed to maintain precision, accuracy and completeness of the data developed from the project. QC refers to accepted formal procedures and activities specifically designed for the purpose of collecting data that is intended to be reliable and consistent for the site conditions.

The program includes formal procedures for all field activities, including soil sampling, decontamination, instrument calibration, documentation of activities and calculations, and peer review. Routine QC procedures were performed by the laboratory, and included daily calibration of instruments, percent surrogate recoveries and analyses of matrix spikes and matrix spike duplicates (laboratory reports). The laboratory reported the results to be within acceptable percent recoveries with no results exceeding the laboratory established control limits.

Limited Soil Sampling - Laboratory Results

Samples collected were composited at the laboratory in groups of four, except one sample which was composited from five samples. The composited samples were analyzed for Organochlorine Pesticides (OCP), Organophosphorous Pesticides (OPP) and Chlorinated Herbicides (CH), using Environmental Protection Agency (EPA) Method Nos. 8081 (OCP) , 8141 (OPP) and 8151 (CH).

OCP in Soil

Composited soil samples G1 through G17 were analyzed for OCP and the data is presented in Table 1, which is included as an attachment to this report. In summary, samples G11, G13, G14, G15 and G17 were reported to contain concentrations of alpha-chlordane ranging from 0.001 to 0.018 milligrams per kilogram (mg/kg). Samples G3, G11, and G13, G14, G15 and G17 were reported to contain concentrations of gamma-chlordane ranging from 0.001 to 0.027 mg/kg. 4,4-DDD was detected in samples G13 through G15 at a concentration of 0.001 mg/kg. Samples G11 and G13 thorough G17 were reported to contain 4,4-DDE in concentrations ranging from 0.002 to 0.034 mg/kg. 4,4-DDT was detected in samples G7 and G11 through G17 in concentrations ranging from 0.002 to 0.023 mg/kg. Dieldrin was detected in samples G6 and G14 at 0.002 and 0.003 mg/kg, respectively. Endosulfan I was detected in sample G14 at a concentration of 0.001 mg/kg. Samples G11 and G17 contained concentrations of Endosulfan II at 0.018 and 0.034 mg/kg, respectively. Endosulfan Sulfate was detected in sample G14 at a concentration of 0.005 mg/kg. Samples G9 through G17 were reported to contain Endrin at concentrations ranging from 0.001 to 0.136 mg/kg. Sample G13 was reported to contain Heptachlor Epoxide at a concentration of 0.001 mg/kg. The laboratory results are summarized in Table 1. The laboratory report is included in Appendix D.

The concentrations of OCPs detected on the subject site were compared with the Preliminary Remediation Goals (PRGs) set up by the United States Environmental Protection Agency (EPA) for various compounds and metals. This comparison revealed that none of the OCPs detected at the subject site exceeded the residential or industrial use PRGs for those compounds. Based on these results, there is a low potential for threat to human health or the environment.

OPP in Soil

Composited soil samples G1 through G17 were analyzed for OPP and the data is presented in Table 1 (see attachments). In summary, all of the samples analyzed were reported not to contain detectable concentrations of OPP. The laboratory results are summarized in Table 1. The laboratory report is included in Appendix D.

CH in Soil

Composited soil samples G1 through G17 were analyzed for CH and the data is presented in Table 1 (see attachments). In summary, all of the samples analyzed were reported not to contain detectable concentrations of CH. The laboratory results are summarized in Table 1. The laboratory report is included in Appendix D.

Pits, Ponds and Lagoons

Pits, ponds and lagoons are often associated with the disposal of solid and liquid wastes, which may include hazardous materials. According to ASTM Standard E 1527-00, pits, ponds and lagoons are "man-made or natural depressions in the ground surface that are likely to hold liquids or sludges containing hazardous substances or petroleum products." Information obtained from the assessment indicated that pits, ponds and lagoons do not currently exist on the subject site. Based on the review of historical records of the subject site, it is unlikely that pits, ponds or lagoons have existed at the site in the past.

Septic Tanks and Cesspools

Septic tanks and cesspools are often associated with the disposal of wastewater from structures that are not served by public sewer systems. Septic tanks and cesspools may be associated with hazardous materials, if such materials have been inappropriately disposed of in the past via sinks. Information obtained from the site assessment indicated that septic tanks and cesspools do not currently exist on the subject property.

Wells, Cisterns and Sumps

Four small diameter groundwater-monitoring wells (piezometers) were observed on Tentative Tract Map 53108. According to Newhall Land personnel, these wells are utilized by Seward Engineering for groundwater elevation data used for engineering purposes.

Three waster wells were observed in the western portion of the subject property. One was observed in the central portion near the intersection of Walcott Way and Highway 126. Approximately six water wells were observed along the eastern property boundary. All of these water wells are used to supply irrigation water to the agricultural crops on the subject site.

Three oil wells have been documented on the subject property. In addition, evidence of three, possibly four, oil wells has been noted in Borrow Site "A." Evidence of two oil wells has also been noted in Borrow Site "B." These oil wells are further discussed in the Historical Review section above or the Agency Contacts section below.

Polychlorinated Biphenyls (PCBs)

No equipment likely to contain PCBs was observed on the subject property or adjacent properties.

On-Site Fuel Storage Tanks

According to the State of California Water Resources Control Board (SCWRCB), underground storage tanks (USTs) and/or permits do not exist for the subject property.[10] A review of Los Angeles County Department of Public Works revealed that UST files existed for 28700 Henry Mayo Drive, a site located within the limits of the subject property. One 1,000-gallon gasoline and one 1,000-gallon diesel UST were removed in 1989 by PW Environmental, in the vicinity of the central farm equipment storage area south of Wolcott Way. This UST is further discussed in the Agency Contacts Section below.

One portable diesel powered pump was observed near the eastern property boundary. Associated with this pump was a small 100-gallon AST on a trailer and an approximate 500-gallon AST sitting on a wooden pallet. The 500-gallon AST was labeled as containing diesel fuel, likely for the pump. Staining was observed on the outside of the AST, as well as on the soil beneath the AST.

Utilities

Electric service is provided by SCE. Water service is provided by the Valencia Water Company. No refuse removal service is provided to the subject property.

Visual Asbestos Survey

BA Environmental performed a visual survey of suspect friable and non-friable asbestos-containing materials (ACMs).

- Friable materials are materials which can be crumbled, pulverized, or reduced to powder by hand pressure when dry.
- Non-friable materials are materials in which the fibers have been locked in by a bonding agent, coating, or binder, and may not release fibers during normal use and handling. Improper handling, such as grinding or sanding of non-friable ACMs, will render these materials friable.

On the day of the site reconnaissance, scattered suspect ACMs were observed. These suspects ACMs included pieces of transite pipe, construction material debris along the old railroad easement, and tar-like coating observed on metal pipe sections located in the western portion of the subject site.

10 The EDR Radius Map with GeoCheck®, Inquiry No. 1108642.4s, January 8, 2004.

Radon Gas Survey

Radon is a radioactive gas that occurs naturally in the environment, and cannot be seen, smelled or tasted. The human health effect associated with exposure to elevated levels of radon is an increased risk of developing lung cancer. The US Environmental Protection Agency (EPA) and the US Center for Disease Control are concerned about the increased risk of lung cancer developing in individuals exposed to above average levels of radon in their homes or offices. In order to address these concerns, the US EPA conducted a radon survey and presented the results for various counties in 1993.[11]

The EPA's map of Radon Zones assigns each of the 3,141 counties in the United States to one of three zones. The zone designations were determined by assessing five factors that are known to be important indicators of radon potential: indoor radon measurements, geology, aerial radioactivity surveys, soil parameters and foundation types. The subject property falls within the designation of Zone 2. Zone 2 counties have a predicted average indoor radon screening level of greater than or equal to 2.0 picocuries per liter (pCi/l) and less than or equal to 4.0 pCi/l of dry air. Based on the results of the survey, the subject site appears to fall within a radon screening level below the recommended EPA Action Level of 4.0 pCi/l. It is BA Environmental's opinion, based upon these results, that it is unlikely that radon is a concern for the subject site.

ADJACENT LAND USE

During the reconnaissance of the surrounding area within a 0.25-mile radius, BA Environmental observed that the subject site is located in an area undeveloped land and agricultural land, with oil fields to the northwest and south.

Adjacent land use to the subject site (Tentative Tract Map No. 53108) include agricultural land and undeveloped land to the west, Castaic Creek to the east, the Santa Clara River to the south, and Highway 126 followed by Chiquita Canyon Landfill and vacant undeveloped land to the north. Adjacent properties to Borrow Site "A" include agricultural land to the west, and undeveloped land to the north, south and east. South of this borrow site is an oil field. Adjacent properties to Borrow Site "B" include undeveloped land to the north, Chiquito Canyon Road and an oilfield to the west, undeveloped land followed by the Chiquito Canyon Landfill to the east, and Highway 126 followed by the subject site to the south.

Wetlands and Flood Plains

During the site reconnaissance and drive-by survey of the surrounding area, BA Environmental did not observe indications that the subject property is located within known wetlands. According to the Environmental Data Resources, Inc. (EDR) report regarding the subject site and site vicinity, no wetlands per the 1994 National Wetlands Inventory are located within a one-mile radius of the subject site. According to the EDR report, portions of the subject property are located within a 100-year flood zone per the Federal Emergency Management Agency (FEMA).[12]

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11 EPA Map of Radon Zones, 1993.

12 The EDR Radius Map with GeoCheck®, Inquiry No. 1108642.4s, January 8, 2004.

AGENCY CONTACTS

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR)

BA Environmental visited the office of the DOGGR regarding oil well abandonment records for the site vicinity. The review of well abandonment records revealed that three oil wells were drilled on the subject property and four additional wells were drilled within 500 feet of the subject property. Well records obtained from the DOGGR with the exception of 'Newhall' 1 are included as Appendix E.

Table 2
Oil Wells Located in Site Vicinity
Tentative Tract Map No. 53108
Newhall Ranch, California

Section	Township	Range	Operator	Well No.	Year Abandoned
15	4 North	17 West	Texaco E&P Inc.	'Newhall' 1	Unknown
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 50	1993
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 2	1993
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 9	1993
14	4 North	17 West	Exxon Mobil Corp	'NHL&F' 77	1993
23	4 North	17 West	Exxon Mobil Corp	'NHL&F' 54	1956
23	4 North	17 West	Exxon Mobil Corp	'NHL&F' 45	1955
23	4 North	17 West	Exxon Mobil Corp	'NHL&F' 1	1994

DOGGR also supplied requirements for well abandonment procedures. A copy of the DOGGR oil well abandonment procedures is included in Appendix F. BA Environmental spoke with Mr. Steve Mulqueen regarding well abandonment. According to Mr. Mulqueen, the abandoned oil wells need to be located, and plotted on the site plan for the project and submitted in triplicate to the DOGGR. Locating the wells is accomplished by hiring a surveyor to locate each well using "location record" for each well. After this is accomplished, the well needs to be excavated. Following excavation, the well needs to tested for gas leakage and inspected for fluid leakage by DOGGR personnel. If the well leaks or is not abandoned properly, the well may need to be reabandoned. If fill soil is to be placed over the oil well, the casing may need to be extended to within five feet of finished grade. If a structure is proposed within 10 feet of an abandoned/reabandoned well, the site plans should include an approved well-vent system designed to vent natural gases to the atmosphere. If a structure is within 25 feet of an abandoned/reabandoned well, and the permitting agency is Los Angeles County, then an approval letter would be required.

Any oil wells located within the borrow sites, as well as any unidentified oil wells encountered on the subject site should be reabandoned as noted above.

Los Angeles County Department of Public Works (LACDPW)

BA Environmental visited the office of the LACDPW regarding files for USTs and hazardous materials storage and usage. According to the LACDPW, files existed for several properties owned and operated by Newhall Land. These files included 30003 Walnut Orchard Road, 31820 Henry Mayo Drive, 28700 Henry Mayo Drive, 27230 Henry Mayo Drive. Only the 28700 Henry Mayo Drive listing appears to be within the limits of the subject property. One 1,000-gallon gasoline and one 1,000-gallon diesel UST were removed in 1989 by PW Environmental in the vicinity of the central farm equipment storage area south of Wolcott Way. One sample collected beneath the gasoline UST was reported to contain 96 milligrams per kilogram (mg/kg) of Total Petroleum Hydrocarbons as gasoline (TPH-g). LACDPW requested a description of sampling methods and manifests for the UST removal. PW Environmental submitted these documents in August and September of 1989. No closure letter was present in the file.

GOVERNMENT RECORDS REVIEW

Regulatory compliance is a primary element of an ESA. Failure to comply with governmental regulations can result in fines, and can expose businesses or individuals to liabilities from which the law would otherwise shield them. The presence of hazardous wastes or hazardous materials, on-site or at neighboring sites, may present certain liabilities. Environmental Data Resources, Inc. (EDR) provided the most recent information regarding the hazardous materials sites identified below.[13] Sites of potential environmental concern are described at the end of this section in Table 3. It should be noted that the search radii for each database has been extended beyond ASTM requirements. The referenced search radii below are minimum distances. The actual search distances are much greater.

1. The Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as the Superfund Act, protects the victims and the environment in the event of a hazardous materials spill. This act primarily addresses cleanup of designated Superfund hazardous waste sites (HWS). To achieve its stated purpose, CERCLA established a hazardous Substances Trust Fund, the Emergency Response Trust Fund, and the Post-Closure Liability Trust Fund. These funds compensate the victims and provide money necessary for the decontamination of the environment. The EPA compiles a list of known contaminated sites that are under consideration for the Superfund List. This list is known as the CERCLIS database. According to the September 2003 version of this document, **no** CERCLIS site is located within a 0.5-mile radius of the subject property.

   The US EPA maintains the National Priority List (NPL) under CERCLA 42 U.S.C. Section 9601 (1985). Once a site has been designated on the CERCLIS, the EPA ranks it to determine the potential risk to human health and the environment. Only those CERCLIS sites which present the greatest risk are added to the NPL, which qualifies the sites to receive CERCLA remedial funding. According to the October 2003 version of this document, **no** NPL site is located within a 1.0-mile radius of the subject property.

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13 The EDR Radius Map with GeoCheck®, Inquiry No. 1108642.4s, January 8, 2004.

2. The EPA's Resource Conservation and Recovery Act (RCRA) Program identifies and tracks hazardous waste from the point of generation to the point of disposal, in addition to enforcing penalties against violators. The RCRA Facilities database is a compilation by the EPA of facilities that generate, store, transport, treat, or dispose of hazardous waste.

   According to the September 2003 listing of hazardous waste treatment, storage and disposal facilities (TSDs), **no** TSD facility is located within a 0.5-mile radius of the subject site.

   The Resource Conservation and Recovery Information System - TSDs CORRACTS report contains information pertaining to TSDs which have conducted, or are currently conducting, a corrective action as regulated under RCRA.

   According to the September 2003 version of the CORRACTS document, **no** CORRACTS facility is located within a 1.0-mile radius of the subject property.

   According to the September 2003 listing of hazardous waste generators, **three** large quantity generator (LQG) facilities and **four** small quantity generator (SQG) facilities are located within a 0.5-mile radius of the subject property.

3. The California Environmental Protection Agency (Cal-EPA) maintains the California Facility Inventory Database (Ca.-FID). The Ca.-FID contains an historical listing of active and inactive UST locations from the State Water Resources Control Board. According to the October 1994 version of this database, the subject property **is not listed** on the Ca.-FID database.

4. The California Department of Toxic Substance Control's (DTSC) Annual Work Plan (AWP, formerly BEP), also known as Cal-Sites, is a listing of known hazardous waste sites. According to the November 2003 version of this document, **no** AWP sites are located within a 1.0-mile radius of the subject site.

   The DTSC maintains a database (known as the Cal-Sites ASPIS list) that includes potential or confirmed hazardous substance release properties. According to the November 2003 version of this database, **no** ASPIS site is located within a 1.0-mile radius of the subject property.

   The DTSC maintains the California Hazardous Materials Incident Report System (known as CHMIRS), which contains information on reported hazardous material incidents (accidental releases or spills). According to the December 2002 version of this database, **eight** CHMIRS sites are located within a 1.0-mile radius of the subject property.

   The DTSC developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds, known as the Bond Expenditure Plan (BEP). This list is not updated. According to the January 1989 version of this database, **no** BEP site is located within a 1.0-mile radius of the subject property.

5. The Emergency Response Notification System (ERNS) is a national database used to collect information on reported releases of oil and hazardous substances. The database contains information from spill reports made to federal authorities,

including the EPA, the US Coast Guard, the National Response Center, and the Department of Transportation.

According to the December 2002 version of this document, there have been **no** reported releases of hazardous substances at the subject property.

6. The State of California State Water Resources Control Board (SWRCB) maintains the California Leaking Underground Storage Tank (LUST) list. According to the April 2003 version of this document, **five** LUST sites are listed as being within a 0.5-mile radius of the subject property.

7. The SWRCB maintains an inventory (CA UST) of registered USTs. According to the April 2003 version of this document, **three** UST sites are listed as being within a 0.5-mile radius of the subject property.

8. The SWRCB maintains the Hazardous Substance Storage Container Database which is a listing of Historic UST (Hist UST) sites. According to the October 1990 version of this database, the subject site **is not listed** as a Hist UST.

9. The SWRCB maintains an inventory (AST) of registered Above-ground Petroleum Storage Tank facilities. According to the July 2003 version of this database, **no** ASTs have been identified for the subject property.

10. The SWRCB maintains the Spills, Leaks, Investigations and Clean-up (SLIC) records. According to the July 2003 version of this database, **two** SLIC sites are located within a 0.5-mile radius of the subject property.

11. The California Governor's Office of Planning and Research annually publishes a listing of potential and confirmed HWS throughout the State of California under Government Code Section 65962.5. This list is also known as the Cortese List. According to the April 2001 version of this list, **nine** Cortese sites are located within a 1.0-mile radius of the subject site.

12. The California Integrated Waste Management Board maintains a list of permitted solid waste landfills (SWF/LF), incinerators and transfer stations. According to the November 2003 version of this database, **two** SWF/LF sites are located within a 0.5-mile radius of the subject property.

13. BA Environmental reviewed the list of "orphan" sites, which have inadequate address information and are therefore unplotted. **Nineteen (19)** "orphan" sites are listed. The "orphan" sites appear to be located at a distance greater than 0.5 miles from the subject property with the exception of the listing for Highway 126 Bridge, which is located adjacent to the east. This site is a construction site and not likely to cause an environmental impact to the subject property. Based on the distance of the remaining "orphan" sites from the subject property, there is a low potential for environmental impact to the subject property.

Table 3
GOVERNMENT-LISTED DATABASES
IDENTIFIED SITES OF ENVIRONMENTAL CONCERN
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

Site of Concern And Address	Distance and Direction from Subject Property	Databases	Regulatory Status	Potential Environmental Impact
Chiquita Canyon Landfill 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	HMS	No Violations	Low
Laidlaw Waste Systems Inc 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	HMS	No Violations	Low
Universal By-Products-Valencia 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	WMUDS SWAT	No Violations	Low
Chiquita Canyon Landfill Inc 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	HAZNET SWF/LF	No Violations	Low
Laidlaw Waste Systems 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	CA Fid UST	No Violations	Low
Chiquita Canyon Landfill 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	CA WDS EMI HAZNET SWF/LF	No Violations	Low
Chiquita Canyon Landfill 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	WMUDS SWAT	No Violations	Low
Laidlaw Waste Systems 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	UST	No Violations	Low
Chiquita Canyon Sanitary Landfill 29201 Henry Mayo Dr	500 Feet North (cross-gradient)	SQG FINDS	No Violations	Low
27900 Chiquito Canyon	1,000 Feet Northwest (down-gradient)	CHMIRS	Release of Petroleum February 1989	Low

Site of Concern And Address	Distance and Direction from Subject Property	Databases	Regulatory Status	Potential Environmental Impact
Newhall Land & Farming 3003 Walnut Orchard Rd	500 Feet Northwest (down-gradient)	LUST CORTESE	Soil Only Release Case Closed	Low
Travel Village 27946 Henry Mayo Drive	2,000 Feet East (cross-gradient)	Hist UST	Not on LUST list	Low
TA Manufacturing 28605 W. Franklin	2000 Feet Northeast (up-gradient)	LQG FINDS HAZNET	No Violations	Low

The subject property is not listed on any of the searched databases. The closest off-site facility is located to the north across Henry Mayo Drive (Highway 126). This facility is located in an assumed cross-gradient location relative to the regional groundwater flow direction. No impact from these facilities is likely. Based on the status and distances of the remaining facilities, there is a low potential for environmental impact due to off-site sources.

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The subject property consists of an approximate 280-acre parcel of land that has been graded and utilized for agricultural production; numerous dirt roads traverse the subject site. Approximately four small buildings exist on the site and are used in activities related to the on-site agricultural production. The subject site is also occupied by several irrigation wells. This project also includes the two borrow sites where fill material will be derived to be placed on the subject property. Borrow Site "A" is approximately 400 acres and Borrow Site "B" is approximately 300 acres. The two borrow sites are primarily in their native states with some dirt roads traversing them. A portion of Borrow Site "A" appears to have been used in the past for agricultural purposes. Mr. John Frye, General Manager, Agriculture and Natural Resources for Newhall Land and Farming, stated that this area was briefly used to grow hay, and that no pesticides were used in this area. There was also some evidence of past oil exploration in this area. An electrical transmission tower is located in Borrow Site "B," as well as evidence of past oil wells. Primary vehicular access to the subject site is from private driveways to the north. Primary vehicular access to Borrow Site "A" is from a dirt road to the south of the subject site or from a dirt road from Potrero Canyon to the south. Primary vehicular access to Borrow Site "B" is from a dirt road to the east of Chiquito Canyon Road.

The review of historical documents indicates that portions of the subject site have been vacant undeveloped land or used as agricultural land from prior to 1903 until the present. From prior to 1903 until prior to 1991, Southern Pacific Railroad tracks ran along the northern boundary of the subject property. Since at least 1969, the eastern portion of the subject property has been located within the Castaic Junction Oil Field. Several small structures have been located throughout the subject property from prior to 1947 through the present. The configurations and locations of these structures have changed several times since 1947. Since 1947, at least two oil wells, possibly three, have been located near the eastern property boundary. No oil wells currently exist on-site. Sometime prior to 1952, three oil ASTs (located within a containment berm) were also located near the

eastern property boundary. By 1968, these ASTs had been removed. A circular AST was located approximately 555 feet south of Highway 126 and approximately 1,000 feet east of the intersection of Walcott Way and Highway 126, from prior to 1952 until prior to 1968. The purpose of this AST is unknown. An oil well has been located in the central portion of the subject property, approximately 555 feet south of the intersection of Walcott Way and Highway 126 from prior to 1952 until prior to 1994. This area has also been occupied by an equipment storage area between 1952 and 1972, and between approximately 1994 to the present. An airstrip occupied the central portion of the subject property since prior to 1968 until prior to 1994, when it was removed. The Indian Dunes Motorcycle Park also occupied the central portion of the subject property from prior to 1972 until prior to 1994, when it was abandoned and subsequently removed. By 1994, the subject property was used for agricultural purposes.

BA Environmental performed a site reconnaissance of the subject property. The site reconnaissance addressed three areas: Subject Property (Tentative Tract Map No. 53108), Borrow Site "A" and Borrow Site "B."

Subject Property (Tentative Tract Map No. 53108)

At the time of the site visit, the subject property was used primarily for agricultural production. Crops included what was believed to be green beans, beets, carrots and other vegetables. Some land appeared to be out of production or fallow. The far western end was occupied by undeveloped land covered by native vegetation. Concrete and asphalt debris was observed scattered throughout the fields. A large pile of asphalt and concrete debris was observed along the northern property boundary. Included in this debris were concrete pipes, an old pickup truck body, old telephone poles and other miscellaneous debris. Approximately 200 feet south-southwest of this pile was a pile of wood debris. Old trash piles and construction debris piles were observed in the western portion of the subject property and along the old railroad easement. The trash observed in these piles appeared to household trash. Old piping was observed scattered in the western portion of the subject property. Some of this piping appeared to be sections of old oil pipelines and some appeared to be transite concrete pipe.

An equipment storage area was observed approximately 50 feet south of the intersection of Walcott Way and Highway 126. This storage area was observed to contain various farm equipment. Two ASTs mounted on trailers were observed in this area. These trailers appeared to be empty. Several empty and partially full 55-gallon steel drums were observed on-site. These drums appeared to contain oil or petroleum products. Staining was observed on the soil throughout this area. One sheet metal building is located in the fenced storage area, and consists of approximately 400 square feet. This building is used to store equipment and grain. This building was formerly an aircraft hangar, which was associated with an airstrip that was formerly located on the subject site. It is likely that this area was formerly used to fuel and maintain the aircraft and may have been an area used to mix pesticides.

The eastern storage area consists of three buildings and a plastic-sheeting hothouse. The buildings are used for storage and packaging. Farm equipment was observed to be stored in this area. Several small ASTs were observed in this area, as well as agricultural chemical mixing. Several 55-gallon drums and smaller five-gallon buckets were observed. None of these containers were labeled. Some staining was observed on the dirt in this storage area.

Several ASTs containing liquid fertilizers and various other agricultural chemicals were

observed in the eastern portion of the subject property. Minor staining was observed on the dirt beneath these ASTs.

One portable diesel-powered pump was observed near the eastern property boundary. Associated with this pump was a small 100-gallon AST on a trailer and an approximate 500-gallon AST sitting on a wooden pallet. The 500-gallon AST was labeled as containing diesel fuel, likely for the pump. Staining was observed on the outside of the AST, as well as on the soil beneath the AST.

An old railroad easement was observed along the northern property boundary, paralleling Highway 126. The railroad tracks have been removed; however, some ballast materials still remain. Debris and trash piles were observed along this easement.

During the site visit, evidence of underground storage tanks (USTs) or wastewater clarifiers was observed on the subject site. The only hazardous materials observed on-site were agricultural chemicals (i.e., pesticides and fertilizers) and petroleum products (i.e., diesel fuel, oil and lubricants).

Four small diameter groundwater monitoring wells (piezometers) were observed on-site. According to Newhall Land personnel, these wells are utilized by Seward Engineering for groundwater elevation data used for engineering purposes.

Several pipelines were observed crossing the subject site. The pipelines were identified visually by either marker signs, or visible piping or pipeline vents. A Southern California Gas pipeline was observed running along the northern property boundary in the railroad easement, and crossing the western end of the subject property. These pipelines are believed to be 18" to 20" in diameter and likely carry natural gas. Where visible, these pipelines appeared to be coated with a tar-like material to prevent corrosion.

A Shell Oil Company petroleum pipeline was also observed to run along the northern property boundary, parallel to the old railroad easement. The size of this pipeline is unknown; however, it is likely to contain crude oil. Approximately 250 feet southeast of the intersection of Chiquito Canyon Road and Highway 126 is a fenced enclosure. This enclosure is adjacent to the Shell Oil Company pipeline and a Shell Oil pipeline vault. A sign on the gate of the enclosure indicates that the enclosure is owned by Eouilon Pipeline Company, and is the Del Valle Booster Station. This is likely a booster station for an oil pipeline. Inside of the enclosure was a pump, a 100-gallon AST likely containing diesel fuel and two electrical transformers. The pump and AST were observed to be in a concrete containment.

An unidentified pipeline was observed running along the southern edge of the old railroad easement. Where exposed, the pipeline appeared to be approximately 18" to 20" in diameter and was coated with a tar-like substance to prevent corrosion. Two vents, similar to those used in oil pipelines, were observed associated with this pipeline.

Damaged piping was observed on the surface in the old railroad easement. It appeared that this pipeline had been removed. It is uncertain if this pipeline was replaced or completely removed. The pipeline appeared to be 16" to 18" in diameter. Oil staining was observed in the areas where this pipeline was exposed.

A Unocal pipeline was observed to run across the western end of the subject property. The size of this pipeline is unknown; however, the pipeline likely carried oil. Reportedly, this pipeline is currently idle, and not being used.

Borrow Site "A"

This parcel was observed to be primarily undeveloped at the time of the site reconnaissance. The site is covered with native vegetation, which consists of brush, oak trees and native plants. The floor of a small valley/canyon, which runs east to west across the borrow site, appears to have been used in the past for agricultural purposes. Mr. John Frye, General Manager, Agriculture and Natural Resources for Newhall Land and Farming, stated that this area was briefly used to grow hay, and that no pesticides were used in this area. Concrete and wood debris were observed scattered in the agricultural field on the floor of the small valley/canyon. This concrete and wood debris may be the indications of either a former structure or oil exploration activities. An abandoned road was observed running along the northern boundary of this borrow site. A flat, roughly graded dirt pad was observed along this road. This is the location of what is believed to have been an exploratory oil well. At the eastern end of this small valley/canyon is a graded dirt pad with what appears to be a filled-in concrete vault. This is likely the location of a former oil well. No oil staining was observed on this graded pad.

During the site visit, no hazardous substances, or evidence of USTs, ASTs or wastewater clarifiers were observed on this site.

Borrow Site "B"

This parcel was observed to be primarily undeveloped at the time of the site reconnaissance. The site is covered with native vegetation, which consists of brush and native plants. A dirt road crosses the subject property and leads to a Southern California Edison (SCE) transmission tower. Along this dirt road, a concrete pad was observed. This pad had a configuration similar to that used for an oil derrick and a cable tool-drilling rig. It is believed that this was the location of a former oil exploration well. No staining was noted around the concrete pad. Approximately 500 feet up a small access road was a second flat dirt pad. Soil in this area was observed to be stained by what is believed to be crude oil. This may have been the location of a second exploratory oil well.

During the site visit, no hazardous substances, or evidence of USTs, ASTs or wastewater clarifiers were observed on this site.

Four small diameter groundwater-monitoring wells (piezometers) were observed on Tentative Tract Map 53108. Reportedly, these wells are utilized for groundwater elevation data used for engineering purposes.

Three water wells were observed in the western portion of the subject property. One was observed in the central portion near the intersection of Walcott Way and Highway 126. Approximately six water wells were observed along the eastern property boundary. All of these water wells are used to supply irrigation water to the agricultural crops on the subject site.

Three oil wells have been documented on the subject property. In addition, evidence of three possibly four oil wells has been noted in Borrow Site "A." Evidence of two oil wells has also been noted in Borrow Site "B."

BA Environmental completed limited soil sampling at the above-referenced site to assess whether past use of pesticides or herbicides has impacted the shallow soils beneath the previously cultivated areas on Tentative Tract No. 53108.

Sixty-nine shallow hand auger borings were advanced to depths of between one and two feet below ground surface (bgs).

Field observations of soil samples collected from all of the borings revealed no unusual odors or discoloration. Groundwater was not encountered in any of the shallow borings.

Samples collected were composited at the laboratory in groups of four, except one sample which was composited from five samples. The composited samples were analyzed for Organochlorine Pesticides (OCP), Organophosphorous Pesticides (OPP) and Chlorinated Herbicides (CH) using Environmental Protection Agency (EPA) Method Nos. 8081 (OCP), 8141 (OPP) and 8151 (CH).

All of the soil samples analyzed were reported not to contain detectable concentrations of OPP or CH.

Several OCPs were detected in the soil samples analyzed. Soil samples G11, G13, G14, G15 and G17 were reported to contain concentrations of alpha-chlordane ranging from 0.001 to 0.018 milligrams per kilogram (mg/kg). Samples G3, G11, and G13, G14, G15 and G17 were reported to contain concentrations of gamma-chlordane ranging from 0.001 to 0.027 mg/kg. 4,4-DDD was detected in samples G13 through G15 at a concentration of 0.001 mg/kg. Samples G11 and G13 thorough G17 were reported to contain 4,4-DDE in concentrations ranging from 0.002 to 0.034 mg/kg. 4,4-DDT was detected in samples G7 and G11 through G17 in concentrations ranging from 0.002 to 0.023 mg/kg. Dieldrin was detected in samples G6 and G14 at 0.002 and 0.003 mg/kg, respectively. Endosulfan I was detected in sample G14 at a concentration of 0.001 mg/kg. Samples G11 and G17 contained concentrations of Endosulfan II at 0.018 and 0.034 mg/kg, respectively. Endosulfan Sulfate was detected in sample G14 at a concentration of 0.005 mg/kg. Samples G9 through G17 were reported to contain Endrin at concentrations ranging from 0.001 to 0.136 mg/kg. Sample G13 was reported to contain Heptachlor Epoxide at a concentration of 0.001 mg/kg.

The concentrations of OCPs detected on the subject site were compared with the Preliminary Remediation Goals (PRGs) set up by the United States Environmental Protection Agency (EPA) for various compounds and metals. This comparison revealed that none of the OCPs detected at the subject site exceeded the residential or industrial use PRGs for those compounds.

BA Environmental performed a review of available government database records. The subject property is not listed on any of the searched databases. The closest off-site facility is located to the north across Henry Mayo Drive (Highway 126). This facility is located in an assumed cross-gradient location relative to the regional groundwater flow direction. No impact from these facilities is likely. Based on the status and distances of the remaining facilities, there is a low potential for environmental impact due to off-site sources.

BA Environmental has performed a Phase I ESA, in conformance with the scope and limitations of ASTM Practice E 1527-00, of the vacant parcel of land, which is located south of the intersection of Henry Mayo Drive (Highway 126), north of the Santa Clara River, east of the intersection of Henry Mayo Drive (Highway 126) and Chiquito Canyon

Road, and west of Castaic Creek, which is referred to as River Village, Tentative Tract Map No. 53108, Highway 126, and the two borrow sites, in Newhall Ranch, California. Any exceptions to, or deletions from, this practice are described in the Introduction section of this report.

This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property, except the following:

- Up to three oil wells and associated production area may exist on the subject property, and several on Borrow Sites "A" and "B";
- Several ASTs, likely associated with oil production, existed on-site in the 1950s;
- Several pipelines cross the subject property, and one pipeline crosses Borrow Site "B";
- Scattered suspect ACM debris was observed in the central and western portions of the subject property;
- Staining was observed beneath what appeared to be an abandoned pipeline along the old railroad easement, and near what was believed to be a former oil well on Borrow Site "B." In addition, staining was observed beneath a diesel AST associated with a portable water pump located in the eastern portion of the subject property; and
- Two equipment storage areas were observed on the subject site, one located in the eastern portion of the subject property and one in the central portion. The storage area in the central portion was associated with a former airstrip. Agricultural chemical storage and mixing was observed or may have taken place at these areas in the past. Soil staining was observed in both areas.

BA Environmental recommends the following:

- If disturbed, or if located within an area of redevelopment, all former oil wells located on the subject property or on either borrow site should be reabandoned according to all applicable local and state regulations;
- If the pipelines on the subject site and Borrow Site "B" are not to be used in the future, they should be abandoned and soils beneath them assessed for petroleum hydrocarbon leakage. If the pipelines are planned to remain in use, the pipelines should be assessed for possible hydrocarbon leakage;
- Properly dispose of scattered suspect ACMs; and
- The areas of former ASTs, current agricultural storage areas and current soil staining observed on the subject site or Borrow Site "B" should be assessed for potential impact to the subject site.

Although not a recognized environmental condition, it is recommended that all groundwater monitoring wells or production water wells be abandoned according to applicable local and state regulations, prior to redevelopment.

REPORT AUTHORS

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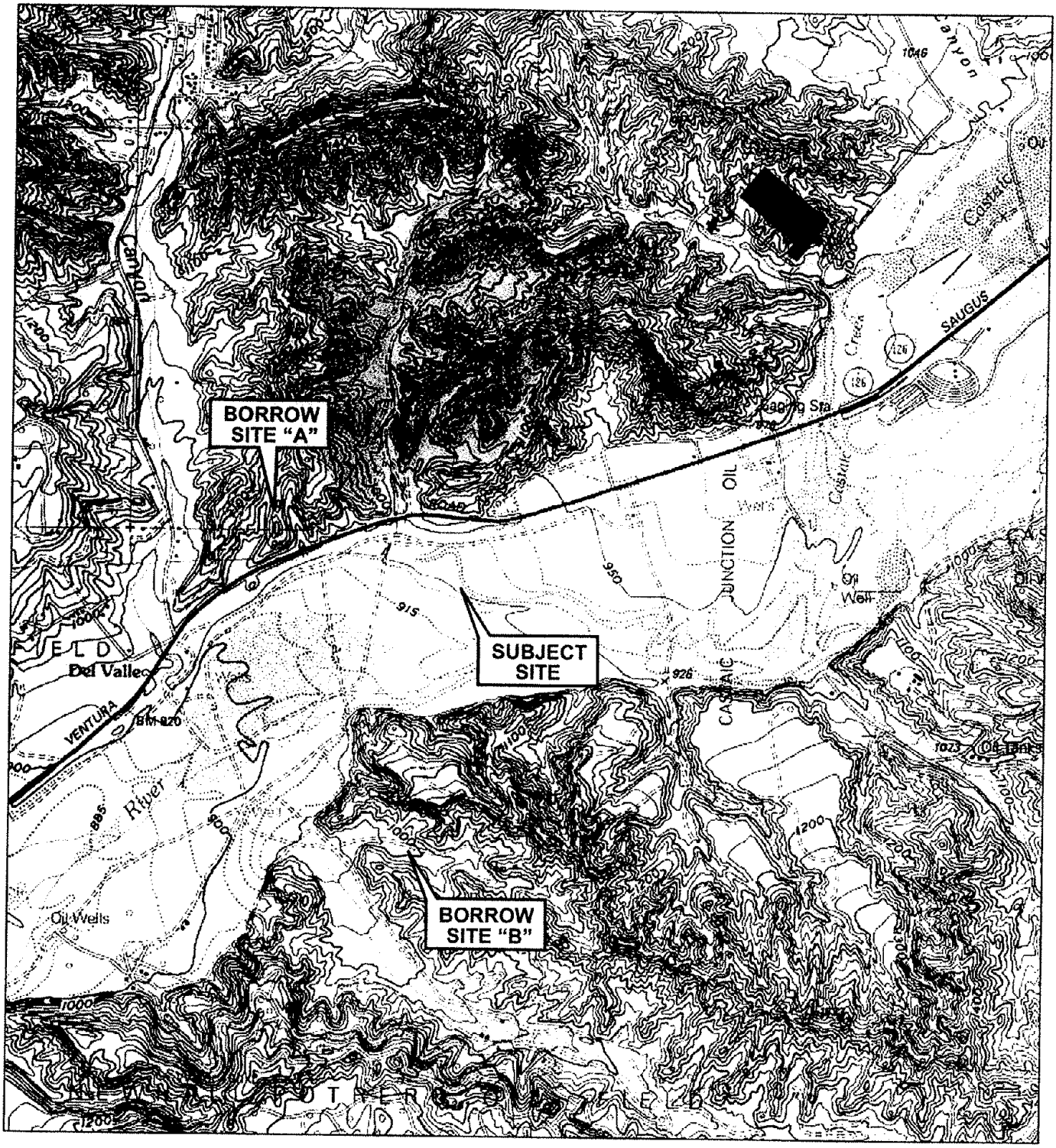
Andy Holmberg
President

FIGURES



NORTH

Reference: USGS Val Verde Quadrangle, California
7.5 Minute Series

SITE VICINITY

SCALE - 1:24,000

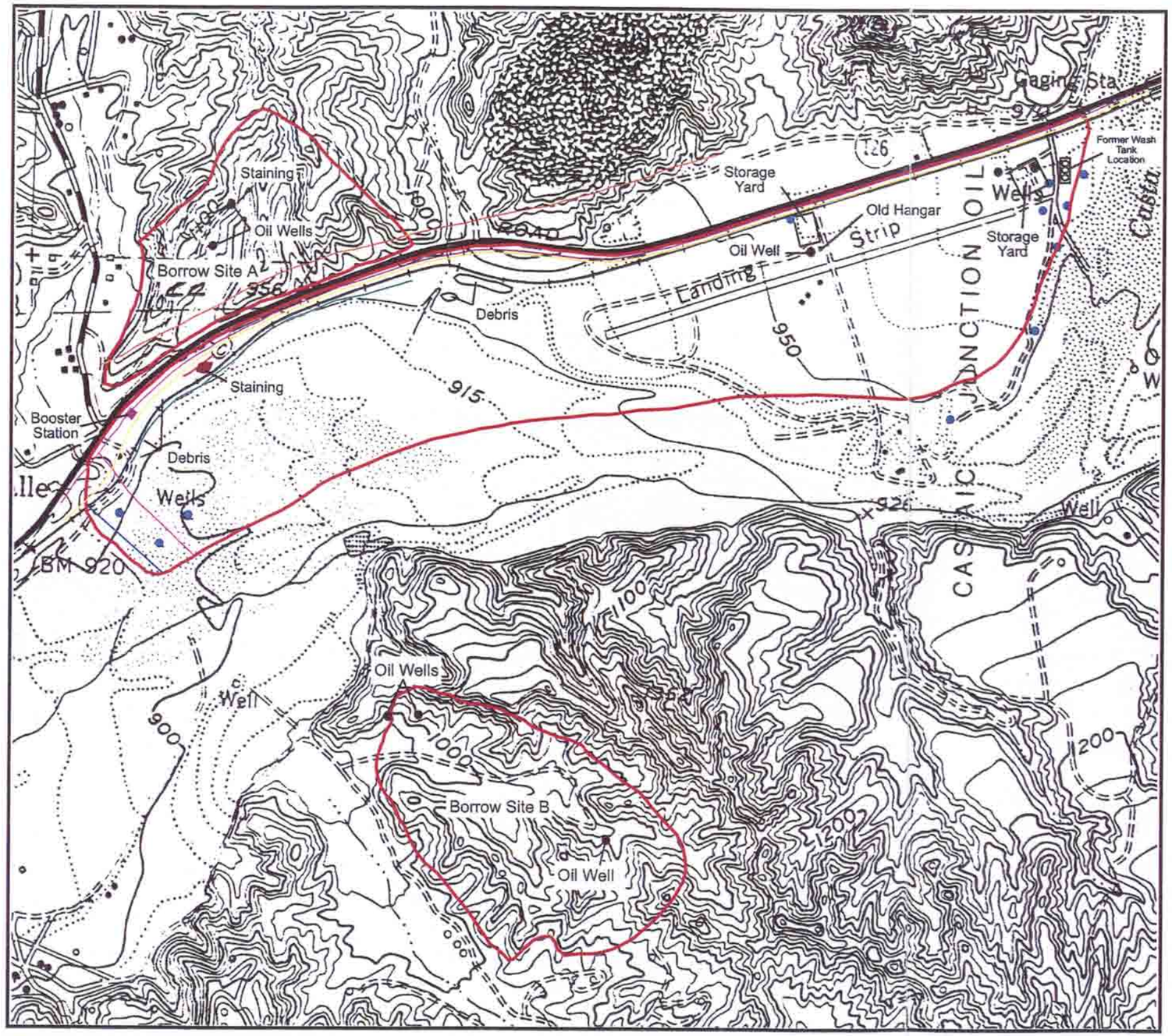
BA ENVIRONMENTAL

PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROJECT: River Village
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

PROJECT NO.
104012

FIGURE
1



LEGEND

- = Limits of Subject Property
- = Southern California Gas Pipeline
- = Unocal Pipeline
- = Shell Gas Pipeline
- = Mobil Oil Pipeline
- = Unidentified Pipeline
- = Exposed Abandoned Pipeline
- = Water Well
- = Former Oil Well

BA ENVIRONMENTAL

NORTH

0 505 1010
Approximate Scale, feet

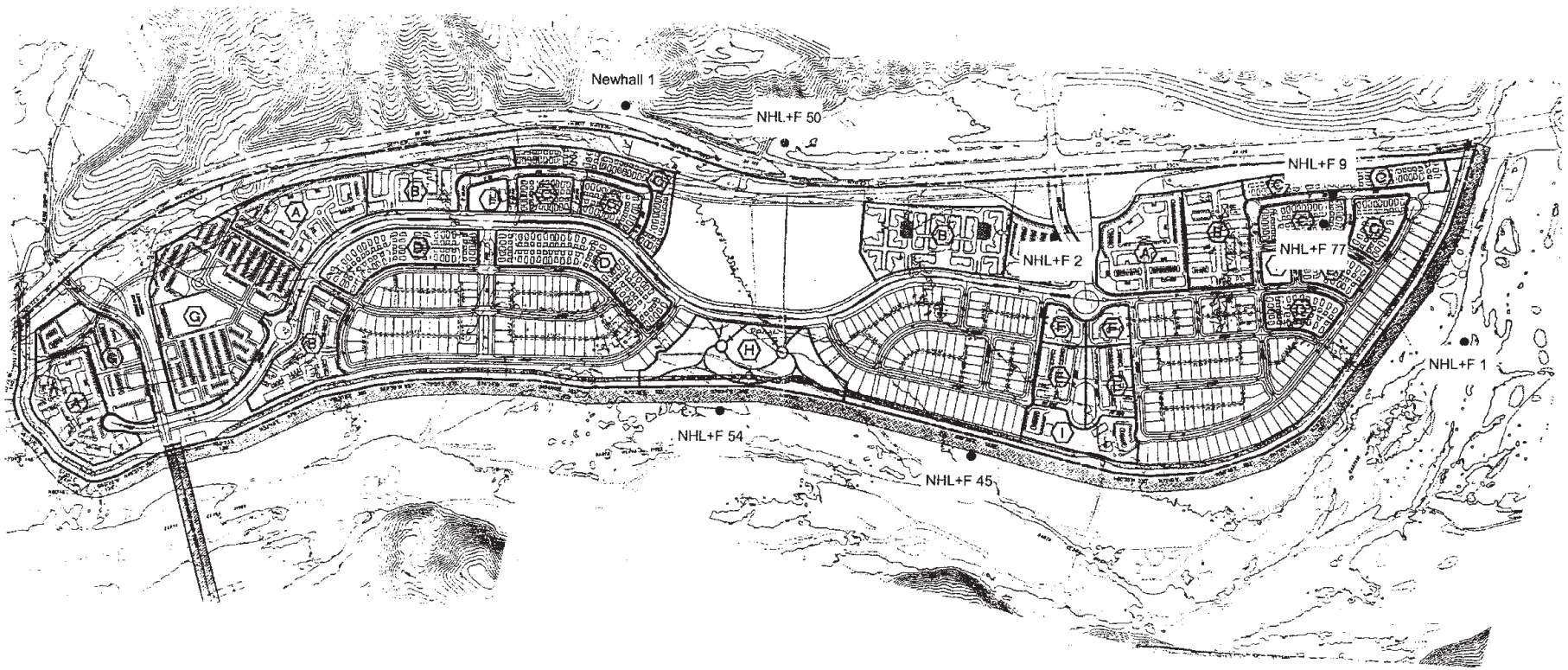
Site Plan

PHASE I ENVIRONMENTAL SITE ASSESSMENT

PROJECT: **River Village**
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

PROJECT NO.
104012

FIGURE
2



Legend

● = Oil well location

NHL+F = Newhall Land and Farming

BA ENVIRONMENTAL

NORTH

0 335 670

Approximate Scale, feet

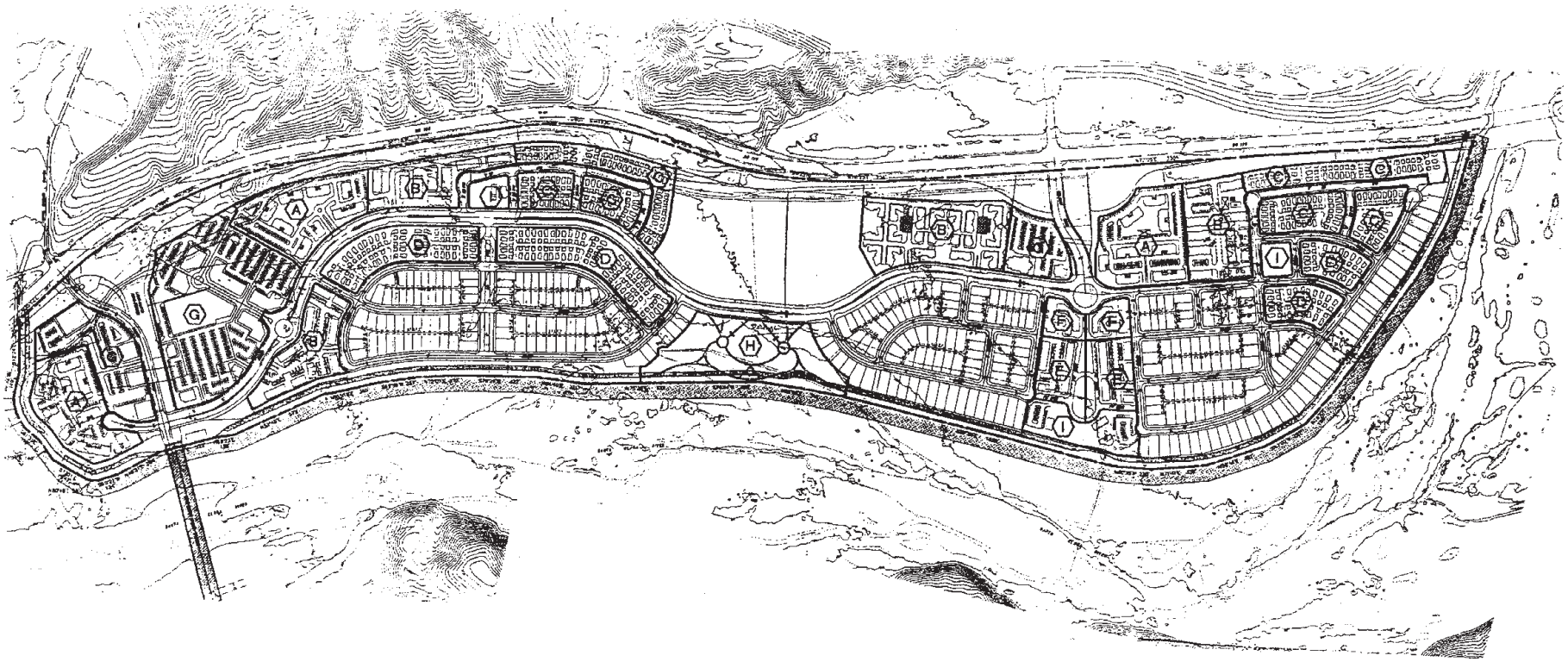
Site Plan

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Oil Well Locations

PROJECT: **River Village**
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

PROJECT NO.
104012

FIGURE
3



BA ENVIRONMENTAL

NORTH

0 335 670
Approximate Scale, feet

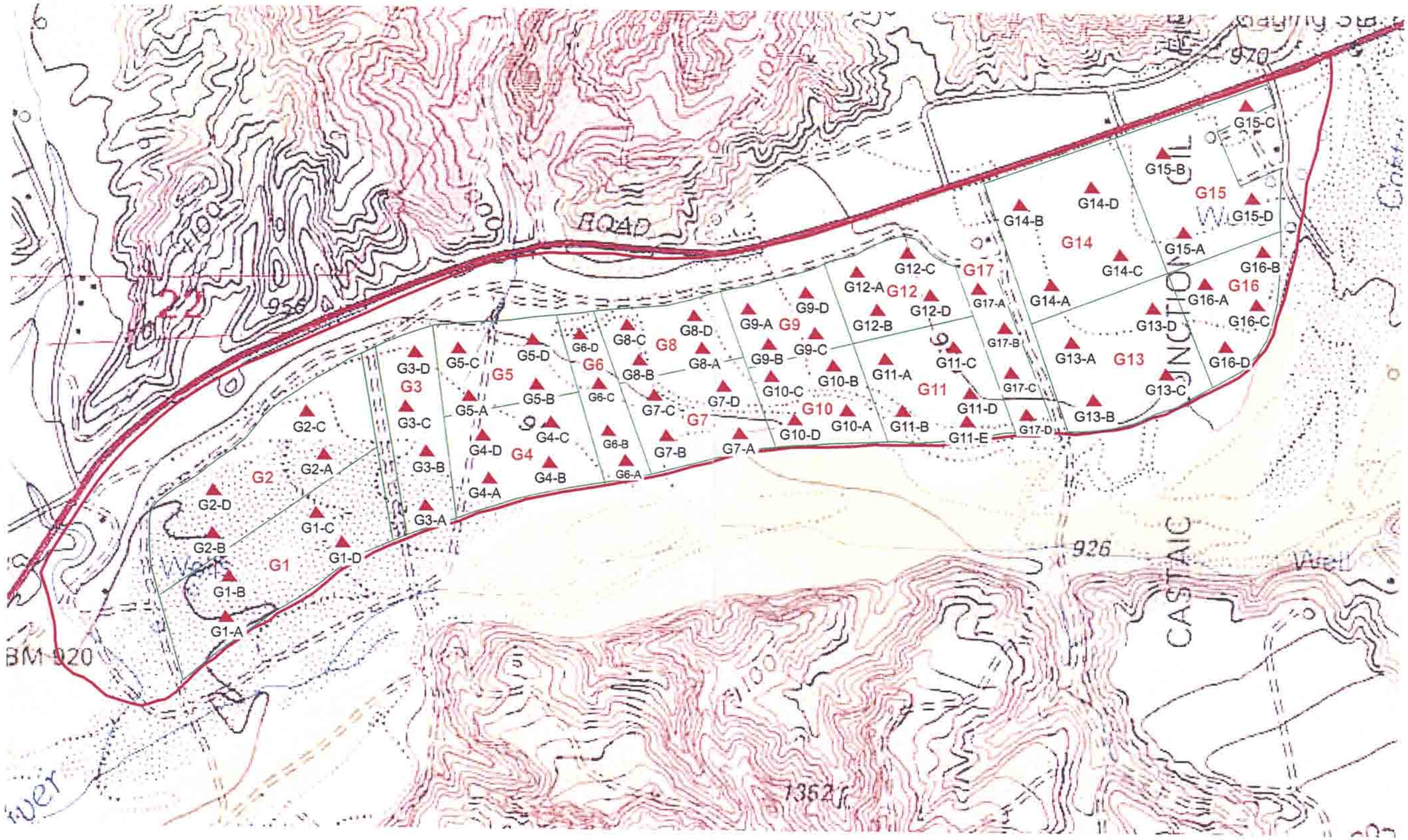
Site Plan

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Development Map

PROJECT: **River Village**
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

PROJECT NO.
104012

FIGURE
4



Site Plan

Legend

= Limits of Subject Property

= Grid Boundary

G1 = Grid Designation

G1-A = Soil Sample Location and Designation

BA ENVIRONMENTAL

NORTH

0 340 680

Approximate Scale, feet

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Soil Sample Locations
PROJECT: **River Village**
Tentative Tract Map No. 53108, Highway 126
Newhall Ranch, California

PROJECT NO.
104012

FIGURE
5

TABLES

Table 1
Soil Sample Analytical Results
OCP, OPP and Herbicides
Tentative Tract Map No. 53108
Newhall Ranch, California

Sample No.	Date	Depth bgs	OCP											OPPs (mg/kg)	CH (mg/kg)
			alpha-Chlordane (mg/kg)	gamma-Chlordane (mg/kg)	4,4-DDD (mg/kg)	4,4-DDE (mg/kg)	4,4-DDT (mg/kg)	Dieldren (mg/kg)	Endosulfan I (mg/kg)	Endosulfan II (mg/kg)	Endrin (mg/kg)	Endosulfan Sulfate (mg/kg)	Heptachlor Epoxide (mg/kg)		
G1-A,B,C,D	1-29-04	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
G2-A,B,C,D	1-29-04	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
G3-A,B,C,D	1-29-04	1.5	ND	**0.001**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
G4-A,B,C,D	1-29-04	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
G5-A,B,C,D	1-29-04	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
G6-A,B,C,D	1-29-04	1.5	ND	ND	ND	ND	ND	**0.002**	ND	ND	ND	ND	ND	ND	ND
G7-A,B,C,D	1-29-04	1.5	ND	ND	ND	ND	**0.002**	ND	ND	ND	ND	ND	ND	ND	ND
G8-A,B,C,D	1-29-04	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
G9-A,B,C,D	2-4-04	1.5	ND	ND	ND	ND	ND	ND	ND	ND	**0.001**	ND	ND	ND	ND
G10-A,B,C,D	2-4-04	1.5	ND	ND	ND	ND	ND	ND	ND	ND	**0.001**	ND	ND	ND	ND
G11-A,B,C,D,E	2-4-04	1.5	**0.012**	**0.017**	ND	**0.008**	**0.014**	ND	ND	**0.018**	**0.061**	ND	ND	ND	ND
G12-A,B,C,D	2-4-04	1.5	ND	ND	ND	ND	**0.022**	ND	ND	ND	**0.029**	ND	ND	ND	ND
G13-A,B,C,D	2-2-04	1.5	**0.001**	**0.004**	**0.001**	**0.026**	**0.006**	ND	ND	ND	**0.061**	ND	**0.001**	ND	ND
G14-A,B,C,D	2-2-04	1.5	**0.002**	**0.015**	**0.001**	**0.007**	**0.015**	**0.003**	**0.001**	ND	**0.082**	**0.005**	ND	ND	ND
G15-A,B,C,D	2-2-04	1.5	**0.003**	**0.004**	**0.001**	**0.034**	**0.007**	ND	ND	ND	**0.055**	ND	ND	ND	ND
G16-A,B,C,D	2-2-04	1.5	ND	ND	ND	**0.002**	**0.003**	ND	ND	ND	**0.004**	ND	ND	ND	ND
G17-A,B,C,D	2-4-04	1.5	**0.018**	**0.027**	ND	**0.012**	**0.023**	ND	ND	**0.034**	**0.136**	ND	ND	ND	ND
PRGs Residential			1.6 ca*	1.6 ca*	2.4 ca	1.7 ca	1.7 ca*	0.03 ca	370 nc	370 nc	18 nc	NA	0.053 ca*	NA	NA
PRGs Industrial			6.5 ca*	6.5 ca*	10 ca	7.0 ca	7.0 ca*	0.11 ca	3700 nc	3700 nc	180 nc	NA	0.19 ca*	NA	NA
Detection Limits (mg/kg)			**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.02-3.35**	**0.020-20.0**

Notes:

CH – Chlorinated Herbicides
OCP - Organochlorine Pesticides
OPP - Organophosphorous Pesticides
PRG - Primary Remediation Goal
ND – None detected above detection limits.
NA - Not applicable
MCL – Maximum Contaminant level
bgs - below ground surface
ca – Cancer PRG
ca* - Cancer PRG (where :nc<100x ca)
nc – Non-cancer PRG

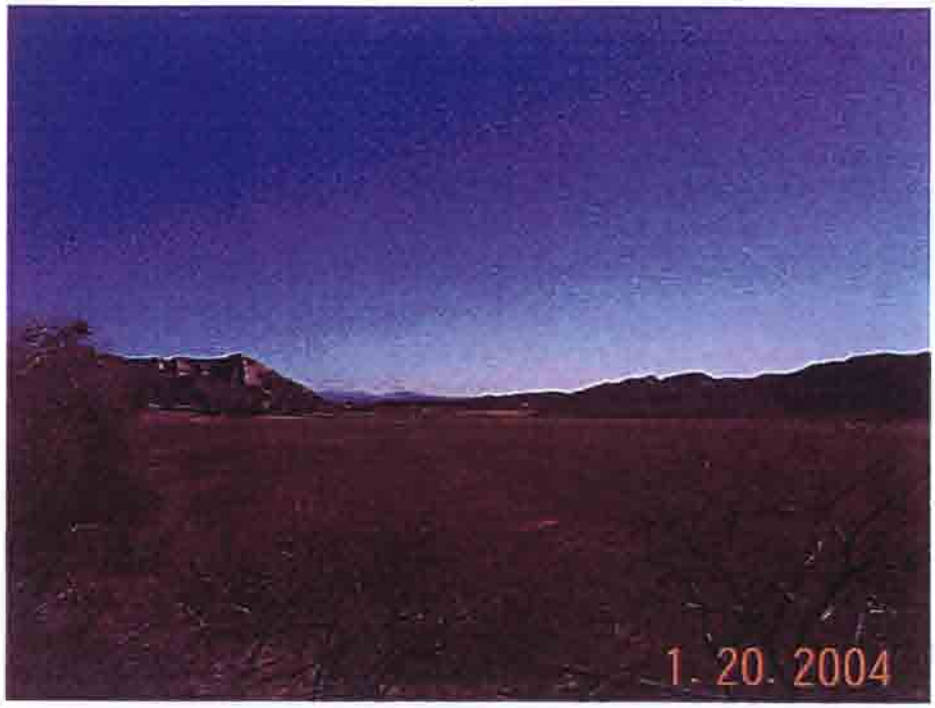
- Concentrations are reported in milligrams per kilogram (mg/kg) which is equivalent to parts per million (ppm).
- Concentrations are reported in micrograms per liter (µg/l) which is equivalent to parts per billion (ppb).
- Analyses for OCP were performed in accordance with the Environmental Protection Agency (EPA) Method No. 8081.
- Analyses for OPP were performed in accordance with the EPA Method No. 8141.
- Analyses for CH were performed in accordance with the EPA Method No. 8151.

APPENDICES

APPENDIX A:

Site Photographs

1



1. View of subject property looking east.

2

2. View of subject property looking west.

3

3. Santa Clara River along southern property boundary.

4

4. Pipeline easement along old railroad tracks,
along northern property boundary.

5

5. Booster station along pipeline easement, northern property boundary.

6

6. Close-up of booster station.

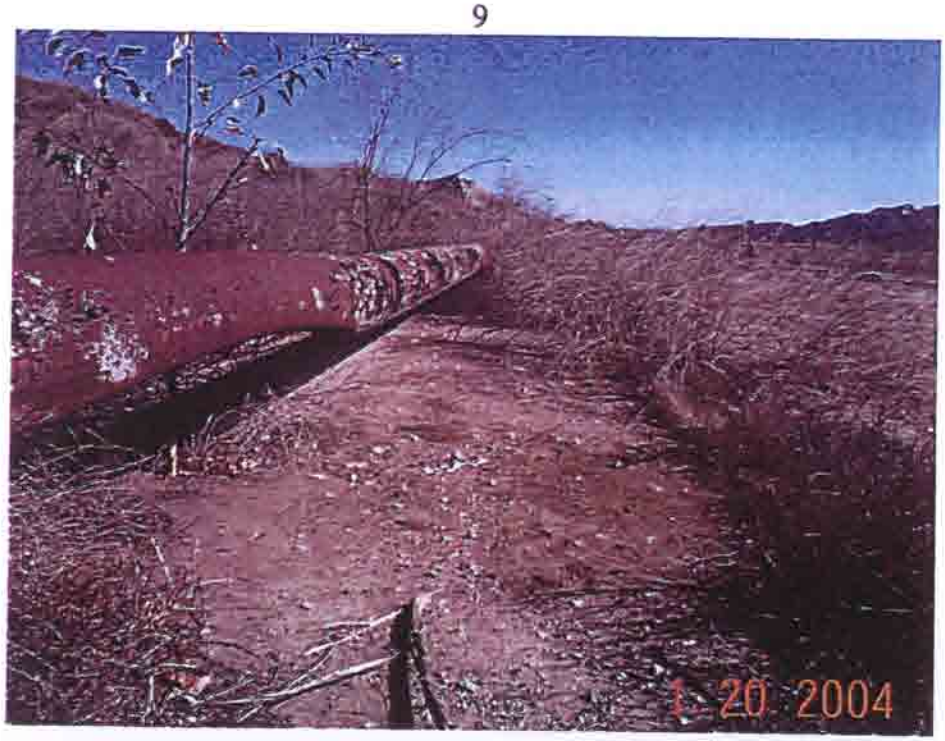
7

7. Access vault for Shell Oil pipeline.

8

8. Vent pipe for oil pipeline.

9



9. Exposed, abandoned oil pipeline. Note oil staining beneath pipe.

10

10. Construction debris in old railroad easement, possible asbestos-containing.

11

11. Construction debris in old railroad easement.

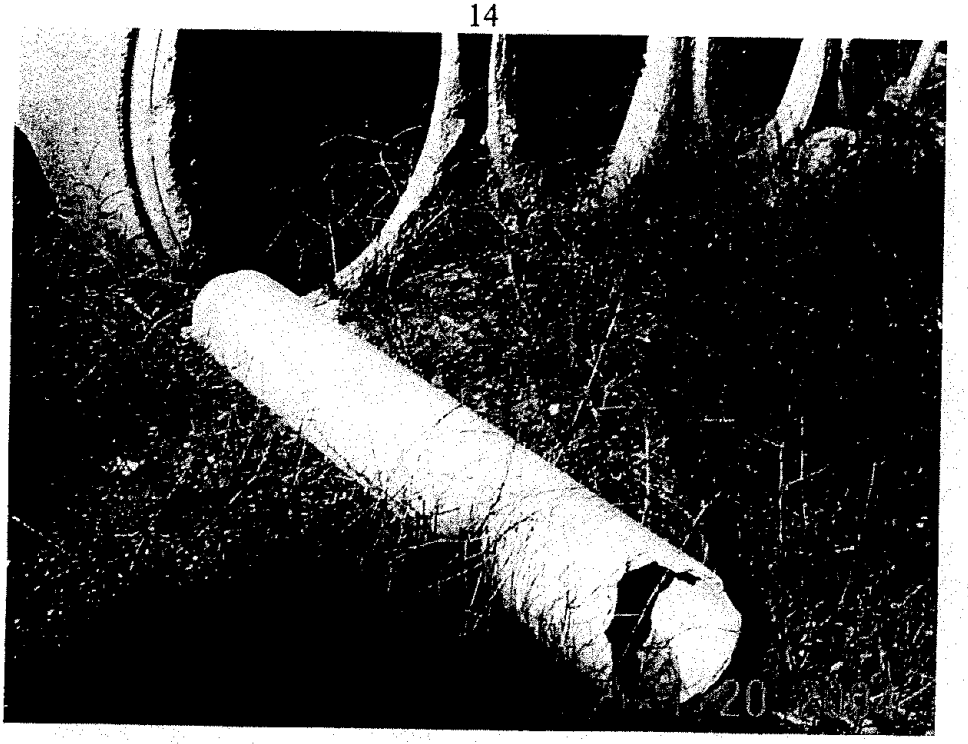
12

12. Trash along bottom slope of old railroad easement.

13

13. Metal debris in debris pile along northern property boundary.

14

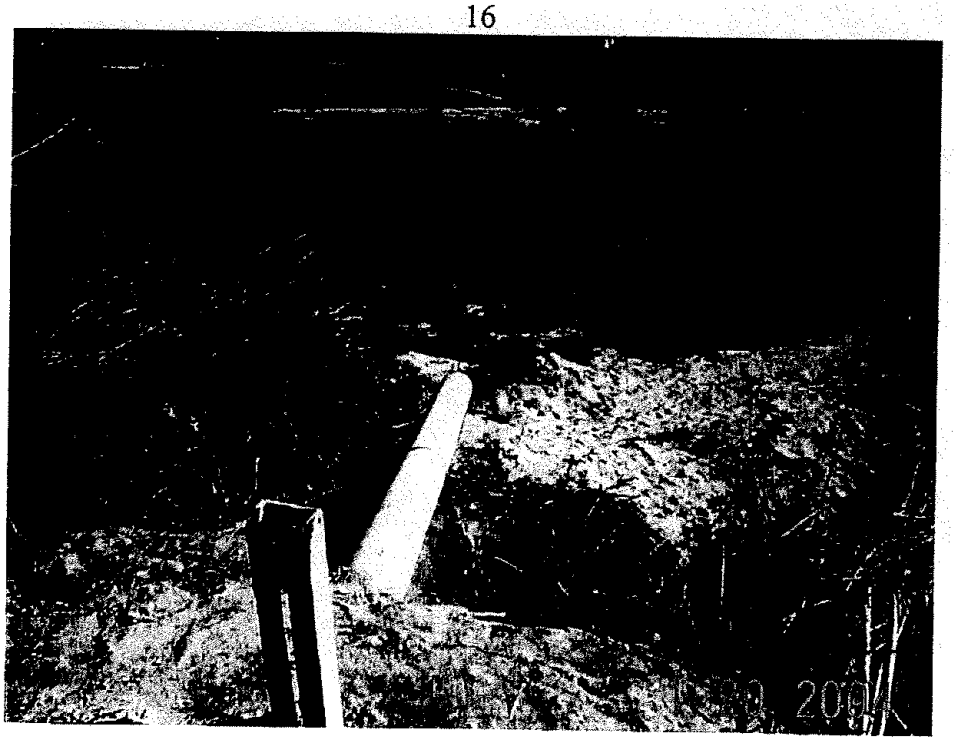


14. Transite pipe in debris pile along northern property boundary.

15

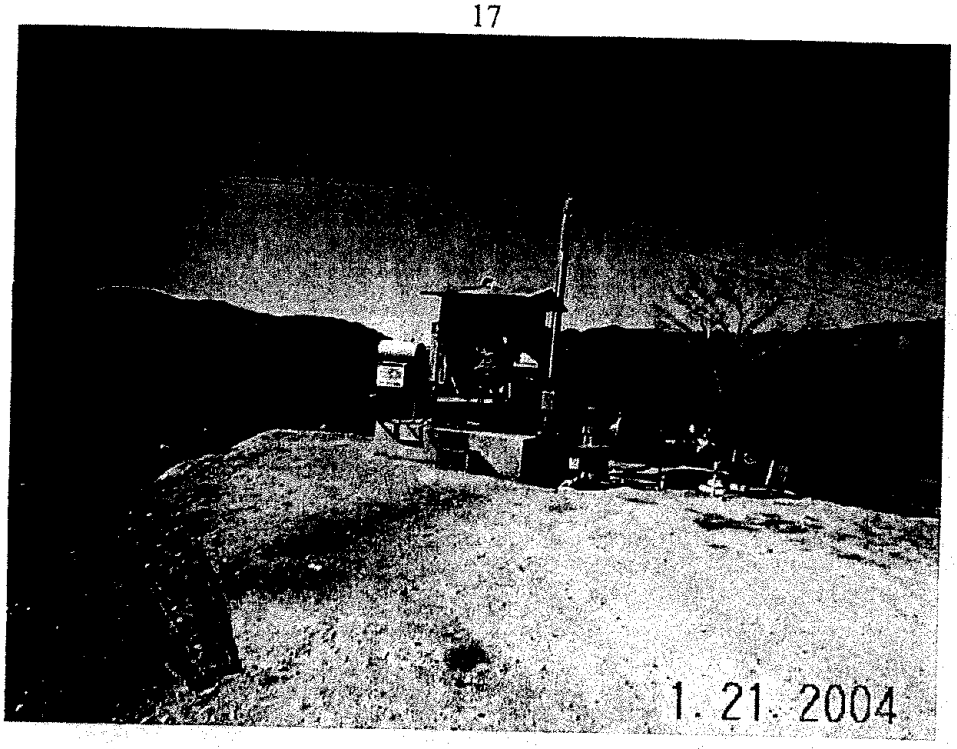
15. Asphalt debris pile along northern property boundary.

16



16. Southern California Gas pipeline in western portion of subject property.

17

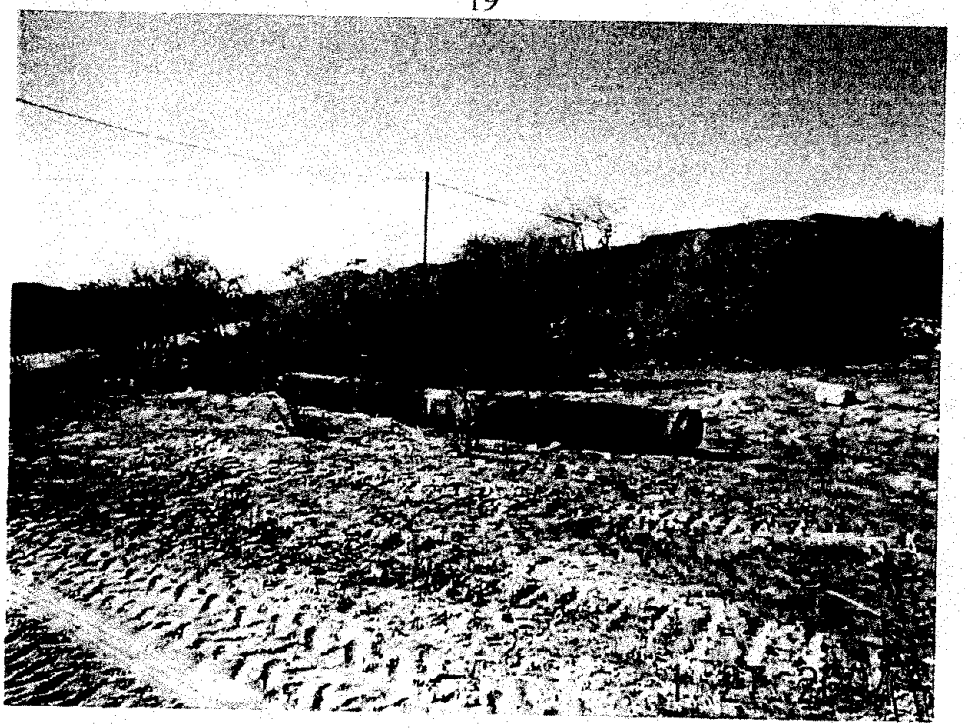


17. Water well in western portion of subject property.

18

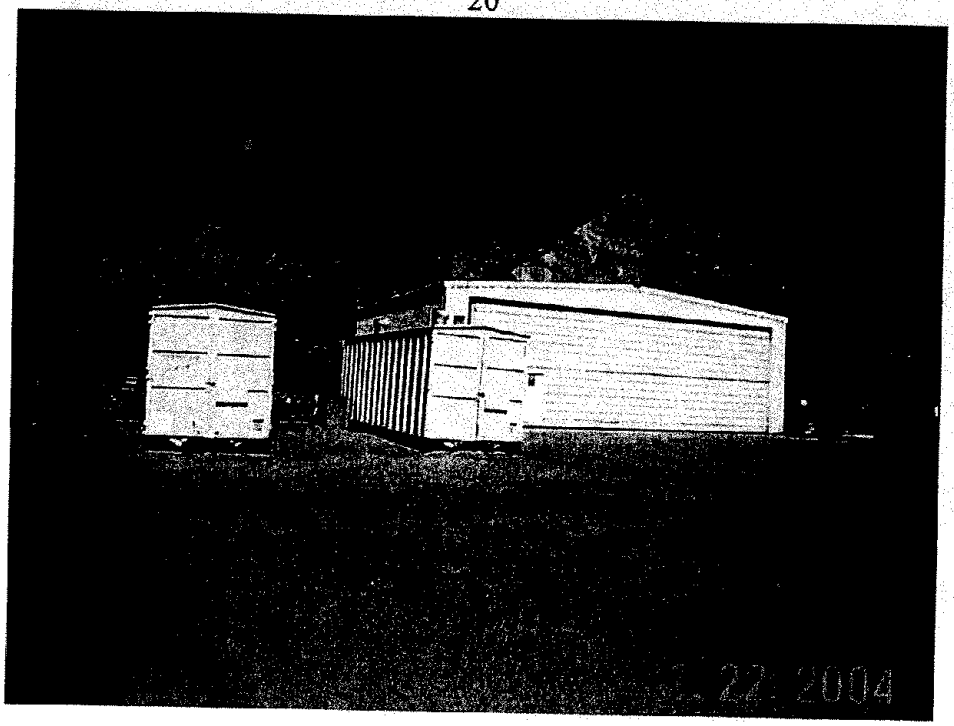
18. Wood debris in central portion of subject property.

19



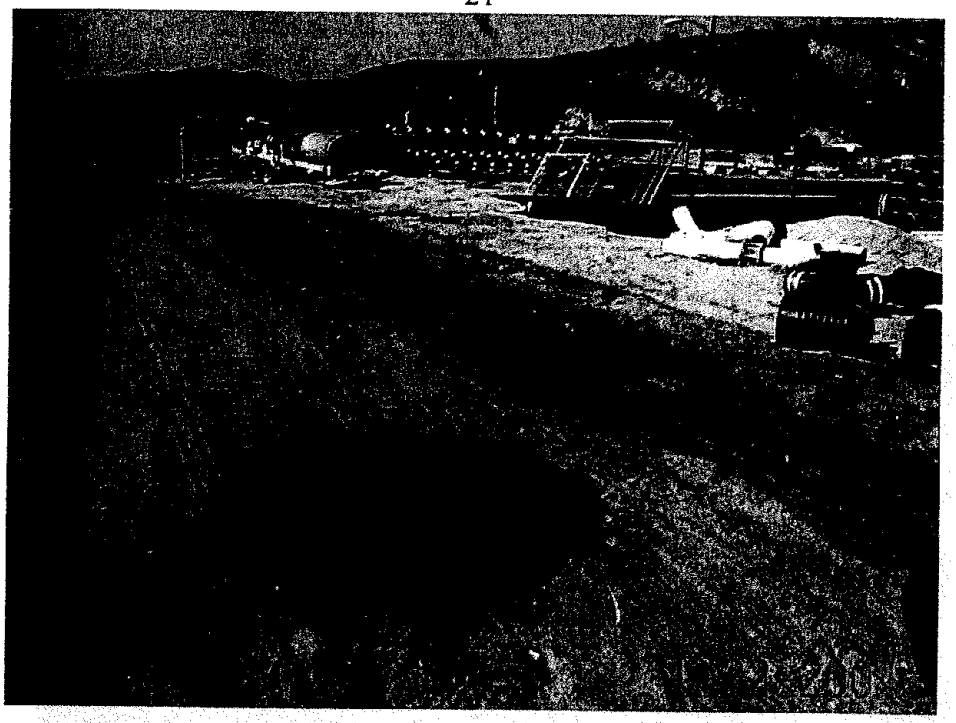
19. Section of abandoned pipe with suspect asbestos-containing tar wrap.

20



20. Old hangar building and cargo containers at storage area near Wolcott Way.

21



21. Oil staining around equipment storage yard, near Wolcott Way.

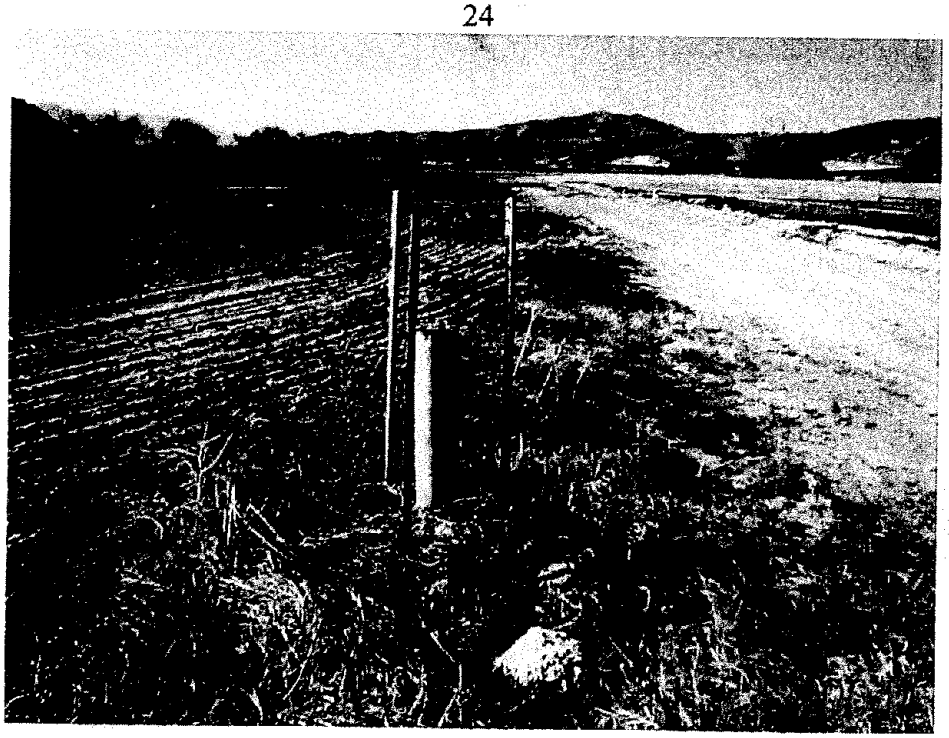
22

22. 55-gallon drum at storage area.

23

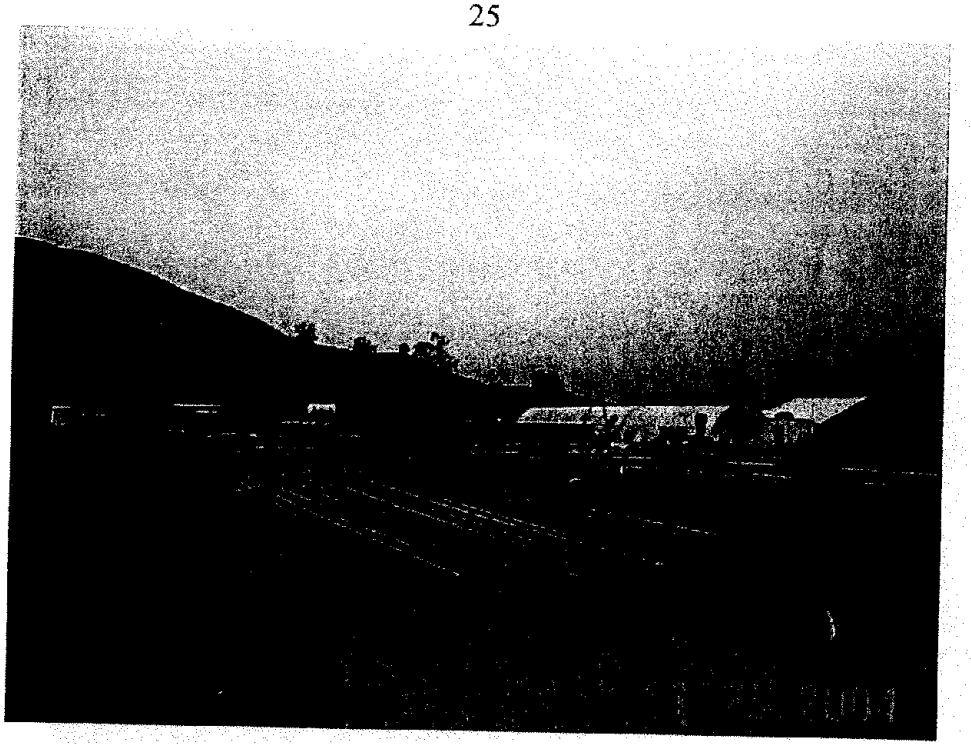
23. Oil staining within fence at equipment storage area at Wolcott Way.

24



24. Piezometer in south-central portion of subject property.

25

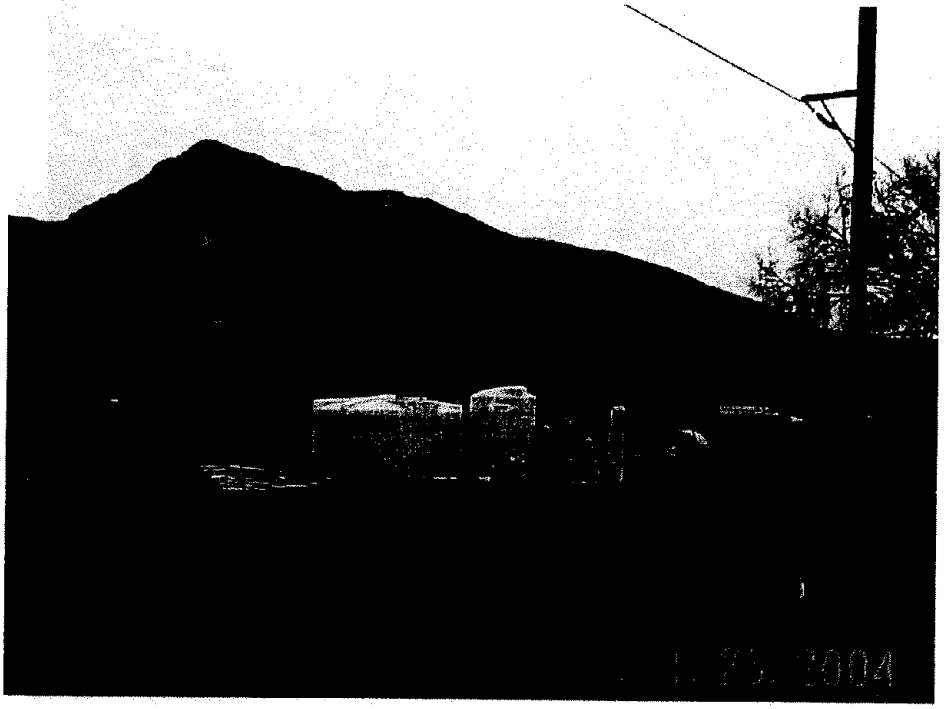


25. Equipment storage area in eastern portion of subject property.

26

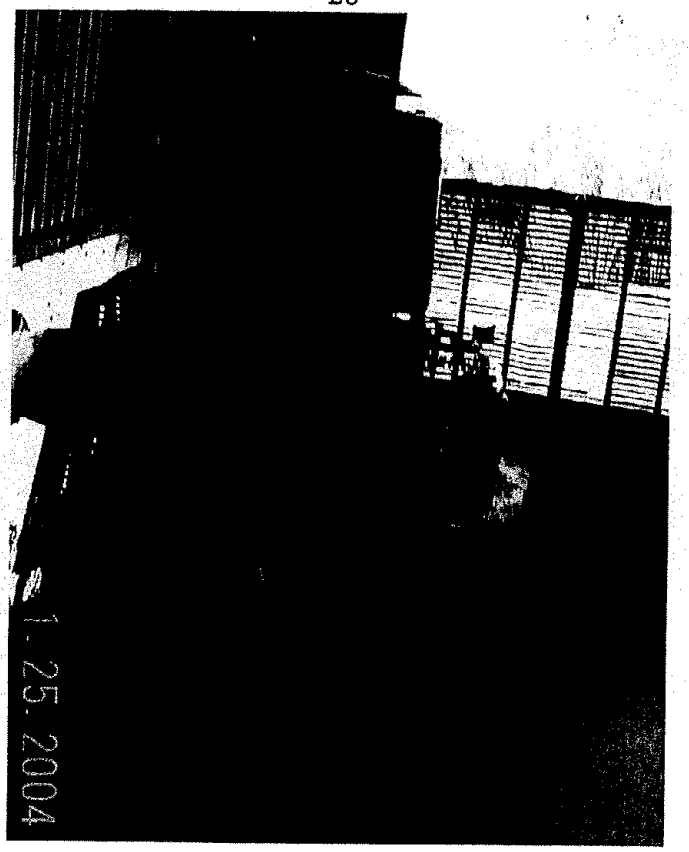
26. Buildings associated with equipment storage area in eastern portion of subject property.

27



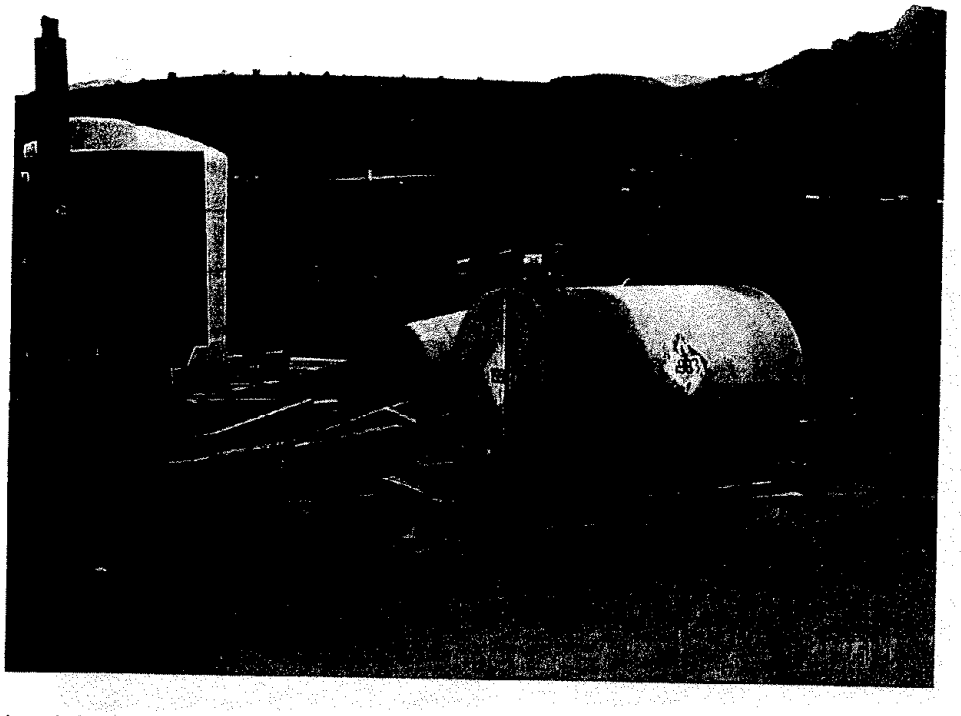
27. Agricultural ASTs in eastern portion of subject property.

28



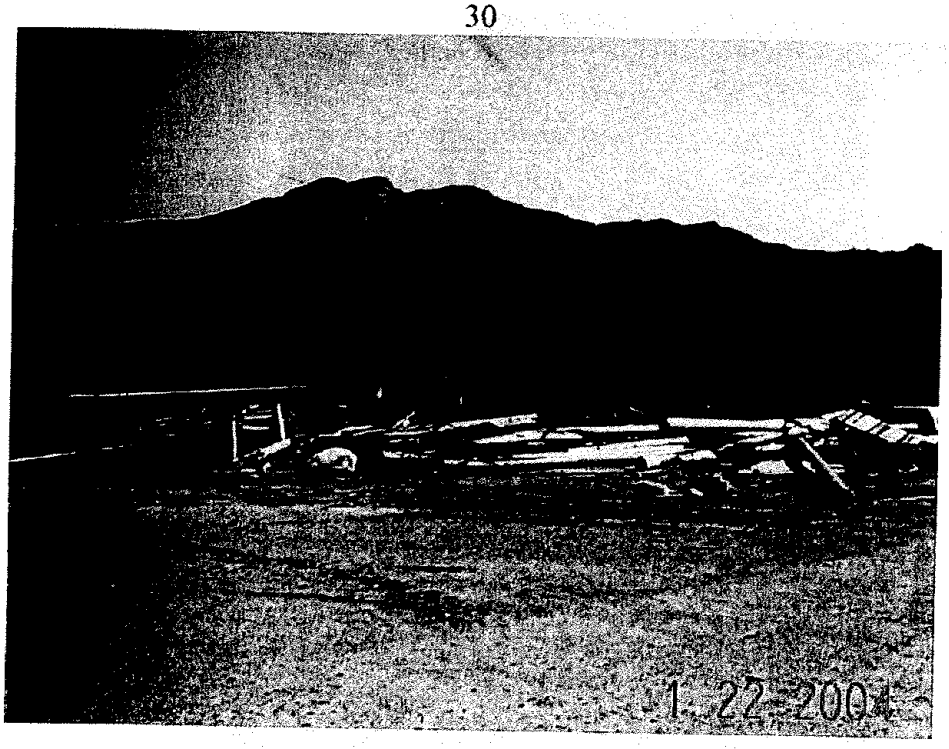
28. Water well in eastern portion of subject property.

29



29. Diesel fuel AST associated with portable water pump located in eastern portion of subject property. Note diesel fuel staining.

30



30. Debris is eastern portion of subject property near river.

31

31. View of Borrow Site "A."

32

32. Borrow Site "A."

33

33. Former oil drilling platform located in Borrow Site "A."

34

34. Possible oil well location in Borrow Site "A."

35

35. Oil staining on soil at possible oil well location in Borrow Site "A."

36

36. Borrow Site "B."

37

37. Looking west across Borrow Site "B."

38

38. Location of possible oil well in Borrow Site "B."

39

39. Location of former oil well in Borrow Site "B."

40

40. Close-up of former oil well in Borrow Site "B."

APPENDIX B:

Historic Aerial Photographs

Inquiry : 1063369.8 Year : 1928 Flyer : Fairchild Scale : 1"=500'

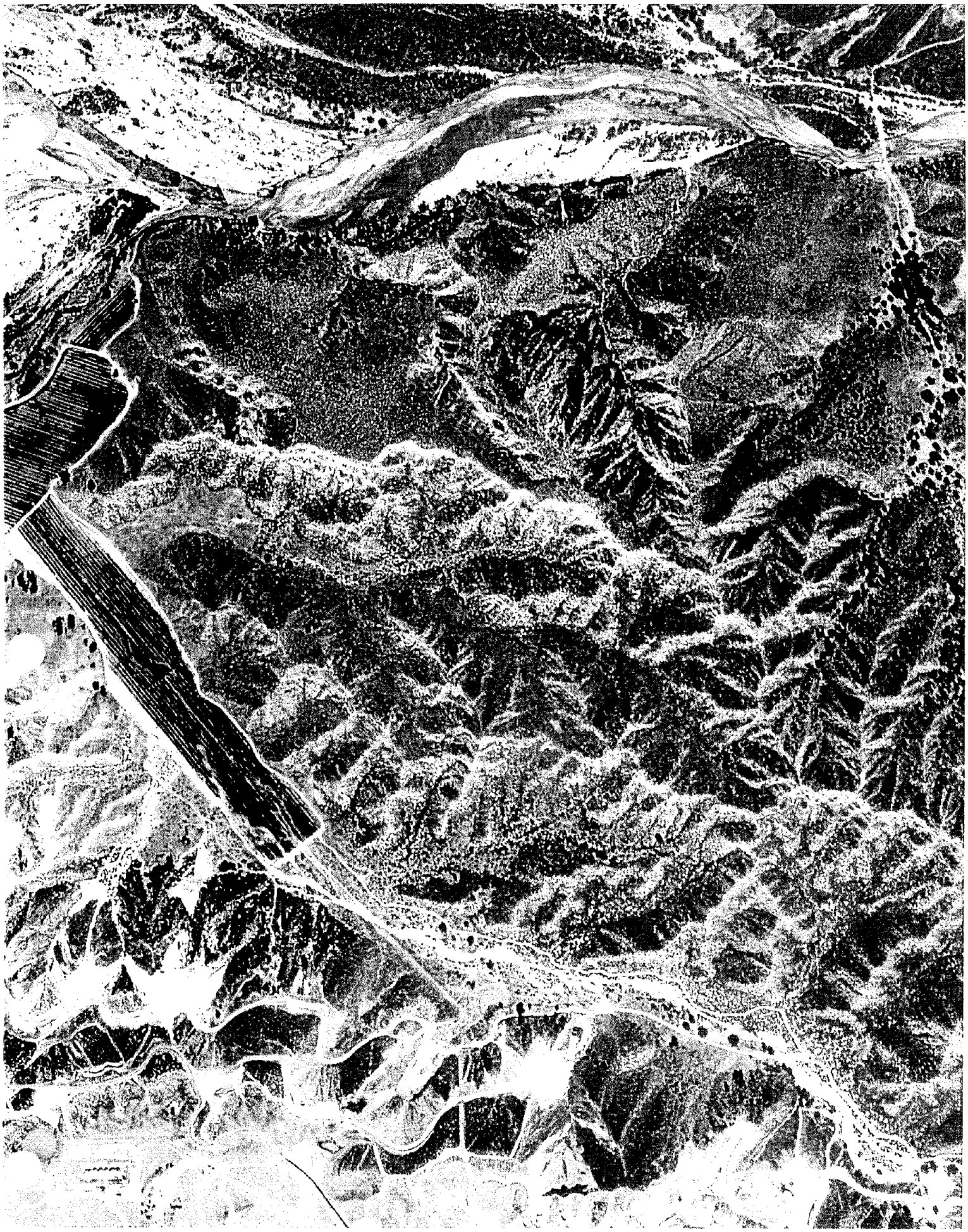
Inquiry : 1108642. Year : 1928 Flyer : Fairchild Scale : 1"=500'

Inquiry : 1108642.9 Year : 1928 Flyer : Fairchild Scale : 1"=500'

Inquiry : 1108642. Year : 1947 Flyer : Tubis Scale : 1"=666'

Inquiry : 1063369.8 Year : 1947 Flyer : Tubis Scale : 1"=666'

Inquiry : 1108642.9 Year : 1947 Flyer : Tubis Scale : 1"=666'



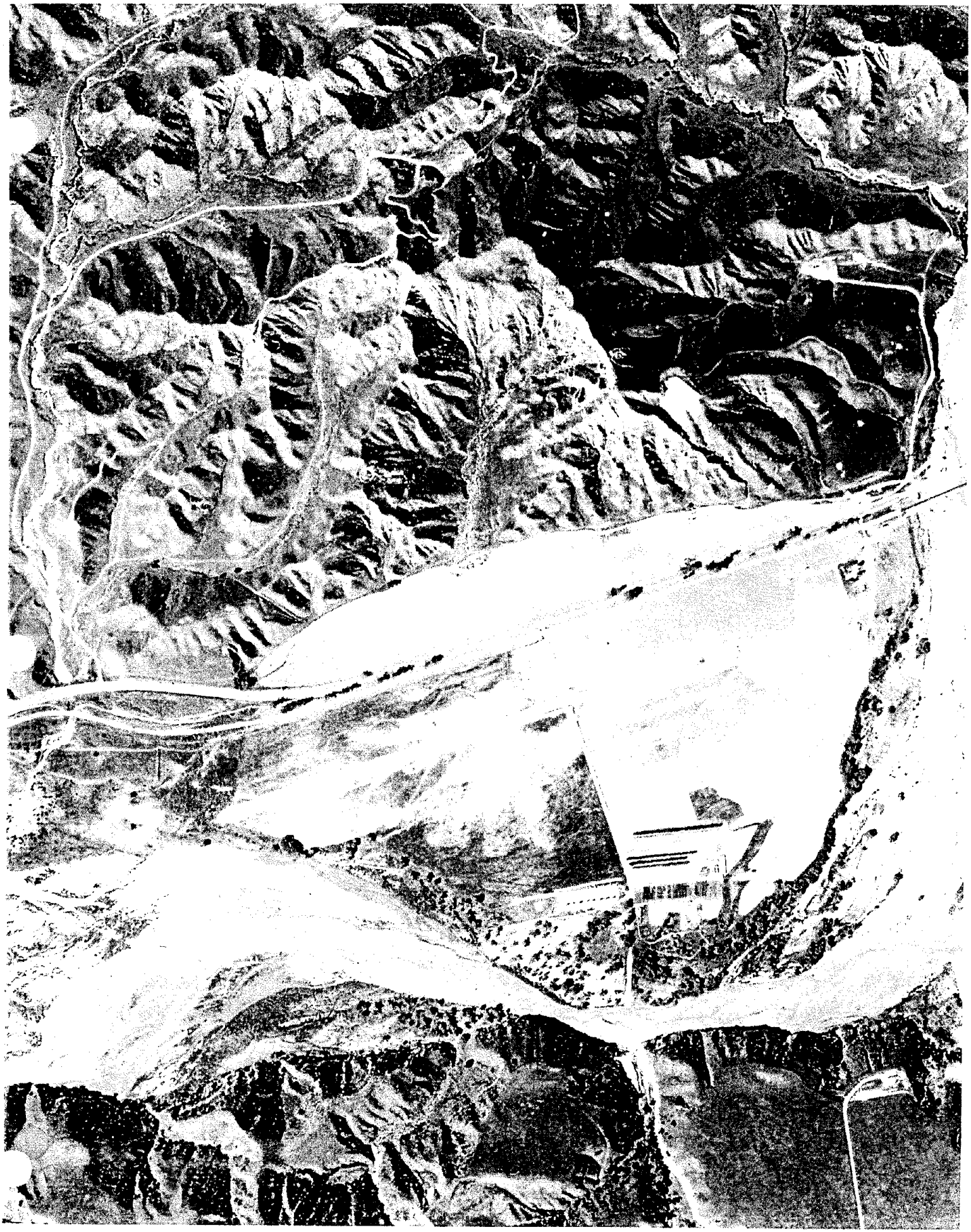
Inquiry : 1108642. Year : 1947 Flyer : Tubis Scale : 1"=666'

Inquiry : 1108642. Year : 1952 Flyer : Pacific Air Scale : 1"=555'

Inquiry : 1108642.9 Year : 1952 Flyer : Pacific Air Scale : 1"=555'

Inquiry : 1108642. Year : 1952 Flyer : Pacific Air Scale : 1"=555'

Inquiry : 1108642. Year : 1968 Flyer : Teledyne Scale : 1"=666'

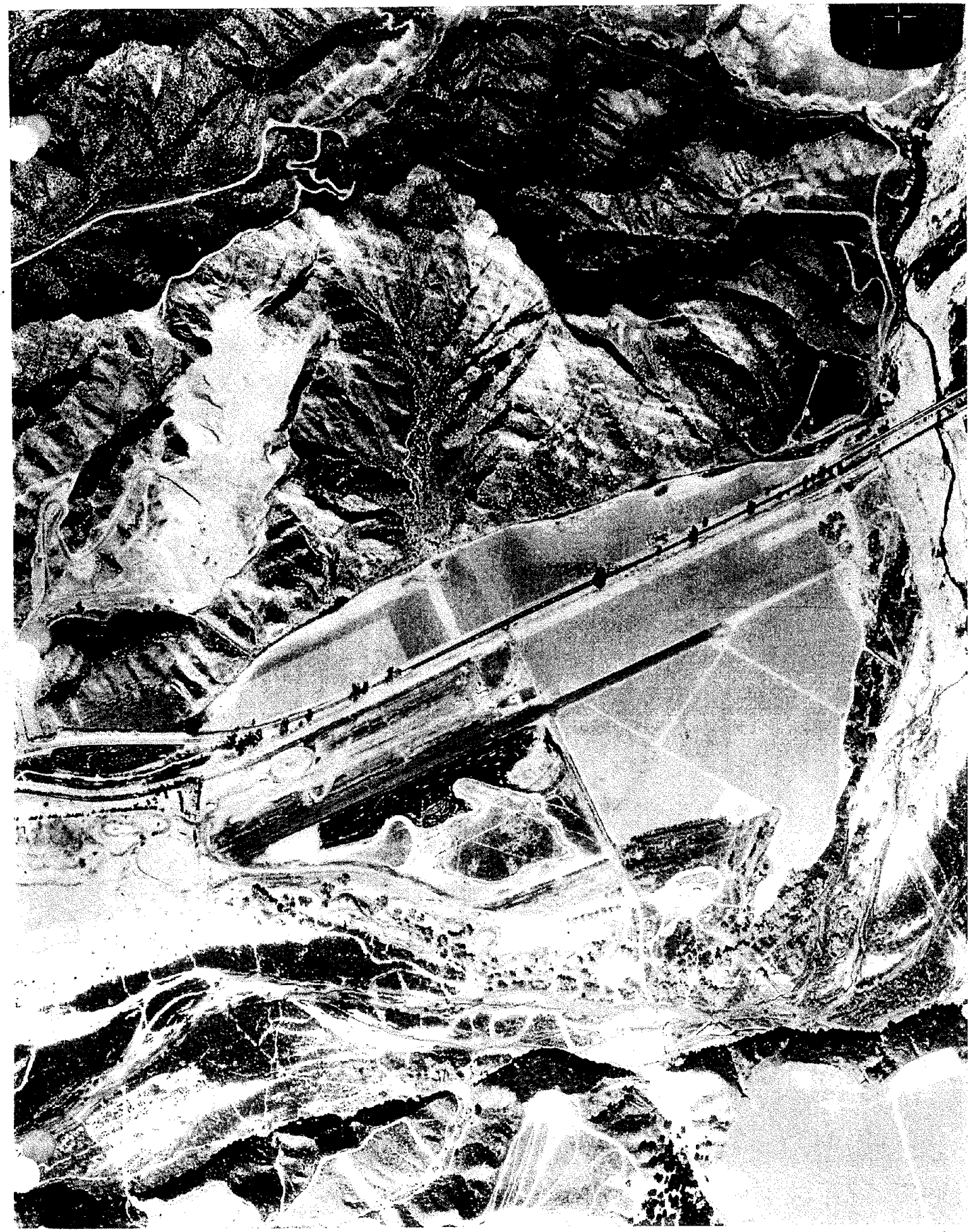


Inquiry : 1108642.9 Year : 1968 Flyer : Teledyne Scale : 1"=666'

7-28-72
AV 13-2

Inquiry : 1108642. Year : 1976 Flyer : Teledyne Scale : 1"=666'

Inquiry : 1063369.8 Year : 1976 Flyer : Teledyne Scale : 1"=666'



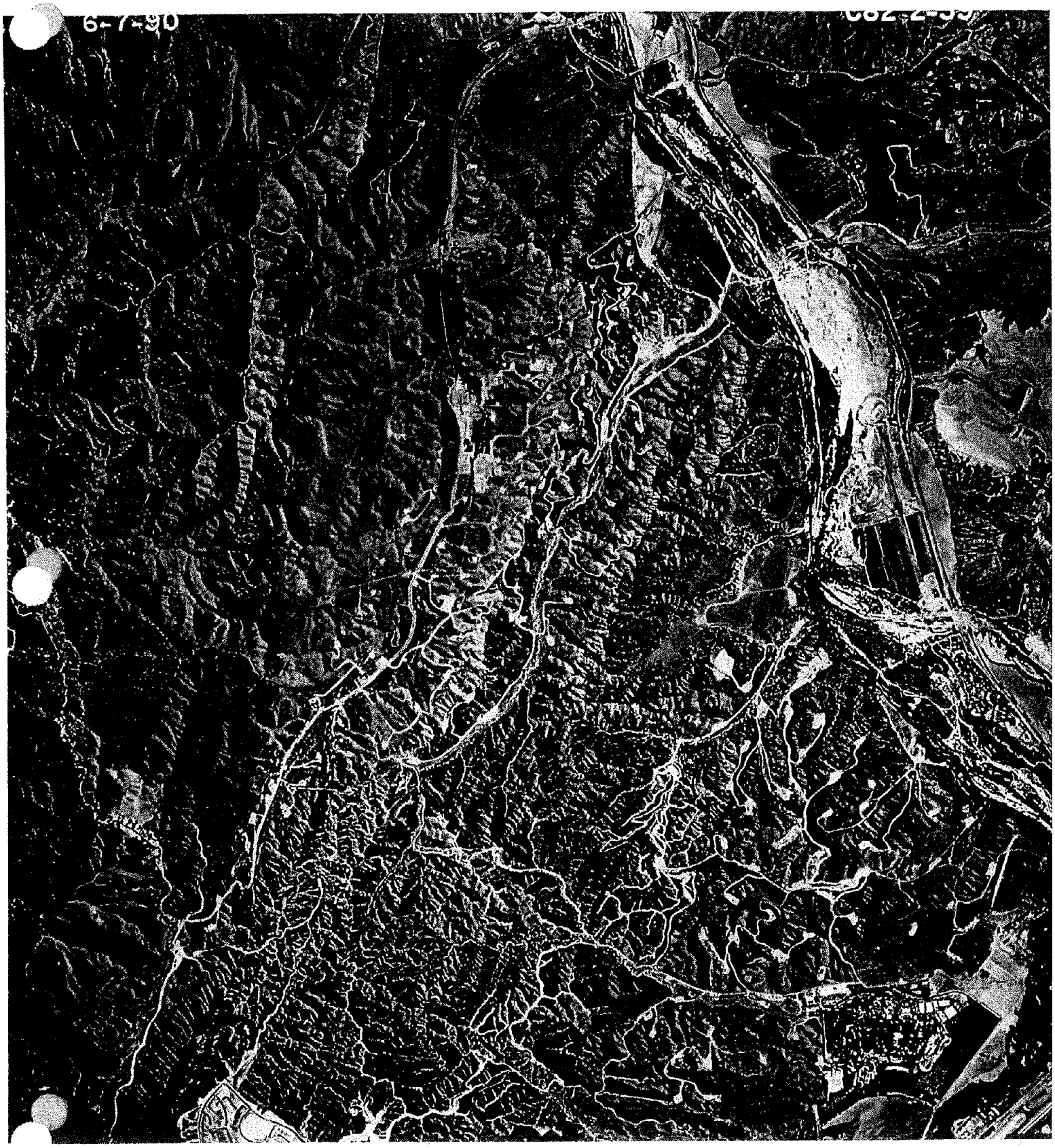
Inquiry : 1108642.9 Year : 1976 Flyer : Teledyne Scale : 1"=666'

470

8
NAS-VEN 3-22

nquiry : 1108642. Year : 1989 Flyer : USGS Scale : 1"=666'

Inquiry : 1108642.9 Year : 1989 Flyer : USGS Scale : 1"=666'


6-7-90

5-9-93
1"=2000'
C87-31-126

Inquiry : 1108642. Year : 1994 Flyer : USGS Scale : 1"=666'

Inquiry : 1063369.8 Year : 1994 Flyer : USGS Scale : 1"=666'

Inquiry : 1108642.9 Year : 1994 Flyer : USGS Scale : 1"=666'

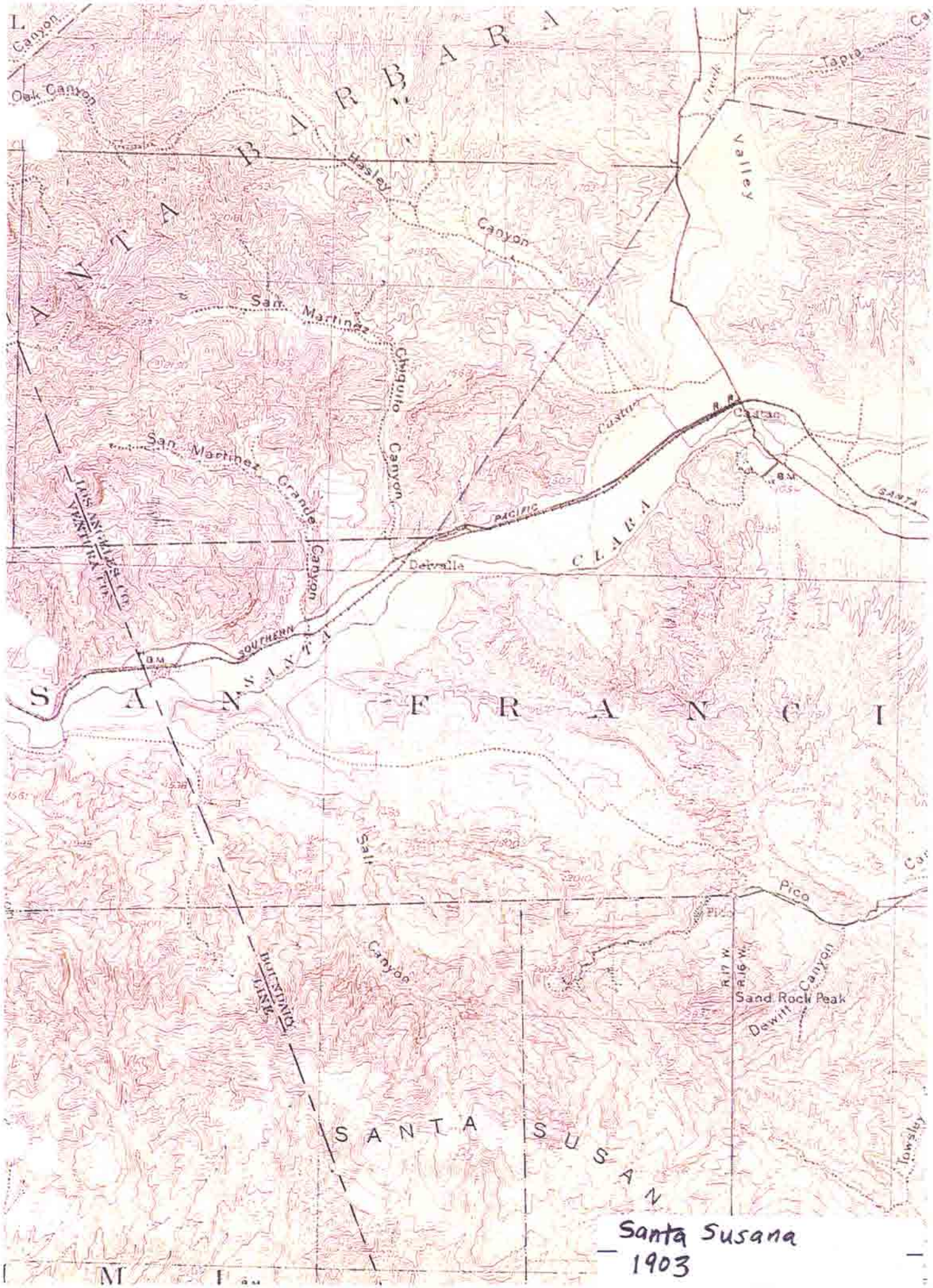
Inquiry : 1108642. Year : 1994 Flyer : USGS Scale : 1"=666'

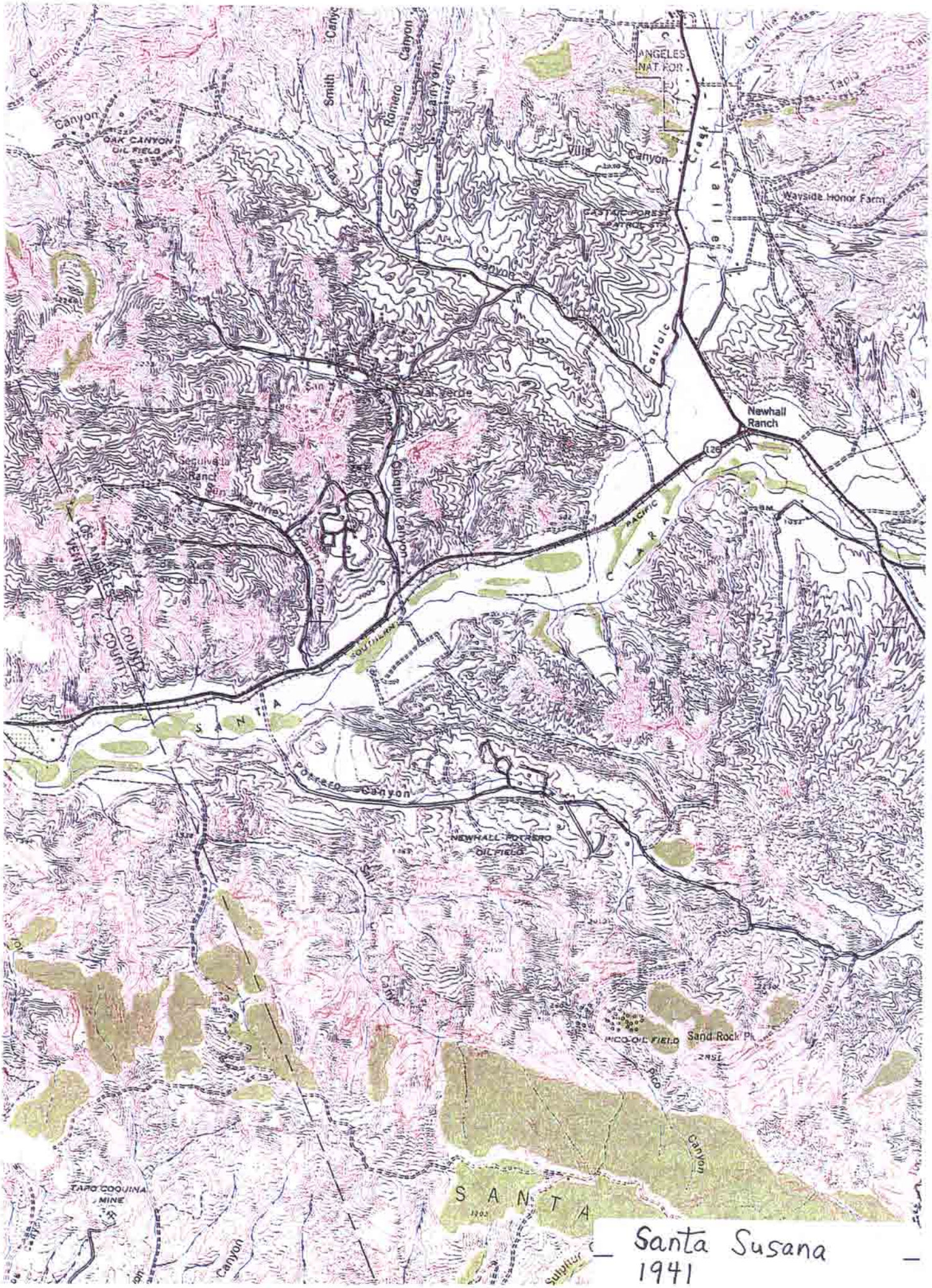
03-12-95
K-2000
CIIR-15-207

22-99
1"=2000'

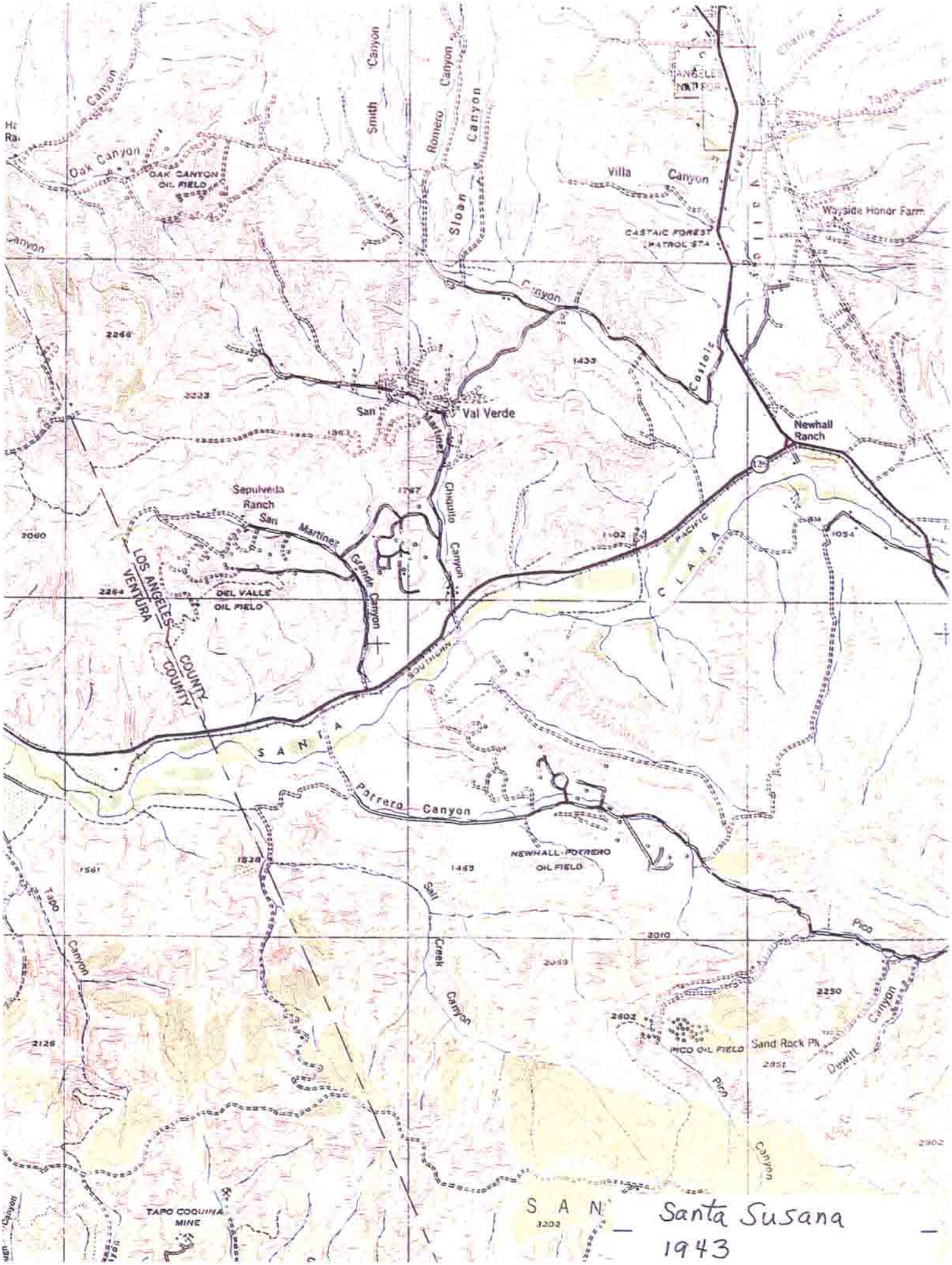
APPENDIX C:

Historic Topographic Maps

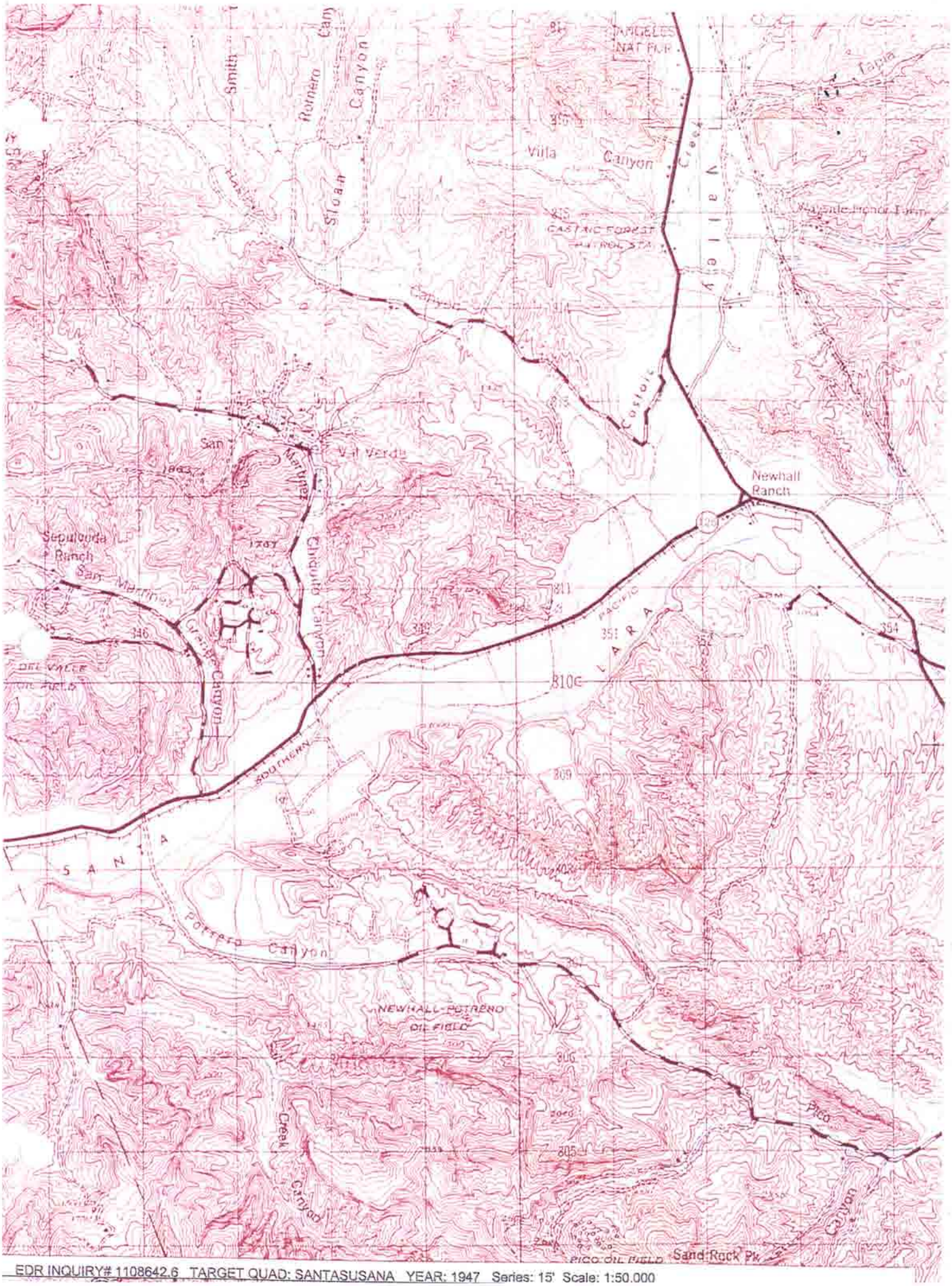

SANTA BARBARA
SANTA CLARA
SANTA FRANCISCO
SANTA SUSANA
Oak Canyon
Tapia
Valley
Hasley
Canyon
San Martinez
Chiquito
Canyon
San Martinez Grande
Canyon
Castro
Castac
Delvalle
Pacific
Southern
Salt
Canyon
Pico
Sand Rock Peak
Dewitt Canyon
Towsley
R.17 W.
R.16 W.
BOUNDARY LINE
Santa Susana
1903



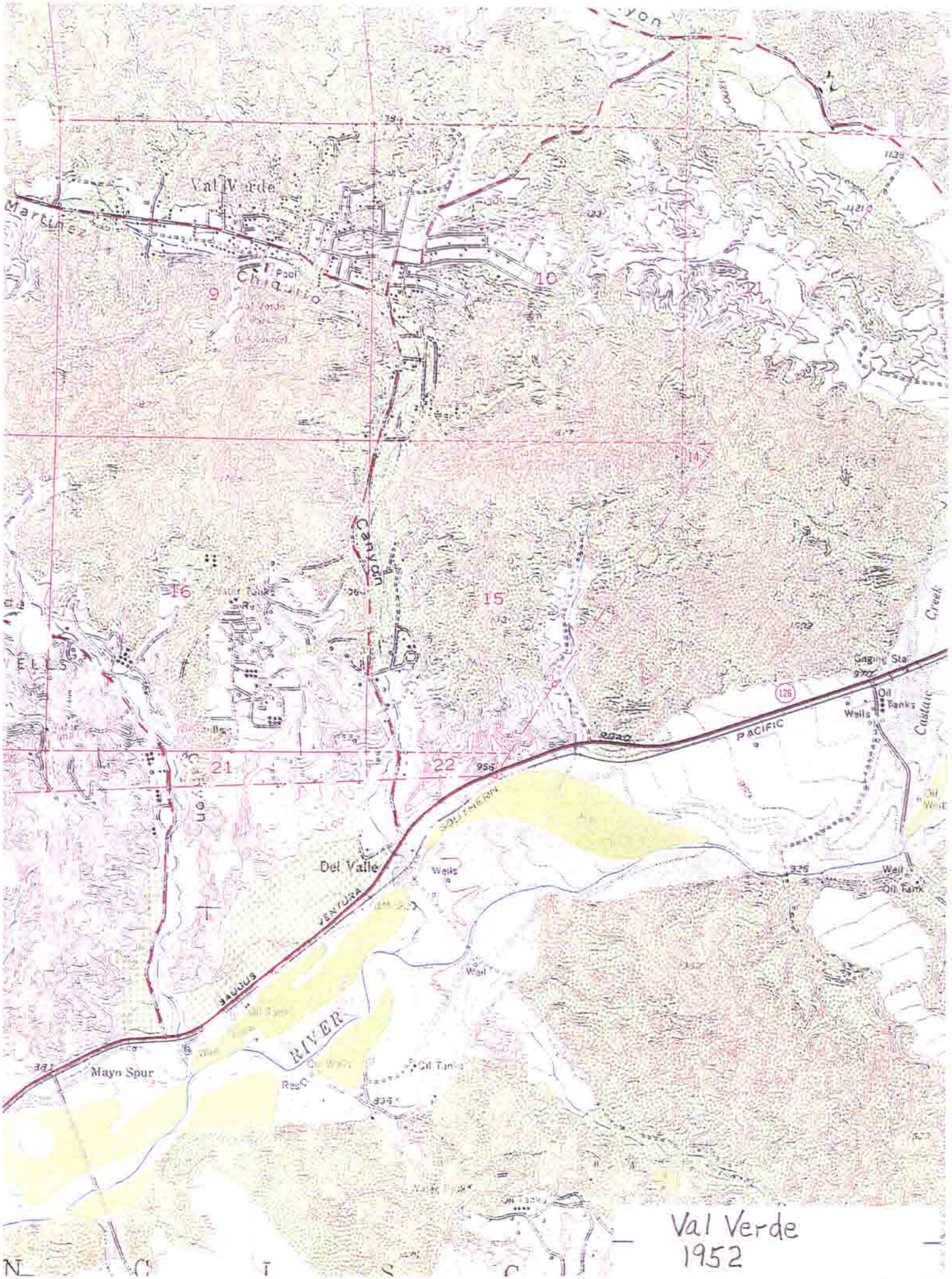
Santa Susana
1941



SAN Santa Susana
1943

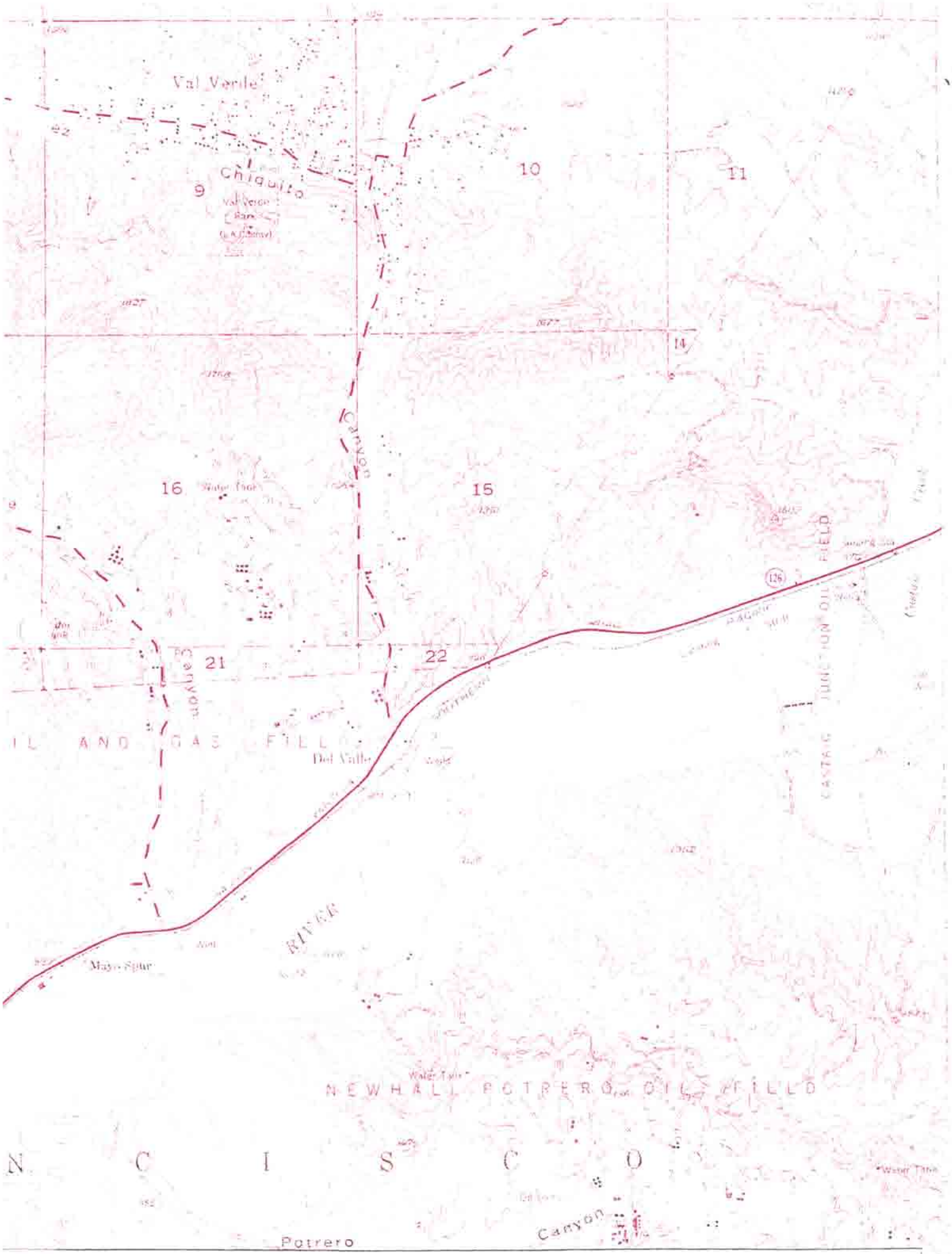


EDR INQUIRY# 1108642.6 TARGET QUAD: SANTASUSANA YEAR: 1947 Series: 15' Scale: 1:50.000

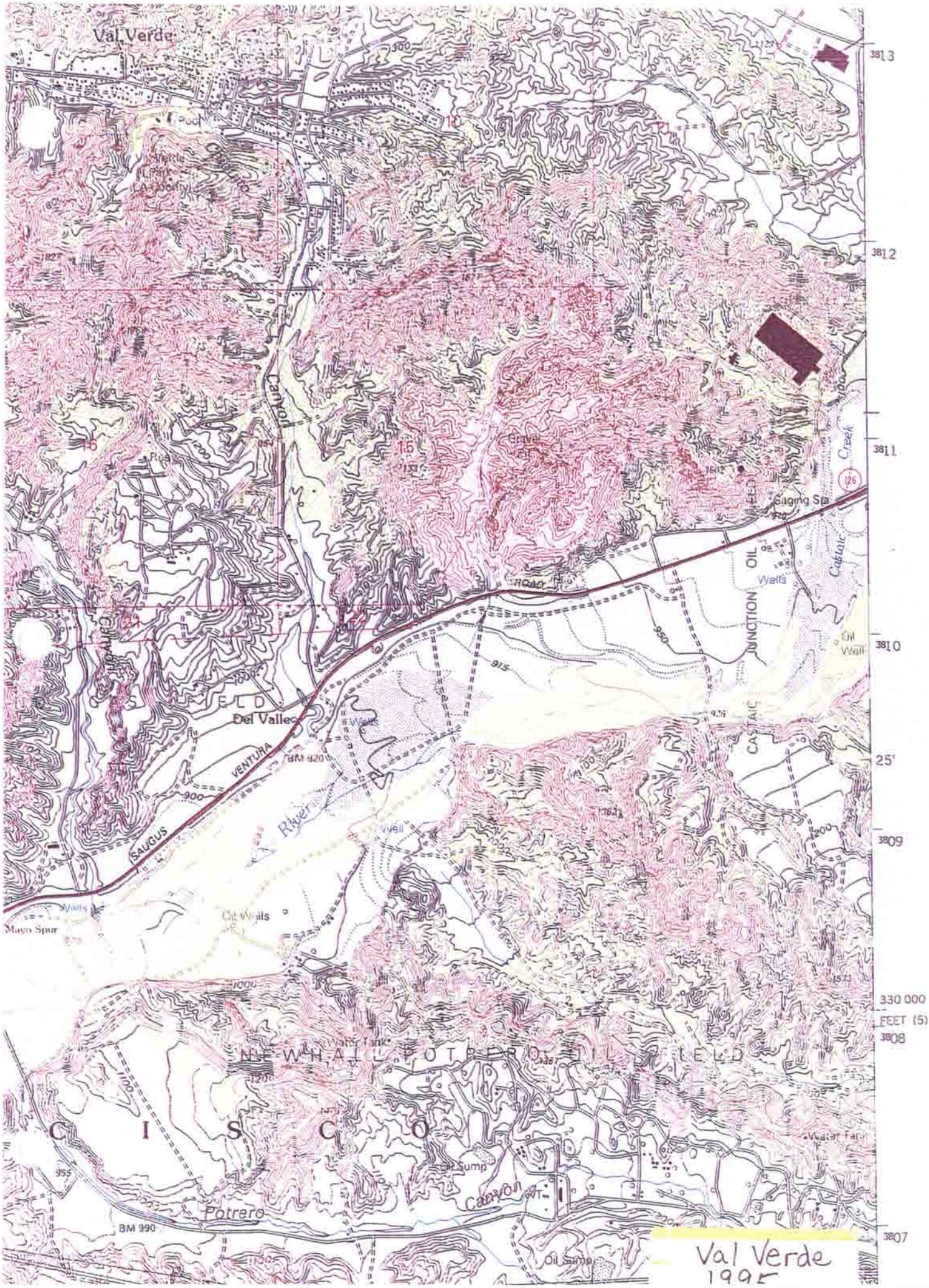


Val Verde
1952

N ^ EDR INQUIRY# 1108642.6 TARGET QUAD: VAL VERDE PHOTOREVISED: 1952-1988 Series: 7.5' Scale: 1:24,000


Val Verde
Chiquito
9
10
11
14
16
15
21
22
Canyon
Del Valle
Mayo Spur
RIVER
NEWHALL POTRERO OIL FIELD
N C I S C O
Potrero
Canyon
126

Val Verde
1991


Val Verde
Canyon
Gravel Pit
Gaging Sta
Castaic Creek
OIL FIELD
JUNCTION
Wells
Oil Well
Del Valle
VENTURA
SAUGUS
BM 820
River
Well
Oil Wells
Mayo Spur
CASTAIC
NEWHALL POTRERO OIL FIELD
Water Tank
Oil Sump
Potrero
Canyon
BM 990
Oil Sump
Water Tank
330 000
FEET (5)
3813
3812
3811
3810
3809
3808
3807
Val Verde
1995

APPENDIX D:

Laboratory Reports and Chain-of-Custody Documentation

Enviro - Chem, Inc.
1215 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

Date: February 6, 2004

FEB 12 2004

Mr. Russell Cote
BA Environmental
528 State Street
Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

Project: **Newhall Land / 104012**

Dear Mr. Cote:

The analytical results for the soil samples, received by our Lab on January 29, 2004, are attached.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,

Curtis Desilets
Vice President/Program Manager

Jesse Tu, Ph.D.
Laboratory Manager

Enviro - Chem, Inc.
1215 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G1-A/B/C/D (Composite)**
LAB I.D.: 040130-10,-11,-12,-13 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G2-A/B/C/D (Composite)**
LAB I.D.: 040130-14,-15,-16,-17 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G3-A/B/C/D (Composite)**
LAB I.D.: 040130-18,-19,-20,-21 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	0.001	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G4-A/B/C/D (Composite)**
LAB I.D.: 040130-22,-23,-24,-25 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G5-A/B/C/D (Composite)**
LAB I.D.: 040130-26,-27,-28,-29 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G6-A/B/C/D (Composite)**
LAB I.D.: 040130-30,-31,-32,-33 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	0.002	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G7-A/B/C/D (Composite)**
LAB I.D.: 040130-34,-35,-36,-37 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	0.002	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G8-A/B/C/D (Composite)**
LAB I.D.: 040130-38,-39,-40,-41 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02/04
DATE ANALYZED: 02/03-04/04
DATE REPORTED: 02/06/04

METHOD BLANK FOR LAB I.D.: 040130-10 TO -13 (Composite), 040130-14 TO -17 (Composite), 040130-18 TO -21 (Composite), 040130-22 TO -25 (Composite), 040130-26 TO -29 (Composite), 040130-30 TO -33 (Composite), 040130-34 TO -37 (Composite), 040130-38 TO -41 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro-Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909)590-5905 Fax (909)590-5907

EPA 8081 QA/QC Report

Matrix: Soil Date Analyzed: 2/3-4/2004
Unit: mg/Kg

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: 040130-120

Analyte	S.R.	spk conc	MS	%REC	MSD	%REC	%RPD	ACP %RPD	ACP %REC
Gamma-BHC	0.000	0.050	0.046	**92%**	0.047	**94%**	**2%**	**0-20%**	**70-130**
Aldrin	0.000	0.050	0.048	**95%**	0.048	**97%**	**2%**	**0-20%**	**70-130**
4,4-DDE	0.000	0.050	0.050	**99%**	0.051	**102%**	**3%**	**0-20%**	**70-130**

Lab Control Spike (LCS) Recovery:

Analyte	spk conc	LCS	% REC	ACP %REC
Gamma-BHC	0.050	0.049	**97%**	**75-125**
Aldrin	0.050	0.049	**98%**	**75-125**
4,4-DDE	0.050	0.049	**98%**	**75-125**
Dieldrin	0.050	0.052	**104%**	**75-125**

Surrogate Recovery	ACP%	MB	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.			040130-116	040130-117	040130-118	040130-119	040130-120	0130-10~13
Tetra-chloro-meta-xylene		111%	120%	114%	116%	130%	110%	122%
Decachlorobipneyl	50-150	114%	116%	108%	121%	94%	103%	112%

Surrogate Recovery	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.	0130-14~17	0130-18~21	0130-22~25	0130-26~29	0130-30~33	0130-34~37	0130-38~41	
Tetra-chloro-meta-xylene	116%	129%	117%	121%	99%	113%	111%	
Decachlorobipneyl	108%	126%	106%	118%	80%	104%	96%	

Surrogate Recovery	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.						
Tetra-chloro-meta-xylene						
Decachlorobipneyl						

S.R. = Sample Result
spk conc = Spike Concentration
%REC = Percent Recovery
ACP %RPD = Acceptable Percent RPD Range
ACP %REC = Acceptable Percent Recovery Range

** = Surrogate fail due to matrix interference*

Note: ***LCS, MS, MSD are in control therefore results are in control.***

Analyzed and Reviewed By: _____

Final Reviewer: _____

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: G1-A/B/C/D (Composite)
LAB I.D.: 040130-10,-11,-12,-13 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G2-A/B/C/D (Composite)**
LAB I.D.: 040130-14,-15,-16,-17 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G3-A/B/C/D (Composite)**
LAB I.D.: 040130-18,-19,-20,-21 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G4-A/B/C/D (Composite)**
LAB I.D.: 040130-22,-23,-24,-25 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
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LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G5-A/B/C/D (Composite)**
LAB I.D.: 040130-26,-27,-28,-29 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G6-A/B/C/D (Composite)**
LAB I.D.: 040130-30,-31,-32,-33 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G7-A/B/C/D (Composite)**
LAB I.D.: 040130-34,-35,-36,-37 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

SAMPLE I.D.: **G8-A/B/C/D (Composite)**
LAB I.D.: 040130-38,-39,-40,-41 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/02-04/04
DATE ANALYZED: 02/04/04
DATE REPORTED: 02/06/04

METHOD BLANK FOR LAB I.D.: 040130-10 TO -13 (Composite), 040130-14 TO -17 (Composite), 040130-18 TO -21 (Composite), 040130-22 TO -25 (Composite), 040130-26 TO -29 (Composite), 040130-30 TO -33 (Composite), 040130-34 TO -37 (Composite), 040130-38 TO -41 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro-Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909)590-5905 Fax (909)590-5907

QA/QC Report

Analysis: EPA 8151A

Matrix: **SOIL** Date Analyzed: **2/4/2004**

Unit: **mg/Kg (PPM)**

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: 040130-38~41

Analyte	S.R.	spk conc	MS	% REC	MSD	% REC	%RPD	ACP %RPD	ACP %REC
2,4,5-T	0	1.0	1.03	**103%**	1.06	**106%**	**3%**	**0-20%**	**50-150**

Lab Control Spike (LCS) Recovery:

Analyte	spk conc	LCS	% REC	ACP %REC
2,4,5-T	0.100	0.105	**105%**	**70-130**
2,4,5-TP	0.100	0.094	**94%**	**70-130**
2,4-DB	1.00	1.12	**112%**	**70-130**

Surrogate Recovery:

Analyte	spk conc	ACP %	M-BLK	%REC	%REC	%REC	%REC	%REC	%REC
Sample ID:				040130-10~13	040130-14~17	040130-18~21	040130-22~25	040130-26~29	040130-30~33
DCAA	0.20	50-150	59%	57%	66%	75%	66%	86%	85%

Analyte	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC
Sample ID:	040130-34~37	040130-38~41							
DCAA	68%	75%							

Analyte	%REC	%REC	%REC	%REC	%REC
Sample ID:					
DCAA					

S.R. = Sample Result

spk conc = Spike Concentration

%REC = Percent Recovery

ACP %RPD = Acceptable Percent RPD Range

ACP %REC = Acceptable Percent Recovery Range

Analyzed and Reviewed By: _____

Final Reviewer: _____

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

Date: February 9, 2004

Mr. Russell Cote
BA Environmental
528 State Street
Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

Project: **Newhall Land / 104012; 8141A**

Dear Mr. Cote:

The analytical results for the soil samples, received by our Lab on January 29, 2004, are attached.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,

Curtis Desilets
Vice President/Program Manager

Jesse Tu, Ph.D.
Laboratory Manager

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G1-A/B/C/D (Composite)**
LAB I.D.: 040130-10,-11,-12,-13 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G3-A/B/C/D (Composite)**
LAB I.D.: 040130-18,-19,-20,-21 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G4-A/B/C/D (Composite)**
LAB I.D.: 040130-22,-23,-24,-25 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G5-A/B/C/D (Composite)**
LAB I.D.: 040130-26,-27,-28,-29 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G6-A/B/C/D (Composite)**
LAB I.D.: 040130-30,-31,-32,-33 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G7-A/B/C/D (Composite)**
LAB I.D.: 040130-34,-35,-36,-37 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G8-A/B/C/D (Composite)**
LAB I.D.: 040130-38,-39,-40,-41 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

METHOD BLANK FOR LAB I.D.: 040130-10 TO -13 (Composite), 040130-14 TO -17 (Composite), 040130-18 TO -21 (Composite), 040130-22 TO -25 (Composite), 040130-26 TO -29 (Composite), 040130-30 TO -33 (Composite), 040130-34 TO -37 (Composite), 040130-38 TO -41 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900

FAX 714/538-1209

CLIENT Enviro-Chem Laboratories, Inc. (7420)
ATTN: Curtis Desilets
1214 E. Lexington Avenue
Pomona, CA 91766

LAB REQUEST 123712

REPORTED 02/09/2004
RECEIVED 01/30/2004

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
494471	040130/10-13
494472	040130/14-17
494473	040130/18-21
494474	040130/22-25
494475	040130/26-29
494476	040130/30-33
494477	040130/34-37
494478	040130/38-41
494479	Laboratory Method Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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TESTING & CONSULTING
Chemical
Microbiological
Environmental

FEB-10-2004 09:17 FROM-Associated Laboratories 714-538-1209 T-535 P.001/012 F-665

Order #: 494471
Matrix: SOLID
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040130/10-13

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD
Surrogates				**Units**	**Control Limits**	
TBP (sur)	71			%	50 - 145	
TPP (sur)	60			%	50 - 145	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES Analytical Results Report

FEB-10-2004 09:18 FROM-Associated Laboratories 714-538-1209 T-535 P 002/012 F-665

Order #: 494472
Matrix: SOLID
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040130/14-17

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates

		Units	Control Limits
TBP (sur)	61	%	50 - 145
TPP (sur)	50	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit. DF = Dilution Factor

FEB-10-2004 09:18 FROM-Associated Laboratories 714-538-1209 T-535 P.003/012 F-665

Order #: 494473
Matrix: SOLID
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040130/18-21

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates

		Units	Control Limits
TBP (sur)	80	%	50 - 145
TPP (sur)	83	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

FEB-10-2004 09:18 FROM-Associated Laboratories 714-538-1209 T-535 P 004/012 F-665

Order #: 494474 **Client:** Enviro-Chem Laboratories, Inc.
Matrix: SOLID **Client Sample ID:** 040130/22-25
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates		Units	Control Limits
TBP (sur)	77	%	50 - 145
TPP (sur)	74	%	50 - 145

DLR = Detection limit for reporting purposes. ND = Not Detected below indicated detection limit, DF = Dilution Factor

FEB-10-2004 09:18 FROM-Associated Laboratories 714-538-1209 T-535 P.005/012 F-665

Order #: 494475 **Client:** Enviro-Chem Laboratories, Inc.
Matrix: SOLID **Client Sample ID:** 040130/26-29
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates		**Units**	**Control Limits**
TBP (sur)	78	%	50 - 145
TPP (sur)	68	%	50 - 145

DLR = Detection limit for reporting purposes. ND = Not Detected below indicated detection limit, DF = Dilution Factor

FEB-10-2004 09:19 FROM-Associated Laboratories 714-538-1209 T-535 P.006/012 F-665

Order #: 494476 **Client:** Enviro-Chem Laboratories, Inc.
Matrix: SOLID **Client Sample ID:** 040130/30-33
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD
Surrogates				**Units**	**Control Limits**	
TBP (sur)	80			%	50 - 145	
TPP (sur)	68			%	50 - 145	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

FEB-10-2004 09:19 FROM-Associated Laboratories 714-538-1209 T-535 P.007/012 F-665

Order #: 494477
Matrix: SOLID
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040130/34-37

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates

		Units	Control Limits
TBP (sur)	85	%	50 - 145
TPP (sur)	70	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

FEB-10-2004 09:18 FROM-Associated Laboratories 714-538-1209 T-535 P.008/012 F-665

Order #: 494478
Matrix: SOLID
Date Sampled: 01/29/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040130/38-41

8141 Organophosphate Pesticides

Analyte	Result	DF	DLR	Units	Date/Analyst	
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates		Units	Control Limits
TBP (sur)	85	%	50 - 145
TPP (sur)	70	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

Order #: 494479 **Client:** Enviro-Chem Laboratories, Inc.

Matrix: SOLID **Client Sample ID:** Laboratory Method Blank

Date Sampled:

Time Sampled:

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates		Units	Control Limits
TBP (sur)	77	%	50 - 145
TPP (sur)	85	%	50 - 145

DLR = Detection limit for reporting purposes. ND = Not Detected below indicated detection limit, DF = Dilution Factor

FEB-10-2004 09:20 FROM-Associated Laboratories 714-538-1209 T-535 P 010/012 F-665

ASSOCIATED LABORATORIES
QA REPORT FORM

Determinative Method : EPA 8141 Preparative Method: EPA 3545

QC Sample: 123712-494473

Matrix: SOLID

Analysis Date: 2/7/04

Batch Date: 02/03/04 (op 020304s)

Applies to: LR 123712 and LR 123536

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS
REPORTING UNITS = mg/Kg

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			MS	MSD	MS	MSD		RPD	% Rec
Demeton-O	ND	0.400	0.237	0.254	59	64	7	35	45-140
Ethoprop	ND	0.400	0.369	0.346	92	86	7	35	45-140
Naled	ND	0.400	0.381	0.374	95	93	2	35	45-140
Diazinon	ND	0.400	0.325	0.324	81	81	0	35	45-140
Stirophos	ND	0.400	0.315	0.329	79	82	4	35	45-140
Fensulfothion	ND	0.400	0.411	0.391	103	98	5	35	45-140
Azinophos, Methyl-	ND	0.400	0.341	0.349	85	87	2	35	45-140
Coumaphos	ND	0.400	0.191	0.206	48	52	8	35	45-140

ND = Not Detected
% Rec - MS & MSD = Percent Recovery from Matrix Spike & Matrix Spike Duplicate
RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate recoveries

LAB CONTROL SPIKE / LAB CONTROL SPIKE DUPLICATE RECOVERIES
REPORTING UNITS = mg/Kg

Test	Spike Added	Spike Recovered	% Rec LCS	QC Limits
Demeton-O	0.400	0.344	86	55-130
Ethoprop	0.400	0.371	93	55-130
Naled	0.400	0.389	97	55-130
Diazinon	0.400	0.381	95	55-130
Stirophos	0.400	0.371	93	55-130
Fensulfothion	0.400	0.399	100	55-130
Azinophos, Methyl-	0.400	0.375	94	55-130
Coumaphos	0.400	0.333	83	55-130

Method Blank = All ND
% Rec - LCS & LCSD = Percent Recovery from Lab Control Spike & Lab Control Spike Duplicate
RPD = Relative Percent Difference of Lab Control Spike and Lab Control Spike Duplicate recoveries

Enviro - Chem, Inc.
1218 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 01/29/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 01/29/04
DATE EXTRACTED: 02/03/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/09/04

SAMPLE I.D.: **G2-A/B/C/D (Composite)**
LAB I.D.: 040130-14,-15,-16,-17 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

123712

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
1 Week (Standard)
Other:

ASSOCIATE

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8141								COMMENTS
040130-10→13		1/29/04		Soil	1			X								
-14→17		↓		↓	↓			↓								DANIELLE:
-18→21																REFER TO
-22→25																PREVIOUS
-26→29																QUOTE.
-30→33																-CURTIS
-34→37																
-38→41																

Company Name:

Address: Enviro-Chem, Inc. 1214 E. Lexington Avenue Pomona, CA 91766-5519

City/State/Zip:

Project Contact: Curtis B. Desilets

Tel: (909) 590-5905

Fax: (909) 590-5907

Sampler's Signature:

Project Name/ID: 040130-10-B, 14→17, 18, 22→25, 26→29, 30→33, 34→37, 38→41

Relinquished by:	Received by:	Date & Time: 1/30/04 1105	Instructions for Sample Storage After Analys
Relinquished by:	Received by:	Date & Time: 1/30/04 1145	O Dispose of O Return to Client O Store (30 Days)
Relinquished by:	Received by:	Date & Time:	O Other:

CHAIN OF CUSTODY RECORD

Date: 1/30/04

1-30-04 3:20

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
X 1 Week (Standard)
Other:

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8081	8141	8151							COMMENTS
G1-A	040130-10	1-29-04		Soil	1 X 4oz		Ice	X	X	X							Composite Samples
G1-B	-11							X	X	X							
G1-C	-12							X	X	X							
G1-D	-13							X	X	X							
G2-A	-14							X	X	X							Composite Samples
G2-B	-15							X	X	X							
G2-C	-16							X	X	X							
G2-D	-17							X	X	X							
G3-A	-18							X	X	X							Composite Samples
G3-B	-19							X	X	X							
G3-C	-20							X	X	X							
G3-D	-21							X	X	X							

Analysis Required

Company Name: Building Analytics
Address: 528 State St.
City/State/Zip: Glendale CA 91203

Project Contact: Russell Cole
Tel: (818) 500-1898
Fax: (818) 246-895

Sampler's Signature: Russell Cole
Project Name/ID: Newhall Land 104012

Relinquished by: Russell Cole	Received by: [illegible]	Date & Time: 1/29/04 1525	Instructions for Sample Storage After Analysis:
Relinquished by: [illegible]	Received by: [illegible]	Date & Time: 1/30/04 0905	O Dispose of O Return to Client O Store (30 Days)
Relinquished by:	Received by:	Date & Time:	O Other:

CHAIN OF CUSTODY RECORD

Date:

WHITE WITH SAMPLE, YELLOW TO CLIENT

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
X 1 Week (Standard)
Other:

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8081	8141	8151							COMMENTS
G4-A	040130-22	1-29-04		Soil	1 X 4oz		TCE	X	X	X							Composite Samples
G4-B	-23							X	X	X							
G4-C	-24							X	X	X							
G4-D	-25							X	X	X							
G5-A	-26							X	X	X							Composite Samples
G5-B	-27							X	X	X							
G5-C	-28							X	X	X							
G5-D	-29							X	X	X							
G6-A	-30							X	X	X							Composite Samples
G6-B	-31							X	X	X							
G6-C	-32							X	X	X							
G6-D	-33							X	X	X							

Analysis Required

Company Name: Building Analytics
Address: 528 State St
City/State/Zip: Glendale CA 91203

Project Contact: Russell Cate
Tel: (818) 500-1898
Fax: (818) 246-8195

Sampler's Signature: Russell Cate
Project Name/ID: 104012 Newhall Land

Relinquished by: Russell Cate
Relinquished by: [illegible]
Relinquished by:

Received by: [illegible]
Received by: [illegible]
Received by:

Date & Time: 1/29/04 1525
Date & Time: 1/30/04 0905
Date & Time:

Instructions for Sample Storage After Analysis:
O Dispose of O Return to Client O Store (30 Days)
O Other:

CHAIN OF CUSTODY RECORD

Date: _____

WHITE WITH SAMPLE - YELLOW TO CLIENT

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
X 1 Week (Standard)
Other:

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8081	8141	8151							COMMENTS
G7-A	040130-34	1-29-04		Soil	1x4oz		ICE	X	X	X							Composite Samples
G7-B	-35							X	X	X							
G7-C	-36							X	X	X							
G7-D	-37							X	X	X							
G8-A	-38							X	X	X							Composite Samples
G8-B	-39							X	X	X							
G8-C	-40							X	X	X							
G8-D	-41							X	X	X							

Analysis Required

Company Name: Building Analytics
Address: 528 State St.
City/State/Zip: Glendale CA 91203

Project Contact: Russell Cole
Tel: (818) 500-1888
Fax: (818) 246-8155

Sampler's Signature: Russell Cole
Project Name/ID: Newhall Land 104012

Relinquished by: Russell Cole
Relinquished by: [illegible]
Relinquished by:

Received by: [illegible]
Received by: [illegible]
Received by:

Date & Time: 1/29/04 1525
Date & Time: 1/29/04 0905
Date & Time:

Instructions for Sample Storage After Analysis:
O Dispose of O Return to Client O Store (30 Days)
O Other:

CHAIN OF CUSTODY RECORD

Date: _____

WHITE WITH SAMPLE - YELLOW TO CLIENT

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

Date: February 12, 2004

Mr. Russell Cote
BA Environmental
528 State Street
Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

Project: **Newhall Land / 104012**

Dear Mr. Cote:

The analytical results for the soil samples, received by our Lab on February 5, 2004, are attached.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,

Curtis Desilets
Vice President/Program Manager

Jesse Tu, Ph.D.
Laboratory Manager

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/09/04
DATE ANALYZED: 02/10-11/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: G9-A/B/C/D (Composite)
LAB I.D.: 040205-1,-2,-3,-4 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.001	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
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LABORATORY REPORT

CUSTOMER: BA Environmental
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Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/09/04
DATE ANALYZED: 02/10-11/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G10-A/B/C/D (Composite)**
LAB I.D.: 040205-5,-6,-7,-8 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.001	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
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LABORATORY REPORT

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PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/09/04
DATE ANALYZED: 02/10-11/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G11-A/B/C/D/E (Composite)**
LAB I.D.: 040205-9,-10,-11,-12,-13 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X10)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	0.012	0.001
gamma-Chlordane	0.017	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	0.008J	0.001
4,4'-DDT	0.014	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	0.018	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.061	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
MDL = MINIMUM DETECTION LIMIT
PQL = PRACTICAL QUANTITATION LIMIT
J = TRACE CONCENTRATION BETWEEN MDL AND PQL
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

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LABORATORY REPORT

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PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/09/04
DATE ANALYZED: 02/10-11/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G12-A/B/C/D (Composite)**
LAB I.D.: 040205-14,-15,-16,-17 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X10)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	0.022	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.029	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

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CAL-DHS ELAP CERTIFICATE No.: 1555

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LABORATORY REPORT

CUSTOMER: BA Environmental
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PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
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DATE ANALYZED: 02/10-11/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: G17-A/B/C/D (Composite)
LAB I.D.: 040205-18,-19,-20,-21 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X10)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	0.018	0.001
gamma-Chlordane	0.027	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	0.012	0.001
4,4'-DDT	0.023	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	0.034	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.136	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/09/04
DATE ANALYZED: 02/10-11/04
DATE REPORTED: 02/12/04

METHOD BLANK FOR LAB I.D.: 040205-1 TO -4 (Composite), 040205-5 TO -8 (Composite), 040205-9 TO -13 (Composite), 040205-14 TO -17 (Composite), 040205-18 TO -21(Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro-Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909)590-5905 Fax (909)590-5907

EPA 8081 QA/QC Report

Matrix: Soil

Unit: mg/Kg

Date Analyzed: 2/10/2004

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: 040206-15

Analyte	S.R.	spk conc	MS	%REC	MSD	%REC	%RPD	ACP %RPD	ACP %REC
Gamma-BHC	0.000	0.050	0.044	**89%**	0.046	**91%**	**3%**	**0-20%**	**70-130**
Aldrin	0.000	0.050	0.045	**91%**	0.046	**92%**	**1%**	**0-20%**	**70-130**
4,4-DDE	0.000	0.050	0.048	**97%**	0.049	**97%**	**1%**	**0-20%**	**70-130**

Lab Control Spike (LCS) Recovery:

Analyte	spk conc	LCS	% REC	ACP %REC
Gamma-BHC	0.050	0.048	**97%**	**75-125**
Aldrin	0.050	0.047	**94%**	**75-125**
4,4-DDE	0.050	0.051	**102%**	**75-125**
Dieldrin	0.050	0.050	**100%**	**75-125**

Surrogate Recovery	ACP%	MB	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.			040206-14	040206-15	040205-1~4	040205-5~8	040205-9~13	040205-14~17
Tetra-chloro-meta-xylene	50-150	119%	99%	97%	101%	105%	101%	101%
Decachlorobipneyl	50-150	143%	116%	110%	114%	119%	114%	114%

Surrogate Recovery	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.	040205-18~21							
Tetra-chloro-meta-xylene	106%							
Decachlorobipneyl	115%							

Surrogate Recovery	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.						
Tetra-chloro-meta-xylene						
Decachlorobipneyl						

S.R. = Sample Result

spk conc = Spike Concentration

%REC = Percent Recovery

ACP %RPD = Acceptable Percent RPD Range

ACP %REC = Acceptable Percent Recovery Range

** = Surrogate fail due to matrix interference (If Marked)*

Note: ***LCS, MS, MSD are in control therefore results are in control.***

Analyzed and Reviewed By: _____

Final Reviewer: _____

Enviro – Chem, Inc.
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LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: G9-A/B/C/D (Composite)
LAB I.D.: 040205-1,-2,-3,-4 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

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LABORATORY REPORT

CUSTOMER: **BA Environmental**
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PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G10-A/B/C/D (Composite)**
LAB I.D.: 040205-5,-6,-7,-8 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

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PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
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DATE REPORTED: 02/12/04

SAMPLE I.D.: **G11-A/B/C/D/E (Composite)**
LAB I.D.: 040205-9,-10,-11,-12,-13 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
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SAMPLE I.D.: G12-A/B/C/D (Composite)
LAB I.D.: 040205-14,-15,-16,-17 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

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LABORATORY REPORT

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PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/04/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G17-A/B/C/D (Composite)**
LAB I.D.: 040205-18,-19,-20,-21 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
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METHOD BLANK REPORT

CUSTOMER: BA Environmental
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PROJECT: Newhall Land / 104012
MATRIX: SOIL
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DATE REPORTED: 02/12/04

METHOD BLANK FOR LAB I.D.: 040205-1 TO -4 (Composite), 040205-5 TO -8 (Composite), 040205-9 TO -13 (Composite), 040205-14 TO -17 (Composite), 040205-18 TO -21(Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

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QA/QC Report

Analysis: EPA 8151A

Matrix: **SOIL** Date Analyzed: **2/8-9/2004**

Unit: **mg/Kg (PPM)**

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: 040206-15

Analyte	S.R.	spk conc	MS	% REC	MSD	% REC	%RPD	ACP %RPD	ACP %REC
2,4,5-T	0	1.0	1.18	**118%**	1.19	**119%**	**1%**	**0-20%**	**50-150**

Lab Control Spike (LCS) Recovery:

Analyte	spk conc	LCS	% REC	ACP %REC
2,4,5-T	0.100	0.115	115%	**70-130**
2,4,5-TP	0.100	0.114	114%	**70-130**
2,4-DB	1.00	1.08	108%	**70-130**

Surrogate Recovery:

Analyte	spk conc	ACP %	M-BLK	%REC	%REC	%REC	%REC	%REC	%REC
Sample ID:				040205-58	040205-59	040205-60	040205-61	040204-53~56	040204-57~60
DCAA	0.20	50-150	73%	79%	78%	81%	81%	97%	97%

Analyte	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC
Sample ID:	040204-61~64	040204-65~68	040205-1~4	040205-5~8	040205-9~13	040205-14~17	040205-18~21	040206-14	040206-15
DCAA	95%	89%	108%	88%	127%	99%	118%	100%	107%

Analyte	%REC	%REC	%REC	%REC	%REC
Sample ID:	040204-29				
DCAA	76%				

S.R. = Sample Result

spk conc = Spike Concentration

%REC = Percent Recovery

ACP %RPD = Acceptable Percent RPD Range

ACP %REC = Acceptable Percent Recovery Range

Analyzed and Reviewed By: _____

Final Reviewer: _____

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/12/04

METHOD BLANK FOR LAB I.D.: 040205-1 TO -4 (Composite), 040205-5 TO -8 (Composite), 040205-9 TO -13 (Composite), 040205-14 TO -17 (Composite), 040205-18 TO -21 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

Date: February 12, 2004

Mr. Russell Cote
BA Environmental
528 State Street
Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

Project: **Newhall Land / 104012; 8141A**

Dear Mr. Cote:

The analytical results for the soil samples, received by our Lab on February 5, 2004, are attached.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,

Curtis Desilets
Vice President/Program Manager

Jesse Tu, Ph.D.
Laboratory Manager

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G9-A/B/C/D (Composite)**
LAB I.D.: 040205-1,-2,-3,-4 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G10-A/B/C/D (Composite)**
LAB I.D.: 040205-5,-6,-7,-8 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G11-A/B/C/D/E (Composite)**
LAB I.D.: 040205-9,-10,-11,-12,-13 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: G12-A/B/C/D (Composite)
LAB I.D.: 040205-14,-15,-16,-17 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/05/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G17-A/B/C/D (Composite)**
LAB I.D.: 040205-18,-19,-20,-21 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900 *FAX 714/538-1209*

CLIENT Enviro-Chem Laboratories, Inc. (7420)
ATTN: Curtis Desilets
1214 E. Lexington Avenue
Pomona, CA 91766

LAB REQUEST 124124
REPORTED 02/09/2004
RECEIVED 02/05/2004

PROJECT #040205-1 to 4, 5 to 8, 9 to 13, 14 to 17, 18 to 21

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
496119	040205-1 to 4
496120	040205-5 to 8
496121	040205-9 to 13
496122	040205-14 to 17
496123	040205-18 to 21
496124	Laboratory Method Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported

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TESTING & CONSULTING
Chemical
Microbiological
Environmental

Order # 496119
Matrix: SOLID
Date Sampled: 02/04/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040205-1 to 4

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD
Surrogates				**Units**	**Control Limits**	
TBP (sur)	78			%	50 - 145	
TPP (sur)	61			%	50 - 145	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Fac

ASSOCIATED LABORATORIES Analytical Results Report

Order # 496120
Matrix: SOLID
Date Sampled: 02/04/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040205-5 to 8

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD

Surrogates		Units	Control Limits
TBP (sur)	81	%	50 - 145
TPP (sur)	57	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Fac

Order # 496121
Matrix: SOLID
Date Sampled: 02/04/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040205-9 to 13

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD

Surrogates		Units	Control Limits
TBP (sur)	81	%	50 - 145
TPP (sur)	59	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Fac

Order # 496122
Matrix: SOLID
Date Sampled: 02/04/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040205-14 to 17

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD

Surrogates		Units	Control Limits
TBP (sur)	86	%	50 - 145
TPP (sur)	59	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Fac

ASSOCIATED LABORATORIES Analytical Results Report

Order # 496123 **Client:** Enviro-Chem Laboratories, Inc.
Matrix: SOLID **Client Sample ID:** 040205-18 to 21
Date Sampled: 02/04/2004
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD
Surrogates				**Units**	**Control Limits**	
TBP (sur)	84			%	50 - 145	
TPP (sur)	59			%	50 - 145	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Fac

ASSOCIATED LABORATORIES Analytical Results Report

Order # 496124 **Client:** Enviro-Chem Laboratories, Inc.
Matrix: SOLID **Client Sample ID:** Laboratory Method Blank
Date Sampled:
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates		Units	Control Limits
TBP (sur)	79	%	50 - 145
TPP (sur)	68	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Fac

ASSOCIATED LABORATORIES Analytical Results Report

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
✓ 1 Week (Standard)
Other:

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8081	8141	8151							COMMENTS
G9-A	040205-1	2-4-04		Soil	1	4°	ICE	X	X	X							Composite Samples
G9-B	-2							X	X	X							
G9-C	-3							X	X	X							
G9-D	-4							X	X	X							
G10-A	-5							X	X	X							Composite Samples
G10-B	-6							X	X	X							
G10-C	-7							X	X	X							
G10-D	-8							X	X	X							
G11-A	-9							X	X	X							Composite Samples
G11-B	-10							X	X	X							
G11-C	-11							X	X	X							
G11-D	-12							X	X	X							
G11-E	-13							X	X	X							

Analysis Required

Company Name: Building Analytic	Project Contact: Russell Cote	Sampler's Signature: Russell Cote	
Address: 528 State St	Tel: (818) 500-1878	Project Name/ID: River Village 104012	
City/State/Zip: Glendale CA 91203	Fax: (818) 246-8195		
Relinquished by: Russell Cote	Received by: [signature]	Date & Time: 2/5/04 0820	Instructions for Sample Storage After Analysis:
Relinquished by: [signature]	Received by: [signature]	Date & Time: 2/5/04 1005	O Dispose of O Return to Client O Store (30 Days)
Relinquished by:	Received by:	Date & Time:	O Other:

CHAIN OF CUSTODY RECORD

Date: _____

WHITE WITH SAMPLE - YELLOW TO CLIENT

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
X 1 Week (Standard)
Other:

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8081	8141	8151							Misc. COMMENTS
G12-A	040205-14	2-4-04		Soil	1	4°C	ICE	X	X	X							Composite Samples
G12-B	-15							X	X	X							
G12-C	-16							X	X	X							
G12-D	-17							X	X	X							
G17-A	-18							X	X	X							Composite Samples
G17-B	-19							X	X	X							
G17-C	-20							X	X	X							
G17-D	-21							X	X	X							

Analysis Required

Company Name: Building Analytics
Address: 528 State St.
City/State/Zip: Glendale CA 91203

Project Contact: Russell Cole
Tel: (818) 500-1898
Fax: (818) 246-8195

Sampler's Signature: Russell Cole
Project Name/ID: Riverviewlage 101012

Relinquished by:	Received by:	Date & Time:
Russell Cole		2/5/04 0820
		2/5/04 1005

Instructions for Sample Storage After Analysis:
O Dispose of O Return to Client O Store (30 Days)
O Other:

CHAIN OF CUSTODY RECORD

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

Date: February 11, 2004

FEB 17 2004

Mr. Russell Cote
BA Environmental
528 State Street
Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

Project: **Newhall Land / 104012**

Dear Mr. Cote:

The analytical results for the soil samples, received by our Lab on February 4, 2004, are attached.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,

Curtis Desilets
Vice President/Program Manager

Jesse Tu, Ph.D.
Laboratory Manager

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: **G13-A/B/C/D (Composite)**
LAB I.D.: 040204-53,-54,-55,-56 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	0.001	0.001
gamma-Chlordane	0.004	0.001
4,4'-DDD	0.001	0.001
4,4'-DDE	0.026	0.001
4,4'-DDT	0.006	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.061	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	0.001	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: **G14-A/B/C/D (Composite)**
LAB I.D.: 040204-57,-58,-59,-60 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	0.002	0.001
gamma-Chlordane	0.015	0.001
4,4'-DDD	0.001	0.001
4,4'-DDE	0.007	0.001
4,4'-DDT	0.015	0.001
Dieldrin	0.003	0.001
Endosulfan I	0.001	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	0.005	0.001
Endrin	0.082	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: **G15-A/B/C/D (Composite)**
LAB I.D.: 040204-61,-62,-63,-64 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	0.003	0.001
gamma-Chlordane	0.004	0.001
4,4'-DDD	0.001	0.001
4,4'-DDE	0.034	0.001
4,4'-DDT	0.007	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.055	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: **G16-A/B/C/D (Composite)**
LAB I.D.: 040204-65,-66,-67,-68 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	0.002	0.001
4,4'-DDT	0.003	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	0.004	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/11/04

METHOD BLANK FOR LAB I.D.: 040204-53 TO -56 (Composite), 040204-57 TO -60 (Composite), 040204-61 TO -64 (Composite), 040204-65 TO -68 (Composite)

Organochlorine Pesticides Analysis
Method: EPA 8081A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL(X1)
Aldrin	ND	0.001
alpha-BHC	ND	0.001
beta-BHC	ND	0.001
gamma-BHC (Lindane)	ND	0.001
delta-BHC	ND	0.001
alpha-Chlordane	ND	0.001
gamma-Chlordane	ND	0.001
4,4'-DDD	ND	0.001
4,4'-DDE	ND	0.001
4,4'-DDT	ND	0.001
Dieldrin	ND	0.001
Endosulfan I	ND	0.001
Endosulfan II	ND	0.001
Endosulfan Sulfate	ND	0.001
Endrin	ND	0.001
Endrin Aldehyde	ND	0.001
Endrin Ketone	ND	0.001
Heptachlor Epoxide	ND	0.001
Heptachlor	ND	0.001
Methoxyclor	ND	0.001
Toxaphene	ND	0.200

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro-Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909)590-5905 Fax (909)590-5907

EPA 8081 QA/QC Report

Matrix: **Soil** Date Analyzed: 2/8/2004
Unit: mg/Kg

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: 040205-58

Analyte	S.R.	spk conc	MS	%REC	MSD	%REC	%RPD	ACP %RPD	ACP %REC
Gamma-BHC	0.000	0.050	0.044	**87%**	0.043	**86%**	**1%**	**0-20%**	**70-130**
Aldrin	0.000	0.050	0.044	**87%**	0.044	**88%**	**1%**	**0-20%**	**70-130**
4,4-DDE	0.000	0.050	0.044	**89%**	0.045	**89%**	**1%**	**0-20%**	**70-130**

Lab Control Spike (LCS) Recovery:

Analyte	spk conc	LCS	% REC	ACP %REC
Gamma-BHC	0.050	0.051	**103%**	**75-125**
Aldrin	0.050	0.048	**97%**	**75-125**
4,4-DDE	0.050	0.053	**107%**	**75-125**
Dieldrin	0.050	0.052	**103%**	**75-125**

Surrogate Recovery	ACP%	MB	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.			040205-58	040205-59	040205-60	040205-61	040204-53~56	040204-57~60
Tetra-chloro-meta-xylene		118%	102%	103%	89%	105%	119%	106%
Decachlorobipneyl	50-150	118%	101%	110%	108%	109%	108%	105%

Surrogate Recovery	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.	040204-61~64	040204-65~68						
Tetra-chloro-meta-xylene	104%	115%						
Decachlorobipneyl	98%	119%						

Surrogate Recovery	%REC	%REC	%REC	%REC	%REC	%REC
Sample I.D.						
Tetra-chloro-meta-xylene						
Decachlorobipneyl						

S.R. = Sample Result
spk conc = Spike Concentration
%REC = Percent Recovery
ACP %RPD = Acceptable Percent RPD Range
ACP %REC = Acceptable Percent Recovery Range

** = Surrogate fail due to matrix interference*

Note: ***LCS, MS, MSD are in control therefore results are in control.***

Analyzed and Reviewed By: _____

Final Reviewer: _____

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: **G13-A/B/C/D (Composite)**
LAB I.D.: 040204-53,-54,-55,-56 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: **G14-A/B/C/D (Composite)**
LAB I.D.: 040204-57,-58,-59,-60 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: G15-A/B/C/D (Composite)
LAB I.D.: 040204-61,-62,-63,-64 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/11/04

SAMPLE I.D.: **G16-A/B/C/D (Composite)**
LAB I.D.: 040204-65,-66,-67,-68 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: BA Environmental
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: Newhall Land / 104012
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06-07/04
DATE ANALYZED: 02/09/04
DATE REPORTED: 02/11/04

METHOD BLANK FOR LAB I.D.: 040204-53 TO -56 (Composite), 040204-57 TO -60 (Composite), 040204-61 TO -64 (Composite), 040204-65 TO -68 (Composite)

Chlorinated Herbicides Analysis
Method: EPA 8151A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL
2,4,5-T	ND	0.020
2,4,5-TP (Silvex)	ND	0.020
2,4-D	ND	0.200
2,4-DB	ND	0.200
Dalapon (Dichloroacetic Acid)	ND	0.500
Dicamba	ND	0.020
Dichloroprop	ND	0.200
Dinoseb (DNBP)	ND	0.100
MCPA	ND	20.0
MCPP	ND	20.0

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro-Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909)590-5905 Fax (909)590-5907

QA/QC Report

Analysis: EPA 8151A

Matrix: **SOIL** Date Analyzed: **2/8-9/2004**

Unit: **mg/Kg (PPM)**

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: 040206-15

Analyte	S.R.	spk conc	MS	% REC	MSD	% REC	%RPD	ACP %RPD	ACP %REC
2,4,5-T	0	1.0	1.18	118%	1.19	119%	1%	0-20%	50-150

Lab Control Spike (LCS) Recovery:

Analyte	spk conc	LCS	% REC	ACP %REC
2,4,5-T	0.100	0.115	115%	70-130
2,4,5-TP	0.100	0.114	114%	70-130
2,4-DB	1.00	1.08	108%	70-130

Surrogate Recovery:

Analyte	spk conc	ACP %	M-BLK	%REC	%REC	%REC	%REC	%REC	%REC
Sample ID:				040205-58	040205-59	040205-60	040205-61	040204-53~56	040204-57~60
DCAA	0.20	50-150	73%	79%	78%	81%	81%	97%	97%

Analyte	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC	%REC
Sample ID:	040204-61~64	040204-65~68	040205-1~4	040205-5~8	040205-9~13	040205-14~17	040205-18~21	040206-14	040206-15
DCAA	95%	89%	108%	88%	127%	99%	118%	100%	107%

Analyte	%REC	%REC	%REC	%REC	%REC
Sample ID:	040204-29				
DCAA	76%				

S.R. = Sample Result

spk conc = Spike Concentration

%REC = Percent Recovery

ACP %RPD = Acceptable Percent RPD Range

ACP %REC = Acceptable Percent Recovery Range

Analyzed and Reviewed By: _____

Final Reviewer: _____

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

Date: February 12, 2004

Mr. Russell Cote
BA Environmental
528 State Street
Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

Project: **Newhall Land / 104012; 8141A**

Dear Mr. Cote:

The analytical results for the soil samples, received by our Lab on February 4, 2004, are attached.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,

Curtis Desilets
Vice President/Program Manager

Jesse Tu, Ph.D.
Laboratory Manager

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: G13-A/B/C/D (Composite)
LAB I.D.: 040204-53,-54,-55,-56 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G14-A/B/C/D (Composite)**
LAB I.D.: 040204-57,-58,-59,-60 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G15-A/B/C/D (Composite)**
LAB I.D.: 040204-61,-62,-63,-64 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/08/04
DATE REPORTED: 02/12/04

SAMPLE I.D.: **G16-A/B/C/D (Composite)**
LAB I.D.: 040204-65,-66,-67,-68 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

Enviro – Chem, Inc.
1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

METHOD BLANK REPORT

CUSTOMER: **BA Environmental**
528 State Street, Glendale, CA 91203
Tel(818)500-1898 Fax(818)246-8195

PROJECT: **Newhall Land / 104012**
MATRIX: SOIL
DATE SAMPLED: 02/02/04
REPORT TO: MR. RUSSELL COTE

DATE RECEIVED: 02/04/04
DATE EXTRACTED: 02/06/04
DATE ANALYZED: 02/07/04
DATE REPORTED: 02/12/04

METHOD BLANK FOR LAB I.D.: 040204-53 TO -56 (Composite), 040204-57 TO -60 (Composite), 040204-61 TO -64 (Composite), 040204-65 TO -68 (Composite)

Organophosphorus Pesticides Analysis
Method: EPA 8141A
Unit: Mg/Kg = Milligram Per Kilogram = PPM

PARAMETER	SAMPLE RESULT	PQL X1
Azinphos Methyl	ND	1.0
Bolstar (Sulprofos)	ND	0.1
Chlorpyrifos	ND	0.2
Coumaphos	ND	1.0
Demeton-O	ND	0.17
Demeton-S	ND	0.17
Diazinon	ND	0.4
Dichlorvos	ND	0.07
Disulfoton	ND	0.13
Ethoprop	ND	0.17
Fensulfothion	ND	1.0
Fenthion	ND	0.07
Malathion	ND	0.02
Merphos	ND	0.17
Mevinphos	ND	0.2
Naled	ND	0.07
Parathion Ethyl	ND	0.02
Parathion Methyl	ND	0.02
Phorate	ND	0.1
Ronnel	ND	0.2
Tetrachlorvinphos (Stirophos)	ND	3.35
Tokuthion (Prothiofos)	ND	0.33
Trichloronate	ND	0.1

COMMENTS:
PQL = PRACTICAL QUANTITATION LIMIT
ND = NON-DETECTED OR BELOW THE PQL
ANALYSIS PERFORMED BY ASSOCIATED LABS, ORANGE, CA

DATA REVIEWED AND APPROVED BY: _____
CAL-DHS ELAP CERTIFICATE No.: 1555

ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868 - 714/771-6900
FAX 714/538-1209

CLIENT Enviro-Chem Laboratories, Inc. (7420)
ATTN: Curtis Desilets
1214 E. Lexington Avenue
Pomona, CA 91766

LAB REQUEST 124125
REPORTED 02/09/2004
RECEIVED 02/05/2004

PROJECT 040204-53 to 56, 57 to 60, 61 to 64, 65 to 68

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
496125	040204-53 to 56
496126	040204-57 to 60
496127	040204-61 to 64
496128	040204-65 to 68
496129	Laboratory Method Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Edward S. Behare, Ph.D.
Vice President

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

TESTING & CONSULTING
Chemical
Microbiological
Environmental

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FEB-12-2004 15:57 FROM-Associated Laboratories 714-538-1209 T-538 P.001/008 F-814

Order #: 496125
Matrix: SOLID
Date Sampled: 02/02/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040204-53 to 56

8141 Organophosphate Pesticides

Analyte	Result	DF	DLR	Units	Date/Analyst	
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD

Surrogates		Units	Control Limits
TBP (sur)	82	%	50 - 145
TPP (sur)	66	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES Analytical Results Report

FEB-12-2004 15:58 FROM-Associated Laboratories 714-529-1209 T-659 P.002/008 F-814

Order #: 496126 **Client:** Enviro-Chem Laboratories, Inc.
Matrix: SOLID **Client Sample ID:** 040204-57 to 60
Sampled: 02/02/2004
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD
Surrogates				**Units**	**Control Limits**	
TBP (sur)	81			%	50 - 145	
TPP (sur)	59			%	50 - 145	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES Analytical Results Report

FEB-12-2004 15:58 FROM-Associated Laboratories 714-538-1209 T-638 P.003/008 F-814

Order #: 496127
Matrix: SOLID
Sampled: 02/02/2004
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: 040204-61 to 64

8141 Organophosphate Pesticides

Analyte	Result	DF	DLR	Units	Date/Analyst	
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD

Surrogates		Units	Control Limits
TBP (sur)	83	%	50 - 145
TPP (sur)	57	%	50 - 145

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES Analytical Results Report

FEB-12-2004 15:58 FROM-Associated Laboratories 714-538-1209 T-638 P.004/008 F-814

Order #: 496128 **Client:** Enviro-Chem Laboratories, Inc.
Matrix: SOLID **Client Sample ID:** 040204-65 to 68
Sampled: 02/02/2004
Time Sampled:
Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst	
8141 Organophosphate Pesticides						
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/08/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/08/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/08/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/08/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/08/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/08/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/08/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/08/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/08/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/08/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/08/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/08/04	SD
Malathion	ND	1	0.02	mg/Kg	02/08/04	SD
Merphos	ND	1	0.17	mg/Kg	02/08/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/08/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/08/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/08/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/08/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/08/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/08/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/08/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/08/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/08/04	SD
Surrogates				**Units**	**Control Limits**	
TBP (sur)	79			%	50 - 145	
TPP (sur)	54			%	50 - 145	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES Analytical Results Report

FEB-12-2004 15:58 FROM-Associated Laboratories 714-538-1209 T-538 P.005/008 F-814

Order #: 496129
Matrix: SOLID
Sampled:
Time Sampled:
Sampled By:

Client: Enviro-Chem Laboratories, Inc.
Client Sample ID: Laboratory Method Blank

8141 Organophosphate Pesticides

Analyte	Result	DF	DLR	Units	Date/Analyst	
Azinophos Methyl (Guthion)	ND	1	1.0	mg/Kg	02/07/04	SD
Bolstar	ND	1	0.1	mg/Kg	02/07/04	SD
Chlorpyrifos(Dursban)	ND	1	0.2	mg/Kg	02/07/04	SD
Coumaphos	ND	1	1.0	mg/Kg	02/07/04	SD
Demeton(Systox)-O	ND	1	0.17	mg/Kg	02/07/04	SD
Demeton(Systox)-S	ND	1	0.17	mg/Kg	02/07/04	SD
Diazinon	ND	1	0.4	mg/Kg	02/07/04	SD
Dichlorvos	ND	1	0.07	mg/Kg	02/07/04	SD
Disulfoton (Disyston)	ND	1	0.13	mg/Kg	02/07/04	SD
Ethoprop	ND	1	0.17	mg/Kg	02/07/04	SD
Fensulfothion	ND	1	1.0	mg/Kg	02/07/04	SD
Fenthion	ND	1	0.07	mg/Kg	02/07/04	SD
Malathion	ND	1	0.02	mg/Kg	02/07/04	SD
Merphos	ND	1	0.17	mg/Kg	02/07/04	SD
Mevinphos (Phosdrin)	ND	1	0.2	mg/Kg	02/07/04	SD
Naled (Dibrom)	ND	1	0.07	mg/Kg	02/07/04	SD
Parathion Ethyl	ND	1	0.02	mg/Kg	02/07/04	SD
Parathion Methyl	ND	1	0.02	mg/Kg	02/07/04	SD
Phorate (Thimet)	ND	1	0.1	mg/Kg	02/07/04	SD
Ronnel	ND	1	0.2	mg/Kg	02/07/04	SD
Stirophos (Tetrachlorvinphos)	ND	1	3.35	mg/Kg	02/07/04	SD
Tokuthion (Protothiofos)	ND	1	0.33	mg/Kg	02/07/04	SD
Trichloronate	ND	1	0.1	mg/Kg	02/07/04	SD

Surrogates		Units	Control Limits
TBP (sur)	79	%	50 - 145
TPP (sur)	68	%	50 - 145

DLR = Detection limit for reporting purposes. ND = Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES
QA REPORT FORM

Determinative Method : EPA 8141

Preparative Method: EPA 3545

QC Sample: 124124-496119

Matrix: SOLID

Analysis Date: 2/8/04

Batch Date: 02/06/04 (op 020604s)

Applies to: LR 124124 and LR 124125

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULTS
REPORTING UNITS = mg/Kg

Test	Sample Result	Spike Added	Spike Recovered		% Rec		RPD	QC Limits	
			MS	MSD	MS	MSD		RPD	% Rec
Demeton-O	ND	0.400	0.336	0.334	84	84	1	35	45-140
Ethoprop	ND	0.400	0.340	0.335	85	84	1	35	45-140
Naled	ND	0.400	0.374	0.350	93	87	7	35	45-140
Diazinon	ND	0.400	0.340	0.340	85	85	0	35	45-140
[illegible]phos	ND	0.400	0.329	0.322	82	80	2	35	45-140
Fensulfothion	ND	0.400	0.390	0.394	98	99	1	35	45-140
Azinophos, Methyl-	ND	0.400	0.297	0.286	74	72	4	35	45-140
Coumaphos	ND	0.400	0.196	0.187	49	47	5	35	45-140

ND - Not Detected
% Rec - MS & MSD = Percent Recovery from Matrix Spike & Matrix Spike Duplicate
RPD = Relative Percent Difference of Matrix Spike and Matrix Spike Duplicate recoveries

LAB CONTROL SPIKE / LAB CONTROL SPIKE DUPLICATE RECOVERIES
REPORTING UNITS = mg/Kg

Test	Spike Added	Spike Recovered	% Rec LCS	QC Limits
Demeton-O	0.400	0.341	85	55-130
Ethoprop	0.400	0.356	89	55-130
Naled	0.400	0.394	99	55-130
Diazinon	0.400	0.352	88	55-130
Stirophos	0.400	0.353	88	55-130
Fensulfothion	0.400	0.400	100	55-130
[illegible]inophos, Methyl-	0.400	0.346	86	55-130
[illegible]umaphos	0.400	0.278	69	55-130

Method Blank = All ND
% Rec - LCS & LCSD = Percent Recovery from Lab Control Spike & Lab Control Spike Duplicate
RPD = Relative Percent Difference of Lab Control Spike and Lab Control Spike Duplicate recoveries

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

124125

Turnaround Time
- 0 Same Day
- 0 24 Hours
- 0 48 Hours
- 0 ~~72 Hours~~
- 1 Week (Standard)
- Other:

Associates

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8141	COMMENTS
040204-53→56		2/2/04		Soil	1		1	X	DANIELLE - PLEASE REFER TO QUOTE
-57→60		↓		↓	↓		↓	↓	
-61→64									
-65→68									

Analysis Required

Company Name: ~~Enviro Chem, Inc.~~ 1214 E. Lexington Avenue Pomona, CA 91766-5519

Address:

City/State/Zip:

Project Contact: Curtis B. Desilets

Tel: (909) 590-5905

Fax: (909) 590-5907

Sampler's Signature:

Project Name/ID: 040204-53→56, 57→60, 61-65→68

Relinquished by: X [signature]

Relinquished by: Steve [signature]

Relinquished by:

Received by: Steve [signature]

Received by: [signature] 2/5/04

Received by:

Date & Time: 2/5/04 1420

Date & Time: 2/5/04 1705

Date & Time:

Instructions for Sample Storage After Analysis
- Dispose of
- O Return to Client
- O Store (30 Days)
- O Other:

CHAIN OF CUSTODY RECORD

Page 1 of 1

WHITE WITH SAMPLE, YELLOW TO CLIENT

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
X 1 Week (Standard)
Other:

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8051	8141	8151							COMMENTS
G13-A	040204-53	2-2-04		Soil	1		ICE	X	X	X							Composite Samples
G13-B	-54							X	X	X							
G13-C	-55							X	X	X							
G13-D	-56							X	X	X							
G14-A	-57							X	X	X							Composite Samples
G14-B	-58							X	X	X							
G14-C	-59							X	X	X							
G14-D	-60							X	X	X							
G15-A	-61							X	X	X							Composite Samples
G15-B	-62							X	X	X							
G15-C	-63							X	X	X							
G15-D	-64							X	X	X							

Analysis Required

Company Name: Building Analytics
Address: 528 State St.
City/State/Zip: Glendale CA 91203

Project Contact: Russell Cole
Tel: (818) 500-1888
Fax: (818) 246-8155

Sampler's Signature: Russell Cole
Project Name/ID: Rivervillage 104012

Relinquished by: Russell Cole
Relinquished by: [illegible]
Relinquished by:

Received by: [illegible]
Received by: [illegible]
Received by:

Date & Time: 2/4/04 1130
Date & Time: 2/4/04 1500
Date & Time:

Instructions for Sample Storage After Analysis:
O Dispose of O Return to Client O Store (30 Days)
O Other:

CHAIN OF CUSTODY RECORD

Date: _____

WHITE WITH SAMPLE - YELLOW TO CLIENT

Enviro-Chem, Inc. Laboratories
1214 E. Lexington Avenue,
Pomona, CA 91766
Tel: (909) 590-5905 Fax: (909) 590-5907
CA-DHS ELAP CERTIFICATE # 1555

Turnaround Time
0 Same Day
0 24 Hours
0 48 Hours
0 72 Hours
X 1 Week (Standard)
Other:

SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	No. OF CONTAINERS	TEMPERATURE	PRESERVATION	8081	8141	8151							COMMENTS
G16-A	040204-65	2-2-04		Soil	1		ICE	X	X	X							Composite into one sample
G16-B	-66							X	X	X							
G16-C	-67							X	X	X							
G16-D	-68							X	X	X							

Analysis Required

Company Name: Building Analytics	Project Contact: Russell Cole	Sampler's Signature: Russell Cole	
Address: 528 State St	Tel: (818) 500-1558	Project Name/ID: River village	
City/State/Zip: Glendale CA 91203	Fax: (818) 246-8195	104012	

Relinquished by: Russell Cole	Received by: [illegible]	Date & Time: 2/4/04 1130	Instructions for Sample Storage After Analysis:
Relinquished by: [illegible]	Received by: [illegible]	Date & Time: 2/4/04 1600	O Dispose of O Return to Client O Store (30 Days)
Relinquished by:	Received by:	Date & Time:	O Other:

CHAIN OF CUSTODY RECORD

APPENDIX E:

Oil Well Records

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL PLUGGING AND ABANDONMENT

Ventura, California

September 21, 1994

EXXON Corporation
Attn: Env. & Reg. Affairs
P.O. Box 1600
Midland, TX 79702

Your report of the plugging and abandonment of well "Newhall Land & Farming Co." 2, A.P.I. No. 037-16473, Section 14, T. 4N, R. 17W, S.B. B.& M., Castaic Junction field, Los Angeles County, dated 10-28-93, received 11-05-93, has been examined in conjunction with records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and the filing of well records.

svl

William F. Guerard, Jr
State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

cc: Conservation Committee
Update

Modified OG159 (4/94)

OPERATOR EXXON
WELL NO. "N.C. & F Co." 2
MAP

A.P.I. 037- 16473
SECTION 14, T. 4 N, R. 17 W

INTENTION	ABANDON					
NOTICE DATED	5-7-93					
P-REPORT NUMBER	293-146					
CHECKED BY/DATE						
MAP LETTER DATED	12/25/93					
SYMBOL						

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEFD	REC'D	NEED
NOTICE	5-12-93											
HISTORY	11-5-93											
SUMMARY												
E-LOG												
MUD LOG												
DIPMETER												
DIRECTIONAL												
CORE/SWS												
CBL												

ENGINEERING CHECK

T-REPORTS	✓					
OPERATOR'S NAME	✓					
WELL NO.	✓					
LOC & ELEV	✓					
SIGNATURE	✓					
SURFACE INSP.	✓					
DRILL CARD						

RECORD'S COMPLETE ✓ SP

FINAL LETTER OK
MAILED
RELEASED BOND

INJECTION BOOK
IDLE WELL LIST
SURFACE INSP. CARD

REMARKS: See insp. OK 4-12-94 MW

OK TO RELEASE FROM CONFIDENTIAL
ABANDONED-REMOVED FROM E.D.P.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND
GEOTHERMAL RESOURCES

No. T293-311

Report on Operations

EXXON Corporation
Attn: Env. & Req. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
December 20, 1993

Your operations at well "Newhall Land & Farming Co." 2, API No. 037-16473, Sec. 14, T. 3N, R. 17W, S.B. B.&M. Castaic Junction Field, in Los Angeles County, were witnessed on 10-21-93. Steve Mulqueen, representative of the supervisor, was present from 0700 to 0800. There were also present Ken Kennedy

Present condition of well: 13 3/8" cem 1493'; 7" cem 11,641', perf 10,254' WSO, cp 100' cp 1472'-1492' & cp 10,252', perfs @ int 10,270'-10,475' (cem off) & perfs @ int 11,200'-11,370'. Junk below 11,133'. TD 11,855'. Plugged w/ 65 sx cem below retainer @ 11,480', plugged w/cem 11,388'-10,054', 1500'-1224', and 124' - sfc.

The operations were performed for the purpose of abandonment.

DECISION:

The plugging operations as witnessed and reported are approved.

SCV

William F. Guerard, Jr.
State Oil and Gas Supervisor

By

Patrick J. Kinnear
Deputy Supervisor

OG109 (Modified 1993)

T293 - 311

DIVISION OF OIL AND GAS
Cementing/Plugging Memo

Operator EXXON CORP. Well No. "N.L.& F." 2
API No. 037 - 16473 Sec. 14, T. 04N, R. 17W, SB B&M
Field CASTAIC JUNCTION, County LOS ANGELES. On 10-21-93,
Mr. ~~Mrs.~~ S. MULQUEEN, representative of the supervisor, was present from 0700 to 0800.
There were also present KEN KENNEDY

Casing record of well: 13 3/8" cem 1493'; 7" cem 11641', perf 10254' WSO, cp 100' cp 1472' - 1492' & cp 10252', perfs @ int 10270' - 10475' (cem off) & perfs @ int 11200' - 11370'. Junk below 11133'. TD 11855'. Plugged w/ 65sx

The operations were performed for the purpose of ABANDONMENT
cem below retainer @ 11480', plugged w/ cem 11388' - 10054', 1500' - 1224', AND 124' - s/c.

☒ The plugging/~~cementing~~ operations as witnessed ~~and reported~~ AND reported are approved.

☐ The location and hardness of the cement plug @ _____' is approved.

Hole size: _____" fr. _____' to _____', _____" to _____' & _____" to _____'

	Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
	Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus (TBG/F)	Casing			
A	7"	23 26 29	0	11641'	10-20	TBG @ 1500' BRAINEN MEH.	162 cf	1326'±	1224'	104 cf	700 PSI	1472' - 1492'

Casing/tubing recovered: _____" shot/cut at 1492' (PERFORATE), 1472' (TO), _____' pulled fr. ——';
_____" shot/cut at 100' (PERFORATE), 102' (TO), _____' pulled fr. _____'.

Junk (in hole): PACKER @ 11133

Hole fluid (bailed to) at _____'. Witnessed by _____

Mudding	Date	Bbls.	Displaced	Poured	Fill	Engr.
9.7#/g CLAY GEL	10-19-93	3/6 BBL	TBG @ 10050	—	1500' ±	S. MULQUEEN
"	10-20-93	176 BBL*	TBG @ 1500	—	SURFACE	"
		*128 BBL IN ANNULUS				

FILL @ 11300', CLEAN OUT TO 11400'.

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time	Engr.
10/14	146 cf	TBG @ 11388'	—	REPORTED	10726'	5K#	10/18 0830	S. MULQUEEN
10/18	145 cf	TBG @ 10720'	—	"	10054'	10K#	10/19 0920	"
A 10/20	162 cf	TBG @ 1500'	—	"	1224'	ALL TBG WEIGHT	10/21 0800	"

TESTED CASING TO 500# FOR 10 MIN.

OGD10 (10/90/GSR1/5M)

Dist. 1

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

Operator Exxon Corporation **Field** Castaic Junction **County** Los Angeles
Well Newhall Land & Farming Co. #2 **Sec.** 14, **T** 4N, **R** 17W, **S.B.B. & M.**
A.P.I. No. 037-16473 **Name** Julie H. Mitchell (Person submitting report) **Title** Staff Office Assist. (President, Secretary or Agent)
Date October 28, 19 93

Signature Julie H. Mitchell

Environmental & Regulatory Affairs, PO Box 1600, Midland, TX 79702 (Address) 915/688-7888 (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

(see attached)

DIVISION OF OIL AND GAS
RECEIVED
NOV 5 1993
VENTURA, CALIFORNIA

OG103 (6/91/GSR1/5M)

NEWHALL LAND & FARMING CO - 0002 Lease# 061590 Job# 60008760
Field Supt R. O. Storey CMP# 4037164730001 AFE# 00039454
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI

Mix & pump 146 cuft, 90 sx, class G cement. Displace with 62 bbls lease water @ 2500 psi max. Pull out with 15+0 stand of tbg. Reverse out 35 min. Pull 10+0 stands to 9839 ft. Close in well, eot. Estimated top of cement @ 10688 ft.
Div of Oil & Gas, Steve Mulqueen, gave verbal ok to pump cement from 11,388 to 10,688 at 9:00 am.

--- 10/13/93
20 Min safety mtg. Check well (tbg 0, csg 0 psi). Bleed well. Cont rih with 2-7/8 N-80 tbg, 110 stands. Pick up and measure 101 jts. Tag top of fill @ 11,119 ft. Circulate well. Clean out from 1119 - 11121 ft, top of pkr. Stab thru pkr. Rih to 11300 ft. Pooh w/40 jt to 10100. Close in well. eot.

--- 10/12/93
Held 15 in safety mtg. Check well, tbg 0 psi, csg 60 psi. Bleed well. Fill well with 5 bbls lease water. Cont pooh, found heavey scale on out side of tbg. Lay down 118 jt N-80 tbg. Haul in 22 jts 1-3/4in tbg. Meas and pick up 1-3/4in tbg. Run 10+0 2-7/8 tbg, 600 ft. Close in well. eot

--- 10/11/93
Hold 20 min safety mtg. Check well (tbg 0 psi, csg 250 psi). Bleed csg circ 100 bbl lease water. Rig up Coast Wireline. RIH set btg plug @ 60 ft, ok. Rig out Coast. ND production Tree. Nipple up class III BOP and BOE, test ok. Rig up working floor and tbg equip. Rig up Coast slick line. Rih, retrieve tbg. plug from 60 ft well dead. Rig out Coast. Pooh with 2-7/8in N-80 tbg. Fill hole every 1200 ft, no flow. No loss of fluid. Pull 100 stands, 6200 ft. Close in well. eot.

--- 10/07/93
20 min safety mtg. Check out well. Tbg 450 psi, csg 540 psi. Remove 3in flange and gate valve. Well secure with bottom master valve. Rig up Coast Slickline and lubricator. RIH w/2-1/2in camco type B tbg plug. Set @ 60 ft. Pooh, attempt to bleed csg. Would not bleed off. Pump 100 bbl lease water. Csg flowing. Pull tbg plug form 60 ft. Circulate 300 bbl down tbg to kill well.

--- 10/06/93
MIRU. eot

10/27/93 MORNING REPORT 5:38PM

NEWHALL LAND & FARMING CO - 0002 Lease# 061590 Job# 60008760
Field Supt R. O. Storey CMP# 4037164730001 AFE# 00039454
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI

--- 10/21/93
Hold safety mtg. Open well (no pressure). RIH, tag top of cement @ 1224 ft. Pooh laying down 47 jts. Rig up Halliburton. Test lines. Mix & Pump 66 cuft, 58 sx, neat cement down 2-7/8in tbg (tail @ 124 ft), up 7 in and 13-3/8 casings to surface @ 300 psi max. Rig out Halliburton. Pooh lay down 4 jts 2-7/8 tbg. Clean BOPE and tbg equip. Rig down work floor RDMO
Div of Oil & Gas, Stephen Mulqueen, approved tag of cement @ 1224 ft. OK. pumping cement from 124 ft to surface.

--- 10/20/93
Hold 10 min safety mtg. Open well (no pressure). Cont pooh, laying down 2-3/8 N-80 tbg. Lay down 131 jts. POOH standing back in derrick 48 jts Fill well with 20 bbls lease water. Rig up MMI perforators. Rig up Lubricator. Held safety mtg. Rih w/20 ft strip shot Dyna Jet Perforator 4 HPF. Locate collar @ 1493 ft. Shoot holes from 1492-1472. Pooh, rig out MMI. Rih with 50 jts 2-7/8in tbg to 1500 ft. Circulate 175 bbls 9.7 ppg mud in 7in & 13-7/8in csg. Rig up Halliburton. Test lines 200# and 2000#, ok. Mix and Pump 141 sx neat cement with 3% Calcium Chloride. Displace with 8 bbls 9.7 ppg mud. Rig out Halliburton. Pooh with 2-7/8 tbg. Rig up MMI Rih w/2 ft strip shot Dyna Jet Perforator. 4 hpf. Shoot holes from 100 - 102 ft. Pooh, rig out MMI. Close in well, eot.

--- 10/19/93
Hold 20 min safety mtg. Open well (no pressure) RIH. tag top of cement @ 10054. Test csg 0-10054 @ 500# for 10 min, ok. POOH lay down 22 jts. Rih with 11 stands out of derrick with tbg tail @ 10050 ft, pump 316 bbls 9.7 ppg mud down well. Displace with 10 bbls lease water. Pooh, laying down 2-7/8in tbg. Close in well, eot.
Div of Oil & Gas, Steve Mulqueen, witnessed and approved: Mudding of hole from 10050-1500 ft. Tag of bottom hole plug @ 10054 as reported.

--- 10/18/93
Held 20 min safety mtg. Open well (tbg 0 psi, csg 70 psi). Rih, tag top of cement @ 10,726 ft. Circulate well. Rig up Halliburton with tail at 10720 ft. Test lines, ok.
Mix & Pump 145 cuft, 90 sx class G cement and displace with 56 bbls lease water @ 3000# max. Pull out with 40 jts to 8780 ft. Reverse out 35 min. Change tbg line. POOH laying down 2-7/8 tbg out of derrick. Close in well. eot.
Div of Oil & Gas, Steve Mulqueen, witnessed tag of cement @ 10726 and okayed placing of cement from 10726 to 10026.
Note: Cement mix: class G cement with 40% Silica Flour, .5% hr-7, and .5% R-3.

--- 10/14/93
Held 20 min safety mtg. Open well (No pressure). RIH w/2-7/8 in tbg. Work thru packer. Tag fill @ 11300 ft. Clean out to 11400 ft. Tbg is plugging. Pull to 11388, circulate well. Rig up Halliburton lines hold safety mtg.

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VENTURA, CALIFORNIA

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS
AND GEOTHERMAL RESOURCES

No. P293-146
Field Code 126
Area Code 00
New Pool Code --
Old Pool Code 20

PERMIT TO CONDUCT WELL OPERATIONS

EXXON Corporation
Attn: Env. & Reg. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
May 13, 1993

Your proposal to abandon well Newhall Land & Farming Co." 2, A.P.I. No. 037-16473, Section 14, T. 4 N, R. 17W, S.B. B.&M., Castaic Junction field, --- area, 21 Del Valle pool, Los Angeles County, dated 5-7-93, received 5-12-93, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOG Class IIB 2M requirements shall be installed and maintained in operating condition at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. A diligent effort shall be made to clean out the well to at least 11,480'.
4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of 72 lbs./cu. ft. and a minimum gel-shear strength (10 min.) of 25 lbs./100 sq. ft.
5. This office shall be consulted before deviating from the proposed abandonment program.

Continued on Page 2

Blanket Bond
PK:SF:nr

Engineer Steve Fields

Phone (805) 654-4761

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.
OG111

6. THIS DIVISION SHALL BE NOTIFIED:
   a. To witness the location and hardness of the cement plug at 10,152'.
   b. To witness the mudding of the well.
   c. To witness the squeeze-cementing of the 7" casing through the perforations at 1483'.
   d. To witness the location and hardness of the cement plug at 1383'.
   e. To witness the placing of the surface plug inside the 7" casing and the plug in the 7" x 13 3/8" casing annulus.
   f. To inspect and approve the cleanup of the well site before approval of abandonment will be issued.

KEN KENNEDY / S. MULQUEEN CLEAN-OUT TO 11400' 10-14-93

DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

NOTICE OF INTENTION TO ABANDON WELL

DIVISION OF OIL AND GAS
RECEIVED
MAY 12 1993
VENTURA, CALIFORNIA

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS	
		OGD114	OGD121
✓	BB	5-12-93 ✓	✓

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon well No. Newhall Land & Farming Co. #2 (Well designation), API No. 037-16473

Sec. 14, T. 4N, R. 17W, S.B. B. & M., Castaic Junction Field, Los Angeles County.

commencing work on 5/29, 1993.

The present condition of the well is:

1. Total depth 11,641
2. Complete casing record, including plugs and perforations
   13 3/8" 54.5# casing @ 0'-1493'
   7" 23/26/29# casing @ 0'-11,641' perfs:11,200'-11,370'
3. Last produced 06/86 2 8 47
   (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)

   OR

4. Last injected _____
   (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Addtional Data for dry hole (show depths)

5. Uppermost oil or gas shows

   Zone 21: 10,270'-10,430'

6. Stratigraphic markers:

7. Formation and age at total depth:

8. Base of fresh water sands: 1490'

5. Is this a critical well according to Section 1720(a), California Code of Regulations? Yes [X] No [ ]

The proposed work is as follows:

1 MIRU. Install and test a DOG class II 5M BOPE.
2. Clean to bottom of 7" casing @ 11,641'.
3. Place class "G" cement plug from 11,641'-10,152', pumping plug in three stages, cementing the 7" casing prefs and to 100' above WSO at 10,252', TOC at 10,152'. Dog to witness.
4. Shoot 4 SPF in the 7" casing @ 1493'to 1983 and place a class "G" cement plug from 1493' to 1373',squeezing the 7" x 13 3/8" annulus. DOG to witness.
5. Shoot 4 holes in the 7" casing @ 100' and circulate a class "G" cement plug from 100' to the surface getting returns in the casing/conductor annulus. DOG to witness.
6. Cut of casing @ 5' and weld plate with well identifier.
7. Clean location. DOG will inspect.

It is understood that if changes in this plan become necessary, we are to notify you immediately

Address 25 Desta Drive P.O. Box 1600
(Street)
Midland, Tx. 79702
(City) (State) (Zip)
Telephone Number 915-688-7888

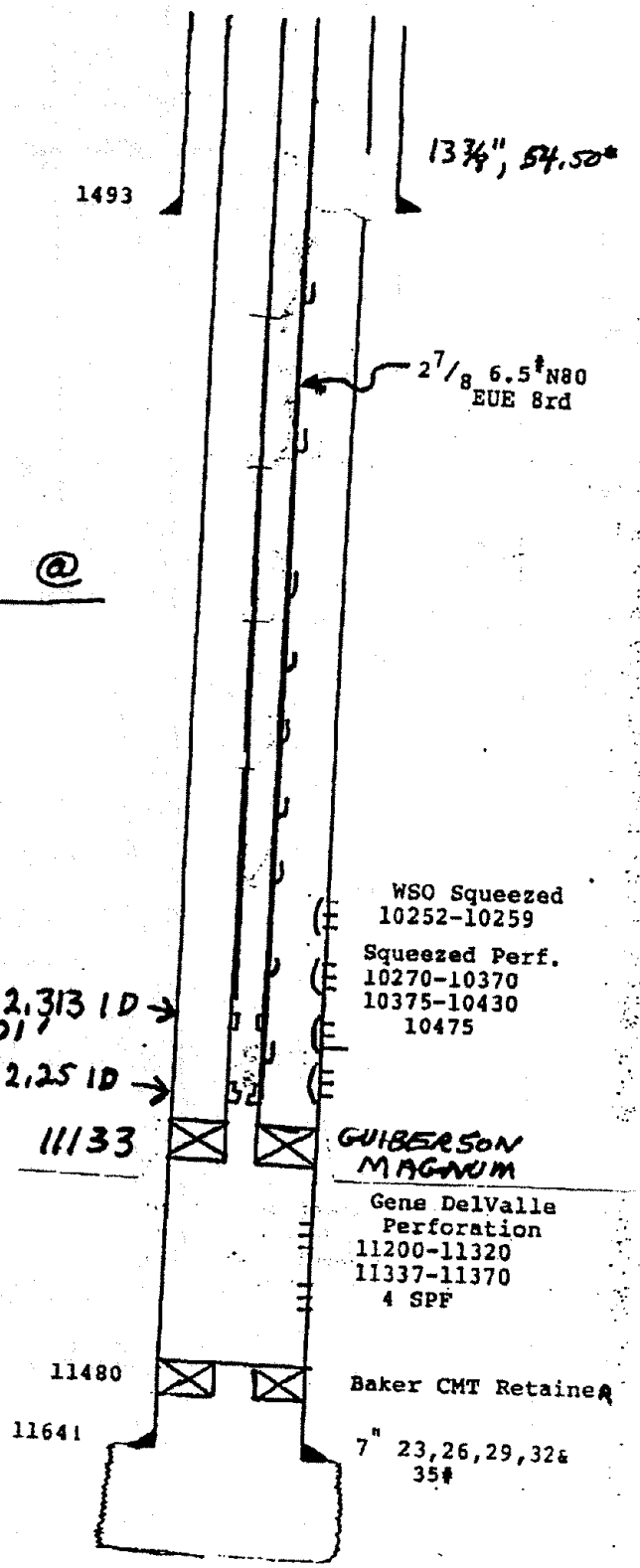
Exxon Corporation
(Name of Operator)
By Judy M. Bagwell
(Name-Printed)
Judy Bagwell 5-7-93
(Name-Signature) (Date)
Type of Organization Corporation

OG108

N.L.&F. 2

BEFORE P+A

KB is 14.15' above csg hd flange



7" CSG Detail	9-GLM's @
35# 0-407	
32# 407-1453	2394
29# 1453-2621	4245
26# 2621-3406	6099
23# 3406-5535	7110
26# 5535-6059	8113
29# 6059-8771	9111
32# 8771-10649	10108
35#10649-11641	10987
	11062

all N-80 grade
excpt 23# S-95

"X" nipple 2.313 ID
11101'

"A" nipple, 2.25 ID
11131'

11133

DIVISION OF OIL AND GAS
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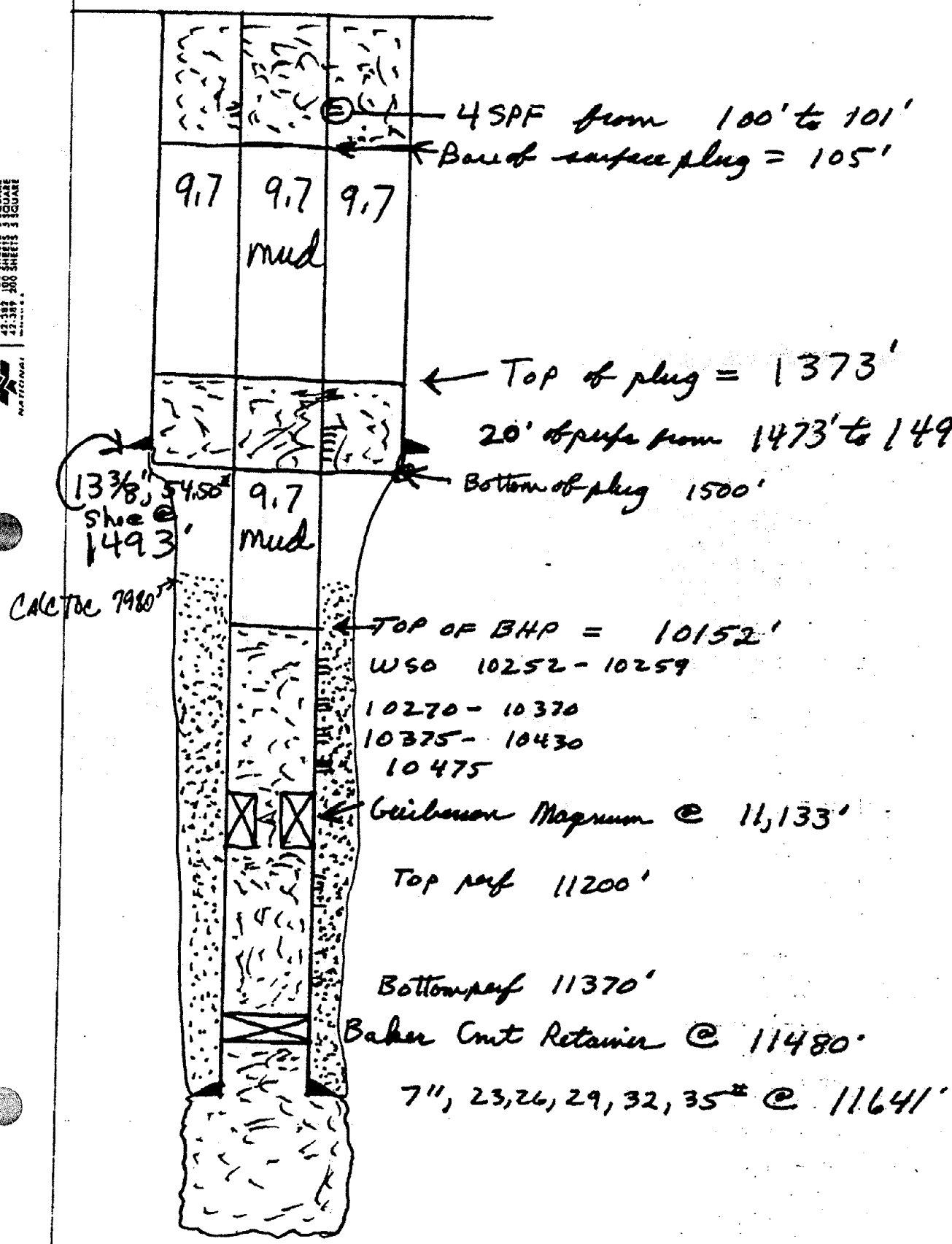
MAY 12 1993
VENTURA, CALIFORNIA

NL+F #2 DM 9-8-92

AFTER P+A



13 3/8", 54.5# casing @ 0'-1493'
7" 26/29/32# casing @ 0'-11,641' slots:11,200'-11370'

SAFETY
Conduct a safety meeting to instruct all personnel on possible hazards in the area. At least 20# of dry chemical is to be on location, as a minumum, for fire fighting equipment. No smoking is to be allowed on location and all personnel are required to wear safety glasses, boots, and hard hats.

OBJECTIVE
Permanently plug and abandon the well.

FAX MORNING REPORTS TO:

KEN SHAFTO	915-688-6162	MIDLAND RES/SUBSURFACE
SHARON TOMLIN	915-688-6199	MIDLAND REGULATORY AFFAIRS
RICK STOREY	805-762-7284	HILL PROPERTY SR.SUPT

NOTE: DOG VENTURA REPRESENTATIVES ARE TO WITNESS ALL PLUG SETTINGS. NOTIFY AGENCY OF INTENT TO PLUG AT LEAST 24 HRS BEFORE COMMENCING PLUGGING OPERATIONS. RECORD THE DOG REPRESENTATIVES' NAME ON THE MORNING REPORT THAT WITNESSES OR WAIVES A PART OF AN ABANDONMENT. VENTURA OFFICE 805-656-4761

MECHANICAL CONSIDERATIONS: During a workover in 11/85 a tight spot in the 7"casing from 7962'-7968' was swedged to 5 1/2". A Guiberson Magnum type "H" packer was set on a wireline @ 11,133, 2 7/8" N-80, 8rd tubing was set w/10,000# on packer and no latch.

PROCEDURE

1. Ensure that the DOG "Permit to Conduct Well Operations" (Abandonment) and the program and the AFE are available prior to the commencement of any work.

2. BEFORE RIG-UP: Prepare location, remove debris, repair roads, install/inspect rig anchors, flush flow line and remove to the edge of the location.

3. MIRU WSU. Bleed off any pressure on the well (casing and tubing). Load or kill the well if necessary. Set tubing plug.

4. N/D tree. NU an Exxon Class III 5M (DOG Class II 5M) BOP with a hydraulic actuating system. Test the BOP to 250/5000 psi.

5. Pull out of Guiberson Magnum type "H" permanent packer @ 11,133', max pull is 77% of tubing yield. Circulate B/U.

6. POOH L/D GLM's, X nipple, "A" nipple, seal assembly etc. Check condition of tubing. P/U workstring.

8. Clean out to bottom @ 11,480' PBTD in 7" liner. Notify DOG of top of fill and clean out depth if unable to clean out to TD.

9. RU cementers and test lines to 250/5000 psi. Mix and pump the following slurry to spot a balanced plug from 11480' to 10152'.

10. 11480'-10152'=328' X .2210 = 73 cu. ft. X 2 = 146 cu.ft.

Cement type	Class "G" + Silica Flour
Retarder	0.03%
Friction Retarder	0.02%
Fluid loss additive	1.0%
Weight	15.7 PPG
Amount	92 sx (146 cu/ft=100% excess)
Yield	1.585 CU.FT/SK
Water required	6.54 GAL/SK
TTT @ 180 Deg F BHCT	3.30 Hrs.
Compressive strengths @	230 Deg F BHST
8 HOURS 1750 psi	
24 HOURS 4800 psi	

11. POOH 5 stands above calculated TOC and reverse out tubing. POOH 3 stands and WOC 8 hrs. Tag top of plug (10152') and have DOG witness.

12. Test casing integrity to 500 psi for 10 minutes.

13. Displace fluid in the hole with approximately 558 bbls of 9.7 ppg mud.

    7", 23# = 10152' x .0393 = 400 BBLS
    7"x 13 3/8"= 1480' x .1070 = 158 BBLS

14. POOH lay down excess pipe .

15. Perforate 20' of 4 1/2" SPF centered at 1483' @ the base of fresh water. RIH with tubing open ended to 1483' circulate mud up the 7" X 13 3/8" annulus to the surface.

16. NOTIFY THE DOG TO WITNESS PUMPING THE FRESHWATER PLUG: R/U cementers & test lines 250/2000 psi. pump and squeeze cement slurry to place cement plug in the 7" and the 7"x10 3/4" annulus so the TOC will be 100' above the BFW.

    100' of 7", 23# X .2210 = 22 cu.ft.
    100' of 7" X 13 3/8" = .6007 = 60 cu.ft.

Cement type	Class "G" + 2% CaCl2
Weight	15.7 PPG
Amount	143 sx (164 cu/ft= 100% excess)
Yield	1.15 CU.FT/SK
Water required	4.96 GAL/SK
TTT @ 180 Deg F BHCT	4.45 Hrs.

Compressive strengths @ 90 Deg F BHST
8 HOURS 155 psi
24 HOURS 1523psi

17. R/U wireline and shoot 4 SPF (90 degrees phasing) in the 7" csg @ 100' (or deeper if required by Newhall grading plan).

18. RIH to 100' and establish circulation in the 7" X 13 3/8" annulus. R/U cementers and pump/squeeze 82 sxs of "G" neat cement to fill the 7" and the 7" X 13 3/8" annulus to surface. DOG TO WITNESS SURFACE PLUG.

19. Complete the following: Remove surface equipment and flow lines back to the header. Restore the site to its pre-drill condition. Complete removal of surface equipment and flowlines within 30 days of FRR. DOG requires all work to be completed, documented, and submitted within 60 days of FRR.

DIVISION OF OIL AND GAS
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SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

RECEIVED
OCT 25 1993
DIVISION OF OIL & GAS
BAKERSFIELD

Operator Exxon Corporation **Field** Castaic Junction **County** Kern
Well Newhall Land & Farming Co. 50, **Sec.** 14, **T.** 4N, **R.** 17W, **S.B. B.&M.**
A.P.I. No. 037-16515 **Name** Julie H. Mitchell (Person submitting report) **Title** Staff Office Assist. (President, Secretary or Agent)
Date October 18, 19 93

Signature Julie H. Mitchell

Environmental & Regulatory Affairs, P.O. Box 1600, Midland, TX 79702 915/688/7888
(Address) (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date	
09/01/93	MIRU. Spot tanks & mud pump. Rig up choke manifold & kill lines. Check well. Tbg 0 psi, csg 130 psi. Close in well.
09/02/93	Open well (tbg 0 psi, csg 130 psi). Circulate well 2 hrs. Rig up Lee Archer (slickline). RIH w/2-1/2 slip type tbg plug set @ 278'. Rig out slickline (well dead). Nipple down production tree. Nipple up class III BOP & BOE. Rig up working floor & tbg equip. Rig up slick line. Retrieve plug @ 278'. Rig out slickline. RIH w/2-7/8" tbg (work string). Tag @ 8196'. Circulate out fill & mud. POOH w/20+0. Secure well.
09/07/93	Service rig & equipment. Open well (no psi). Fill well w/2 bbl lease water. Continue measuring out w/2.785 N-80 tbg. Fill hole every 20 stands (not losing or gaining fluid). Pull 131+0 stands total. Makeup 180' 4.5 wash pipe & 6 3-1/8 in D. C. w/ B-S & Jars. RIH w/81+0 2 7/8" N-80 tbg. Rig transmission out 9/8/93. Well secure. Repairs being done.
09/09/93	Open well (no psi). RIH with 50+0 2-7/8" tbg. Tag fill or fish @ 8197. Reverse circulate @ 1000#, 1.61 BPM. Rig up power swivel and stripping cage. Clean out f/8197' to 8200'. Reverse out clean. Swivel broke, secure well.

DIVISION OF OIL AND GAS
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VENTURA, CALIFORNIA

OG103 (8/91/GSR1/5M)

09/13/93 Open well (no psi). RIH, tag top of fish @ 8197'. Reverse circulate f/8197-8352'. Cutting show dried mud. Losing fluid while cleaning out. POOH w/10+0, 300'. Secure well.

09/14/93 Open well (no psi). RIH w/4-1/2" W.P. Tag top of fish @ 8197'. RIH to 8352', no fill. POOH w/131+0 stands. Back wash pipe. Makeup 2-7/8X4-1/2" overshot. RIH w/6 3 1/8" drill collars. RIH w/121+0 2-7/8 tbg. Secure well.

09/15/93 Open well (no psi). RIH, latch on fish @ 8197'. Jarring on fish @ 100,000#, no movement, 2 hrs. Rig up Dia-Log. Attempt to run 5/8" free point tools. Would not go in hole. Make up 5/8" sinker bars. RIH, work thru, excelerator. Tag fill @8654'. POOH, rig up free point tool. RIH to top of excelerator. Could not work thru. POOH. Rig out Dia-Log. POOH with 10+0 2-7/8" tbg. Secure well.

09/17/93 Open well (no psi). Cont POOH w/2-7/8" N-80 tbg. Pull 129+0 stand back 3-1/8" Drill Collars. Make up overshot w/2-7/8" grapple and pack off. Make up BS and tbg jars. RIH w/120+0. Secure well.

09/20/93 Open well (no psi). RIH w/90 jts 2-7/8" N-80 tbg. Latch on fish @ 8196'. Rig up Dia-Log. RIH w/1-11/16" chemical cutter. Tag fill @ 8627'. Cut tbg @ 8612'. POOH. Jar on fish @ 100,000#. Rig up pump. Pump down tbg. Pack off in fishing tool leaking. RIH w/1-11/16" chemical cutter. Cut tbg @ 8337'. POOH, rig out Dia-Log. Jar fish loose. POOH w/100 jts 2-7/8" tbg. Secure well.

09/21/93 Open well (no psi). POOH w/120 jts 2-7/8" tbg. Pull 3-1/8" and 4-3/4" fishing tools. Lay down 152' 2-7/8" tbg. Found hole in first jt @ approx. 8220'. Showed possible csg holes. RIH w/3-1/8" D.C.s and 4-1/2" wash pipe. POOH, lay down all tools. Make up Halliburton 5-1/2" 19-20# cement retainer. RIH w/15o jts 2-7/8" N-80 tbg. Secure well.

09/22/93 Open well (no psi). Continue RIH to 8089'. Set 5-1/2" 17# Halliburton EZSX retainer @ 8089'. Attempt to break down. Rig up Halliburton, test lines 250# and 5000#. Pump 3 bbl pm @ 1000# circulating around cement retainer. (Csg holes above retainer). DOG okayed pump 62 sx cement. Mix & pump 62 sx, 100 cubic ft class G cement w/40% Silica Flour + .15% HR-7 +.15% CFR-3, displace w/43 bbls lease water @ 1600#. Rig out Halliburton. POOH with 30 jts, 930'. Reverse circulate 35 min. Pull 10+0, 600'. Close in.

Note: Lost 30 bbls while reversing out cement.

Note: Peter Wygle of Div Oil & Gas witnessed placement of 62 sx, 98 cubic ft cement thru retainer @ 8089' and squeeze of 400 level foot @ 100 psi.

09/23/93 Open well (no psi). RIH w/2-7/8" N-80 tbg. Tag top of cement @ 7593'. POOH w/265 jts 2-7/8" N-80 tbg. Lay down stinger f/cement retainer. Make up 5-1/2" 17# full bore packer. RIH to 2000'. Test 5-1/2" csg from surface to 2000' @ 500 psi. Release packer. Secure well.

Note: Peter R. Wygle, Div Gas & Oil, witnessed tag @ 7593. Tag ok, wants to test to find location of hole.

09/27/93 Open well (no psi). Continue RIH w/5 1/2" full bore packer. Set @ 4000'. Leaking f/2000-4000'. Pull up. Testing csg every 300'. Locate hole @ 2593'. POOH w/packer & tbg. RIH w/265 jts to 7590'. Secure well.

10/01/93 Open well (no psi). Pickup 2 jts 2 7/8" tbg. Rig up pump & mud tank/ Pump 110 bbls 9.7 ppg mud f/7593 to 2700'. Displace w/15 bbls lse water. POOH lay down 165 jts 2 7/8" tbg. Close in well with 86 jt in hole, 2700'.

10/04/93 Open well (no psi). POOH w/86 jts. Fill well w/30 bbls lse water. Rig up MMI electric line. RIH w/10' perforator gun Dyna Jet 4 spf. Locate collar at 2389'. Shoot holes f/ 2399 to 2409'. POOH circulate well down 5 1/2" csg up 8 5/8" csg @ 300#. RIH w/88 jts 2 7/8" tbg w/tail at 2703'. Rig up Halliburton. Test lines 250# low. 4000# high,. Mix & pump 102 cubic ft 89.5 sx neat cement. Displace w/13 bbls lease water @ 400 psi max. Returns coming up 5 1/2" and 8 5/8" csg. Rig out Halliburton. Pull 30 jts to 1773'. Reverse circulate well clean 30 min. POOH, rig up MMI. RIH w/10' Dyna Jet perforator gun 4 spf. Locate collar @ 802'. Shoot holes @ 782-792'. POOH, rig out MMI. Estimated top of cement @ 2209'. Close in well.
NOTE: Called DOG. Steve Fields okayed, phone, pumping cement f/2700-2309' @ 8:00a.

10/05/93 Open well (no psi). RIH, tag cement plug @ 2063'. Displace 28 bbls 9.7 P.P.G. mud w/5 bbls water from 2063 to 806'. POOH w/40 jt 2 7/8" tbg. Tbg tail @ 806'. Rig up Halliburton, test lines 250# @ 2000#. Mix & pump 65 cubic feet, 57 sx neat cement down 2 7/8" tbg up 8 3/8" csg. Displace w/3.5 bbls lse water. Let cement gravitate in 5 1/2" csg. Pull 5 stand. lay down remaining tbg while waiting on cement. Rig up MMI. RIH w/2 ft link jt shoot 8 holes f/100-98'. POOH. RIH w/ 2 7/8" tbg. Cement still wet. POOH, close in well. Estimated top of cement @ 606'. DOG, Peter Wygle, witness tag @ 2063 top of cement at 9:30a.

10/06/93 Open well (no psi). RIH , tag cement plug @ 553'. POOH, laying down 22 jts 2 7/8" tbg. With tbg tail @ 124' rig up Halliburton. Mix and pump 30 sx in 5 1/2" & 8 5/8" csg to surface. Rig out Halliburton. Clean BOPE, lay down 4 jts. ND BOP. DRMO. DOG, Peter Wygle, witness tag @ 553' & placement of cement f/100' to surface 5 1/2 and 8 5/8" csg - 30 sx=34.2 cubic feet.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL PLUGGING AND ABANDONMENT

Ventura, California

September 21, 1994

EXXON Corporation
Attn: Env. & Req. Affairs
P.O. Box 1600
Midland, TX 79702

Your report of the plugging and abandonment of well "Newhall Land & Farming Co." 50, A.P.I. No. 037-16515, Section 14, T. 4N, R. 17W, S.B. B.& M., Castaic Junction field, Los Angeles County, dated 10-18-93, received 10-27-93, has been examined in conjunction with records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and the filing of well records.

svl

William F. Guerard, Jr
State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

cc: Conservation Committee
Update

Modified OG159 (4/94)

DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND
GEOTHERMAL RESOURCES

No. T293-267

Report on Operations

EXXON Corporation
Attn: Env. & Reg. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
November 22, 1993

Your operations at well "Newhall Land & Farming Co." 50, API No. 037-16515, Sec. 14, T. 4N, R. 17W, S.B. B.&M. Castaic Junction Field, in Los Angeles County, were witnessed on 10-6-93. Pete Wygle, representative of the supervisor, was present from 0800 to 1000. There were also present C. Ballard, Operator's Rep.

Present condition of well: 10 3/4" cem 792'; 8 5/8" cem 2409'; 5 1/2" cem 11,235, perf 10,970' WSO, perf 99' - 101', 2399' - 2409', & @ ints 11,010' - 11,155', holes at 2593', damaged @ 8220' & 10,600'. TD 11,365'. Junk: 2 7/8" tbg 8340' - 10,960' w/pkr @ 10,960'. Plugged w/cem 11,365' - 11,215', w/approx 50 cf of cem below ret @ 8089' - 7593', 2703' - 2063', 806' - 553', & 126' - 5'.

The operations were performed for the purpose of abandonment.

DECISION:

The plugging operations as witnessed and reported are approved.

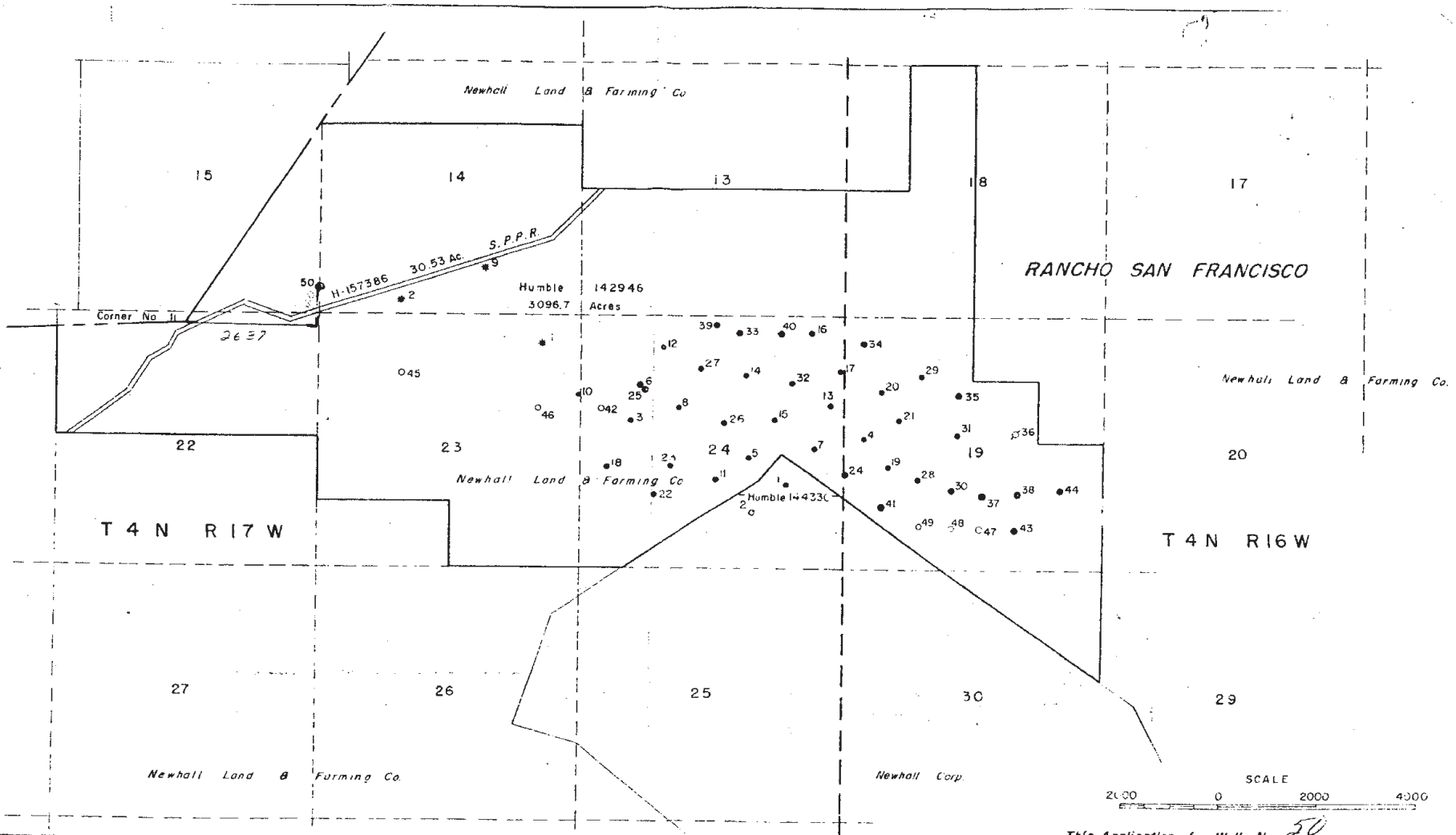
SCV

William F. Guerard, Jr.
State Oil and Gas Supervisor

By Patrick J. Kinnear

Patrick J. Kinnear
Deputy Supervisor

OG109 (Modified 1993)



This Application for Well No. 50

REVISIONS					
NO	DATE	DESCRIPTION	BY	CHK	APPR

REVISIONS					
NO	DATE	DESCRIPTION	BY	CHK	APPR
7	1-28-55	ADD WELL NO 45	KDS		
8	2-2-55	" " " 46	"		
9	3-2-55	" " " 47	"		
10	3-7-55	" " " 48	"		
11	3-7-55	" " " 49	"		
12	4-25-55	" " " 50	"		

REVISIONS					
NO	DATE	DESCRIPTION	BY	CHK	APPR
1	8-18-54	ADD WELL NO 40	KDS		
2	8-30-54	" " " 38	NDC		
3	9-2-54	" " " 41	NDC		
4	9-28-54	" " " 42	KDS		
5	12-14-54	" " " 43	KDS		
6	12-21-54	" " " 44	KDS		

NEWHALL LAND & FARMING CO.
LEASE NO 142946
CASTAIC JUNCTION DIST. LOS ANGELES CO.

HUMBLE OIL & REFINING COMPANY
CIVIL ENGINEERING DIVISION
CALIFORNIA AREA

DRAWN KDS
CHECKED
APPR.
SCALE 1" = 2000'
DATE 8-18-54
REVISED
FILE NO. CAB 44

SUPERSEDES DRWG NO CAB 23

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL PLUGGING AND ABANDONMENT

Ventura, California

September 21, 1994

EXXON Corporation
Attn: Env. & Req. Affairs
P.O. Box 1600
Midland, TX 79702

Your report of the plugging and abandonment of well "Newhall Land & Farming Co." 9, A.P.I. No. 037-16480, Section 14, T. 4N, R. 17W, S.B. B.& M., Castaic Junction field, Los Angeles County, dated 10-28-93, received 11-05-93, has been examined in conjunction with records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and the filing of well records.

svl

William F. Guerard, Jr
State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

cc: Conservation Committee
Update

Modified OG159 (4/94)

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
RBDMS- RECORDS ENTERED

COMPANY Exxon WELL NO. Newhall Land & Farms B. 9
API NO. 037-16780 SEC. 14, T. 4N, R. 17W, SB B.&M.
COUNTY LA FIELD Castaic Jct

RBDMS DATA ENTERED: 3/24/98
(DATE)

BY: KP
(NAME)

RBDMS DATA MUST BE UPDATED FOR ALL DATA THAT IS RECEIVED AFTER THE DATE INDICATED ABOVE.

WELL CONSTRUCTION DATA ONLY

OPERATOR Exxon Corp
LSE & NO "Newhall Ldg Farm Co" 9
MAP

	(/)	( )	( )	( )	( )	( )
ENTION	Reperforate	ABANDON				
NOTICE DATED	12-15-77	5-7-93				
P-REPORT NUMBER	277-465	P293-147				
CHECKED BY/DATE	PV/7-28-78					
MAP LETTER DATED	Idle 8/5/78	2-19-94 SPM				
SYMBOL	⊕ New	⊕ 11/12/57				

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE	12-21-78		5-12-93									
HISTORY	7-26-78		11-5-93									
SUMMARY	—		—									
IES/ELECTRIC LOG	—		—									
ECTIONAL SURV	—		—									
CORE/SWS DESCRIP	—		—									
OTHER	—											
RECORDS COMPLETE	7/28/78		4-14-94									

ENGINEERING CHECK

T-REPORTS	✓
OPERATOR'S NAME	✓
WELL DESIGNATION	✓
LOC & ELEV	✓
SIGNATURE	✓
SURFACE INSPECTION	✓
FINAL LETTER OK	

CLERICAL CHECK

POSTED TO 121 _____ 170 MAILED _____ FINAL LETTER MAILED _____

RELEASED BOND _____

REMARKS: Sfc insp OK 4-12-94 FRW

1991. 1

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

Operator Exxon Corporation **Field** Castaic Junctio **County** Los Angeles
Well Newhall Land & Farming Co. #9, **Sec.** 14, **T** 4N, **R** 17W, S.B. B. & M.
A.P.I. No. 037-16480 **Name** Julie H. Mitchell (Person submitting report) **Title** Staff Office Assist. (President, Secretary or Agent)
Date October 28, 19 93.

Signature Julie H. Mitchell

Environmental & Regulatory Affairs, P.O. Box 1600, Midland, TX 79702 (Address) 915/688-7888 (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

(see attached)

DIVISION OF OIL AND GAS
RECEIVED
NOV 5 1993
VENTURA, CALIFORNIA

OG103 (6/91/GSR1/5M)

10/27/93 MORNING REPORT 5:38PM

NEWHALL LAND & FARMING CO - 0009 Lease# 061590 Job# 60007687
Field Supt R. O. Storey CMP# 4037164800001 AFE# 00039455
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI

--- 10/26/93
Safety mtg. Open well. Rih, tag cement @ 615 ft. Ran to 120 ft. Rig up Halliburton, test lines. Mix and Pump 50 sx class G neat cement from 120 to surface. 10-3/4 and 7 in csg. Rig out Halliburton. Rig out all equipment.
Div of Oil & Gas, Peter R. Wygle witnessed and approved tag of top of cement at 615 ft. Also witnessed pumping of surface plug from 120 ft to surface in 10-3/4 and 7 in casings.

--- 10/21/93
Attend safety mtg. Rih tag cement @ 3476. 37 ft above holes. Rig up Halliburton with tbg hung at 3470. Mix and pump 20 sx, of class G neat cement 1.15 yield = 103 cuft displaced with 19 bbls water. Rig out Halliburton. Pull and lay down 86 Jts. Stood back 760 ft of tbg. Rig up MMI shot 80 holes between 7 and 10-3/4 in csg from 740 - 760 ft. Rig out MMI. Mud up down 7 in and up 10-3/4. Rih with tbg to 760 ft. Rig up Halliburton. Mix and Pump 87 sx, 100 cuft, Class G cement with 2% CACL2 displaced with 3.7 bbls. Rig out Halliburton. Calculated top of cement at 560 ft, 10-3/4 and 7 in. Pull tbg. Rig up MMI. shot 8 holes from 100 -102 ft. Secure well. eot.
Div of Oil & Gas, Stephen Mulqueen: Tag of cement @ 3476 ft is low. Ok to place 100 linear ft (15 sx) on top of plut @ 3476 ft without having to tag plug.
Div. of Oil & Gas, Stephen Mulqueen gave permission to squeeze fresh water without having to witness.

--- 10/20/93
Safety mtg. Open well. Pull and lay down 99 jts of tbg. Rig up Hallibur ton. Test lines with tbg hung at 3600 ft. Mix and pump 33 sx cement blended with 40% SSA-1, .3% CFR3 and .5% HR7 with a yield of 54 cuft. Displaced with 18.5 bbls. Pulled to 300 ft. Filled hole. Squeezed 20 cuft away at 300 psi, 1/2 bbls per min. Pulled to 2700 ft. Secure well eot.

--- 10/19/93
Safety mtg. Open well. Continue testing for holes in csg. Located holes between 3513 and 3534 ft. Pull out of hole with test packer. Ran tbg openended to 10400 ft. Pull and lay down 133 jts of tbg. Secure well eot.
Notified Div of Oil & Gas of location of holes. Got DOG approval to lay a cement plug from 3645 to 3413.

--- 10/18/93
Safety mtg. Open well. Rih . tag cement @ 10447. Pressured csg to 500 psi. Bleed to 0 psi in 45 seconds. Pulled tbg.-Made up Robinson test pkr. Rih to 1000 ft. Test csg ok. Ran to 2200 ft, ok. Ran to 332, test ok. Secure well, eot
Div of Oil & Gas, Steve Mulqueen, witnessed and approved tag @ 10447.

--- 10/14/93

DIVISION OF OIL AND GAS
RECEIVED
NOV 5 1993
VENTURA, CALIFORNIA

NEWHALL LAND & FARMING CO - 0009 Lease# 061590 Job# 60007687
Field Supt R. O. Storey CMP# 4037164800001 AFE# 00039455
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI

Attend safety mtg. Open well. With tbg hung open ended at 10790 rig up Halliburton. Test lines. Mix and pump 53 sx, 110.42 cuft cement blened with 40% SSA-1, .3% CFR-3, -5% HR-7, displaced with 58 bbls mud Calculated top of cement @ 10390 ft. Pulled to 10090, reversed around twice. Pulled to 9490, secure well. eot.

--- 10/13/93
Attend safety mtg. Open well. Sting into retainer at 10793 ft. Rig up Halliburton. Unable to squeeze thru retainer. Rig out Halliburton. Got DOG approval to cement above retainer. Pooh with setting tool. RIH w/ openended tbg to 10790. Secure well, ready to cement in am.
Div of Oil & Gas, Peter Wygle, gave approval to lay 300 ft cement plug on top of retainer. Also approved change over to 9.3 ppg mud.

--- 10/12/93
Attend safety mtg. Pooh with kill string. Rih with wash pipe and drill collars. Pull and lay down drill collars and wah pipe. Notified DOG of new fish depth. Top of fish at 10809 ft. Make up Halliburton EZ Drill Retainer. Set retainer @ 10793 ft. Secure well, eot.
Div of Oil & Gas, Peter R. Wygle, waived witness, and approved by phone the setting of retainer ant 10809 feet.

--- 10/11/93
Attend safety mtg. Changed well over to 9.2 mud, 400 bbls. Well stopped flowing. Pull all tbg and fishing tools, 10600 ft. Recovered 114 ft of fish. Ran 720 ft kill string, secure well. Eot.

--- 10/09/93

--- 10/07/93
Attend safety mtg. Open well, circulate bottoms up cont pulling tbg. After pulling 10 stands well started flowing our tbg and csg. Hook up Kelly line, circulated around twice, well still flowing. INstall gauge in tbg. Got shut in surface pressure of 17 psi. Notified foreman of conditions. Decided to run back to top of fish at 10665 ft. and change over to mud. Ran tbg to 10170 ft. Secure well, shut down until am.

--- 10/06/93
Attend safety mtg. Open well, RIH circulate bottoms up from 9645 - washed over fish at 10665 to 10878. Stacked out to drive sub. Pulled to 10853. While attempting to cut, cutter let loose. Tried 3 times at 10853. Cutter kept releasing. PUlled to 10821. Attempted to cut. No success. Release cutter, pulled 8000 ft. Secure well. eot

--- 10/05/93
Attend safety mtg. Open well, ran tbg to 9645 ft. Circulate bottoms Clean out heavy contaminated mud to 10636 ft. Circulate clean. REady to make washover and first cut in am.

--- 10/04/93
Attend safety mtg. Open well, ran 72oo ft OE tbg. Tbg tail at 9625 ft.

NEWHALL LAND & FARMING CO - 0009 Lease# 061590 Job# 60007687
Field Supt R. O. Storey CMP# 4037164800001 AFE# 00039455
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI

Rig up to reverse tbg. Unable to reverse. Pulled to 9300 ft. Circulated bottoms up. Got heavy mud returns. Ran to 9625, circulated, pulled to 8881, Secure well, eot.

--- 10/01/93
Attend safety mtg. Start up job. Cont pulling tb. Last 49 jts were gaulded. Had trouble breaking out. Laying down last 49 jts. Made up 250 ft of wash pipe with drill collars and outside cutter. RIH with wash pipe and tbg until eot. Secure well, eot

--- 09/27/93
Attend safety mtg. Open well. Reversed bottoms up form 10500 ft. Pull @ measure tbg. Unload wash pipe and fishing tools. Tbg seat @ 2400 ft, kill string in hole. Secure well, eot.

--- 09/23/93
Attend safety mtg. Open well work stuck packer to 7780 max yield for 2-7/8in N-80 tbg, 111,000 pull. Couldnot get loose. Rig up Dia-Log. Ran free point & collar locator to 11748. Logged collars and packer top at 11727. First collar above packer at 11696, log second collar up at 11665. Determined free point at 10700. Pulled collar locator and free point. Made up chemical cutter. RIH, cut at 11710 ft, 18 ft above pkr Pulled cutter, worked tbg to 11100. Would not come free. Pump fluid away at 500 psi. No returns. RIH with second cut. Cut at 10700 ft. Pipe came free. Rig out Dia-Log. Pull 5 stands. Secure well. eot.

--- 09/22/93
Attend safety mtg. Open well. Rig up Nowcam coil tbg unit. Tested BOP ran in hole with 1-1/2in coil tbg. Clean out mud from 10750 to 11747 ft Pull coil tbg. Rig out Nowcam. Secure well. eot.

--- 09/21/93
Drove to location. Attend safety mtg. Open well. Rig up Dia-Log, test lubricator. Made up 1in sinker bars and 1 in collar locator. Rih, went throug heavy fluid, like mud, to 11,090 ft. Hit fluid @ 10,809. Rig out Dia-Log. Secure well, shut down until am pending arrival of coiled tbg unit.

--- 09/20/93
Attend safety mtg. Open well. Attempt to release Lane Wells Packer at 11,700 ft. Worked at 110,000 pull 77% factor. Could not get loose. Rig up Dia-Log. Test Lubricator. RIH with free point and 1-5/8in sinker bars, Hit heavy fluid at 10,968 ft. Worked down to 10,809 ft. Could not go further. Tbg still free at this point. POOH and secure well. Ready to run 1 in sinker bars and free point in am.

--- 09/17/93
Attend safety mtg. Open well. Attempt to pump through bypass ports on Baker TBS tbg plug. Went to 200 psi with rig pump. Rig up Halliburton Pump truck. Rig up slickline & test lubricator. Held 3410 psi on tbg. Worked tsb plug loose. Pulled plug. Lay down lubricator. Bleed tbg to 0

NEWHALL LAND & FARMING CO - 0009 Lease# 061590 Job# 60007687
Field Supt R. O. Storey CMP# 4037164800001 AFE# 00039455
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI
psi. Rig out Halliburton. Secure well. eot.

--- 09/15/93
Safety mtg. Move all equipment from well 7 to 9. Rig up, guy mast, bleed csg from 250 psi to 0 psi in 10 min. Remove tree, install and test Class III BOP. Secure well, eot.

DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND
GEOTHERMAL RESOURCES

No. T293-266

Report on Operations

EXXON Corporation
Attn: Env. & Req. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
November 19, 1993

Your operations at well "Newhall Land & Farming Co." 9, API No. 037-16480, Sec. 14, T. 4N, R. 17W, S.B. B.&M. Castaic Junction Field, in Los Angeles County, were witnessed on 11-4-93. Pete Wygle, representative of the supervisor, was present from 1015 to 1030. There were also present

Present condition of well: 10 3/4" cem 760'. 7" cem 11,785, perf 11,055' WSO, cp 11,054', perfs 100', 740'- 760' 11,120' - 11,150' holes 3513' - 3545'; 5 1/2" ld 11,753' - 12,156', perfs @ int. 11,780' - 12,155'. Junk below 10,818'. TD 12,157'. Retainer @ 10,793'. Plugged w/ cem 10,790' - 10,447', 3600' - 3272'+/-, 760' - 615', & 100' - 5'.

The operations were performed for the purpose of abandonment.

DECISION:

The plugging operations as witnessed and reported are approved.

SCV

William F. Guerard, Jr.
State Oil and Gas Supervisor

By Patrick J. Kinnear

Patrick J. Kinnear
Deputy Supervisor

OG109 (Modified 1993)

E3500 T 2666

DIVISION OF OIL AND GAS
Cementing/Plugging Memo

Operator EXXON CORP. Well No. "Newhall Land + Farming Co."
API No. 037 - 16480 Sec. 14, T. 04N, R. 17W, SB B&M
Field CASTAIC JUNCTION, County LOS ANGELES. On 11-4-93,
Mr./Ms. P. Wygle, representative of the supervisor, was present from 1015 to 1030.
There were also present

Casing record of well: 10 3/4" cem 760'. 7" cem 11,785, perf 11,055' WSO, cp 11054' perfs 100', 740'-760', 11,120'-11,150', holes 3513'-3545', 5 1/2" TB 11,753'-12,156', perfs @ INT 11,780'-12,155'. Junk below 10818'. TD 12157'. RETAINER @ 10793'.

The operations were performed for the purpose of ABANDONMENT
Plugged w/ cem 10790'-10447', 3600'-3272'±, 760'-615', & 100'-5

☑ The plugging/~~cementing~~ operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @ _____' is approved.

Hole size: _____" fr. _____' to _____', _____" to _____' & _____" to _____'

	Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
	Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			
A	7"	23# -35#	0	11785'	10-14	RETAINER @ 10793' *	53 sx	0	10447'	0	—	THRU. JU @ 10818
B	"	"	"	"	10-20	TBG @ 3600' BRADEN HEAD	54 cf	—	3476'	20 cf	300 psi	3513'-3545' HOLES

* NO BREAK-DOWN PLACED PLUG ON TOP OF RETAINER ONLY (33 sx)

Casing/~~tubing~~ ~~recovered~~ perf 4 hpf: 7" shot/~~cut~~ at 760', 100', 740'-', _____' pulled fr. _____';
_____" shot/cut at _____', _____', _____' pulled fr. _____'.

Junk (in hole): 10818' TBG STUB, PACKER BELOW @ 11708'

Hole fluid (bailed to) at _____'. Witnessed by _____

Mudding	Date	Bbls.	Displaced	Poured	Fill	Engr.
9.3#/g CLAY GEL	10-18-93	430	TBG @ 10447'	—	SURFACE	S. MULQUEEN

FOUND HOLES 3513'-3545' IN 7" CASING

	Cement Plugs		Placing	Placing Witnessed		Top Witnessed				
	Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time		Engr.
A'	10/14	53 sx	RETAINER @ 10793' TBG @ 10790' *	—	REPORTED	10447'	5K#	10/18	0930	S. MULQUEEN
B'	10/20	54 cf	TBG @ 3600'	—	"	3476'	10K#	10/21	0830	"
	10/21	20 sx	TBG @ 3470'	—	"	3272'±	CALC.	10/21	—	REPORTED
	10/25	100 cf	Equalized thru perfs 740'-760', Thru 760'	—	"	615'	Wt of Slurry	10/26	0730	PRW
	10/26	60 cf	Fill 7" csg & 10 3/4 annulus thru perf 100'	0900	PRW	5	VISUAL	11/4		

OGD10 (10/90/GSR1/5M)

Form 136

MEMORANDUM OF TELEPHONE OR PERSONAL CONVERSATION

_____, Calif.

_____ 19____

Operator EXXON Well No. "Newhall Land and Farming Co." 9

Field Castaic Junction Sec. 14 T. 4N R. 17W SB B&M

A ~~XXXXXXX~~ personal telephone conversation was held, concerning above well, with Mr. Ken Kennedy

_____ for above operator on 10-12 19 93 at 1130A M.

Details of the conversation were as follows:

Fishing attempts for the tubing and packer at 11,708' have been unsuccessful. Exxon has attempted to fish with almost the entire budgeted amount of the abandonment of the well. Tubing has been cut at 10,818' and washed over and recut at 11,693'. Unable to recover the second piece of tubing. Top of tubing fish is at 10,818'. Want to set a retainer as close to the top of fish as possible (cem outside of casing is at 10,778') and squeeze cem past fish. OK to proceed.

Wygle visited wellsite at 0700 on Oct 13 to witness squeeze cem operations. Unable to squeeze below ret at 10,800'. No breakdown. Pressure test no good above retainer. OKd 300'+/- plug on top of retainer. 9.3 ppg mud in hole to surface. OK for abandonment mud.

(Signed) Peter R Wygle

Title EMRE

New File

F-31 Rev. D24264

HUMBLE OIL & REFINING COMPANY
WELL RECORD

FIELD: Castaic Junction — LEASE: Newhall Land & Farming Co. — WELL NO. 9

COUNTY: Los Angeles — SURVEY: Sec. 14, T 4 N, R 17 W, S.B.B.& M.

JOB ORDER NO. CAL-109 — LOCATION OF WELL: 1306' N and 5968' E of Corner 11, Rancho San Francisco

OPERATOR: Humble Oil & Refining Company — ADDRESS: Box 2180, Houston, Texas

WELL DATA

ELEV. OF ~~Rotary Table~~ R.D.B. 976 977' ; ELEV. OF TOP FLG. OF OIL STRING CASINGHEAD 963'

DISTANCE BETWEEN TOP OF RTY. DR. BUSHING AND TOP OF TOP FLG. OF OIL STRING CASINGHEAD 14.2'

DISTANCE BETWEEN TOP OF RTY. DR. BUSHING AND TOP OF DERRICK FLOOR 2.6'

COMPLETION FLUID: Oil Emulsion Mud ; TOTAL DEPTH: 12,157' ; TYPE WELL: Potential G Well Standi

FORMATION: Miocene ; RESERVOIR: Mohnian 21 ; COMPLETION DEPTH: (See Note)

COMPLETION DATE: 6-26-52 ; HOLE SIZE BEHIND OIL STRING CSG. 9-7/8" ; SIZE OF OPEN HOLE BELOW CSG. 9-7/8" ; PRODUCING FROM - TO -

PRODUCTION TESTS

INTL OR POT	DATE	SIZE CHOKE OR PLUNGER	HOURS TESTED	BBLS/DAY FLUID	BBLS/DAY OIL	% BS & W	GAS M C F /DAY	GAS OIL RATIO	TBG PR OR S P M	CSG PR OR L STROKE	COR GRAV
NONE											

DRILL STEM TESTS

DATE	TYPE OF TEST OPEN HOLE OR PERF CSG	FORMATION TESTED FROM	FORMATION TESTED TO	SIZE CHOKE TOP	SIZE CHOKE BOTTOM	TOOL OPEN MIN.	FORMATION PRESSURE FLOWING	FORMATION PRESSURE SHUT-IN	RECOVERY - FEET OIL	RECOVERY - FEET WATER	RECOVERY - FEET MUD	RECOVERY - FEET OTHER	W.C.	WAS TEST SATIS.
4-5-52	OH	10437	10452	1"	1/4"	60	1460	5015	-			2500		Yes
4-17-52	OH	11119	11139	1	1/4	60	1250	4980	30	123	60	2500		Yes
4-18-52	OH	11136	11159	1	1/4	60	1235	5015	10	140	60	2500		Yes
4-20-52	OH	11149	11189	1	1/4	Tool failed to open								Yes
4-21-52	OH	11149	11189	1	1/4	Packer failed								No
4-22-52	OH	11158	11189	1	1/4	60	1240	4660	30	183	30	2500		No

CASING, SCREEN AND LINER RECORD

(Continued on page 2)

SIZE	GRADE AND KIND	WT/FT	NO. AND FORM THREADS	CLASS	MANUFACTURER	JOINTS	AMOUNT SET FEET	DEPTH SET AT
10-3/4"	B	40.5	8	1	J & L	28	743.85*	760.3
*Includes guide shoe and float collar.								
7" O.D.	N-80 LJ	26	8R	1	J&L	22	791.39	
7	N-80 LJ	23	8R	1	J&L	72	2793.60	
7	N-80	26	8R	1	J&L	82	3231.49	
7	N-80	29	8R	1	National	54	2199.54	9030.65
7	N-80	32	8R	1	National	56	2021.53	11,052.18
7	N-80	35	8R	1	National	16	687.59	
7 Float Collar			8R	1	HOWCO		1.23	11741.0
7	N-80	35	8R	1	National	1	42.85	
7 Guide Shoe			8R	1	HOWCO		1.63	
							11770.85	11785.0

NOTE: 7" Baker "E" Magnesium retainer set @ 11091' with cement plug in casing to bottom of perforations @ 11120-50'. Float Collar and assembly has not been drilled out.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT OF WELL PLUGGING AND ABANDONMENT

Ventura, California

September 21, 1994

EXXON Corporation
Attn: Env. & Reg. Affairs
P.O. Box 1600
Midland, TX 79702

Your report of the plugging and abandonment of well "Newhall Land & Farming Co." 77, A.P.I. No. 037-22047, Section 14, T. 4N, R. 17W, S.B. B.& M., Castaic Junction field, Los Angeles County, dated 09-28-93, received 10-06-93, has been examined in conjunction with records filed in this office. We have determined that all of the requirements of this Division have been fulfilled relative to plugging and abandonment of the well, removal of well equipment and junk, and the filing of well records.

svl

William F. Guerard, Jr
State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

cc: Conservation Committee
Update

Modified OG159 (4/94)

OPERATOR Cotton
LSE & NO Nk+F 77
MAP 253

	(1)	(2)	( )	( )	( )	( )
INTENTION	Drill & Supp	Supp. to drill C	after casing	ABANDON		
NOTICE DATED	10-10-79	1-21-80	9-11-81	5-10-93		
P-REPORT NUMBER	279-317	280-24	281-371	293-158		
CHECKED BY/DATE		4/14/80				
MAP LETTER DATED	→			12/25/93		
SYMBOL	→			80-12002		

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE	10-12-79		1-23-80				5-13-93					
HISTORY	→	→	2-20-81				10-6-93					
SUMMARY	→	→	2-20-81									
DISFL IES/ELECTRIC LOG			2-20-81									
DIRECTIONAL SURV			2-20-81									
CORE/SWS DESCRIP			2-20-81									
OTHER												
RECORDS COMPLETE	→		Done 4/14/80				FMN 2/28/94					

ENGINEERING CHECK

T-REPORTS	✓
OPERATOR'S NAME	✓
WELL DESIGNATION	✓
LOC & ELEV	✓
SIGNATURE	✓
SURFACE INSPECTION	2/17/94 FMN
FINAL LETTER OK	

CLERICAL CHECK

POSTED TO 121 _____ 170 MAILED _____ FINAL LETTER MAILED _____

RELEASED BOND _____

REMARKS: _____

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

Operator Exxon Corporation **Field** Castaic Junction **County** Los Angeles
Well Newhall Land & Farming Co. #77, **Sec.** 14, **T** 4 N., **R** 17W, S.B. **B. & M.**
A.P.I. No. 037-22047 **Name** Donna R. Devience (Person submitting report) **Title** Sr. Geological Asst (President, Secretary or Agent)
Date September 28, 19 93.

Signature Donna R. Devience

Environmental & Regulatory Affairs P.O. Box 1600 Midland, Tx. 79702 (915) 688-7882
(Address) (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

(See Attachment)

DIVISION OF OIL AND GAS
RECEIVED
OCT 6 1993
VENTURA, CALIFORNIA

OG103 (6/91/GSR1/5M)

NEWHALL LAND & FARMING CO - 0077 Lease# 061590 Job# 60008763
Field Supt R. O. Storey CMP# 4037220470003 AFE# 00039513
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI

--- 09/14/93 Daily
Attend safety mtg. Open well, Tag fresh water plug @ 403 ft. Pulled and layed down tbg. Ran tbg to 125 ft. Attempt to circulate down 7 in and up 9-5/8in and 13-3/8 in. Unable to get good enough circulating rate for total anulus top plug. Mix and pump 25 sx class G cement with 2% CACL2. Got DOG approval, Peter R. Wygle, on tag of plug @ 403 ft and cmt in 7in from 130 feet to surface.
Note: DOG approved cementing down in tbg between csg strings after well head cut off

--- 09/13/93 Daily
Attend safety mtg. Open well. Pull and lay down all tbg. Filled tbg displacement with 9.8 mud. Rig up MMI wireline. Shot 80 holes from 488 feet to 508 feet. Rig out wireline. Rig up Halliburton. Ran 2-7/8in tbg tail to 514 ft. Tested lines. Mix & pump balanced plug between 7 in and 9-5/8in anules using class G cement with 2% CACL2 as per program. Calculated top of plug 403ft. Rig out Halliburton. Pull tbg. Rig up shooters. Shot 8 holes between all 3 string from 121-123 ft. Rig out shooters. Secure well. eot.

--- 09/10/93 Daily
Drove to job, attend safety mtg. Open well, ran tbg. Tag top of cement at 10423 ft. Performed csg test @ 500 psi. Changed well over ot 9.8 lb mud, pumped 388 bbls. Pulled and layed down 175 jts. Secure well, eot..
* Steve Mulqueen, Div of Oil & Gas, witnessed and approved:
Csg test to 500 psi.
Tag cement plug at 10,423 feet.
388 bbls mud, 9.8 change over.

--- 09/09/93 Daily
Attend safety mtg. Open well, run tbg, tag TOC @ 10900 ft. Rig up Halliburton. Test lines. Mix & pump 68 sx blended cement with 40% SSA-1 + .5% HR7 and .75% CFR-3. Displaced with 60 bbls water. Pulled 5 stds above calculated top of cement at 10400 ft. Reversed around twice. Pulled 5 more stands. Rig out Halliburton. Secure well, rig up to lay down tbg in am, shut down.

--- 09/08/93 Daily
Drove to job, attend safety mtg. Open well (25 psi, csg & tbg). Ran tbg tag fill at 11570. Notified DOG. Got approval to cement with tbg hung @ 11500. Rig up Halliburton. Test lines. Mix & pump 80 sx cement, blended with 40% SSA-1, .5% HR7, and .75% CFR-3, displaced with 63.6 bbls water. Max psi 3500. Pulled 5 stands above calculated TOC at 10900 feet. Reversed around twice. Pull 5 more stds. Secure well, rig out cementers. shut down until am.

--- 09/07/93 Daily
Drove to job, attend safety mtg. Open well, 25 psi on csg & tbg. Pulled and measured all tbg. Measure and pick up 1.9 string 702 ft. Ran tbg until eot. Secure well, shut down.

MORNING REPORT

NEWHALL LAND & FARMING CO - 0077 Lease# 061590 Job# 60008763
Field Supt R. O. Storey CMP# 4037220470003 AFE# 00039513
PLUG AND ABANDON

Expected Buildup oil/gas /
Estimated PI

--- 09/02/93 Daily
Drove to job. Attend safety mtg. Open well (0 psi csg & tbg). Remove tree, install and test class III BOP, Rig up working floor. Spot lay down trailers. PUlled ot of seal assembly. Rig up slickline. Tested lubricator to 3000 psi. RIH with slickline, latch onto plug @ 325 ft. Could not get loose, due to bottom hole pressure. Rig up pump to lubricator, pressured to 500 psi, got loose. Pulled tbg plug. Rig out slickline & circulated, bottoms up, with lease water. Changed completely over. Secure well. eot

--- 09/01/93 Daily
Drove to job. Attend safety mtg. Open well, 50 psi csg. Bleed to 0 in 2 min. 2150 psi on tbg. Rig up slick line. Test lubricator with 2300 psi on tbg with pump. RIH to 5260 ft with slickline. Hit heavy fluid, could go no further. Rig out slickline. Bleed well to 0 psi into blow down tank. Loaded tbg backside with lease water. Set DD plug at 325 ft Secure well. EOT

--- 08/31/93 Daily
Attend safety mtg. Move equipment from well # 8 to well # 77. Rig up guy mast, spot & rig up pump & manifold. Open well to manifold. Tbg side 2000# psi. Pumped 66 bbls lease water down tbg. Pressure still 2000# psi. Closed tbg in. Bled csg from 100 psi to 0 psi in 10 min. Close well in, eot.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

No. T293-314

DIVISION OF OIL, GAS, AND
GEOTHERMAL RESOURCES

Report on Operations

EXXON Corporation
Attn: Env. & Req. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
December 21, 1993

Your operations at well "Newhall Land & Farming Co." 77, API No. 037-22047, Sec. 14, T. 4N, R. 17W, S.B. B.&M. Castaic Junction Field, in Los Angeles County, were witnessed on 9-14-93. Pete Wygle, representative of the supervisor, was present from 1100 to 1200. There were also present Dan Mullins

Present condition of well: 20" ld 40'; 13 3/8" cem 503'; 9 5/8" cem 4015'; 7" cem 11,895', perf & sqz 121'-123', 488'-508', & 10,550;, perf @ ints 10,630'-10,710' (sqz off), perf @ ints 11,272'-11,490'. TD 12,000'. Plugged w/cem 11,500'-10,423', 514'-403', & 130'-5'.

The operations were performed for the purpose of abandonment.

DECISION:

The plugging operations as witnessed and reported are approved.

scv

William F. Guerard, Jr.
State Oil and Gas Supervisor

By

Patrick J. Kinnear
Deputy Supervisor

OG109 (Modified 1993)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS
AND GEOTHERMAL RESOURCES

No. P293-158
Field Code 126
Area Code 00
New Pool Code --
Old Pool Code 20

PERMIT TO CONDUCT WELL OPERATIONS

EXXON Corporation
Attn: Env. & Reg. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
May 28, 1993

Your proposal to abandon well "Newhall Land & Farming Co." 77, A.P.I. No. 037-22047, Section 14, T. 4 N, R. 17W, S.B. B.&M., Castaic Junction field, --- area, 21 Del Valle pool, Los Angeles County, dated 5-10-93, received 5-13-93, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOG Class II 2M requirements shall be installed and maintained in operating condition at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. A diligent effort shall be made to clean out the well to at least 11,486'.
4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of 72 lbs./cu. ft. and a minimum gel-shear strength (10 min.) of 25 lbs./100 sq. ft.
5. This office shall be consulted before deviating from the proposed abandonment program.

Continued on Page 2

Blanket Bond
PK:SF:nr

Engineer Steve Fields

Phone (805) 654-4761

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.
OG111

6. THIS DIVISION SHALL BE NOTIFIED:
   a. To witness the location and hardness of the cement plug at 10,450'.
   b. To witness the mudding of the well.
   c. To witness the location and hardness of the cement plug at 403'.
   d. To witness the placing of cement inside the 7" casing and all annuli.
   e. To inspect and approve the cleanup of the well-site before approval of abandonment will be issued.

STATE OF CALIFORNIA-RESOURCES AGENCY

GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS
SOUTH OJAI STREET, P. O. BOX 67
SANTA PAULA, CALIFORNIA 93060
(805) 525-2105

May 21, 1984

Mr. L. M. Smedley, Agent
Exxon Corporation
P.O. Box DO
Ventura, CA 93002

Re: "NEWHALL LAND & FARMING CO."77
CASTAIC JUNCTION FIELD

Records on file with this office indicate that the above mentioned well has been suspended since 10-11-80 . Please respond by 6-29-84 , in writting any reasons why the well should not be immediately ordered abandoned pursuant to Section 3237 of the Public Resources Code.

Mike Kratovil

MIKE KRATOVIL
Division Engineer

cc: Newhall Land & Farming Co.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

REPORT OF CORRECTION OR CANCELLATION

Santa Paula, California

Oct. 18, 1983

Mr. L. M. Smedley, Agent
Exxon Corporation
P.O. Box DO
Ventura, CA 93002

In accordance with Sec. 3203, Div. 3, of the PRC requiring proposed operations commence within one year

the following change pertaining to your well No. "Newhall Land & Farming Co." 77, Sec. 14, T. 4N, R. 17W, SB B. & M., Castaic Junction field, Los Angeles County, District No. 2, is being made in our records:

☐ The corrected location is

☐ The corrected elevation is

☐ Report No. , dated , has been corrected as follows:

☒ Your notice to alter casing (Drill, abandon, etc.) dated Sept. 11, 1981, and our report No. P281-336, issued in answer thereto, are hereby cancelled inasmuch as the work will not be done. If you have a drilling bond on file covering this notice it will be returned. No request for such return is necessary.

☐ Other:

MAP	MAP BOOK	CARDS	BOND	FORMS	
				~~414~~	121
				EDP	✓
				N/A	

MS/b

State Oil and Gas Supervisor

For By Michael Stettner
Murray W. Dosch, Deputy Supervisor

OCD165 (8-75 CSPI-3M)

FORM OG111 (11/80/DWRR/5M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

No. P 281-336

126 (field code)
00 (area code)
20 (new pool code)
30 (old pool code)

REPORT ON PROPOSED OPERATIONS

E. C. Hutchinson, Agent
Exxon Corporation
P.O. Box DO
Ventura, CA 93002

Santa Paula, California
Sept. 29, 1981

Your _____ proposal to alter casing well "Newhall Land & Farming Co." 77, A.P.I. No. 037-22047, Section 14, T. 4N, R. 17W, SB B. & M., Castaic Junction field, any area, 21 Del Valle pool, Los Angeles County, dated 9/11/81, received 9/15/81 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Hole fluid of sufficient quality and quantity shall be maintained in the hole to control any subsurface condition, and a reserve supply shall be on hand for emergencies.
2. Unlined sumps, if they contain harmful waters, shall not be located over fresh water bearing aquifers.
3. Any sump used during these operations shall be thoroughly cleaned and filled with earth as soon as operations are completed.
4. Blowout prevention equipment of at least DOG Class II 3M, with a hydraulic actuating system, shall be installed and maintained in operating condition at all times.

Blanket Bond
MD:b

M. G. MEFFERD, State Oil and Gas Supervisor

By John L. Hardoin, Deputy Supervisor

A copy of this report and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

RECEIVED
SEP 15 1981
DIVISION OF OIL & GAS
BAKERSFIELD

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

This notice and indemnity or cash bond shall be filed and approval given, before rework begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

DIVISION OF OIL AND GAS
SEP 21 1981
SANTA PAULA, CALIFORNIA

FOR DIVISION USE ONLY		
BOND	OGD114	OGD121
BB	✓	✓

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well No. "Newhall Land & Farming Co; "77, API No. 037-22047, Sec. 14, T. 4N, R. 17W, S.B. B. & M., Castaic Junction Field, Los Angeles County.

The present condition of the well is as follows:

1. Total depth. 12,000'
   Casing shoe @ 11,895'. PBTD @ 11,816'.
2. Complete casing record, including plugs and perforations:
   See Attached.

3. Present producing zone name 21 DelValle Zone in which well is to be recompleted Same
4. Present zone pressure 3850 psi @ 10400 s.s New zone pressure same
5. Last produced 31 Jul 80 (Date) ---- (Oil, B/D) ----- (Water, B/D) 115 (Gas, Mcf/D)

   or

6. Last injected N/A (Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

See Attached

Cancelled

Dry Mountain

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address P.O. Box D.O. (Street)
Ventura, (City) CA (State) 93002 (Zip)
Telephone Number (805) 654-6800

Exxon Company, U.S.A. (Name of Operator)
By J.E. Garrison (Name) 9-11-81 (Date)
Type of Organization Corporation (Corporation, Partnership, Individual, etc.)

(1-78-GSRI-15M)

Attchment I
"Newhall Land & Farming Co." 77
API NO. 037-22047

2. Complete casing record, including plugs and perforations:

1. 13-3/8", 54.5# K-55 Buttress to 503'. Cemented to surface.

2. 9-5/8", 40# K-55 LT&C to 4015' cemented w/715 sacks in 12¼" open hole. Calculated TOC @ 230'±.

3. 7", 29# & 32# K-55 LT&C to 11895' cemented w/984 sacks in 8½" open hole. Calculated TOC @ 9500'±. PBTD @ 11816'. Selectively perfed 10,630' - 10,710 @ 2 spf (sqzd). Reperfed selectively 11,272' - 11,490' @ 2 spf.

4. 2-7/8", 6.5 tubing to 11,149'. Packer @ 11,149'.

The proposed work is as follows:

1. Run baseline temperature survey.

2. Install and test Class III 5,000 psi BOP for DOG.

3. Kill well and POH with tubing and packer.

4. Resqueeze cement perforations at 10,630' - 10,710'.

5. Drill out cement.

6. Set permanent packer @ 11,200'± and RIH with 3½" frac string. Test string to 15,000 psi.

7. Pump 85,000 gallons fracturing fluid with 135,000 lbs. of ceramic proppant at 11,000 psi±.

8. Run temperature logs to determine fracture height and proppant placement.

9. Drill out permanent packer.

10. RIH with production tubing and packer to 11,200'±.

11. Unload well with coiled tubing and nitrogen.

12. Put well on production. Run pressure buildup test.

DIVISION OF OIL AND GAS
RECEIVED
FEB 20 1981
SANTA PAULA, CALIFORNIA

ORIGINAL

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

API No. 037-22047

WELL SUMMARY REPORT

Operator: Exxon Corporation	Well: Newhall Land & Farming #77
Field: Castaic Junction	County: Los Angeles; Sec. 14; T. 4N; R. 17N; B.&M. SB
Location (Give surface location from property or section corner, street center line and/or California coordinates): 1228' North along section line and 5977' East at right angles from Corner 11, RSF of Section 14.	Elevation of ground above sea level: 964'
Commenced drilling (date): 1-8-80	Total depth (1st hole): 12,000'; (2nd): ; (3rd):
Completed drilling (date): 3-4-80	Present effective depth: 11,816'
Commenced producing (date): 5-6-80	Junk:
[X] Flowing [ ] Pumping [ ] Gas lift	
Name of producing zone(s): 21 Zone	
Depth measurements taken from top of: [ ] Derrick Floor [ ] Rotary Table [X] Kelly Bushing	Which is 15 feet above ground

GEOLOGICAL MARKERS	DEPTH
15 Zone	10,037'
21 Zone	11,270'

Formation and age at total depth: 21 Zone - Miocene

	Clean Oil (bbl per day)	Gravity Clean Oil	Percent Water including emulsion	Gas (Mcf per day)	Tubing Pressure	Casing Pressure
Initial Production	0			125	325	
Production After 30 days	6 bbls of fluid			282	370	

CASING RECORD (Present Hole)

Size of Casing (API)	Top of Casing	Depth of Shoe	Weight of Casing	Grade and Type of Casing	New or Second Hand	Size of Hole Drilled	Number of Sacks or Cubic Feet of Cement	Depth of Cementin (if through perforations)
20"	Surface	40'		Conductor	New	Driven		
13 3/8"	Surface	503'	54.5#	K-55 BT	New	17 1/2"	630 sx	
9 5/8"	Surface	4015'	40.0#	K-55 LT&C	New	12 1/4"	1200 sx	
7"	Surface	11,895'	29#, 32#	N-80 LT&C	New	8 1/2"	984 sx	

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

Perfed: 2 SPF: 11,486'-11,466'; 11466'-11,450'; 11,441'-11,424'; 11420'-11,400'; 11,394'-11,374'; 11,374'-11,362'; 11,352'-11,332'; 11,332'-11,313'; 11,308'-11,299'; 11,292'-11,284'; 10,710'-10,680'; 10,655'-10,630'

Was the well directionally drilled? If yes, show coordinates at total depth
[X] Yes [ ] No 633.66' S and 430.87' W

Electrical log depths: Compensated Density: 11,888'-4015'. Formation Factor: 11,888'-4015'. DISFL: 11,993'-510'. Shale Density: 12,000'-9940'. Dipmeter: 11,883'-4015'. Cement Log: 11,700'-9000'.

Other surveys: Deviation Survey, Direction 1 Survey, Core Analysis.

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Name: D. Daly	Title: Revenue & Regulatory Acctg. Section Head
Address: 1800 Ave. of the Stars	City: Los Angeles, Ca; Zip Code: 90067
Telephone Number: (213) 552-5400	Signature: D. Daly; Date: 2/13/81

SUBMIT IN DUPLICATE

DIVISION OF OIL AND GAS
Cementing/Plugging Memo

Operator EXXON CORPORATION Well No. "N.L.&.F" 77
API No. 037 - 22047 Sec. 14, T. 04N, R. 17W, SB B&M
Field CASTAIC JUNCTION, County LOS ANGELES. On 9-14-93,
Mr./Ms. P Wyale, representative of the supervisor, was present from 1100 to 1200.
There were also present DAN MULLINS

CASING RECORD OF WELL: 20" ld 40': 13-3/8" cem 503': 9-5/8" cem 4015': 7" cem 11,895', perf & sqz 121'-123', 488'-508', & 10,550', perf @ ints 10,630'-10,710' (sqz off), perf @ ints 11,272-11,490'. TD 12,000'. Plugged w/cem 11,500'-10,423', 514'-403', & 130'-5'.

The operations were performed for the purpose of ABANDONMENT

☐ The plugging/~~cementing~~ operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @_____' is approved.

Hole size:_____" fr._____' to_____', _____" to_____' & _____" to_____'

Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			

Casing/~~tubing~~ ~~recovered~~ perf 4 hpf: 7" shot/~~cut~~ at 488-508', 121-123', _____' pulled fr._____';
_____" shot/cut at_____', _____', _____' pulled fr._____'.

Junk (in hole):

Hole fluid (bailed to) at_____'. Witnessed by_____

Mudding	Date	Bbls.	Displaced	Poured	Fill	Engr.
CLAY-GEL 9.8 #/g	9-10-93	388±	TBG @ 10423'	—	SURFACE	S. MULQUEEN

CLEAN OUT @ 11570'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time	Engr.
9/9	148 sx	TBG @ 11500'	—	REPORTED	10,423'	5K#	9/10 0800	S. MULQUEEN
9/13	148 cf	✓ 514	—	✓	403	wt of tbg	9/14 0750	PRW
9/14	30 cf	✓ 130	1200	PRW	5ft	WITNESS	9/14 1100	PRW
9/15	50 cf	Pump to annulus thru 7" tbg hg 397'	—	RPW	5'	✓	9/23 1000	[illegible]

OGD10 (10/90/GSR1/5M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

REPORT OF WELL PLUGGING AND ABANDONMENT

Ventura, California
May 19, 1994

EXXON Corporation
Attn: Env. & Reg. Affairs
P.O. Box 1600
Midland, Texas 79702

Your report of plugging and abandonment of well "Newhall Land & Farming Co." 1, A.P.I. No. 037-16472, Section 23, T. 4N, R. 17W, SB B.&M., Castaic Junction field, Los Angeles County, dated October 15, 1993, received October 22, 1993, has been examined in conjunction with operations witnessed and records filed in this office. We have determined that all of the requirements of this Division have been fulfilled.

tkc
cc: Conservation Committee
Update

WILLIAM F. GUERARD, Jr.
State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear, Deputy Supervisor

OGD159 (6/92)

OPERATOR Exxon Corp.
WELL NO. "Newhall Land & Farming Co." 1
MAP

TENTION	ABANDON	Supp. Add.				
NOTICE DATED	10-29-92	10-15-93				
P-REPORT NUMBER	292-319	293-393				
CHECKED BY/DATE		9M				
MAP LETTER DATED		2-19-94				
SYMBOL						

	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED	REC'D	NEED
NOTICE	11-4-92		10-22-93									
HISTORY			1-21-94									
SUMMARY												
E-LOG												
MUD LOG												
DIPMETER												
DIRECTIONAL												
CORE/SWS												
CBL												

ENGINEERING CHECK

T-REPORTS						
OPERATOR'S NAME		✓				
WELL NO.		✓				
LOC & ELEV		✓				
SIGNATURE		✓				
SURFACE INSP.		✓				
DRILL CARD		✓				

RECORD'S COMPLETE 2-15-94 SAM

FINAL LETTER OK
MAILED
RELEASED BOND

INJECTION BOOK
IDLE WELL LIST
SURFACE INSP. CARD

REMARKS: Sfc insp OK 4-12-92 PBW

TO RELEASE FROM CONFIDENTIAL
ANDONED-REMOVED FROM E.D.P.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND
GEOTHERMAL RESOURCES

No. T294-43

Report on Operations

EXXON Corporation
Attn: Env. & Req. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
February 15, 1994

Your operations at well "Newhall Land & Farming Co." 1, API No. 037-16472, Sec. 23, T. 4N, R. 17W, S.B. B.&M. Castaic Juncion Field, in Los Angeles County, were witnessed on 12-28-93. Steve Mulqueen, representative of the supervisor, was present from 0800 to 1100. There were also present C. Ballard, Operator's Rep.

Present condition of well: 20" cem 70'; 13 3/8" cem 1591'; 7" cem 11,792', perf 11,608' WSO, cp 100' & 1570', perfs 11,636'-11,778'. TD 11,952'. Plugged w/ cem 11,952'-11,783', 11,634'- 10,702', 1617'-1452' & 124'-5'.

The operations were performed for the purpose of abandonment.

DECISION:

The plugging operations as witnessed and reported are approved.

SCV

William F. Guerard, Jr.
State Oil and Gas Supervisor

By Patrick J. Kinnear

Patrick J. Kinnear
Deputy Supervisor

OG109 (Modified 1993)

T

DIVISION OF OIL AND GAS
Cementing/Plugging Memo

T294-43

Operator Exxon Corp. Well No. "Newhall Land & Farming Co" 1
API No. 037-16472 Sec. 23, T. 4N, R. 17W, SB B&M
Field Castaic Jct, County LA. On 12-28-93,
Mr./~~Ms.~~ S. MULQUEEN, representative of the supervisor, was present from 0800 to 1100.
There were also present C. Ballard, operator's rep.

Casing record of well: 20" cem 70'; 13 3/8" cem 1591'; 7" cem 11792', perf 11608' WSO, cp 100' & 1570', perfs 11636'-11778'. TD 11952'. Plugged w/ cem 11952'-11783', 11634'-10702', 1617'-1452' & 124'-5'.

The operations were performed for the purpose of abandonment

☒ The plugging/~~cementing~~ operations as witnessed and reported are approved.

☐ The location and hardness of the cement plug @_____' is approved.

Hole size:_____" fr._____' to_____', _____" to_____' & _____" to_____'

Casing				Cemented			Top of Fill		Squeezed Away	Final Press.	Perfs.
Size	Wt.	Top	Bottom	Date	MO-Depth	Volume	Annulus	Casing			
7"				12-27	TBG @ 1617' BRADEN HD.	99 sx	—	1452'	78 cf		1570'-1590'
7"				12-28	TBG @ 124'	113 cf	5'	5'	—		100'-102'

Casing/tubing recovered: 7" shot/cut at 1570' PERFORATE TO 1590', _____' pulled fr._____';
7" shot/cut at 100 TO 102', _____' pulled fr._____'.

Junk (in hole):

Hole fluid (bailed to) at_____'. Witnessed by

Mudding	Date	Bbls.	Displaced	Poured	Fill	Engr.
10 # mud	12-22-93	345	to 10,702	—	to 1590	PRW

CO 11,686'

Cement Plugs		Placing	Placing Witnessed		Top Witnessed			
Date	Sx./cf	MO & Depth	Time	Engr.	Depth	Wt/Sample	Date & Time	Engr.
12/22	128 cf	tbg 11,634	~	PRW	10,702	6k tbg	12-23 1800	PRW
12/27	99 sx	TBG @ 1617'	—	"	1452	ALL TBG WEIGHT	12/28 0830	S. MULQUEEN
12/28	113 cf	TBG @ 124'	1030	S. MULQUEEN	5'	VISUAL	12/28 1100	"

Pressure tested csg 10,702'-sf. to 750 psi, 10 min.

OGD10 (10/90/GSR1/5M)

DISTRICT 2

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

RECEIVED
JAN 21 1994
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
VENTURA, CALIFORNIA

23-4-17

History of Oil or Gas Well

Operator Exxon Corporation **Field** Castaic Junction **County** Los Angeles
Well Newhall Land & Farming Co. 1, **Sec.** 8, **T.** 4N, **R.** 16W, **S.B. & M.**
A.P.I. No. 037-16472 **Name** Julie H. Mitchell (Person submitting report) **Title** Staff Office Assist. (President, Secretary or Agent)
Date January 14, 19 94.

Signature Julie H. Mitchell

Environmental and Regulatory Affairs, PO Box 1600, Midland, TX 79702 (Address) 915/688-7888 (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

12/09/93 Move in rig up. Guy rig out, rig up tubing racking platform, rig up blow down line.

12/10/93 Rig up hard line, pump hoses to rig pump. Rig up plate steel on tubing platform and weld tubing basket to platform. Make stand from outrigger and weld on well. Hook up pump hoses to line coil tubing and 2-7/8 inch tubing. Pump down line coil tubing (plug). Pump down 2-7/8 inch tubing. Pump 2 barrels (pressure up). Rig up pump hose to 7 inch casing. Casing pressure 950 psi. Bled down 7 inch casing to blow down tank. Fill 7 inch casing with 150 barrels water. Latch on liner coil tubing. Remove packer, pull coil tubing, found cut at master valve. Recover 4 foot piece. Ran in hole with 1-3/4 inch jars on sand line. Tag up @ 13 feet. Pull out of hole, close in well.

12/11/93 Check well, tubing 0 psi, casing 250 psi. Bleed casing, fill well with 5 barrels fresh water. Fill tubing with 1 barrel fresh water. Well dead. Nipple down production tree. Nipple up Class III BOP and BOE, tested okay. Rig up working floor and tubing equipment. Close well in due to bad weather.

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VENTURA, CALIFORNIA

12/13/93 Open well, no pressure. Work stuck tubing. Rotate and work to 110,000#. Tubing parted after 20 minutes @ 110,000 approximately 90 feet down 2-7/8 tubing. Make up line grapple on 1-3/16 overshot. Ran in hole to 29 feet latch on 1 inch coil tubing. Pull up. Wait on coil tubing unit. Pull up on coil tubing. Parted @ 11000#. Fish tubing with comb overshots 4 times. Parted all 4 times - 1 inch to 4 inch. Lay down fishing tool and rod subs. Raise floor and haul in 3500 feet 1-1/4 inch tubing. Close well in.

12/14/93 Open well (no psi). Make up 1-5/16 inch overshot with line grapple. Ran in hole with 6 joints 1-1/4 inch tubing. Pull coil tubing. Parted. Pull out of hole standing back 1-1/4 inch tubing. Pull line tubing out bottom of stand, cutting tubing. Recovered about 240 feet. Make up 5-3/4 X 3-1/16 inch overshot on 2-7/8 inch tubing. Ran in hole to 180 feet. Latch on fish. Rig up for 1-1/4 BOP. Make up overshot with line grapple. Ran in hole to 180 feet. Could not get 2-7/8 inch tubing. Pull out of hole, close in well.

12/15/93 Open well, no pressure. Rig up Dia-Log. Ran in hole with 1-11/16 sinker bars and 2-1/8 chemical cutter to 178 feet. Could not get in fish. Pull out of hole. Ran in hole with 1-3/8 sinker bars, could not get in fish. Pull out of hole. Ran in hole with line sinker bar. Could get in fish. Rig out Dia-Log. Work 2-7/8 tubing, tubing moved 20 feet. Work tubing free - 2 hours @ 10000#. String weight 94000#. Pull out of hole to 5-3/4 inch fishing tool. Lay down tools. Lay down 6 joints 1-1/4 inch in derrick. Fill casing with 1 barrel fresh water. Rig up plastic around working floor. Pull out of hole, wet with 2-7/8 inch and 1 inch tubing. Lay down 60 feet in ct and 2 joints 2-7/8 inch tubing. Close in well.

12/16/93 Open well, no pressure. Continue laying down and cutting line coil tubing while pulling out of hole with 2-7/8 inch N-80 tubing, wet with water. Pull 35+0 stands. Came to mud. Rig up tubing basket and skid to lay down all tubing. Lay down 3 joints in H&H tank. Close in well.

12/17/93 Open well, no pressure. Continue pulling out of hole laying down 2-7/8 N-80 tubing with 1 inch coil tubing inside, wet with mud inside H&H tubing transfer tank. Fill casing with 30 barrels fresh water. Displace for 3937 feet, tubing is 24-1/2 barrel, well took 5 barrels. Lay down 62 joints, haul trailer to pipe yard. Unload tubing on racks.

12/18/93 Open well, no pressure. Continue pulling out of hole laying down 2-7/8 inch tubing with line coil tubing inside wet with mud. Lay down 80 joints. Fill well with 20 barrels tubing displacement 16 barrels. Close in well.

12/19/93 Open well, no pressure. Continue pulling out of hole with 2-7/8 inch N-80 tubing with line coil tubing inside and wet with mud. Stand back 26+0 laying down line out bottom. Came to heavy mud, start laying down singles in tubing bagkit on trailer. Lay down 25 joints. Fill well with 20 barrels displacement of tubing is 17 barrels. Close in well.

12/20/93 Open well, no pressure. Continue pulling out of hole with 2-7/8 inch N-80 tubing with line coil tubing inside and wet with mud. Lay down 53 joints and stand back 40+0. Pipe very tight. Lay down packer and perforated stub. Ran in hole with 10+0 stand kill string. Close in well.

12/21/93 Open well, no pressure. Lower working floor. Clean floor and working area. Measure in hole with 67 stands, 134 joints out of derrick. Circulate out mud every 40 joints. Due to heavy mud in tubing, lay down 18 joints bad tubing. Measure and pick up 382 joints tubing (work string). With tubing tail @ 10800 feet, reverse circulate well. Ran in hole, tag @ 11686 feet. Pull to 11364 - 300. Break circulation @ 2700# @ 1.3 barrels per minute. Ran in hole back to 11674. Rig up Halliburton. Circulate well @ 2500# @ 1.5 barrels per minute. Formation taking water. Close well in.

12/22/93 Continue pumping well with Halliburton. Circulate heavy mud out of casing. Surface equipment plugging up with mud. Pumped 1000 barrels fresh water. Recover 375 barrels mud and water due to weak zone. Well cleaned up. Mix and pump 128 cubic feet, 91 sacks class G cement @ 1400# maximum. Displace with 61 barrels fresh water. Pull 40 joints to 10434 feet. Cement from 11674 to 10674 estimated. Reverse out 40 minutes. Wait on cement for 5 hours. Ran in hole tag cement @ 10702 feet, okay. Test 7 inch casing from 10702 t surface @ 500# for 5 minutes, okay. Rig to pump 9.7 ppg P&H mud. Circulate 400 barrels mud. Pull out of hole with 11+0 stands. Close in well. Steve Field, Div of Oil and Gas, gave verbal approval to pump 1000# cement plug from 11674 to 10674. Peter R. Wygle, Div of Oil and Gas, witnessed and approved tag of plug @ 10702 feet, pressure test casing and mud operations from 10702 to 1590 feet.

12/23/93 Open well, no pressure. Continue laying down 2-7/8 inch N-80 workstring. Lay down 170 joints. Close in well.

12/27/93 Open well, no pressure. Continue laying down 2-7/8 inch N-80 work string. Lay down 40 joints. Had to lay down 134 joints 2-7/8 inch N-80 junk pipe. Had to lay down 40 joints in doubles because of tight pipe. Fill hole with 30 barrels 9.7 ppg P&A mud. Rig up kill line to 10-3/4 inch casing. Bleed casing 10-3/4 inch. Rig up MMI, ran in hole with 20 feet perf gun, 4 shots per foot. Shoot hole from 1570 to 1590 feet. Pull out of hole circulate 60 barrels mud down 7 inch and up 10-3/4 casing. Ran in hole with 54 joints 2-7/8 inch tubing. With tubing tail @ 1617 feet, rig up Halliburton. Test lines. Mix and pump 114 cubic feet, 99 sacks neat cement down 2-7/8 inch tubing and up 10-3/4 casing. Displace with 8 barrels lease water. Open 7 inch casing to gravitate in cement. Pull out of hole with 2-7/8 tubing. Rig up MMI, ran in hole with 2 inch perf gun 4 shots per foot to 100 feet. Shoot from 100 to 102 feet, pull out of hole. Close in well.

12/28/93 Open well. Ran in hole, tag cement @ 1452 feet. Pull out of hole laying down 50 joints 2-7/8 tubing. Rig up Halliburton with tubing tail @ 124 feet. Mix and pump 109 cubic feet, 95 sacks, neat cement down 2-7/8, up 7 & 10-3/4 inch casing to surface. Pull out of hole laying down 4 joints. Clean up BOPE and working floor and tubing equipment. Nipple down BOP, load out BOP. Rig out pump and miscellaneous equipment. Load out BOE. Load out 100 joints junk tubing. Cut 30 stands of tubing in half. Clean out Baker tank and mud pit. Stephen Mulqueen, Div of Oil and Gas, witnessed tag of bfw plug @ 1452 feet and approved placement of surface plug from 124 to surface in 7 inch and 10-3/4 inch annulus.

12/29/93 Rig down move out. Load out junk 2-7/8 tubing. Haul rig and tubing to upper lease. Off load tubing, return to location, load up flow lines and miscellaneous equipment. Load up rig mats.

DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND
GEOTHERMAL RESOURCES

No. P293-393

PERMIT TO CONDUCT WELL OPERATIONS

126
(field code)
00
(area code)
--
(new pool code
00
(old pool code)

EXXON Corporation
Attn: Env. & Req. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
October 25, 1993

Your supplementary proposal to abandon well "Newhall Land & Farming Co." 1, A.P.I. No. 037-16472, Section 23, T. 4N, R. 17W, S.B. B.&M., Castaic Junction field, ---- area, Main pool, Los Angeles County, dated 10/15/93, received 10/22/93, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Requirements specified in permit No. P292-319 dated November, 1993 shall apply.

Fields/Kennard
c/o 10 11,674
OK

Blanket Bond
SAF:sf

Engineer Steven A. Fields

Phone (805) 654-4761

William F. Guerard, Jr.
State Oil and Gas Supervisor

By

Patrick J. Kinnear
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

OG111 (Modified 1993)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

SUPPLEMENTARY NOTICE

FOR DIVISION USE ONLY			
BOND	FORMS		EDP WELL FILE
	OGD114	OGD121	
BB	—	✓	

A notice to the Division of Oil and Gas dated October 29, 19 92, stating the intention to abandon (Drill, rework, abandon) well "Newhall Land & Farming Co." 1 (Well designation), API No. 037-16472,

Sec. 23, T. 4N, R. 17W, S.B. B.& M., Castaic Junction Field,

Kern County, should be amended because of changed conditions.

1. The complete casing record of the well (present hole), including plugs and perforations, is as follows:

2. The total depth is: _____ feet. The effective depth is: _____ feet.

3. Present completion zone (s): _____ (Name). Anticipated completion zone (s): _____ (Name).

4. Present zone pressure: _____ psi. Anticipated/existing new zone pressure: _____ psi.

We now propose: *(A complete program is preferred and may be attached.)*

Please extend P292-319 dated November 6, 1992 for one year.

RECEIVED
OCT 20 1993
DIVISION OF OIL & GAS
BAKERSFIELD

DIVISION OF OIL AND GAS
RECEIVED
OCT 2 2 1993
VENTURA, CALIFORNIA

Note: If the well is to be redrilled, show proposed bottom-hole coordinates and estimated true vertical depth.
The Division must be notified if changes to this plan become necessary.

Name of Operator	Telephone Number	
Exxon Corporation	915/688-7888	
Address	**City**	**Zip Code**
P.O. Box 1600 ML 14	Midland, TX	79702
Name of Person Filing Notice	**Signature**	**Date**
Julie H. Mitchell	Julie H. Mitchell	10/15/93

File In Duplicate

OG123 (3/90/GSR1/5M)

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

No. P292-319
Field Code 126
Area Code 00
New Pool Code —
Old Pool Code 25

PERMIT TO CONDUCT WELL OPERATIONS

EXXON Corporation
Attn: Env. & Reg. Affairs
P.O. Box 1600
Midland, Texas 79702

Ventura, California
November 6, 1992

Your proposal to abandon well "Newhall Land & Farming Co." 1, A.P.I. No. 037-16472, Section 23, T. 4 N, R. 17W, S.B. B.&M., Castaic Junction field, --- area, Main pool, Los Angeles County, dated 10-29-92, received 11-04-92, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED THAT:

1. Blowout prevention equipment conforming to DOG Class II 2M requirements shall be installed and maintained in operating condition at all times.
2. Hole fluid of a quality and in sufficient quantity is used to control all subsurface conditions in order to prevent blowouts.
3. A diligent effort shall be made to clean out the well to at least 11,778'.
4. All portions of the well not plugged with cement are filled with inert mud fluid having a minimum density of 72 lbs./cu. ft. and a minimum gel-shear strength (10 min.) of 25 lbs./100 sq. ft.
5. The cement plug proposed to be placed from 11,783' to 11,783' extends from 11,783' to at least 11,508'
6. The well shall be plugged with cement from 324' to 224' to cover a high pressure water zone encountered during drilling.

Blanket Bond
SF:nr

Engineer Steve Fields

Phone (805) 654-4761

WILLIAM F. GUERARD, Jr.
Acting State Oil and Gas Supervisor

By Patrick J. Kinnear
Patrick J. Kinnear
Deputy Supervisor

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.
OG111

7. This office shall be consulted before deviating from the proposed abandonment program.
8. THIS DIVISION SHALL BE NOTIFIED:
   a. To witness the location and hardness of the cement plug at 11,508' and 1470'.
   b. To witness the mudding of the well.
   c. To witness the placing of the surface plug or to verify its location.
   d. To inspect and approve the cleanup of the well site before approval of abandonment will be issued.

DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

NOTICE OF INTENTION TO ABANDON WELL

This notice must be given at least five days before work is to begin.

DIVISION OF OIL AND GAS
RECEIVED
NOV 0 4 1992
VENTURA, CALIFORNIA

FOR DIVISION USE ONLY			
CARDS	BOND	FORMS	
		OGD114	OGD121
	BB	11-4-92	✓

DIVISION OF OIL AND GAS

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon well No. Newhall Land & Farming Co 1 (Well designation), API No. 037-16472

Sec. 8, T. 4N, R. 16W, S.B. B. & M., Castaic Junction Field, Los Angeles County.

commencing work on 10/26, 19 92.

The present condition of the well is:

1. Total depth 11952'

2. Complete casing record, including plugs and perforations
   20" 48# conductor 0'-70'
   13 3/8" 54.5# csg 0'-1591'
   7" 23/26/29/32# csg 0'-11952'
   perfs: 11636'-11744' (4 SPF)
   11670'-11778' (8 SPF)

   Botttom Hole Plug 11,952'-11,783'

3. Last produced 1986 (Date) 1 (Oil, B/D) 60 (Water, B/D) 5 (Gas, Mcf/D)

OR

4. Last injected _____ (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure)

Additional Data for dry hole (show depths)

5. Uppermost productive zone:

   Top of 10 Sand: 10,630'

6. Stratigraphic markers:

7. Formation and age at total depth:

8. Base of fresh water sands: 1580'

The proposed work is as follows:

1. MIRU. Install and test a DOG class III 5M BOPE.
2. Clean out to the bottom of the 7" casing 11,783'.
3. Place a Class "G" cement plug from 11783'-11536'. DOG to witness.
4. Shoot 20'of 4 SPF @ 1590-1570', place class "G" cement plug from 1590' to 1470' to cover fresh water base. DOG to witness.
5. Shoot 4 holes @ 100'. Circulate cement plug from 100' to surface getting returns in casing/conductor annulus.
6. Cut off casing @ 5' and weld plate with well identifier.
8. Clean location. DOG will inspect.

It is understood that if changes in this plan become necessary, we are to notify you immediately

Address 25 Desta Drive P.O. Box 1600 (Street)
Midland, TX 79702 (City) (State) (Zip)
Telephone Number 915-688-7888

Exxon Corp. (Name of Operator)
By Judy M. Bagwell (Name-Printed)
Judy Bagwell (Name-Signature) 10-29-92 (Date)
Type of Organization Corporation

Forms\Abandon.DOG

SUBMIT IN DUPLICATE

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS
RECEIVED
NOV - 1 1978
SANTA PAULA, CALIFORNIA

History of Oil or Gas Well

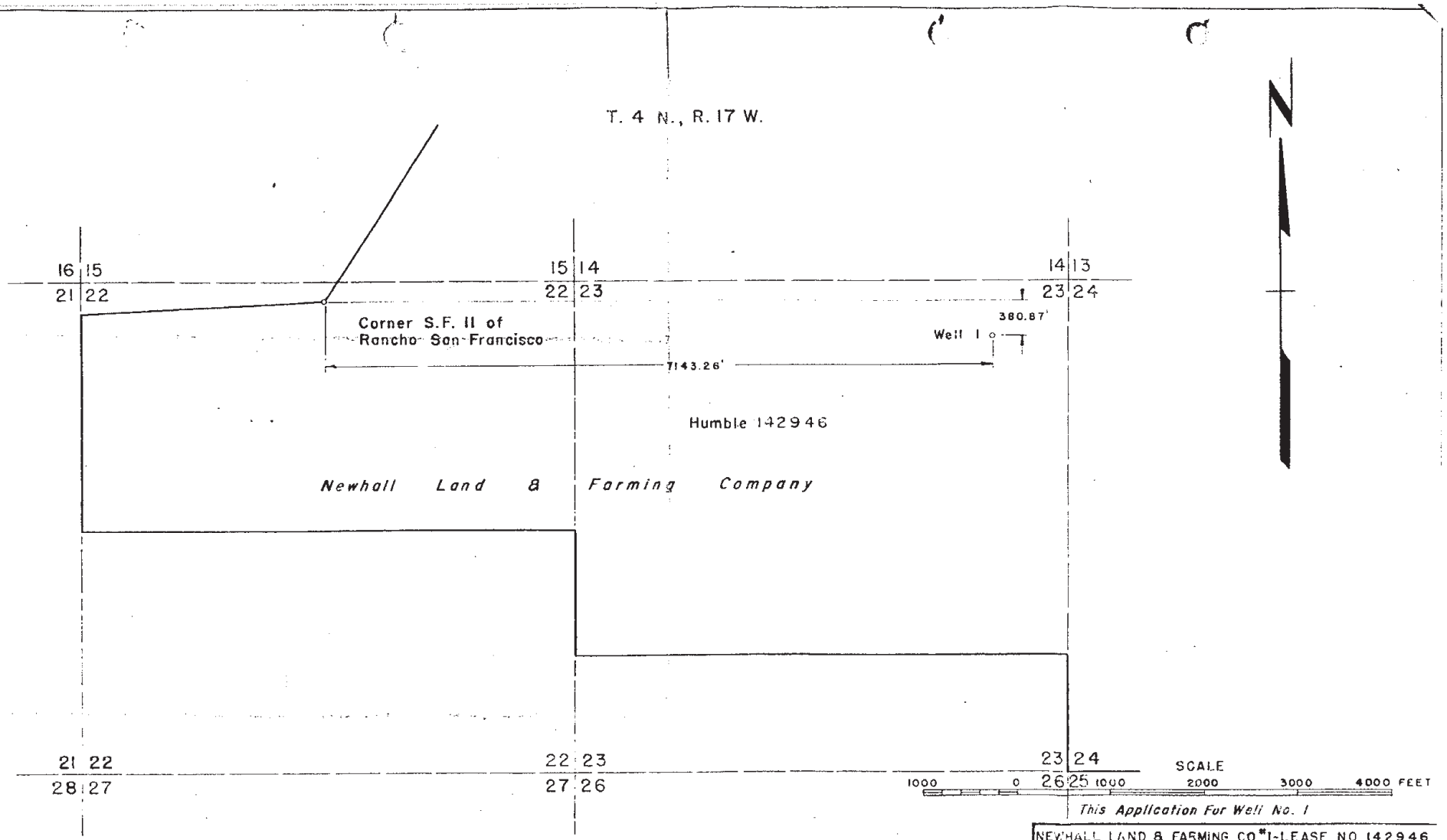
Operator EXXON CORPORATION Field or County Castaic Junction
Well "Newhall Land & Farming Co." 1, Sec. 23, T 4N, R 17W, S.BB. & M.
A.P.I. No. 037-16472 Name E. L. McBee (Person submitting report) Title Operations Supt. (President, Secretary or Agent)
Date October 20, 19 78

Signature M. Ferrell for E.L.M. 10/27

2755 Orange Avenue, Long Beach, CA 90807 (Address) (213) 426-8844 (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date	
9-1-76	MIRU. Installed lubricator and perforated with 2 spf from 11,744' to 11,636' using 2-1/8" link jet gun. Tagged bottom at 11,764' prior to perforating. Hit fluid at 6300' on first perf run and fluid at 3500' on last run. Had no pressure on tbg.
9-2-76	Well shut-in for 12 hrs with 250# tbg pressure. Opened well to tank. Flowed 1 Bbl of oil to tank in 30 min then died. Shut-in to pressure back up.
-76	Shut in for 20 hrs. Tbg pressure 450#. Opened to tank and bled to zero in 15 min (no fluid).
9-4-76	Pressured up with gas lift gas to 1,425#. Shut in for 20 hrs. Opened well to tank and bled to zero in 22 min (no fluid). Shut-in pressure 550#.
9-5-76	Well shut-in.



NEWHALL LAND & FARMING CO. #1-LEASE NO. 142946
LOS ANGELES COUNTY, CALIFORNIA
CALIFORNIA DISTRICT

HUMBLE OIL & REFINING COMPANY
CIVIL ENGINEERING DIVISION
GULF COAST DIVISION

DRAWN Bomb	SCALE 1" = 1000'	FILE NO.
CHECKED	DATE 7-7-49	STB-1445
APPR.	REVISED	

FORM 159 (9-49)

(17)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

REPORT OF WELL ABANDONMENT

Los Angeles California

April 9 1956

Mr. J E Cox Agent
Humble Oil & Refining Co
613 San Fernando Road
Newhall California

Dear Sir

Your report of abandonment of Well No. "Newhall Land & Farming Co." 54, Sec. 23, T. 4 N, R. 17 W, S B B. & M., Castaic Junction field, Los Angeles County, dated April 2, 1956, has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this Division, which are based on all information filed with it, have been fulfilled.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
18A N.W. cor of Sec. 23	ok		[illegible]		[illegible]

Orig - Company, L.A.
cc - Mr E H Musser
Company, Newhall (2)
Newhall Land & Farming Co
Conservation Committee
Mr L A Dutton
Fire Prevention Bureau
es

E. H. MUSSER
State Oil and Gas Supervisor

By R. W. Walling
Deputy Supervisor

17401 8-55 11,200 SPC

WORK PERFORMED:

Drill_____ Redrill_____ Deepen_____

Plug_____ Alter casing_____

Water flood_____ Water disposal_____

Abandon_____

Other_____

STATUS: (Date)

Producing_____

Recomp. prod._____

Water flood_____

Water disposal_____

Abandoned_____

Other_____

MAP AND BOOK_____

RECORDS FILED & DATE: Clerk_____

Summary (dup.)_____

Log & Core (dup.)_____

History (dup.)_____

E-log_____

Radio log_____

✓D. Survey Surf-12077 7/5/4 OK

Other_____

(Check records for signature and correct name of operator or well, S.T.R. and field.)

Location_____ Notice states_____

Elevation_____ Notice states_____

Production Reports_____

(If production reports not received, make notation and inform Sr. Steno. when rec'd.)

If stimulation or disposal well:
Form 121_____ Folder_____

RECORDS & REQUIREMENTS CHECKED: Eng.____

Surface inspection_____

Data needed_____

Request records_____

Correct records_____
(Specify)

CARDS_____

BOND: Ok 1.7

Hold___ Reason_____

Release____ Date elig._____

End premium year____
Release requested___ (Check one)
Bond superseded____
Well abandoned_____

FINAL LETTER_____
and
FILE CLEARED_____

Clerk:

F 170____

F 165____
165A___

F 150b

F 159____

F 121____

Form 100.

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

DIVISION OF OIL AND GAS
APR 9 1956
LOS ANGELES, CALIFORNIA

Operator Humble Oil & Refining Company

Well No. "Newhall Land & Farming Co." #54

Location 969' South and 3727' East from Corner 11, Rancho San Francisco, Los Angeles County.

Date April 9, 1956

Geologist Roy M. Smith

Field Castaic Junction Proj.

Sec. 23, T. 4-N, R. 17-W, S.B. B.&M.
Elevation above sea level 929 feet.
All depth measurements taken from top of Rotary Drive Bushing, which is 12.70 feet above ground.

Signed S. D. McCarty

Title District Superintendent (Agent)

Commenced drilling 12-19-55 Completed drilling 2-29-56 Drilling tools-Rotary

Total depth 12077 Plugged depth --

Junk None

Commenced producing - Dry Hole

GEOLOGICAL MARKERS	DEPTH
Top of Miocene (E. Log)	7600'

Initial Production - None

CASING RECORD

Size of Casing	Depth of Shoe	Top Csg	Weight	New Used	Seamless Lapweld	Grade	Size Hole	Sacks Cemt.	Depth Perfs.
10-3/4	831'	17	40.5	New	SS	J-55	16"	500	-

PERFORATIONS

None

Electrical Log Depths 10648, 10941, 11960, 12062, 12077'.

Form 103.

DIVISION OF OIL AND GAS

HISTORY OF OIL OR GAS WELL

Operator Humble Oil & Refining Company

Field Castaic Junction

Proj.

Well No. Newhall Land & Farming Co. #54

Sec. 23, T. 4-N, R. 17-W, S.B. B.&M.

Signed S. D. McCarty

Date April 2, 1956

Title District Superintendent (Agent)

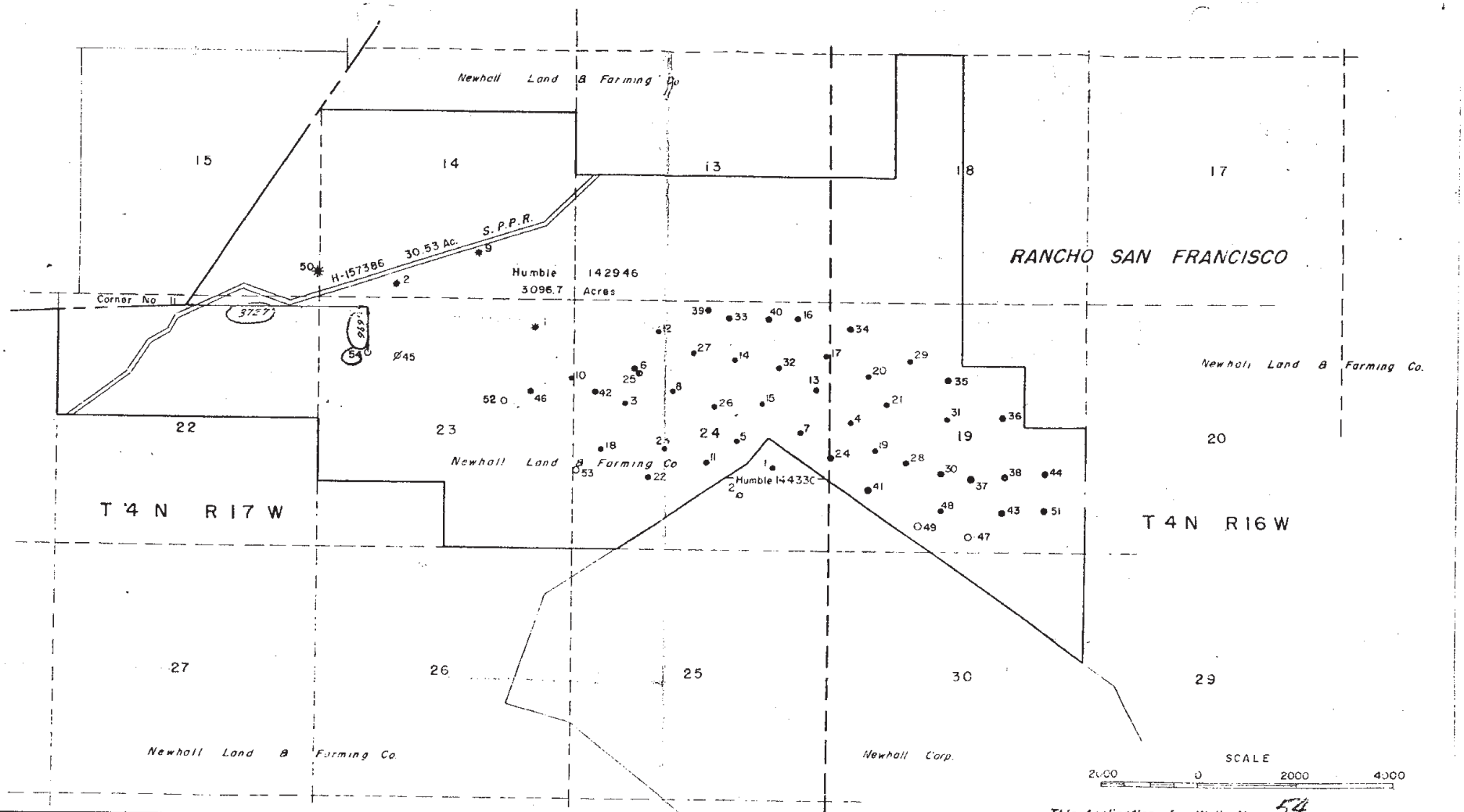
Date	Depth	Description
12-19-55	-	Moving in and rigging up.
12-20 thru 12-21	852	Spudded 11" hole at 12:01 AM, 12-20-56 and drilled to 852'. Opened 11" hole to 16" to 840'. Ran and set 814' of 10 3/4" casing at 831'. Cemented with 500 sacks of cement. Waiting on cement.
12-22 thru 12-23	2560	Drilled 9 7/8" hole to 1931' and twisted off. Ran fishing tools and recovered fish. Drilling 9 7/8" hole.
12-24 thru 1-13-56	8886	Drilled to 2563' and twisted off. Ran fishing tools and recovered fish. Drilling 9 7/8" hole.
1-14 thru 1-17	8942	Drilled 9 7/8" hole to 8921'. Circulated and cleaned hole. Ran and set whipstock at 8921'. Drilled off face of whipstock from 8921' to 8932' with 7 5/8" bit. Opened 7 5/8" hole to 9 7/8" from 8921 to 8932'. Drilling 9 7/8" hole.
1-18 thru 1-19	8999	Drilled 9 7/8" hole to 8972'. Ran and set whipstock at 8972'. Drilled off face of whipstock from 8972' to 8984' with 7 1/2" bit. Opened 7 1/2" hole to 9 7/8" from 8972' to 8984'. Drilling 9 7/8" hole.
1-20 thru 1-22	9032	Drilled 9 7/8" hole to 9016' and ran and set whipstock. Drilled off face of whipstock from 9016' to 9022' with 7 1/2" bit. Opened 7 1/2" hole to 9 7/8" from 9016' to 9022'. Ran and set whipstock at 9022' and drilled off face to 9032' with 7 1/2" bit.
1-23 thru 1-24	9077	Opened 7 1/2" hole to 9 7/8" from 9022' to 9032' and drilled to 9067'. Ran and set whipstock at 9067'. Drilled off face of whipstock to 9077' with 7 1/2" bit. Opened 7 1/2" hole to 9 7/8" from 9067' to 9077'.
1-25 thru 1-27	9160	Drilled 9 7/8" hole to 9106' and ran and set whipstock. Drilled off face of whipstock to 9116' with 7 1/2" bit. Opened 7 1/2" hole to 9 7/8" from 9106' to 9116'. Drilling 9 7/8" hole.
1-28	9184	Drilled 9 7/8" hole to 9174' and ran and set whipstock. Drilled off face of whipstock from 9174' to 9184' with 7 1/2" bit.

Form 103.

DIVISION OF OIL AND GAS
RECEIVED
APR 6 1956
LOS ANGELES, CALIFORNIA

WELL HISTORY (Cont'd)
Humble Oil & Refining Co.
Newhall Land & Farming Co. #54

Date	Depth	Description
1-29 thru 2-10	10348	Opened 7 1/2" hole to 9 7/8" from 9174' to 9184'. Drilled 9 7/8" hole to 9204' and ran and set whipstock. Drilled off face of whipstock to 9212' with 7 1/2" bit. Opened 7 1/2" hole to 9 7/8" from 9204' to 9212'. Drilled 9 7/8" hole to 10348'.
2-11 thru 2-12	10564	Reduced 9 7/8" hole to 8 3/4" at 10348'. Drilling 8 3/4" hole.
2-13 thru 2-17	10940	Drilled to 10650' and ran electric log to 10648'. Drilling 8 3/4" hole.
2-18 thru 2-23	11883	Ran electric log to 10941'. Drilling 9 7/8" hole.
2-24	11960	Drilled to 11960' and ran electric log to 11960'.
2-25	12020	Drilled 8 3/4" hole to 12000'. Cored from 12000' to 12020' with 6 1/4" core head.
2-26	12077	Opened 6 1/4" hole to 8 3/4" from 12000' to 12020' and drilled to 12077'. Ran electric log to 12062'.
2-27	12077 TD	Placed cement plug #1 from 11998' to 11798' with 75 sacks of cement. Placed plug #2 from 10967' to 10767' with 75 sacks of cement. Placed plug #3 from 3400' to 3170' with 100 sacks of cement. Top of plug #3 witnessed by the Division of Oil and Gas.
2-28	12077	Placed plug #4 from 930' to 730' with 100 sacks of cement. Released rig at 12:00 Noon, 2-28-56. Tearing out rig.
2-29		Placed plug #5 from 20' to surface with 20 sacks of cement. Welded steel plate on top of 10 3/4" casing. Finished tearing out rig. Well dry and abandoned. Final report for rig and well.



REVISIONS				
DATE	DESCRIPTION	BY	CHK	APPR
5-20-55	ADD WELL NO. 51	KDS		
8-25-55	" " " 52	"		
10-12-55	" " " 53	"		
[illegible]55	" " " 54	"		

REVISIONS					
NO	DATE	DESCRIPTION	BY	CHK	APPR
7	1-28-55	ADD WELL NO 45	K.D.S.		
8	2-2-55	" " " 46	"		
9	3-29-55	" " " 47	N.D.C.		
10	3-7-55	" " " 48	K.D.S.		
11	11-21-55	" " " 49	"		
12	4-25-55	" " " 50	"		

REVISIONS					
NO	DATE	DESCRIPTION	BY	CHK	APPR
1	8-18-54	ADD WELL NO 40	KDS		
2	8-30-54	" " " 38	NDC		
3	9-2-54	" " " 41	NDC		
4	9-28-54	" " " 42	KDS		
5	12-14-54	" " " 43	KDS		
6	12-21-54	" " " 44	KDS		

This Application for Well No. 54

NEWHALL LAND & FARMING CO.
LEASE NO 142946
CASTAIC JUNCTION DIST. LOS ANGELES CO.

HUMBLE OIL & REFINING COMPANY
CIVIL ENGINEERING DIVISION
CALIFORNIA AREA

DRAWN KDS
CHECKED
APPR
SCALE 1" = 2000'
DATE 8-18-54
REVISED
FILE NO. CAB 44

SUPERCEDES DRWG NO CAB 23

FORM 105

037-16511

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

3

(D)

DIVISION OF OIL AND GAS
RECEIVED
FEB 1 1955

Notice of Intention to Drill New Well

This notice and surety bond must be filed before drilling begins

Los Angeles Calif. Los Angeles, California January 27, 1955

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division III, Article 4, Public Resources Code, notice is hereby given that it is our intention to commence the work of drilling well No. Newhall Land & Farming Co. ~~No.~~ 45, Sec. 23, T. 4-N, R. 17-W, SB B. & M., Castaic Junction Field, Los Angeles, County.

Legal description of lease See attached Plat.
(Attach map or plat to scale)

Location of Well: 835 feet South (Direction) ~~[illegible]~~ and 4269 feet East (Direction) at right angles to said line from ~~[illegible]~~ corner ~~[illegible]~~ 11, Rancho San Francisco, Los Angeles, County, California. Also located 1,020 feet South and 3,698 feet West from the Northeast corner of Projected Section 23, T-4-N, R-17-W, SBB&M.

Elevation of ground above sea level feet To be submitted Later datum.

All depth measurements taken from top of Kelly Bushing (Derrick Floor, Rotary Table or Kelly Bushing) which is 12 feet above ground.

PROPOSED CASING PROGRAM

SIZE OF CASING INCHES A.P.I.	WEIGHT	GRADE AND TYPE	TOP	BOTTOM	CEMENTING DEPTHS
10-3/4"	40.5#	J-55	0	800	Cemented to surface
5-1/2"	17 -20 & 23#	N-80	0	12000	Cemented 1000 feet above shoe

Intended zone or zones of completion: Zone 21, Upper Miocene, 12000'

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
9X-18A	WHP	EB	Blanket	EB	EB

It is understood that if changes in this plan become necessary we are to notify you before running casing.

Address 612 South Flower Street
Los Angeles 17, California
Telephone Number MA 6-7701

Humble Oil & Refining Co.
(Name of Operator)
By James R. Cox

SEND ONE COPY OF NOTICE TO DIVISION OFFICE IN DISTRICT WHERE WELL IS LOCATED

FORM 111 (1-49)

D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P 155-198

Mr. J E Cox
Newhall
California
Agent for HUMBLE OIL & REFINING CO

Los Angeles 15 California
February 7 1955

121

DEAR SIR:

Your "Newhall Land & Farming Co." proposal to drill Well No. 45,

Section 23, T. 4 N, R. 17 W, S B B. & M., Castaic Junction Field, Los Angeles County,

dated Jan. 27 1955, received Feb. 1 1955, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES
"Legal description of lease See attached Plat.
Location of Well: 835 feet South and 4269 feet East at right angles to said line from corner 11, Rancho San Francisco, Los Angeles, County, California. Also located 1,020 feet South and 3,698 feet West from the Northeast corner of Projected Section 23, T-4-N, R-17-W, SBB&M
Elevation of ground above sea level To be submitted Later
All depth measurements taken from top of Kelly Bushing which is 12 feet above ground."

PROPOSAL
"PROPOSED CASING PROGRAM

Size of Casing Inches A.P.I.	Weight	Grade and Type	Top	Bottom	Cementing Depths
10-3/4"	40.5#	J-55	0	800	Cemented to surface
5-1/2"	17 -20 & 23#	N-80	0	12000	Cemented 1000 feet above shoe

Intended zone or zones of completion: Zone 21, Upper Miocene, 12000'
It is understood that if changes in this plan become necessary we are to notify you before running casing."

DECISION
THE PROPOSAL IS APPROVED PROVIDED THAT

1. Mud fluid consistent with good drilling practice shall be used and the column of mud fluid maintained at all times to the surface, particularly while pulling the drill pipe.
2. Adequate blowout prevention equipment shall be installed and maintained in operating condition at all times.
3. THIS DIVISION SHALL BE NOTIFIED AS FOLLOWS:
   (a) To inspect the installed blowout prevention equipment before drilling below 2000'.
   (b) To witness a test of the effectiveness of the 5½" shut-off.

FEK:OH

cc Company (2)
Newhall Land & Farming Co

Orig Company Los Angeles

Blanket bond.

E. H. MUSSER
State Oil and Gas Supervisor

By R. N. Walling Deputy

98406 5-54 25M SPO

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 155-682

Mr. J E Cox
613 San Fernando Road
Newhall California
Agent for HUMBLE OIL & REFINING CO

Los Angeles 15 Calif.
March 29 1955

DEAR SIR:

Operations at your well No. "Newhall Land & Farming Co." 45 Sec. 23, T. 4 N, R. 17 W, S B B. & M., Castaic Junction Field, in Los Angeles County, were witnessed on March 21, 1955. Mr. G. Y. Lee, Engineer, representative of the supervisor was present from 9:30 A.M. to 10:00 A.M. There were also present J. Ortega, Drilling Foreman G. Micheli, Driller

Present condition of well: 10 3/4" cem. 824'; T.D. 7435'

The operations were performed for the purpose of inspecting blowout prevention equipment and installation

Mr. Ortega reported:

1. A 16" rotary hole was drilled from the surface to 824'.
2. On March 6, 1955, 10 3/4", 40 lb. casing was cemented at 824' with 450 sacks of cement.
3. Cement returned to the surface.
4. A 9 7/8" rotary hole was drilled from 824' to 7435'.

THE ENGINEER NOTED THAT the well was equipped with the following blowout prevention equipment:

1. A Shaffer double cellar control gate for closing in the well with the drill pipe out of the hole, and for closing around the 4 1/2" drill pipe.
2. A G. K. Hydril Blowout Preventer for closing around the 4 1/2" drill pipe.
3. The controls for the above equipment were located outside the derrick.
4. A 2" mud fill-up line with a 2" high pressure Nordstrom stopcock into the 10 3/4" casing below the above equipment.
5. A high pressure stopcock on the kelly.

THE BLOWOUT PREVENTION EQUIPMENT AND INSTALLATION ARE APPROVED.

GYL:lg

cc Company (2)
Newhall Land & Farming Co.

Orig Company Los Angeles

E. H. MUSSER
State Oil and Gas Supervisor

By R. N. Nelling Deputy

12362 2-55 16,100 SPO

FORM 108. 57613 2-52 20M ⓢ SFO

DIVISION OF OIL AND GAS
RECEIVED
MAY 4 1955
LOS ANGELES, CALIFORNIA

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Notice of Intention to Abandon Well

This notice must be given at least five days before work is to begin; one copy only

Newhall, Calif. May 2, 19 55

DIVISION OF OIL AND GAS
1015 West Olympic Blvd.
Los Angeles 15, Calif.

In compliance with Secs. 3228, 3229, 3230, 3231 and 3232, Ch. 93, Stat. 1939, notice is hereby given that it is our intention to abandon well No. Newhall Land & Farming Co. #45

Sec. 23, T. 4-N, R. 17-W, S.B. B. & M. Castaic Junction Field,

Los Angeles County, commencing work on the 2nd day

of May 19 55.

The present condition of the well is as follows:

1. Total depth. 11,947' - Drilled 9-7/8" hole to TD without encountering any commercial oil or gas shows. Approximate top of 21-zone - 11,700', top of 15-zone - 10,690', base of fresh water sand 3300'.
2. Complete casing record.

10-3/4" 40.50 J-55 Casing set at 824'.

3. Last produced. Dry Hole

Date	Net oil	Gravity	Cut

The proposed work is as follows: Place cement plugs as follows:

#1 - from 11,800 to 11,600, using 100 sacks cement
#2 - from 10,750 to 10,550, using 100 sacks cement
#3 - from 3,300 to 3,100, using 100 sacks cement
DOG will be notified to witness location and hardness of plug #3 which is at base of fresh water sand.
#4 - from 925 to 725 using 100 sacks cement
#5 - from 20 to 0 using 10 sacks cement
and weld steel plate on top of casing.

abandon

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
		EB	Blanket	EB	EB

HUMBLE OIL & REFINING COMPANY
(Name of Operator)

By James E. Cox
James E. Cox

ADDRESS ONE COPY OF NOTICE TO DIVISION OF OIL AND GAS IN DISTRICT WHERE WELL IS LOCATED

FORM 111 (1-49)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS

No. P 155-800

Mr J E Cox
613 San Fernando Road
Newhall California
Agent for HUMBLE OIL & REFINING CO

Los Angeles 15, Calif.
May 5, 19 55

DEAR SIR:

Your "Newhall Land & Farming Co." proposal to abandon Well No. 45, Section 23, T. 4 N, R. 17 W, S B B. & M., Castaic Junction Field, Los Angeles County, dated May 2 19 55, received May 4 19 55, has been examined in conjunction with records filed in this office.

Present conditions as shown by the records and the proposal are as follows:

THE NOTICE STATES

"The present condition of the well is as follows:

1. Total depth. 11,947' - Drilled 9-7/8" hole to TD without encountering any commercial oil or gas shows. Approximate top of 21-zone - 11,700', top of 15-zone - 10,690', base of fresh water sand 3300'.
2. Complete casing record.
   10-3/4" 40.50 J-55 Casing set at 824'.
3. Last produced. Dry Hole."

PROPOSAL

"The proposed work is as follows: Place cement plugs as follows:

#1 - from 11,800 to 11,600, using 100 sacks cement
#2 - from 10,750 to 10,550, using 100 sacks cement
#3 - from 3,300 to 3,100, using 100 sacks cement
DOG will be notified to witness location and hardness of plug #3 which is at base of fresh water sand.
#4 - from 925 to 725 using 100 sacks cement
#5 - from 20 to 0 using 10 sacks cement and weld steel plate on top of casing."

DECISION

THE PROPOSAL, COVERING WORK ALREADY COMPLETED IN ACCORDANCE WITH PRIOR AGREEMENT, IS APPROVED.

FEK:OH

2 cc Humble Oil & Refining Co
P O Box 1196
Newhall California

Newhall Land & Farming Co
Route 3 Box 77
Saugus California

Orig. Humble Oil & Refining Co
612 South Flower Street
LOS ANGELES 17

Blanket bond.

E. H. MUSSER, State Oil and Gas Supervisor

By R. H. Walling, Deputy

FORM 109-D

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL AND GAS

Special Report on Operations Witnessed

No. T 155-1146

Mr. J E Cox
613 San Fernando Road
Newhall California
Agent for HUMBLE OIL & REFINING CO

Los Angeles 15 Calif.
May 20 1955

DEAR SIR: "Newhall Land & Farming Co."

Operations at your well No. 45 Sec. 23, T. 4 N, R. 17 W, S B B. & M., Castaic Junction Field, in Los Angeles County, were witnessed on May 4, 1955. Mr. R. Ybarra, Engineer, representative of the supervisor was present from 1:00 to 2:00 p.m. There were also present J. Walvoord, Engineer; J. Ortega, Drilling Foreman.

Present condition of well: 10-3/4" cem. 824'. T.D. 11,947', plugged with cement 11,800'-11,600', 10,750'-10,550', 3300'-3095', 914'-714'±, and 27'-7'.

The operations were performed for the purpose of witnessing the plugging operations in the process of abandonment.

Mr. xxxxxx reported:

ENGINEER YBARRA VISITED THE WELL FROM 8:30 - 9:30 A.M., MAY 4, 1955, AND MR. WALVOORD REPORTED: 1. A 9-7/8" rotary hole was drilled from 824' to 11,947'.

2. No commercial showings of oil or gas were encountered.
3. On May 2, 1955, 100 sacks of cement was pumped into the hole through 4½" drill pipe hanging at 11,800', filling to 11,600'.
4. On May 2, 1955, 100 sacks of cement was pumped into the hole through 4½" drill pipe hanging at 10,750', filling to 10,550'.
5. On May 3, 1955, 100 sacks of cement was pumped into the hole through 4½" drill pipe hanging at 3,300', filling to 3,095'.

THE ENGINEER NOTED THAT the cement plug at the reported depth of 3,095' supported 15 point of the weight of the 4½" drill pipe.

THE ENGINEER ARRIVED AT THE WELL AT 1:00 P.M. AND MR. ORTEGA REPORTED:

1. On May 4, 1955, 100 sacks of cement was pumped into the hole through 4½" drill pipe hanging at 914', calculated to fill to 714'.
2. A wooden plug was driven to 27'.
3. Seven sacks of cement was poured into the hole.

THE ENGINEER NOTED THAT the top of the cement in the 10-3/4" casing was at the cellar floc 7' below the ground level.

THE PLUGGING OPERATIONS AS WITNESSED AND REPORTED ARE APPROVED.

RY:OH

(2) cc Humble Oil & Refining Co.
P O Box 1196
Newhall California

Newhall Land & Farming Co.
Route 3 Box 77
Saugus California

E. H. MUSSER
State Oil and Gas Supervisor

By R. N. Nelling Deputy

Orig. Humble Oil & Refining Co.
612 South Flower Street
LOS ANGELES 17

123502 2-55 18,100 SPO

FORM 159 (9-49)

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS

(25)

REPORT OF WELL ABANDONMENT

Los Angeles 15 California

June 27, 1955

Mr J E Cox Agent
Humble Oil & Refining Co
613 San Fernando Road
Newhall California

Dear Sir

Your report of abandonment of Well No. "Newhall Land & Farming Co." 45 Sec. 23, T. 4 N, R. 17 W, S B B. & M., Castaic Junction field, Los Angeles County, dated May 31, 1955, has been examined in conjunction with records filed in this office.

A review of the reports and records shows that the requirements of this Division, which are based on all information filed with it, have been fulfilled.

MAP	MAP BOOK	CARDS	BOND	FORMS 114	FORMS 121
Cal 18A	WDP		Blanket		M.J.

Yours truly

E. H. MUSSER
State Oil and Gas Supervisor

By R. W. Walling
Deputy Supervisor

cc Mr E H Musser
Company
Newhall Land & Farming Co
Mr L A Dutton
Fire Prevention Bureau
Conservation Committee

es

88061 4-54 11,200 SPO

Form 100.

RECEIVED JUN 24 1955 LOS ANGELES, CALIFORNIA

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT

Operator Humble Oil & Refining Company

Field Castaic Junction

Well No. Newhall Land & Farming Co. #45

Sec. 23, T. 4-N, R. 17-W, S. B. B.&M.

Location 835' South and 4269' East at right angles to said line from corner 11, Rancho San Francisco, Los Angeles County.

Elevation above sea level 943 feet. All depth measurements taken from top of Rotary Drive Bushing, which is 955 feet above ground.

Date May 31, 1955

Signed James E. Cox

Geologist Paul H Dudley Jr

Title James E. Cox, District Superintendent

Commenced drilling 3-4-55 Completed drilling 5-5-55 Rotary Drilling tools

Total depth 11947' Plugged depth -

Junk None

~~Commenced producing~~ Dry Hole

Initial production None

GEOLOGICAL MARKERS	DEPTH
Top of Miocene(E.Log)	7700(?)

CASING RECORD

Size of Casing	Depth Shoe	Top Csg	Weight	New Used	Seamless Lapweld	Grade	Size Hole	Cemt.	Depth Perfs.
10-3/4"	824'	16'	40.5#	New	SS	J-55	16"	450	-

PERFORATIONS - None

Plug To Abandon:

No. 1	11800-11600	Using 100 sacks Hi-Temp Cement
No. 2	10750-10550	Using 100 sacks Hi-Temp Cement
No. 3	3300- 3100	Using 100 sacks Construction Cement
No. 4	914- 714	Using 100 sacks Construction Cement

Top plug from bottom of cellar down 20'.

Electrical Log Depths 10737' and 11947'

Form 103.

DIVISION OF OIL AND GAS

HISTORY OF OIL OR GAS WELL

Operator Humble Oil & Refining Company

Field Castaic Junction

Well No. Newhall Land & Farming Co. #45

Sec. 23, T. 4-N, R. 17-W, S. B. B.&M.

Signed James E. Cox

Date May 31, 1955

Title James E. Cox, District Superintendent

Date	Depth	Description
3-4-55	-	Moved in and rigged up.
3-5-55	811	Spudded 11" hole @ 12:01 A.M. and drilled to 811'.
3-6-55	871	Drilled 11" hole to 871'. Opened 11" hole to 16" from 0 to 835'. Ran and set 807' of 10-3/4" casing at 824'. Cemented with 450 sacks of construction cement mixed with 8% gel. Waiting on cement to set.
3-7-55	1153	Tested surface casing w/500 lbs. for 1/2 hour. Drilled 9-7/8" hole to 1153'.
3-8-55 thru 3-9-55	2433	Drilling 9-7/8" hole.
3-10-55	2937	Drilled 9-7/8" hole to 2514'. Twisted off, leaving 3 drill collars in hole. Ran in with socket, bumper sub, and jars. Recovered fish. Drilled 9-7/8" hole to 2937'.
3-11-55 thru 4-12-55	10701	Drilling 9-7/8" hole. Placed Baroid mud logging unit on well on 3-16-55 and ran to total depth (11947').
4-13-55	10726	Coring 7-5/8" hole.
4-14-55	10726	Ran 9-7/8" string reamer and reamed tight hole from 4150' to 4658'.
4-15-55	10726	Reamed 9-7/8" hole to bottom. Set pipe on bottom and backed off at 5223'.
4-16-55	10726	Screwed into fish and pulled same out of hole. Preparing to run drill stem test.
4-17-55	10736	Ran in hole for HOWCO DST #1 to test from 10706' to 10726'. Packer failed - no test resulted. Cored 7-5/8" hole to 10736'. Preparing to run drill stem test.
4-18-55	10737	Ran HOWCO DST #2 from 10711' to 10736' using 1" top and 1/4" bottom chokes. Tool open 80 minutes with flowing pressure of 1435#. Shut-in pressure 3760#. Recovered 350' salt water, 8500 ppm chloride, and 100' drilling fluid. Open 7-5/8" hole to 9-7/8" and drilled one foot to 10737'.

Form 103.

RECEIVED
JUN 24 1955
LOS ANGELES, CALIFORNIA

WELL HISTORY (Cont'd)
Humble Oil & Refining Company
Newhall Land & Farming Co. #45

Date	Depth	Description
4-19-55	10814	Ran electric log to 10737'. Drilled 9-7/8" hole to 10814".
4-20-55	10844	Cored 7-5/8" hole to 10844'.
4-21-55	10903	Ran HOWCO DST #3 from 10819' to 10844' using 1" top and 1/4" bottom chokes. Tool open 60 minutes with flowing pressure of 1470#. Shut-in pressure 5105#. Recovered 315' salt water, 1200 ppm chloride, 30' drilling fluid, and 15' thin black oil. Opened 7-5/8" hole to 9-7/8" and drilled to 10903'.
4-22-55 thru 4-29-55	11879	Drilling 9-7/8" hole.
4-30-55	11947	Completed drilling 9-7/8" hole. Ran Caliper Log from 6993' to 11947', Contact Log from 10500' to 11947', Dipmeter from 7000' to 11947', and Electric Log to 11947'.
5-1-55		Preparing to run drill stem test.
5-2-55		Planned to test from 10718' to 10765' but packers failed to hold. Placed Plug No. 1 from 11800' to 11600' using 100 sacks Colton Hi-Temp Cement. Placed Plug No. 2 from 10750' to 10550' using 100 sacks Colton Hi-Temp Cement.
5-3-55		Placed Plug No. 3 from 3300' to 3100' using 100 sacks Construction Cement. Found top at 3095'. Witnessed and approved by representative from Division of Oil and Gas. Placed Plug No. 4 from 914' to 714' using 100 sacks Construction Cement.
5-4-55		Placed top plug from bottom of cellar down 20'. Witnessed and approved by representative from Division of Oil and Gas. Tearing down and moving out rig.
5-5-55		Finished moving out. Well abandoned as dry hole.

Form 101.

RECEIVED
JUL 24 1955
LOS ANGELES, CALIFORNIA

(75)

DIVISION OF OIL AND GAS

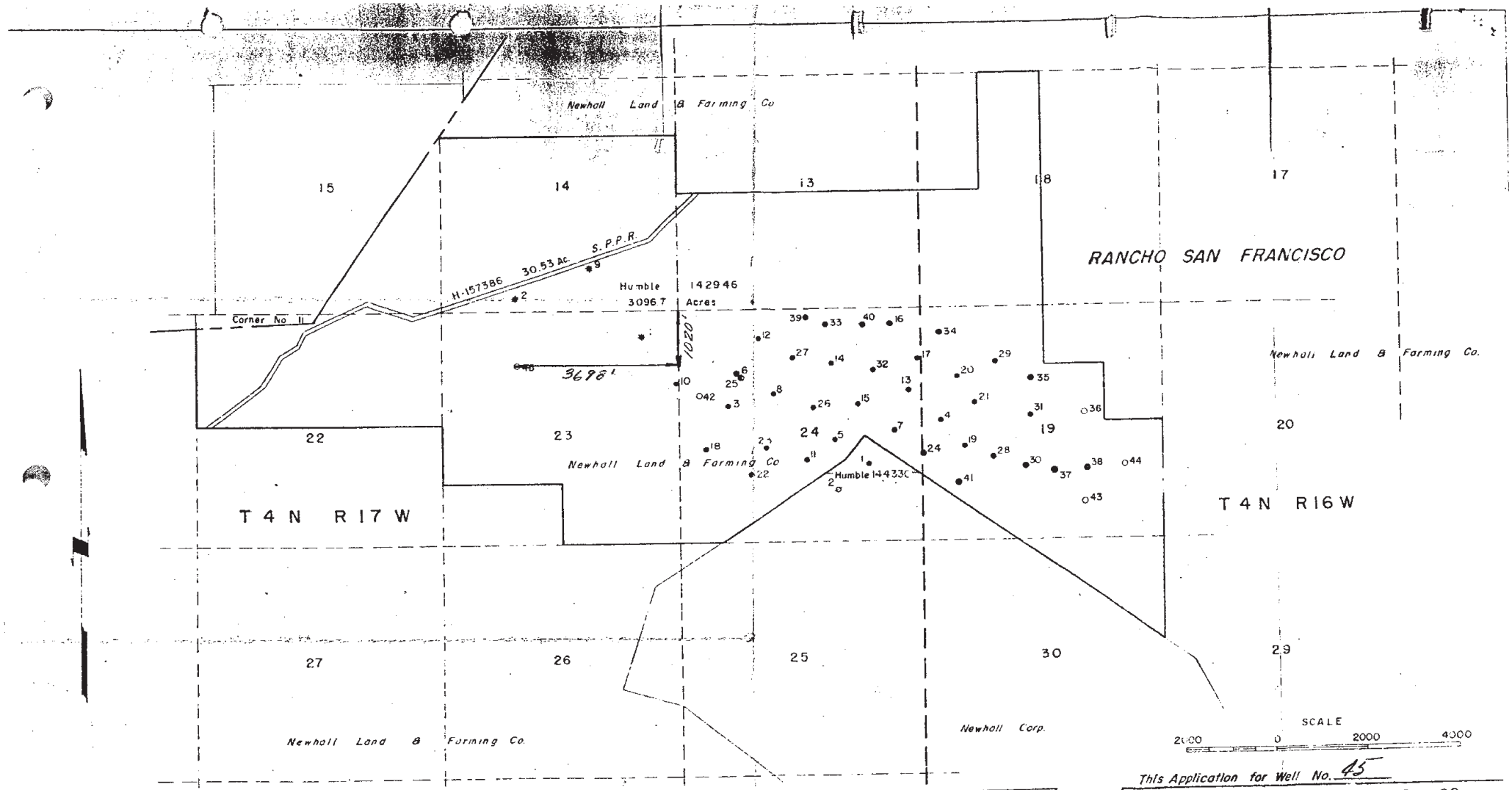
LOG AND CORE RECORD OF OIL OR GAS WELL

Operator Humble Oil & Refining Company Field Castaic Junction

Well No. Newhall Land & Farming Co. #45 Sec. 23, T. 4-N, R. 17-W, S. B. B.&M.

FORMATIONS PENETRATED BY WELL

Depth To			
Top of Formation	Bottom of Formation	Drilled or Cored	Description
0	871	D	Sand, boulders, and gravel
871	3655	D	Sand
3655	5478	D	Shale
5478	7714	D	Shale and sand
7714	10701	D	Shale
10701	10736	C	See core description attached
10736	10814	D	Shale
10814	10844	C	See core description attached
10844	11947	D	Shale



This Application for Well No. 45

NEWHALL LAND & FARMING CO.
LEASE NO 142946
CASTAIC JUNCTION DIST. LOS ANGELES CO.

HUMBLE OIL & REFINING COMPANY
CIVIL ENGINEERING DIVISION
CALIFORNIA AREA

DRAWN KDS
CHECKED
APPR
SCALE 1" = 2000'
DATE 8-18-54
REVISED
FILE NO. CAB 44

SUPERCEDES DRWG NO CAB 23

REVISIONS

NO	DATE	DESCRIPTION	BY	CHK	APPR

REVISIONS

NO	DATE	DESCRIPTION	BY	CHK	APPR
7	1-28-55	ADD WELL NO 45	K.D.S		

REVISIONS

NO	DATE	DESCRIPTION	BY	CHK	APPR
1	8-18-54	ADD WELL NO 40	KDS		
2	8-30-54	" " " 38	NDC		
3	9-2-54	" " " 41	NDC		
4	9-28-54	" " " 42	KDS		
5	12-14-54	" " " 43	KDS		
6	12-21-54	" " " 44	KDS		

APPENDIX F:

DOGGR Well Abandonment Procedures

DEPARTMENT OF CONSERVATION'S

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

District 2-Ventura

CONSTRUCTION PROJECT SITE REVIEW

AND

WELL ABANDONMENT PROCEDURE

12-9-03

CALIFORNIA CONSERVATION

OIL AND GAS WELL REVIEW PROCEDURE

Applicant	Permitting Office
Address	
City Zip	Mailing Address
Date	City Zip

Plan Check No. _____

Plan Checker _____
Print or Type Name Signature Phone Number

The proposed construction site is located at _____

_____

_____

There is/are _____ active, idle, or abandoned well(s) located on or adjacent to the site; (number)

therefore, before a building/grading permit should be issued, The Division of Oil and Gas (Division) recommends that a site-plan review be obtained. The Division will determine if affected wells have been abandoned to current standards. Wells that are not abandoned to current standards may require abandonment/reabandonment. Cost of the required abandonment/reabandonment shall be the responsibility of the landowner or developer. (PRC Section 3208.1)

THE DIVISION OF OIL AND GAS RECOMMENDS THAT A DILIGENT EFFORT BE MADE TO AVOID BUILDING NEAR ANY WELL.

SITE REVIEW PROCEDURE TO BE FOLLOWED BY PROJECT APPLICANT

1. Contact and make an appointment with the Division at:

   California Department of Conservation
   Division of Oil, Gas, and Geothermal Resources
   1000 S. Hill Road Suite 116
   Ventura, CA. 93003-4458

2. Provide the following information: (EXAMPLE)

   a. Area, location.....Section, Township, and Range
   b. Oil field/County.....Placerita Oil Field, L.A. County
   c. Company/Operator.....XYZ Oil Company
   d. Well Designation....."Gusher" 1
   e. Section-Township-Range: 35-T5N-R17W
   f. Major Cross streets..Main Street and X street
      (or other identifier)

3. The Division will provide you with the location or record for each well. Using this information, uncover the well(s) and have the well locations(s) surveyed by a licensed surveyor. If any well cannot be located using the original description on file, a diligent effort, including excavation, must be made to locate it.

4. The following procedures are to be used to locate wells on site plans and to verify that an adequate search was completed.

Step 1. The developer/landowner shall survey the well locations using the "location of record". If the well cannot be found then excavate at least 15 feet long, 15 feet wide, and 12 feet dig. If any indications of an oil well (i.e. cellar, oilfield debris, oil- saturated soil) are observed, or if any information available that original conditions have changed since "location of record" was determined, a larger hole may be required.

Step 2. If the well is not located using the procedures listed in step #1, a metal detector should be used to survey the area (inside and outside the excavation).

Step 3. The developer/landowner shall excavate all indicated metal detector locations by digging a hole that is at least 10 feet long, 10 feet wide, and 12 feet deep, if necessary. If any indications of an oil well are observed upon completion of the excavation, or if there is any information available that original conditions have changed since the well was drilled, a larger hole may be required.

Step 4. The developer/landowner shall notify the Division to witness all completed excavations before they are refilled. Pictures shall be taken of all excavations. The survey of the well shall be available to the Division engineer for review.

Step 5. If the well search efforts prove unsuccessful, the Division engineer and the developer shall prepare written report describing the search procedures and attach the excavation pictures.

5. **All accessible previously plugged and abandoned wells located on the project site shall be tested for gas leakage and inspected for fluid leakage.** The testing/inspection shall be done by Division personnel or the developer. If the developer performs the test, the Division shall be notified to witness the test.

   If there is any indication of fluid or gas leakage, the well condition shall be remedied, even if the well will not be located nearby a structure. The cost of the reabandonment shall be the responsibility of the landowner or developer. (PRC Section 3208.1)

6. The location of each well must be plotted on the site plan. The well survey description must reference a point on the site plan which in turn must reference a point on existing Division maps. (Section corner, Rancho corner, latitude/longitude, etc.) Identify each well with the name of the company/operator and well designation. Submit <u>THREE</u> copies of the site plan and three copies of each well-location survey to the Division.

   If a developer/landowner locates a well within a 4-foot radius of the wells "location of record", there is no need to survey the actual well location. However, the developer/landowner must verify that the well was found within 4 feet of the "location of record".

   The site plans should indicate the property boundaries, an area of at least 25 feet outward from the perimeter of the property, any proposed or existing structures, and any existing or proposed roads or streets that pass through or are immediately adjacent to the property. The site plan should also include a plot (to scale) of all existing and proposed oilfield facilities (tanks, processing equipment, pipelines, etc.) that will be operating on the site after completion of the proposed development and include a description of the existing type and height of all oilfield enclosures and list any facility modifications that are part of the development plans.

   If a structure is proposed within 10 feet of an abandoned/reabandoned well, the site plans should include an approved well-vent system designed to vent natural gases to the atmosphere. If a structure is within 25 feet of a structure and the permitting agency is Los Angeles County then an approval letter from Los Angeles County Environmental Programs Division must be submitted.

7. A Division engineer will review the submitted plans. The Division will prepare a "Plan Review" (Form OG190), which will indicate the wells on the project site and our recommendations with respect to the wells.

After the review is complete, the reviewing engineer will affix the Division certification stamp to the three copies of the site plans and three copies of the FORM OG190. One copy will be returned to the applicant and one copy will be forwarded to the permitting agency. The remaining copy will be retained by the Division.

PLUGGING AND ABANDONMENT PERMIT PROCESS

1. Before any well operations are commenced, an application to plug and abandon or reabandon or extend casing for each well must be filed with the Division. (FORM OG108 or FORM OG123) This application must be outline the work proposed to upgrade the well to current requirements.

2. The Division will respond with a "Permit to Conduct Well Operations" that sets forth the conditions and requirements to be met.

3. When the well work is completed and all records received the Report of Well Plugging and Abandonment or Reabanonment will be issued.

IF, DURING THE CONSTRUCTION/GRADING PROCESS, ANY PREVIOUSLY UNKNOWN WELL IS DISCOVERED, THE DIVISION MUST BE NOTIFIED IMMEDIATELY, SO PLUGGING AND ABANDONMENT REQUIREMENTS CAN BE DETERMINED.

ONSHORE ABANDONMENT/REABANDONMENT REQUIREMENTS
DISTRICT 2

General

Plugging is required to protect life, health, property, deposits of oil, gas, or fresh water from loss or damage. A written notice (OG108) stating in detail the proposed method of abandonment, must be filed. For reabandonments, a written notice (OG1123) stating in detail, the proposed method of reabandonment, must be filed. All required downhole cement plugs shall use cement that has a minimum compressive strength of 1000 psi and a maximum liquid permeability of .1 md. No more than a 4% gel mixture shall be allowed. The sand/cement ratio for downhole muds is limited to 2:1.

Mudding

All portions of the hole not occupied by cement shall be filled with good quality, water-base mud fluid having proper weight and consistency to prevent movement of other fluids into the wellbore. Under "normal" conditions, proper weight and consistency is 72 lbs./cf with a minimum gel-shear strength (10 min.) 25 lbs./100 sq. ft.

Surface Pour

No aggregate concrete (NO ROCKS) may be used for surface plugs. The maximum sand/cement ration that is acceptable is 4:1. When there is more than one string of casing at the surface, cement shall be placed between. The preferred alliterative is to cut and pull all inside strings before the surface plug is placed. A surface cement-pour is permitted only in an empty hole with a diameter of not less than 5 inches. Depth limitations shall be determined on an individual well basis.

Bailers

Bailer placed cement plugs are limited to 3000' or less.

Junk in Hole

Diligent effort shall be made to recover junk when such junk may prevent proper abandonment. In the event that the junk cannot be removed and fresh-water or oil and gas zones penetrated below cannot therefore be properly abandoned, cement shall be down-squeezed through or past the junk and a 100-foot cement plug shall be placed on top of the junk. In the event that a retainer is used, then 100 foot plug shall be placed on top of the retainer.

Recovery of Casing

Approval to recover all casing possible will be given in the abandonment of wells where subsurface plugging can be done to the satisfaction of the Division.

Extending Casing

The final grade of the well shall be no greater than 5 feet below ground. In the event that the casing is to be extended, it shall be extended with adequate casing of the same size of the casing that is found at the surface. In addition, the casing shall be filled with cement.

Open Hole

Oil and Gas Zones- Cement plug shall be place from total depth or at least 100 feet below the bottom of each oil and gas zone, whichever is less, to at least 100 feet above the top of each zone.

Freshwater Zones- A minimum 200 foot cement plug shall be placed across all fresh-saltwater interfaces. An interface plug may be placed wholly within a thick shale if such a shale separates the freshwater sands from the brackish or saltwater sands.

Cased Hole

Oil and Gas zones- All perforations shall be plugged with cement and the plug shall extend at least 100 feet above the top of a landed liner, the uppermost perforations, the casing cementing point or the water shut-off holes, whichever is highest. (See CCR for special requirements)

Bridge plugs- A bridge plug above the lowermost zone in a multiple-zone completion my be allowed in lieu of cement through the lowermost zone if such lowermost zone is isolated from the upper zone by cement behind casing.

Fresh water zones- a 100 feet cement plug across the fresh water interface opposite cemented casing; in un-cemented casing, squeeze cementing sufficient cement to fill 200 feet behind casing and plug 100 feet above the perforations; or cavity shot immediately below the fresh water and cemented to 100 feet above the shot.

Surface Plugging

The well and all annuli shall be plugged from 30 feet to 5 feet. All casing shall be cut off 5 feet below the surface or the ground. In urban areas, a steel plate shall be welded on top of all casings.

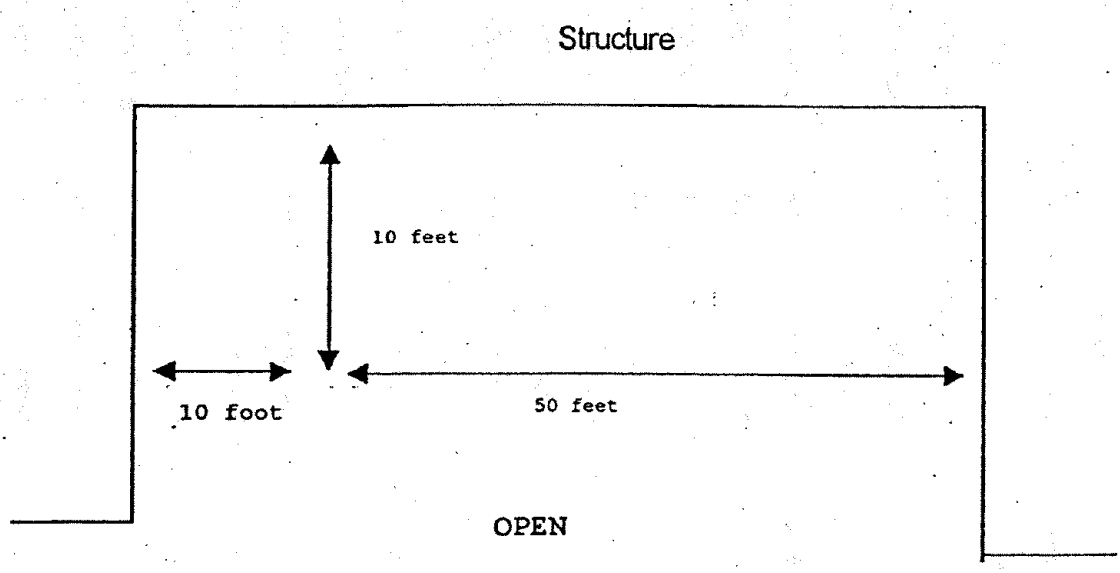
In the event that fill is proposed over the well, then the casing may have to be extended to have the top of the casing 5 feet below ground level.

Cleanup

Return surface to original condition as practical. Property owner with good reason may apply for exceptions. Contact Regional Water Quality Control Board for ground contamination problems. The cleanup must be performed within 60 days after the completion of the work.

NEARBY

Nearby is defined as being within 10 feet from the structure and/or property line, limited to any two adjacent sides of the well, and within 50 feet from the property line and/or structure on the third side of the well. The fourth side of the well shall always have open access.



Well Abandonment Contractors--District 2

Company Name	Contact	Address	City	State	Phone #	License Number
AATR Entertprises	Willie Smith	3249 South La Clenega Blvd	Los Angeles	CA	(213) 752-0055	629460
ACCES	Hamid Assadi	2034 Cotner Avenue 2nd Floor	Los Angeles	CA		557581
Access Drilling	E. Abili	2893 E La Palma Avenue	Anaheim	CA	(714)237-1187	763494
Accurate Excavating Inc	Kevin Hodges	27241 Burbank	Foothill Ranch	CA	(949) 598-7311	654063
Allan Walker Inc	Ed Levin	P O Box 82531	Bakersfield	CA	(661) 391-9152	493118
Allwaste Transportation & Remediation Inc	Jeff Bertoni	P O Box 431	San Ardo	CA	(831) 627-2595	534002
Arbor Services	Jim Staley	9155 Brown Deer Road Suite 1	San Diego	CA	(619) 687-5475	688532
Bud's Equipment Inc	Joe Lowry	P O Box 558	Coalinga	CA	(559) 935-2672	422391
CEDA Mechnical Services	Chris Davis	2756 St Louis Avenue	Signal Hill	CA	(562) 989-3650	722902
Clark Engineering Construction	Don Clark	2235 N Ventura Avenue	Ventura	CA	(805) 643-8119	627891
CMH Environmental Group Inc	Property Valuation	2501 E Chapman Avenue Suite 100	Fullerton	CA	(714) 447-4345	678295
DPH Contracting Services	Daniel Hencey	28101 Langside Avenue	Canyon Country	CA	(805) 298-4540	730421
Ecology Control Industries	Larry Hartzell	19500 Normandie Avenue	Torrance	CA	(310) 320-2555	741611
El Capitan Environmental Services Inc		722 W Wilson Avenue	Glendale	CA	(818) 265-1222	640045
Engineering Remediation Resource Group Inc	Randy Randall	4070 Nelson Avenue Suite B	Concord	CA	(925) 969-0750	743750
Env America Incorporated	Jim Larwood	16 Technology Drive Suite 154	Irvine	CA	(949) 453-9191	648559
EPS Engineering Services	Patrick Mbaba	P O Box 64365	Los Angeles	CA	(310) 826-9733	597765
First Energy Services	Mark Sterbenk	3143 Petrol Road	Bakersfield	CA	(661) 387-9300	756192
Fleet Cementers Inc	Ken Moon	1355 West Kern Street	Taft	CA	(661) 763-1859	727918
Foss Environmental Services	Robert Russell	909 East Harbor Drive	San Diego	CA	(619) 234-3677	716581
Frost Equipment Rentals L.P.	Owen Clark	250 South Hallock Drive	Santa Paula	CA	(805) 933-3334	763960
Gary Drilling Company	Troy Azlin	7001 Charity Avenue	Bakersfield	CA	(800) 443-5925	222619

Company Name	Contact	Address	City	State	Phone #	License Number
GCE Technologies	Sharon Bison	17244 Darwin Suite J	Hesperia	CA	(714) 632-9969	724889
Gradient Engineers Inc	Nick Berzins	17781 Cowan Suite 140	Irvine	CA	(949) 477-0555	734297
Grayson Service Inc	Bob Grayson	4004 South Enos Lane	Bakersfield	CA	(661) 399-6300	287659
Halliburton Energy Services Inc	Kyle Holden	5500 Ming Avenue Suite 365	Bakersfield	CA	(661) 837-2971	256183
Jensen Drilling Co	Nancy Butler	1775 Henderson Avenue	Eugene	OR	(541) 726-7435	340115
KM Scrivner Inc	Jerry Deverick	P O Box 1075	Coalinga	CA	(559) 935-0815	485655
Minco Construction	Refaat Mina	P O Box 1273	Redondo Beach	CA	(310) 376-2929	612429
MMI Services Inc	David Knoeb	6400 Price Way	Bakersfield	CA	(661) 589-9366	684884
Oil Well Service Company	Paul Braden	1241 E Burnett Street	Long Beach	CA	(562) 595-4501	178480
PC Exploration Inc	Parris Baker	1780 Vernon Street Suite 3	Roseville	CA	(916) 783-9733	265556
Pool California Energy Services Inc	Tim Barman	1025 Earthmover Court	Bakersfield	CA	(661) 588-6140	115753
Protec Engineering Services Inc	Kay Akinrele	11288 Ventura Blvd Suite 284	Studio City	CA	(818) 704-6331	716350
QST Environmental	Tom Gibbons	235 East Clark Ave	Orcutt	CA	(805) 938-7952	658022
Randoph Construction	Don Randolph	P O Box 430	Santa Maria	CA	(805) 349-1275	693014
Redi Rental and Leasing	Thurman Rock	841 E. Washington Avenue	Santa Ana	CA	(714) 547-9012	630433
RMR Inc	Mario Perea	P O Box 1715	Santa Maria	CA	(805) 928-4013	535800
SI Nor Inc	Silas Ugorji	1345 Fitzgerald Avenue Suite F	Rialto	CA	(909) 820-4010	717123
Suma Pacific Corp	Rich Steward	P O Box 1251	Grants Pass	OR	(541) 479-1461	461280
Tetra Tech Inc	Dennis Zafuto	3201 Airpark Drive Suite 108	Santa Maria	CA	(805) 739-2600	551555
The Reynolds Group		250 El Camino Real Suite 204	Tustin	CA	(714) 730-5397	659765
Tidelands Oil Production Company	Mark Kapelke	P O Box 1330	Long Beach	CA	(562) 436-9918	681859
Trak Environmental Group Inc	Bradford Newman	4125 Market Street Suite 19	Ventura	CA	(805) 650-5333	709623
Wayne Perry Inc	Richard Kreis	11230 Gold Express Drive, Suite 31	Gold Rive	CA	(916) 635-6719	300345
Western Colima Corporation	David Nowel	1780 E McFadden Avenue Suite 11	Santa Ana	CA	(714) 542-2644	638004
WZI Inc.	Tom Gibbons	235 E. Clark Avenue, Suite C	Orcutt	CA	(805) 937-2040	629898

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CARDS ☐
BOND ☐
OGD114 ☐
OGD121 ☐

Notice of Intention to Abandon Well

File in Duplicate

In compliance with Section 3229, Division 3, Public Resources Code, notice is hereby given that it is our intention to abandon

Well _____ **API No.** _____ **Sec.** _____ **T.** _____ **R.** _____ _____ **B.&M.**

_____ **Field** _____ **County, starting work on** _____

The present condition of the well is

1. Total depth:

2. Complete casing record, with plugs and perforations (present hole):

3. Date last produced or injected:

Additional data for dry hole (show depths)

1. Oil or gas shows:

2. Stratigraphic markers:

3. Formation and age at total depth:

4. Base of freshwater sands:

Is this a critical well according to the definition on the reverse side of this form (or on page 2 if you are using the Internet)?

☐ Yes ☐ No

The proposed work is as follows:

It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address _____ (Street)

_____ (City) (State) (Zip)

Telephone Number _____ (Area Code) (Number)

_____ (Name of Operator)

By _____ (Print Name)

_____ (Signature) (Date)

OG108 (9/00)

CRITICAL WELL

As defined in the California Administrative Code, Title 14, Section 1720 (a), "Critical well" means a well within:

(1) 300 feet of the following:
   (A) Any building intended for human occupancy that is not necessary to the operation of the well; or
   (B) Any airport runway.

(2) 100 feet of the following:
   (A) Any dedicated public street, highway, or nearest rail of an operating railway that is in general use;
   (B) Any navigable body of water or watercourse perennially covered by water;
   (C) Any public recreational facility such as a golf course, amusement park, picnic ground, campground, or any other area of periodic high-density population; or
   (D) Any officially recognized wildlife preserve.

Exceptions or additions to this definition may be established by the supervisor upon his own judgment or upon written request of an operator. This written request shall contain justification for such an exception.

APPENDIX G:

Government Records Report

The EDR Radius Map
with GeoCheck®

Tentative Tract Map No. 53108
Wolcott Way/Henry Mayo Drive
Valencia, CA 91355

Inquiry Number: 1108642.4s

January 08, 2004

Environmental Data Resources, Inc.

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06890

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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FEDERAL ASTM STANDARD

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-LQG list, as provided by EDR, and dated 09/10/2003 has revealed that there are 3 RCRIS-LQG sites within approximately 1.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
T A MANUFACTURING CO	*28065 W FRANKLIN PKWY*	*1/2 - 1*	*NE*	*10*	*15*
DEL WEST ENGINEERING	*28128 W LIVINGSTON AVE*	*1 - 2*	*NNE*	*E28*	*31*
PHARMAVITE LLC	*28305 W LIVINGSTON AVE*	*1 - 2*	*NNE*	*G35*	*36*

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-SQG list, as provided by EDR, and dated 09/10/2003 has revealed that there are 4 RCRIS-SQG sites within approximately 1.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
CHIQUITA CANYON SANITARY LANDF	*29201 HENRY MAYO DRIVE*	*1/2 - 1*	*W*	*B9*	*15*
R A H INDUSTRIES	*28035 HARRISON PKWY*	*1 - 2*	*NNE*	*E25*	*29*
TIME AVIATION SERVICES INC	*28402 W LIVINGSTON AVE*	*1 - 2*	*N*	*F32*	*34*
KIMBALL MICROELECTRONICS	*28575 LIVINGSTON AVE*	*1 - 2*	*N*	*37*	*39*

STATE ASTM STANDARD

CHMIRS: The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

A review of the CHMIRS list, as provided by EDR, and dated 12/31/2002 has revealed that there are 8

CHMIRS sites within approximately 2.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
Not reported	27900 CHIQUITO CANYON R	1 - 2	W	13	17
Not reported	*28201 FRANKLIN PARKWAY*	*1 - 2*	*NE*	*D23*	*25*
Not reported	28201 FRANKLIN PKWY, B	1 - 2	NE	D24	28
Not reported	27353 SAN MARTINEZ GRAN	1 - 2	W	53	53
Not reported	*29300 THE OLD ROAD*	*>2*	*NE*	*K54*	*54*
Not reported	29300 THE OLD ROAD	>2	NE	K55	59
Not reported	N/B I-5, CASTAIC INSP F	>2	NE	59	67
Not reported	HASELY CYN 1MI NORTH OF	>2	NNE	61	68

CORTESE: This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, has revealed that there are 9 Cortese sites within approximately 2.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
LA CO FD FIRE TRAINING CN	28101 CHIQUITO CNYN	1 - 2	W	C19	24
SCHWARTZ OIL CO.	*27241 HENRY MAYO DR*	*1 - 2*	*NE*	*I44*	*44*
LA CO FD FIRE STA #076	*27223 W HENRY MAYO DR*	*1 - 2*	*NE*	*I47*	*47*
NEWHALL LAND & FARMING	*27230 HENRY MAYO RD*	*1 - 2*	*ENE*	*J52*	*51*
DIXIE DIESEL STATION	*29471 THE OLD ROAD*	*>2*	*NE*	*56*	*60*
NEWHALL LAND & FARMING CO	*28760 N CASTAIC CANYON*	*>2*	*ENE*	*L57*	*62*
TRI-R-TRUCKING	*28748 CASTAIC CANYON RD*	*>2*	*ENE*	*L58*	*65*
CHEVRON STATION 9 1899	*28805 THE OLD RD*	*>2*	*ENE*	*60*	*68*

Lower Elevation	Address	Dist / Dir		Map ID	Page
NEWHALL LAND & FARMING	*3003 WALNUT ORCHARD RD*	*1 - 2*	*WSW*	*14*	*18*

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, has revealed that there are 2 SWF/LF sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
CHIQUITA CANYON LANDFILL INC	*29201 HENRY MAYO DRIVE*	*1/2 - 1*	*W*	*B4*	*7*
CHIQUITA CANYON LANDFILL	*29201 HENRY MAYO DR*	*1/2 - 1*	*W*	*B6*	*10*

WMUDS/SWAT: The Waste Management Unit Database System is used for program tracking and inventory of waste management units. The source is the State Water Resources Control Board.

A review of the WMUDS/SWAT list, as provided by EDR, has revealed that there are 2 WMUDS/SWAT sites

EXECUTIVE SUMMARY

WDS: California Water Resources Control Board - Waste Discharge System.

A review of the CA WDS list, as provided by EDR, and dated 09/22/2003 has revealed that there is 1 CA WDS site within approximately 1.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
CHIQUITA CANYON LANDFILL	***29201 HENRY MAYO DR***	***1/2 - 1***	***W***	***B6***	***10***

Emissions Inventory Data: Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies

A review of the EMI list, as provided by EDR, and dated 12/31/2001 has revealed that there are 3 EMI sites within approximately 1.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
CHIQUITA CANYON LANDFILL	***29201 HENRY MAYO DR***	***1/2 - 1***	***W***	***B6***	***10***
US POSTAL SERVICE, SANTA CLARI	28201 FRANKLIN PKY	1 - 2	NE	D21	25
SCHWARTZ OIL CO	***27241 HENRY MAYO DR***	***1 - 2***	***NE***	***I43***	***43***

CA SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the CA SLIC list, as provided by EDR, has revealed that there are 2 CA SLIC sites within approximately 2 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
UNOCAL - LINCOLN LEASE	28101 CHIQUITO CYN	1 - 2	W	C18	24
PROPOSED SCHOOL BUS STOP	28300 LIVINGSTON	1 - 2	NNE	G34	36

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, has revealed that there are 19 HAZNET sites within approximately 1.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
CHIQUITA CANYON LANDFILL INC	***29201 HENRY MAYO DRIVE***	***1/2 - 1***	***W***	***B4***	***7***
CHIQUITA CANYON LANDFILL	***29201 HENRY MAYO DR***	***1/2 - 1***	***W***	***B6***	***10***
T A MANUFACTURING CO	***28065 W FRANKLIN PKWY***	***1/2 - 1***	***NE***	***10***	***15***
BLOOMERS METAL STAMPINGS INC	28615 BRAXTON AVE	1 - 2	NE	12	17
LA CTY FIRE DEPT/DELVAL TRG CT	28101 CHIQUITO CANYON R	1 - 2	W	C16	21
Not reported	***28201 FRANKLIN PARKWAY***	***1 - 2***	***NE***	***D23***	***25***
R A H INDUSTRIES	***28035 HARRISON PKWY***	***1 - 2***	***NNE***	***E25***	***29***
EMCO	28045 W HARRISON PKWY	1 - 2	NNE	E26	30
JERRY AVALOS TRUCKING	28459 CHIQUITO CANYON R	1 - 2	WNW	27	30
DEL WEST ENGINEERING	***28128 W LIVINGSTON AVE***	***1 - 2***	***NNE***	***E28***	***31***
20TH CENTURY FOX,PAPI CHULO	28455 LIVINGSTON AVE	1 - 2	N	30	32
REGENT AEROSPACE INC	28110 HARRISON PKWY	1 - 2	NNE	E31	33
TIME AVIATION SERVICES	28402 W LIVINGSTON AVE	1 - 2	N	F33	34
PHARMAVITE LLC	***28305 W LIVINGSTON AVE***	***1 - 2***	***NNE***	***G35***	***36***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
PHARMAVITE LLC	***28310 W LIVINGSTON AVE***	***1 - 2***	***NNE***	***G36***	***37***
KIMBALL MICROELECTRONICS	***28575 LIVINGSTON AVE***	***1 - 2***	***N***	***37***	***39***
WALT DISNEY PICTURES & TELEVIS	28150 W HARRISON PARKWA	1 - 2	NNE	38	40
THE VALENCIA TRAVEL VILLAGE	27946 HENRY MAYO ROAD,	1 - 2	NE	H41	42
SCHWARTZ OIL CO	***27241 HENRY MAYO DR***	***1 - 2***	***NE***	***I43***	***43***

HMS: Los Angeles County Industrial Waste and Underground Storage Tank Sites.

A review of the LOS ANGELES CO. HMS list, as provided by EDR, has revealed that there are 8 LOS ANGELES CO. HMS sites within approximately 1.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
CHIQUITA CANYON LANDFILL	29201 W HENRY MAYO DR	1/4 - 1/2	WNW	A1	6
LAIDLAW WASTE SYSTEMS INC	29201 W HENRY MAYO DR	1/4 - 1/2	WNW	A2	6
L A COUNTY FIRE DEPT	***28101 N CHIQUITO CANYON***	***1 - 2***	***W***	***C17***	***22***
DEL WEST ENGINEERING	28128 W LIVINGSTON AVE	1 - 2	NNE	E29	32
PHARMAVITE LLC	***28310 W LIVINGSTON AVE***	***1 - 2***	***NNE***	***G36***	***37***
FIESTA RESORTS	27946 W HENRY MAYO DR	1 - 2	ENE	H39	41
VALENCIA TRAVEL VILLAGE	27946 W HENRY MAYO DR	1 - 2	ENE	H40	41
LA CO FD FIRE STA #076	***27223 W HENRY MAYO DR***	***1 - 2***	***NE***	***I47***	***47***

Site Mitigation Complaint Control Log: The Los Angeles County Site Mitigation Log comes from Community Health Services.

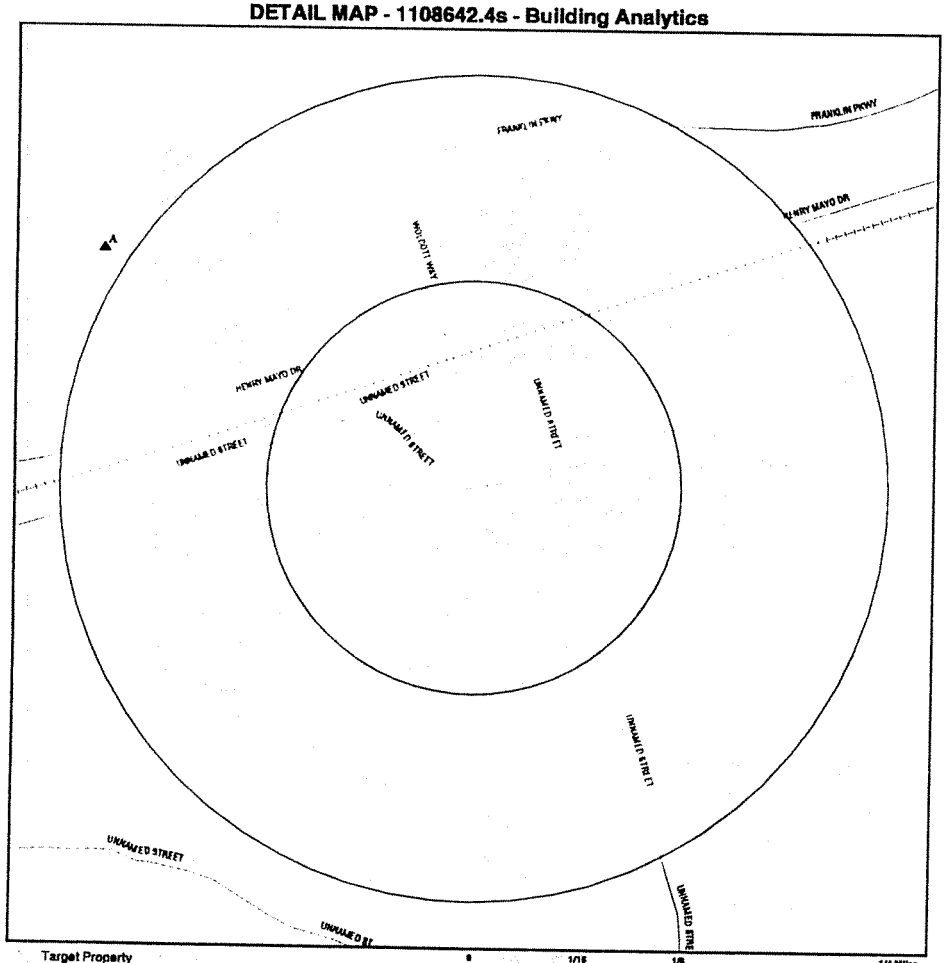
A review of the LA Co. Site Mitigation list, as provided by EDR, has revealed that there is 1 LA Co. Site Mitigation site within approximately 1.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir		Map ID	Page
DEL VALLE TRAINING CENTER	28101 CHIQUITO CANYON R	1 - 2	W	C15	21

EDR PROPRIETARY HISTORICAL DATABASES

See the EDR Proprietary Historical Database Section for details

DETAIL MAP - 1108642.4s - Building Analytics



Target Property
Sites at elevations higher than or equal to the target property
Sites at elevations lower than the target property
Coal Gasification Sites
Historical Gas Stations / Historical Dry Cleaners
See the EDR Proprietary Historical Map Findings
Sensitive Receptors
National Priority List Sites
Landfill Sites
Dept. Defense Sites

County Boundary
Oil & Gas pipelines
100-year flood zone
500-year flood zone

Areas of Concern

0 1/16 1/8 1/4 Miles

TARGET PROPERTY:	Tentative Tract Map No. 53108	CUSTOMER:	Building Analytics
ADDRESS:	Wolcott Way/Henry Mayo Drive	CONTACT:	Joe Montoya
CITY/STATE/ZIP:	Valencia CA 91355	INQUIRY #:	1108642.4s
LAT/LONG:	34.4243 / 118.6373	DATE:	January 08, 2004 12:47 pm

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MAP FINDINGS SUMMARY

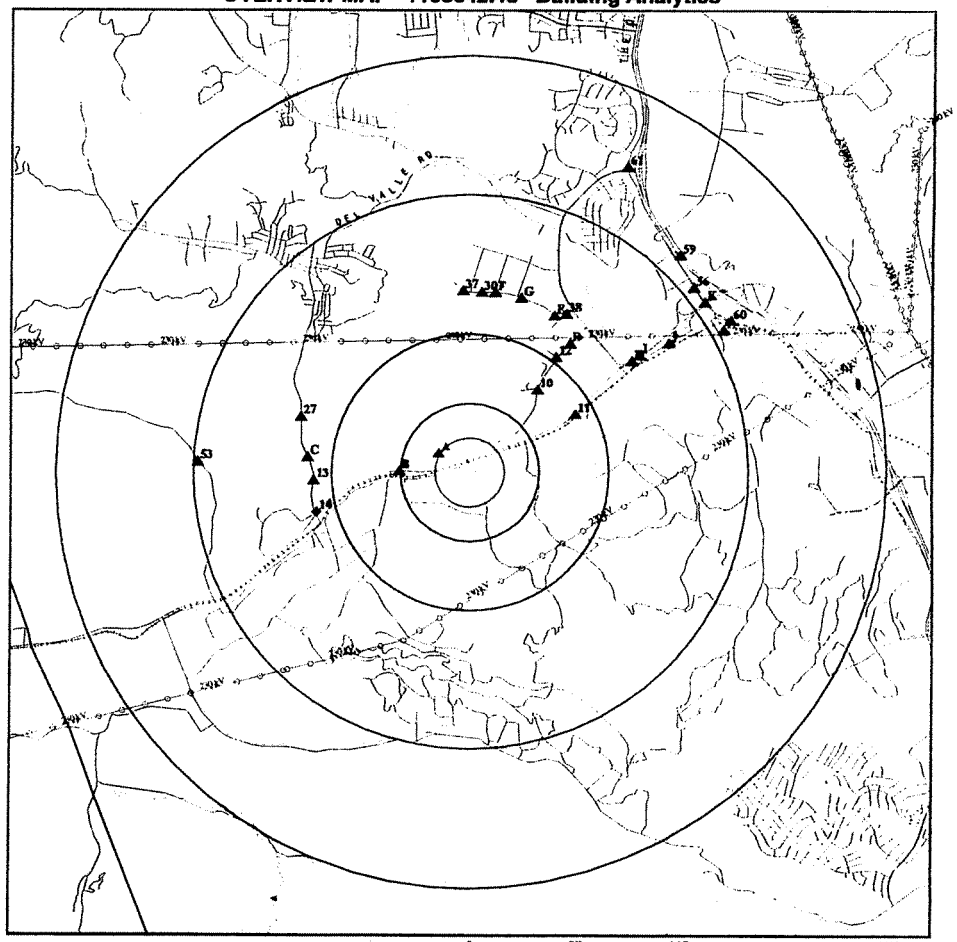
Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		2.500	0	0	0	0	0	0
Proposed NPL		2.500	0	0	0	0	0	0
CERCLIS		2.000	0	0	0	0	0	0
CERC-NFRAP		1.750	0	0	0	0	0	0
CORRACTS		2.500	0	0	0	0	0	0
RCRIS-TSD		2.000	0	0	0	0	0	0
RCRIS Lg. Quan. Gen.		1.750	0	0	0	1	2	3
RCRIS Sm. Quan. Gen.		1.750	0	0	0	1	3	4
ERNS		1.500	0	0	0	0	0	0
STATE ASTM STANDARD								
AWP		2.500	0	0	0	0	0	0
Cal-Sites		2.500	0	0	0	0	0	0
CHMIRS		2.500	0	0	0	0	8	8
Cortese		2.500	0	0	0	0	9	9
Notify 65		2.500	0	0	0	0	0	0
Toxic Pits		2.500	0	0	0	0	0	0
State Landfill		2.000	0	0	0	2	0	2
WMUDS/SWAT		2.000	0	0	1	1	0	2
LUST		2.000	0	0	0	0	5	5
CA Bond Exp. Plan		2.500	0	0	0	0	0	0
UST		1.750	0	0	0	1	2	3
VCP		2.000	0	0	0	0	0	0
INDIAN UST		1.750	0	0	0	0	0	0
CA FID UST		1.750	0	0	0	1	3	4
HIST UST		1.750	0	0	0	1	3	4
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		2.500	0	0	0	0	0	0
ROD		2.500	0	0	0	0	0	0
Delisted NPL		2.500	0	0	0	0	0	0
FINDS		1.500	0	0	0	2	6	8
HMIRS		1.500	0	0	0	0	0	0
MLTS		1.500	0	0	0	0	0	0
MINES		1.750	0	0	0	0	0	0
NPL Liens		1.500	0	0	0	0	0	0
PADS		1.500	0	0	0	0	0	0
DOD		2.500	0	0	0	0	0	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
RAATS		1.500	0	0	0	0	0	0
TRIS		1.500	0	0	0	0	0	0
TSCA		1.500	0	0	0	0	0	0
SSTS		1.500	0	0	0	0	0	0
FTTS		1.500	0	0	0	0	0	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
AST		1.500	0	0	0	0	2	2

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
PPG INDUSTRIES INC WORKS 24	RCRIS-SQG, RCRIS-TSD, FINDS, CORRACTS, CERC-NFRAP, LOS ANGELES CO. HMS
BERTH 70, LONG BEACH HARBOUR	CHMIRS, HAZNET
BERTH 30 LONG BEACH HARBOUR	CHMIRS, HAZNET
FLORENCE AVE / TELEGRAPH RD WHITTIER	CHMIRS, LUST
CSI CRIME SCENE INVESTIGATION	HAZNET
CALIFORNIA INSTITUTE OF THE ARTS	HAZNET
PRODUCTION GOODBYE LOVER	HAZNET
LOS ANGELES COUNTY FIRE DEPT	HAZNET
TECHNICAL TROUBLE SHOOTING	HAZNET
HOWARD CUSTOM BOATS INCORPORATED	FINDS, EMI, HAZNET
DEPARTMENT OF TRANSPORTATION	RCRIS-SQG, FINDS
TWO WATER WELLS RESTORATION	CA WDS
COMMERCE CENTER BRIDGE	CA WDS
CASTAIC CREEK CHANNEL LINING	CA WDS
HWY. 126 BRIDGE	CA WDS
GOLDEN VALLEY ROAD EXTENSION	CA WDS
WATER WELL NO. W-11	CA WDS
GRUBER SYSTEMS, INC	REF
SCHOOL ON 18 ACRE SITE	SCH

OVERVIEW MAP - 1108642.4s - Building Analytics



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- County Boundary
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

TARGET PROPERTY:	Tentative Tract Map No. 53108	CUSTOMER:	Building Analytics
ADDRESS:	Wolcott Way/Henry Mayo Drive	CONTACT:	Joe Montoya
CITY/STATE/ZIP:	Valencia CA 91355	INQUIRY #:	1108642.4s
LAT/LONG:	34.4243 / 118.6373	DATE:	January 08, 2004 12:46 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CLEANERS		1.750	0	0	0	0	0	0
CA WDS		1.500	0	0	0	1	0	1
DEED		1.500	0	0	0	0	0	0
SCH		1.750	0	0	0	0	0	0
NFA		1.750	0	0	0	0	0	0
EMI		1.500	0	0	0	1	2	3
REF		1.750	0	0	0	0	0	0
NFE		1.750	0	0	0	0	0	0
CA SLIC		2.000	0	0	0	0	2	2
HAZNET		1.750	0	0	0	3	16	19
Los Angeles Co. HMS		1.500	0	0	2	0	6	8
LA Co. Site Mitigation		1.500	0	0	0	0	1	1
AOCONCERN		2.500	0	0	0	0	0	0
EDR PROPRIETARY HISTORICAL DATABASES								
Gas Stations/Dry Cleaners		0.250	0	0	NR	NR	NR	0
Coal Gas		2.500	0	0	0	0	0	0
BROWNFIELDS DATABASES								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
VCP		2.000	0	0	0	0	0	0

NOTES:

See the EDR Proprietary Historical Database Section for details

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	Database(s)	EDR ID Number EPA ID Number
A1 **WNW** **1/4-1/2** **1402 ft.**	**CHIQUITA CANYON LANDFILL** **29201 W HENRY MAYO DR** **UNINCORPORATED, CA**	**LOS ANGELES CO. HMS**	**1001865073** **N/A**

Site 1 of 3 in cluster A

Relative: Higher

Actual: 1034 ft.

HMS:

Facility Id:	005897-I06111		
Area:	7		
Facility Type:	I08		
Permit Number:	174	Permit Status:	Closed
Facility Status:	Permit		
Region:	Los Angeles County:		
Facility Id:	005897-037921		
Area:	7		
Facility Type:	I09		
Permit Number:	174	Permit Status:	Permit
Facility Status:	Permit		
Region:	Los Angeles County:		
Facility Id:	005897-037920		
Area:	7		
Facility Type:	T0		
Permit Number:	174	Permit Status:	Permit
Facility Status:	Permit		
Region:	Los Angeles County:		

A2 **WNW** **1/4-1/2** **1402 ft.**	**LAIDLAW WASTE SYSTEMS INC** **29201 W HENRY MAYO DR** **UNINCORPORATED, CA**	**LOS ANGELES CO. HMS**	**S102064584** **N/A**

Site 2 of 3 in cluster A

Relative: Higher

Actual: 1034 ft.

HMS:

Facility Id:	005897-006111		
Area:	7		
Facility Type:	T0		
Permit Number:	174	Permit Status:	Closed
Facility Status:	Permit		
Region:	Los Angeles County:		

A3 **WNW** **1/4-1/2** **1402 ft.**	**UNIVERSAL BY-PRODUCTS-VALENCIA** **29201 SAUGUS-VENTURA ROAD** **VALENCIA, CA**	**WMUDS/SWAT**	**S103441396** **N/A**

Site 3 of 3 in cluster A

Relative: Higher

Actual: 1034 ft.

WMUDS:

Region:	4
Date of Last Facility Edit:	Not reported
Last Facility Editors:	Not reported
Waste Discharge System ID:	4 190133NUR
Solid Waste Information ID:	Not reported
Waste Discharge System:	False
Solid Waste Assessment Test Program:	True
Facility Name:	Not reported
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act Program:	False
Department of Defense:	False

UNIVERSAL BY-PRODUCTS-VALENCIA (Continued) — **S103441396**

Open to Public:	False
Number of WMUDS at Facility:	1
Facility Telephone:	Not reported
Primary Standard Industrial Classification:	Not reported
Secondary Standard Industrial Classification:	Not reported
Solid Waste Assessment Test Program Name:	UNIVERSAL BY-PRODUCTS
NPID:	Not reported
Tonnage:	0
Regional Board ID:	Not reported
Municipal Solid Waste:	False
Superorder:	False
Sub Chapter 15:	False
Reg. Board Project Officer:	LT
Section Range:	Not reported
RCRA Facility:	Not reported
Waste Discharge Requirements:	Not reported
Base Meridian:	Not reported
Waste List:	False
Facility Description:	Not reported
Self-Monitoring Rept. Frequency:	Not reported

Threat to Water Quality:Not reported

Agency:	UNIVERSAL BY-PRODUCTS
Address:	Not reported
Department:	Not reported
Contact:	Not reported
Telephone:	Not reported
Landowner:	Not reported
Address:	CA
Telephone:	Not reported
Contact:	Not reported

B4
West
1/2-1
2690 ft.

Relative: Higher

Actual: 974 ft.

CHIQUITA CANYON LANDFILL INC
29201 HENRY MAYO DRIVE
VALENCIA, CA 91355

HAZNET **S100932492**
SWF/LF **N/A**

Site 1 of 6 in cluster B

LF:

Facility ID:	19-AA-0052
Operator:	Republic Services Of California I, L.L.C
Operator Phone:	(661) 257-3655
Operator Addr:	29201 Henry Mayo Drive Valencia, CA 91355
Owner:	Republic Services Of California I, L.L.C
Owner Address:	Not reported 29201 Henry Mayo Drive Valencia, CA 91355
Owner Telephone:	(661) 257-3655
Activity:	Solid Waste Landfill
Operator's Status:	Active
Regulation Status:	Permitted
Region:	STATE
Lat/Long:	34 / -119
Permit Date:	Not reported
Accepted Waste:	Construction/demolition,Green Materials,Industrial,Inert,Mixed municipal
Restrictions:	
Status :	Not reported
Swisnumber :	Not reported
Site Type :	Not reported

CHIQUITA CANYON LANDFILL INC (Continued) — **S100932492**

Aka :	Not reported
Type Of Waste :	Not reported
Disposal Area :	Not reported
SWFP Date :	Not reported
WDR Number :	Not reported
Dates Of Operation :	Not reported
Closure Approved :	Not reported
Date Of Field Units :	Not reported
Surface Condition :	Not reported
Landfill Gas :	Not reported
Leachate :	Not reported
Emergency Response :	Not reported
Other Recommendation :	Not reported
Reassess Site :	Not reported
Priority For Site Assessment :	Not reported
Lea Date :	Not reported
Explanation:	Not Reported
No Further Action:	Not Reported
Permitted Throughput with Units:	6000
Permitted Throughput with Units:	6000
Permitted Throughput with Units:	6000
Actual Throughput with Units:	Tons/day
Actual Capacity with Units:	45889550
Permitted Capacity with Units:	45889550
Remaining Capacity with Units:	Cubic Yards
Permitted Total Acreage:	592
Inspection Frequency:	Monthly
Landuse Name:	Residential,Recreational,Industrial,Agricultural
GIS Source:	Map
Permit Status:	Permitted
Category:	Disposal
Unit Number:	01
Last Waste Tire Inspection Count :	Not reported
Last Waste Tire Inspection Date:	Not reported
Original Waste Tire Count:	Not reported
Original Waste Tire Count Date:	Not reported
Closure Date:	11/24/2019
Closure Type:	Estimated
Disposal Acreage:	257
Remaining Capacity:	26024360

HAZNET:

Gepaid:	CAL000035857
TSD EPA ID:	AZD049318009
Gen County:	Los Angeles
Tsd County:	99
Tons:	.4250
Waste Category:	Laboratory waste chemicals
Disposal Method:	Transfer Station
Contact:	CHIQUITA CANYON LANDFILL INC
Telephone:	(805) 257-3655
Mailing Address:	29201 HENRY MAYO DR VALENCIA, CA 91355
County	Los Angeles

CHIQUITA CANYON LANDFILL INC (Continued) — **S100932492**

Gepaid: CAL000035857
TSD EPA ID: AZD049318009
Gen County: Los Angeles
Tsd County: 99
Tons: .5000
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Contact: CHIQUITA CANYON LANDFILL INC
Telephone: (805) 257-3655
Mailing Address: 29201 HENRY MAYO DR
VALENCIA, CA 91355
County Los Angeles

Gepaid: CAL000035857
TSD EPA ID: CAT000613893
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .2400
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Contact: CHIQUITA CANYON LANDFILL INC
Telephone: (805) 257-3655
Mailing Address: 29201 HENRY MAYO DR
VALENCIA, CA 91355
County Los Angeles

Gepaid: CAL000035857
TSD EPA ID: CAT000613893
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .1542
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: CHIQUITA CANYON LANDFILL INC
Telephone: (805) 257-3655
Mailing Address: 29201 HENRY MAYO DR
VALENCIA, CA 91355
County Los Angeles

Gepaid: CAL000035857
TSD EPA ID: CAD099452708
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 2.0850
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: CHIQUITA CANYON LANDFILL INC
Telephone: (805) 257-3655
Mailing Address: 29201 HENRY MAYO DR
VALENCIA, CA 91355
County Los Angeles

The CA HAZNET database contains 16 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

CHIQUITA CANYON LANDFILL INC (Continued) — **S100932492**

B5 West 1/2-1 2690 ft. — **LAIDLAW WASTE SYSTEMS INC**, **29201 HENRY MAYO DR**, **VALENCIA, CA 91355** — **CA FID UST** — **S101586012**, **N/A**

Site 2 of 6 in cluster B

Relative: Higher
Actual: 974 ft.

FID:
Facility ID: 19036223 — Regulate ID: Not reported
Reg By: Active Underground Storage Tank Location
Cortese Code: Not reported — SIC Code: Not reported
Status: Active — Facility Tel: (805) 257-3655
Mail To: Not reported
29201 HENRY MAYO DR
VALENCIA, CA 91355
Contact: Not reported — Contact Tel: Not reported
DUNs No: Not reported — NPDES No: Not reported
Creation: 10/22/93 — Modified: 00/00/00
EPA ID: Not reported
Comments: Not reported

B6 West 1/2-1 2690 ft. — **CHIQUITA CANYON LANDFILL**, **29201 HENRY MAYO DR**, **VALENCIA, CA 91310** — **CA WDS**, **EMI**, **HAZNET**, **SWF/LF** — **1002687338**, **N/A**

Site 3 of 6 in cluster B

Relative: Higher
Actual: 974 ft.

LF:
Facility ID: Not reported
Operator: Not reported
Operator Phone: Not reported
Operator Addr:
Owner: Not reported
Owner Address: Not reported
Not reported
Owner Telephone: Not reported
Activity: Not reported
Operator's Status: Not reported
Regulation Status: Not reported
Region: LOS ANGELES
Lat/Long: Not reported
Permit Date: Not reported
Accepted Waste:
Restrictions:
Status : Not reported
Swisnumber : Not reported
Site Type : Not reported
Aka : Not reported
Type Of Waste : Not reported
Disposal Area : Not reported
SWFP Date : Not reported
WDR Number : Not reported
Dates Of Operation : Not reported
Closure Approved : Not reported
Date Of Field Units : Not reported
Surface Condition : Not reported
Landfill Gas : Not reported
Leachate : Not reported

CHIQUITA CANYON LANDFILL (Continued) 1002687338

Emergency Response :	Not reported
Other Recommendation :	Not reported
Reassess Site :	Not reported
Priority For Site Assessment :	Not reported
Lea Date :	Not reported
Explanation:	Not Reported
No Further Action:	Not Reported
Permitted Throughput with Units:	Not reported
Permitted Throughput with Units:	Not reported
Permitted Throughput with Units:	Not reported
Actual Throughput with Units:	Not reported
Actual Capacity with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity with Units:	Not reported
Permitted Total Acreage:	Not reported
Inspection Frequency:	Not reported
Landuse Name:	Not reported
GIS Source:	Not reported
Permit Status:	Not reported
Category:	Not reported
Unit Number:	Not reported
Last Waste Tire Inspection Count :	Not reported
Last Waste Tire Inspection Date:	Not reported
Original Waste Tire Count:	Not reported
Original Waste Tire Count Date:	Not reported
Closure Date:	/ /
Closure Type:	Not reported
Disposal Acreage:	Not reported
Remaining Capacity:	Not reported

HAZNET:

Gepaid:	CAL000196316
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.00
Waste Category:	Off-specification, aged, or surplus organics
Disposal Method:	Transfer Station
Contact:	MATT TERRELL
Telephone:	(661) 257-3655
Mailing Address:	29201 HENRY MAYO DR VALENCIA, CA 91355
County	Not reported

Gepaid:	CAL000196316
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.14
Waste Category:	Off-specification, aged, or surplus organics
Disposal Method:	Recycler
Contact:	MATT TERRELL
Telephone:	(661) 257-3655
Mailing Address:	29201 HENRY MAYO DR VALENCIA, CA 91355
County	Not reported

CHIQUITA CANYON LANDFILL (Continued) 1002687338

Gepaid:	CAL000196316
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	1.66
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Contact:	MATT TERRELL
Telephone:	(661) 257-3655
Mailing Address:	29201 HENRY MAYO DR VALENCIA, CA 91355
County	Not reported

Gepaid:	CAL000196316
TSD EPA ID:	CAD008252405
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.0166
Waste Category:	Off-specification, aged, or surplus organics
Disposal Method:	Recycler
Contact:	REPUBLIC SERVICES OF CA I LLC
Telephone:	(661) 257-3655
Mailing Address:	29201 HENRY MAYO DR VALENCIA, CA 91355
County	Los Angeles

Gepaid:	CAL000196316
TSD EPA ID:	CAT000613893
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.0625
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Not reported
Contact:	REPUBLIC SERVICES OF CA I LLC
Telephone:	(661) 257-3655
Mailing Address:	29201 HENRY MAYO DR VALENCIA, CA 91355
County	Los Angeles

The CA HAZNET database contains 8 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

WDS:

Facility ID:	0		
Facility Contact	Mike Dean (General manager)	Facility Telephone	(661) 257-3655
SIC Code:	4953	SIC Code 2:	Not reported
Agency Name:	A REPUBLIC WASTE SERVICES CO.		
Agency Address:	0		
Agency Contact:	Not reported	Agency Phone:	Not reported
Design Flow:	0 Million Gal/Day	Baseline Flow:	0 Million Gal/Day
Facility Type:	Solid Waste Site-Class III - Landfills for non hazardous solid wastes.		
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.		
Agency Type:	Private		
Waste Type:	Solid Wastes - Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).		

CHIQUITA CANYON LANDFILL (Continued) 1002687338

Threat to Water: Not reported
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.
Reclamation: No reclamation requirements associated with this facility.
POTW: The facility is not a POTW.
NPDES Number: Not reported
Subregion: 4

EMISSIONS :

Facility ID :	61029
Air District Code :	SC
SIC Code :	4959
Total Priority Score :	Not reported
Health Risk Assessment :	Not reported
Non-cancer Chronic Haz Index :	Not reported
Non-cancer Acute Haz Index :	Not reported
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
Total Organic Hydrocarbon Gases :	2
Reactive Organic Gases :	1
Carbon Monoxide Emissions :	6
NOX Gas Emissions (Nitrogen - Oxygen) :	5
SOX Gas Emissions (Sulphur - Oxygen) :	3

Facility ID :	61029
Air District Code :	SC
SIC Code :	4959
Total Priority Score :	Not reported
Health Risk Assessment :	Not reported
Non-cancer Chronic Haz Index :	Not reported
Non-cancer Acute Haz Index :	Not reported
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
Total Organic Hydrocarbon Gases :	Not reported
Reactive Organic Gases :	Not reported
Carbon Monoxide Emissions :	Not reported
NOX Gas Emissions (Nitrogen - Oxygen) :	Not reported
SOX Gas Emissions (Sulphur - Oxygen) :	Not reported

B7 West 1/2-1 2690 ft. — **CHIQUITA CANYON LANDFILL** — WMUDS/SWAT — 1001526767 / N/A
29201 HENRY MAYO DR
VALENCIA CA, CA 91310

Site 4 of 6 in cluster B

Relative: Higher — **Actual: 974 ft.**

WMUDS:

Region:	4
Date of Last Facility Edit:	11/22/1996
Last Facility Editors:	JHM, JHM, JHM
Waste Discharge System ID:	4A190359001
Solid Waste Information ID:	19-AA-0052
Waste Discharge System:	True
Solid Waste Assessment Test Program:	True

CHIQUITA CANYON LANDFILL (Continued) 1001526767

Facility Name:	LAIDLAW WASTE SYSTEMS CHIQUITA, INC.
Toxic Pits Cleanup Act Program:	False
Resource Conservation Recovery Act Program:	False
Department of Defense:	False
Open to Public:	False
Number of WMUDS at Facility:	5
Facility Telephone:	(805) 257-3655
Primary Standard Industrial Classification:	4953
Secondary Standard Industrial Classification:	Not reported
Solid Waste Assessment Test Program Name:	LAIDLAW WASTE SYSTEMS CHIQUITA, INC
NPID:	Not reported
Tonnage:	5000
Regional Board ID:	67-20
Municipal Solid Waste:	True
Superorder:	True
Sub Chapter 15:	True
Reg. Board Project Officer:	Not reported
Section Range:	04N17W14
RCRA Facility:	No
Waste Discharge Requirements:	A
Base Meridian:	SB
Waste List:	True
Facility Description:	Not reported
Self-Monitoring Rept. Frequency:	Quarterly Submittal

Threat to Water Quality: Major Threat to Water Quality. A violation could render unusable a ground water or surface water resource used as a significant drink water supply, require closure of an area used for contact recreation, result in long-term deleterious effects on shell fish spawning or growth areas of aquatic resources, or directly expose the public to toxic substances.
Facility Type: Solid Waste Site-Class III - Landfills for non hazardous solid wastes.
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.
Prime Waste: Solid Wastes - Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Agency: USA WASTE
Address: 29201 HENRY MAYO DRIVE
VALENCIA CA 91310
Department: REGIONAL ENGINEER
Contact: RYAN WURGLER
Telephone: (805) 257-3655
Type: Private
Landowner: NEWHALL LAND & FARMING
Address: 27050 HENRY MAYO DR.
CASTAIC, CA 91310
Telephone: (805) 255-4000
Contact: Not reported
Comments: REGIONAL BOARD SAYS 3500 TONS PER DAY...

CHIQUITA CANYON LANDFILL (Continued) — **1001526767**

B8 — **LAIDLAW WASTE SYSTEMS INC** — **UST** — **U003776127**
West — **29201 HENRY MAYO DR** — **N/A**
1/2-1 — **CASTAIC, CA 91384**
2690 ft.

Site 5 of 6 in cluster B

Relative: Higher
Actual: 974 ft.

State UST:
Facility ID: 6111
Region: STATE
Local Agency: 19000

B9 — **CHIQUITA CANYON SANITARY LANDFILL** — **RCRIS-SQG** — **1000820545**
West — **29201 HENRY MAYO DRIVE** — **FINDS** — **CAD983666041**
1/2-1 — **CASTAIC, CA 91384**
2690 ft.

Site 6 of 6 in cluster B

Relative: Higher
Actual: 974 ft.

RCRIS:
Owner: LAIDLAW WASTE SYSTEMS INC
(805) 257-3655
EPA ID: CAD983666041
Contact: SONNY STAATS
(805) 257-3655
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
AIRS/AIRS Facility Subystem (AIRS/AFS)
National Emissions Inventory (NEI)
National Emissions Trends (NET)
National Toxics Inventory (NTI)
Resource Conservation and Recovery Act Information system (RCRAINFO)
Solid Waste Inventory System (California sub-system of landfills) (SWIS)

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10 — **T A MANUFACTURING CO** — **RCRIS-LQG** — **1001231332**
NE — **28065 W FRANKLIN PKWY** — **FINDS** — **CAR000039230**
1/2-1 — **VALENCIA, CA 91355** — **HAZNET**
4090 ft.

Relative: Higher
Actual: 983 ft.

RCRIS:
Owner: T A MANUFACTURING CO
(805) 775-1100
EPA ID: CAR000039230
Contact: DAVID SCHMIDT
(805) 775-1100
Classification: Large Quantity Generator
TSDF Activities: Not reported

T A MANUFACTURING CO (Continued) — **1001231332**

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

HAZNET:

Gepaid:	CAR000039230
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	99
Tons:	0.00
Waste Category:	Other inorganic solid waste
Disposal Method:	Treatment, Incineration
Contact:	ERIC BENFORD
Telephone:	(661) 775-1100
Mailing Address:	28065 W FRANKLIN PKWY VALENCIA, CA 91355
County	Not reported

Gepaid:	CAR000039230
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	99
Tons:	0.10
Waste Category:	Off-specification, aged, or surplus organics
Disposal Method:	Disposal, Land Fill
Contact:	ERIC BENFORD
Telephone:	(661) 775-1100
Mailing Address:	28065 W FRANKLIN PKWY VALENCIA, CA 91355
County	Not reported

Gepaid:	CAR000039230
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	99
Tons:	0.04
Waste Category:	Off-specification, aged, or surplus organics
Disposal Method:	Recycler
Contact:	ERIC BENFORD
Telephone:	(661) 775-1100
Mailing Address:	28065 W FRANKLIN PKWY VALENCIA, CA 91355
County	Not reported

Gepaid:	CAR000039230
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	3.62
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Recycler
Contact:	ERIC BENFORD
Telephone:	(661) 775-1100
Mailing Address:	28065 W FRANKLIN PKWY VALENCIA, CA 91355
County	Not reported

T A MANUFACTURING CO (Continued) — 1001231332

Gepaid: CAR000039230
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.40
Waste Category: Unspecified organic liquid mixture
Disposal Method: Recycler
Contact: ERIC BENFORD
Telephone: (661) 775-1100
Mailing Address: 28065 W FRANKLIN PKWY
VALENCIA, CA 91355
County: Not reported

The CA HAZNET database contains 55 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

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11 ENE 1/2-1 4583 ft. — **TRAVEL VILLAGE**, **27946 HENRY MAYO DR**, **CASTAIC, CA 91355** — HIST UST — U001567876 / N/A

Relative: Higher
Actual: 984 ft.

UST HIST:
Facility ID: 41379
Total Tanks: 1
Owner Name: NEWHALL INVESTMENT PROPERTIES
Owner Address: 23823 VALENCIA BOULEVARD
VALENCIA, CA 91355
Facility Status: Not reported
Region: STATE
Box Number: Not reported

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12 NE > 1 5500 ft. — **BLOOMERS METAL STAMPINGS INC**, **28615 BRAXTON AVE**, **VALENCIA, CA 91355** — HAZNET — S105724739 / N/A

Relative: Higher
Actual: 1020 ft.

HAZNET:
Gepaid: CAL000214634
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Kings
Tons: 4.21
Waste Category: Other inorganic solid waste
Disposal Method: Disposal, Land Fill
Contact: PERRY BLOOMER / VICE PRESIDENT
Telephone: (661) 257-2955
Mailing Address: 28615 BRAXTON AVE
VALENCIA, CA 91355
County: Not reported

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13 West > 1 5954 ft. — **27900 CHIQUITO CANYON ROAD**, **UNINC, CA** — CHMIRS — S100216887 / N/A

Relative: Higher
Actual: 962 ft.

CHMIRS:
OES Control Number: 8904996
Chemical Name: Not reported
Extent of Release: Not reported
Property Use: Petroleum Refinery

(Continued) — S100216887

Incident Date: 23-FEB-89
Date Completed: 23-FEB-89
Time Completed: 2035
Agency Id Number: 19110
Agency Incident Number: 52
OES Incident Number: 8904996
Time Notified: 1915
Surrounding Area: 946
Estimated Temperature: Not reported
Property Management: P
More Than Two Substances Involved?: N
Special Studies 1: Not reported
Special Studies 2: Not reported
Special Studies 3: Not reported
Special Studies 4: Not reported
Special Studies 5: Not reported
Special Studies 6: Not reported
Responding Agency Personel # Of Injuries: 0
Responding Agency Personel # Of Fatalities: 0
Resp Agncy Personel # Of Decontaminated: 0
Others Number Of Decontaminated: 0
Others Number Of Injuries: 0
Others Number Of Fatalities: 0
Vehicle Make/year: Not reported
Vehicle License Number: Not reported
Vehicle State: Not reported
Vehicle Id Number: Not reported
CA/DOT/PUC/ICC Number: Not reported
Company Name: Not reported
Reporting Officer Name/ID: CAPT. JOHN W. EVERETT
Report Date: 26-FEB-89
Comments: Not reported
Facility Telephone Number: 213 267-2485
Waterway Involved: Not reported
Waterway: Not reported
Spill Site: Not reported
Cleanup By: Not reported
Containment: Not reported
What Happened: Not reported
Type: Not reported
Other: Not reported
Chemical 1: Not Reported
Chemical 2: Not Reported
Chemical 3: Not Reported
Date/Time: Not reported
Evacuations: Not reported

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14 WSW > 1 6031 ft. — **NEWHALL LAND & FARMING**, **3003 WALNUT ORCHARD RD**, **VALENCIA, CA 91350** — Cortese, LUST — S102434348 / N/A

Relative: Lower
Actual: 949 ft.

State LUST:
Cross Street: HENRY MAYO DRIVE
Qty Leaked: Not reported
Case Number: I-14101
Reg Board: 4
Chemical: Gasoline
Lead Agency: Regional Board

NEWHALL LAND & FARMING (Continued) S102434348

Local Agency : 19000
Case Type: Soil only
Status: Case Closed
Review Date: Not reported
Workplan: 3/9/90
Pollution Char: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 06/27/1996
Release Date: 03/09/1990
Cleanup Fund Id : Not reported
Discover Date : 01/25/1989
Enforcement Dt : Not reported
Enf Type: Not reported
Enter Date : 03/05/1990
Funding: Federal Funds
Staff Initials: Not reported
How Discovered: Tank Closure
How Stopped: Not reported
Interim : Not reported
Leak Cause: UNK
Leak Source: UNK
MTBE Date : / /
Max MTBE GW : 0 Parts per Billion
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Priority: Not reported
Local Case # : Not reported
Beneficial: Not reported
Staff : JLC
GW Qualifier : Not reported
Max MTBE Soil : Not reported
Soil Qualifier : Not reported
Hydr Basin #: Not reported
Operator : JONES, ROGER ALSO SEE I-14100
Oversight Prgm: RB Lead Underground Storage Tank
Oversight Prgm : UST
Review Date : 07/22/1998
Stop Date : 01/25/1989
Work Suspended : Not reported
Responsible Party: NEWHALL LAND AND FARM
RP Address: 23823 VALENCIA BLVD., VAKENCIA, 91355 C
Global Id: T0603704137
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: 0
Mtbe Fuel: 1
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

Confirm Leak: Not reported
Prelim Assess: 3/9/90
Remed Plan: Not reported

LUST Region 4:
Report Date: 3/9/1990
Lead Agency: Regional Board
Local Agency: 19000
Case Number: I-14101
Substance: Gasoline

NEWHALL LAND & FARMING (Continued) S102434348

Case Type: Soil
Status: Case Closed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Federal Funds
Date the Leak was Discovered: 1/25/1989
How the Leak was Discovered: Tank Closure
How the Leak was Stopped: Close Tank
Cause of Leak: Unknown
Leak Source: Unknown
Date The Leak was Stopped: 1/25/1989
Date Confirmation Leak Began: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: 3/9/1990
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 6/27/1996
Date Case Last Changed on Database: 7/22/1998
Enforcement Action Date: Not reported
Date Leak First Reported: 3/9/1990
Enforcement Type: Not reported
Global ID : T0603704137
Organization : Not reported
Historical Max MTBE Data: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil : Not reported
County: Los Angeles
Regional Board: 04
Owner Contact: Not reported
Responsible Party: NEWHALL LAND AND FARM
RP Address: 23823 VALENCIA BLVD., VAKENCIA, 91355 C
Significant Interim Remedial Action Taken: Not reported
Program : UST
Lat / Long : 34.4200613 / -118.6567124
MTBE Counts : 0
MTBE Fuel : 1
MTBE Tested : NT
Local Agency Staff: UNK
Summary : Not reported
Hydrologic Basin # : Not reported
Beneficial Use : Not reported
Priority : Not reported
Cleanup Fund Id : Not reported
Suspended : Not reported
Local Case No : Not reported
Substance Quantity : Not reported
Abatement Method Used at the Site: Not reported
Operator : JONES, ROGER ALSO SEE I-14100
Water System : WALNUT HILL
Well Name : WELL C-6
Approx. Dist To Production Well (ft) : 8339.4141756642599077889829 5
W Global ID : W0603709014
Assigned Name : 04N/17W-14Q07 S

NEWHALL LAND & FARMING (Continued) — S102434346

MTBE Class : Not reported

CORTESE:
Region: CORTESE
Fac Address 2: 3003 WALNUT ORCHARD RD

C15 West > 1 6207 ft. — **DEL VALLE TRAINING CENTER** — LA Co. Site Mitigation — S103697023 / N/A
28101 CHIQUITO CANYON RD
SCV, CA 91350

Relative: Higher
Actual: 994 ft.

Site 1 of 6 in cluster C

Site Mitigation Log:
Case Number: 91S259
Abatement Date: 08/12/97
Thomas Guide Page Numbers: 4549C2

C16 West > 1 6207 ft. — **LA CTY FIRE DEPT/DELVAL TRG CTR** — HAZNET — S103649248 / N/A
28101 CHIQUITO CANYON ROAD
CASTAIC, CA 91384

Relative: Higher
Actual: 994 ft.

Site 2 of 6 in cluster C

HAZNET:
Gepaid: CAL000100193
TSD EPA ID: CAT080013352
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .6255
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: COUNTY OF LOS ANGELES-FIRE DEP
Telephone: (818) 448-0161
Mailing Address: 1320 N EASTERN AVE
LOS ANGELES, CA 90063 - 3294
County Los Angeles

Gepaid: CAL000100193
TSD EPA ID: CAD000088252
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .5293
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Contact: COUNTY OF LOS ANGELES-FIRE DEP
Telephone: (818) 448-0161
Mailing Address: 1320 N EASTERN AVE
LOS ANGELES, CA 90063 - 3294
County Los Angeles

Gepaid: CAL000100193
TSD EPA ID: CAD000088252
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .3880
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Contact: COUNTY OF LOS ANGELES-FIRE DEP
Telephone: (818) 448-0161
Mailing Address: 1320 N EASTERN AVE

LA CTY FIRE DEPT/DELVAL TRG CTR (Continued) — S103649248

LOS ANGELES, CA 90063 - 3294
County Los Angeles

C17 West > 1 6207 ft. — **L A COUNTY FIRE DEPT** — LOS ANGELES CO. HMS, LUST — S102064540 / N/A
28101 N CHIQUITO CANYON RD
CASTAIC, CA 91384

Relative: Higher
Actual: 994 ft.

Site 3 of 6 in cluster C

State LUST:
Cross Street: SAN MARTINEZ CYN RD
Qty Leaked: Not reported
Case Number R-00003
Reg Board: 4
Chemical: Hydrocarbons
Lead Agency: Local Agency
Local Agency : 19000
Case Type: Soil only
Status: Leak being confirmed
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Review Date: 04/10/1991 — Confirm Leak: 04/10/1991
Workplan: Not reported — Prelim Assess: Not reported
Pollution Char: Not reported — Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: Not reported
Release Date: 12/03/1997
Cleanup Fund Id : Not reported
Discover Date : 04/10/1991
Enforcement Dt : Not reported
Enf Type: Not reported
Enter Date : 02/18/1998
Funding: Not reported
Staff Initials: Not reported
How Discovered: OM
How Stopped: Not reported
Interim : Not reported
Leak Cause: Not reported
Leak Source: Tank
MTBE Date : / /
Max MTBE GW : 0 Parts per Billion
MTBE Tested: Not Required to be Tested.
Priority: Not reported
Local Case # : Not reported
Beneficial: Not reported
Staff : JLC
GW Qualifier : Not reported
Max MTBE Soil : Not reported
Soil Qualifier : Not reported
Hydr Basin #: Not reported
Operator : Not reported
Oversight Prgm: Local Implementing Agency UST (includes non-LOP cases within LOP jurisdiction)
Oversight Prgm : LIA
Review Date : 12/03/1997
Stop Date : / /
Work Suspended :Not reported
Responsible PartyUNOCAL CORP

L A COUNTY FIRE DEPT (Continued) S102064540

RP Address: 2125 KNOLL DR., P.O. BOX 6176, VENTURA, CA 93003
Global Id: T0603704507
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: 0
Mtbe Fuel: 0
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 4:
Report Date: 12/3/1997
Lead Agency: Local Agency
Local Agency: 19000
Case Number: R-00003
Substance: Hydrocarbons
Case Type: Soil
Status: Leak being confirmed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Not reported
Date the Leak was Discovered: 4/10/1991
How the Leak was Discovered: Other Means
How the Leak was Stopped: Close Tank
Cause of Leak: Not reported
Leak Source: Tank
Date The Leak was Stopped: Not reported
Date Confirmation Leak Began: 4/10/1991
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: Not reported
Date Case Last Changed on Database: 12/3/1997
Enforcement Action Date: Not reported
Date Leak First Reported: 12/3/1997
Enforcement Type: Not reported
Global ID : T0603704507
Organization : Not reported
Historical Max MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil : Not reported
County: Los Angeles
Regional Board: 04
Owner Contact: Not reported
Responsible Party: UNOCAL CORP
RP Address: 2125 KNOLL DR., P.O. BOX 6176, VENTURA, CA 93003
Significant Interim Remedial Action Taken: Not reported
Program : LIA
Lat / Long : 34.4358266 / -118.6591324
MTBE Counts : 0
MTBE Fuel : 0

L A COUNTY FIRE DEPT (Continued) S102064540

MTBE Tested : NRQ
Local Agency Staff: UNK
Summary : TPH 17000 PPM, 36000 PPM & 20000 PPM IN SOIL DEPTH TO GW 300 FT BGS.
Hydrologic Basin # : Not reported
Beneficial Use : Not reported
Priority : Not reported
Cleanup Fund Id : Not reported
Suspended : Not reported
Local Case No : Not reported
Substance Quantity : Not reported
Abatement Method Used at the Site: Excavate and Dispose
Operator : Not reported
Water System : WALNUT HILL
Well Name : WELL C-6
Approx. Dist To Production Well (ft) : 9199.3148241037374240915100 48
W Global ID : W0603709014
Assigned Name : 04N/17W-14Q07 S
MTBE Class : Not reported

HMS:
Facility Id: 000003-I00003
Area: 7
Facility Type: I09
Permit Number: 174 Permit Status: Removed
Facility Status: Removed
Region: Los Angeles County:

Facility Id: 000003-000003
Area: 7
Facility Type: T0
Permit Number: 174 Permit Status: Removed
Facility Status: Removed
Region: Los Angeles County:

C18 **UNOCAL - LINCOLN LEASE** **CA SLIC** **S104404774**
West **28101 CHIQUITO CYN** **N/A**
> 1 **CASTAIC, CA 91384**
6207 ft.

Site 4 of 6 in cluster C

Relative: Higher

SLIC Region 4:
Facility Status: Closure
Region: 4
SLIC 0520B
Staff: Manjulika Chakarbarti
Substance: TPH

Actual: 994 ft.

C19 **LA CO FD FIRE TRAINING CN** **Cortese** **S105023127**
West **28101 CHIQUITO CNYN** **N/A**
> 1 **CASTAIC, CA 91384**
6212 ft.

Site 5 of 6 in cluster C

Relative: Higher

CORTESE:
Region: CORTESE
Fac Address 2: Not reported

Actual: 994 ft.

LA CO FD FIRE TRAINING CN (Continued) — **S105023127**

C20 West > 1 6212 ft. — **DEL VALLE REGIONAL EMERGENCY TRAINING CTR**, **28101 CHIQUITO CANYON RD**, **CASTAIC, CA 91384** — AST — A100210954 / N/A

Site 6 of 6 in cluster C

Relative: Higher — Actual: 994 ft.

AST:
- Owner: LOS ANGELES COUNTY FIRE DEPT
- Total Gallons: 2000

D21 NE > 1 6222 ft. — **US POSTAL SERVICE, SANTA CLARI**, **28201 FRANKLIN PKY**, **SANTA CLARITA, CA 91383** — EMI — S105940246 / N/A

Site 1 of 4 in cluster D

Relative: Higher — Actual: 1022 ft.

EMISSIONS :

Facility ID :	100544
Air District Code :	SC
SIC Code :	4300
Total Priority Score :	Not reported
Health Risk Assessment :	Not reported
Non-cancer Chronic Haz Index :	Not reported
Non-cancer Acute Haz Index :	Not reported
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
Total Organic Hydrocarbon Gases :	Not reported
Reactive Organic Gases :	Not reported
Carbon Monoxide Emissions :	Not reported
NOX Gas Emissions (Nitrogen - Oxygen) :	Not reported
SOX Gas Emissions (Sulphur - Oxygen) :	Not reported

D22 NE > 1 6222 ft. — **US POSTAL - SANTA CLARITA P&DC**, **28201 FRANKLIN PKWY**, **SANTA CLARITA, CA 91383** — UST — U003777338 / N/A

Site 2 of 4 in cluster D

Relative: Higher — Actual: 1022 ft.

State UST:
- Facility ID: 17066
- Region: STATE
- Local Agency: 19000

D23 NE > 1 6222 ft. — **28201 FRANKLIN PARKWAY**, **SANTA CLARITA, CA 02584** — CHMIRS, HAZNET — S103993337 / N/A

Site 3 of 4 in cluster D

Relative: Higher — Actual: 1022 ft.

(Continued) — **S103993337**

HAZNET:

Gepaid:	CAL000157107
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Not reported
Tons:	0.33
Waste Category:	Polychlorinated biphenyls and material containing PCB's
Disposal Method:	Recycler
Contact:	KEN GONZALES/MAINT ENG SP
Telephone:	(661) 775-7975
Mailing Address:	28201 FRANKLIN PKWY SANTA CLARITA, CA 91383 - 9735
County	Not reported

Gepaid:	CAL000157107
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.04
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Recycler
Contact:	KEN GONZALES/MAINT ENG SP
Telephone:	(661) 775-7975
Mailing Address:	28201 FRANKLIN PKWY SANTA CLARITA, CA 91383 - 9735
County	Not reported

Gepaid:	CAL000157107
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	San Bernardino
Tons:	3.28
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Transfer Station
Contact:	KEN GONZALES/MAINT ENG SP
Telephone:	(661) 775-7975
Mailing Address:	28201 FRANKLIN PKWY SANTA CLARITA, CA 91383 - 9735
County	Not reported

Gepaid:	CAL000157107
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	San Bernardino
Tons:	0.22
Waste Category:	Waste oil and mixed oil
Disposal Method:	Transfer Station
Contact:	KEN GONZALES/MAINT ENG SP
Telephone:	(661) 775-7975
Mailing Address:	28201 FRANKLIN PKWY SANTA CLARITA, CA 91383 - 9735
County	Not reported

(Continued) S103993337

Gepaid:	CAL000157107
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	San Bernardino
Tons:	0.20
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Transfer Station
Contact:	KEN GONZALES/MAINT ENG SP
Telephone:	(661) 775-7975
Mailing Address:	28201 FRANKLIN PKWY SANTA CLARITA, CA 91383 - 9735
County	Not reported

The CA HAZNET database contains 39 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

CHMIRS:

OES Control Number:	97-2033
Chemical Name:	Ink
Extent of Release:	Not reported
Property Use:	Not reported
Incident Date:	Not reported
Date Completed:	Not reported
Time Completed :	Not reported
Agency Id Number :	Not reported
Agency Incident Number :	Not reported
OES Incident Number :	97-2033
Time Notified :	Not reported
Surrounding Area :	Not reported
Estimated Temperature :	Not reported
Property Management :	Not reported
More Than Two Substances Involved? :	Not reported
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	Not reported
Others Number Of Decontaminated :	Not reported
Others Number Of Injuries :	Not reported
Others Number Of Fatalities :	Not reported
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	Yes
Waterway :	Drain
Spill Site :	Other

(Continued) S103993337

Cleanup By :	Not being accomplished
Containment :	Unknown
What Happened :	Dumped by employees, weekley into drain
Type :	OTHER, CHEMICAL
Other :	Ink
Chemical 1 :	Solvent
Quantity Released :	15 Gal(s)
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	5/21/97
Evacuations :	0

D24
NE
> 1
6222 ft.

28201 FRANKLIN PKWY, BMF
SANTA CLARITA, CA 91387

CHMIRS **S105882989**
N/A

Site 4 of 4 in cluster D

Relative:
Higher

Actual:
1022 ft.

CHMIRS:

OES Control Number:	02-1417
Chemical Name:	Motor Oil
Extent of Release:	Not reported
Property Use:	Not reported
Incident Date:	Not reported
Date Completed:	Not reported
Time Completed :	Not reported
Agency Id Number :	Not reported
Agency Incident Number :	Not reported
OES Incident Number :	02-1417
Time Notified :	Not reported
Surrounding Area :	Not reported
Estimated Temperature :	Not reported
Property Management :	Not reported
More Than Two Substances Involved? :	Not reported
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	Not reported
Others Number Of Decontaminated :	Not reported
Others Number Of Injuries :	Not reported
Others Number Of Fatalities :	Not reported
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	Yes
Waterway :	storm drain
Spill Site :	Other

(Continued) S105882989

Cleanup By :	Reporting Party
Containment :	Unknown
What Happened :	A vehicle leaked oil into a storm drain
Type :	Qt.(s)
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	3/14/2002 1330
Evacuations :	0

E25 NNE > 1 6527 ft. — **R A H INDUSTRIES**, **28035 HARRISON PKWY**, **VALENCIA, CA 91355** — RCRIS-SQG, FINDS, HAZNET — 1004677606, CAR000099523

Relative: Higher **Actual: 1054 ft.**

Site 1 of 5 in cluster E

RCRIS:
Owner: R A H INDUSTRIES INC
(661) 295-5190
EPA ID: CAR000099523
Contact: RICHARD CRESPO
(661) 295-5190
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

HAZNET:

Gepaid:	CAR000099523
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	1.27
Waste Category:	Waste oil and mixed oil
Disposal Method:	Recycler
Contact:	Richard Crespo
Telephone:	(661) 295-5190
Mailing Address:	28035 Harrison Pkwy Valencia, CA 91355
County	Not reported

Gepaid:	CAR000099523
TSD EPA ID:	Not reported
Gen County:	Not reported
Tsd County:	Not reported
Tons:	0.69
Waste Category:	Waste oil and mixed oil
Disposal Method:	Not reported
Contact:	Richard Crespo
Telephone:	(661) 295-5190
Mailing Address:	28035 Harrison Pkwy Valencia, CA 91355
County	Not reported

R A H INDUSTRIES (Continued) 1004677606

Gepaid:	CAR000099523
TSD EPA ID:	Not reported
Gen County:	Not reported
Tsd County:	Not reported
Tons:	0.69
Waste Category:	Waste oil and mixed oil
Disposal Method:	Transfer Station
Contact:	Richard Crespo
Telephone:	(661) 295-5190
Mailing Address:	28035 Harrison Pkwy Valencia, CA 91355
County	Not reported

E26 NNE > 1 6578 ft. — **EMCO**, **28045 W HARRISON PKWY**, **VALENCIA, CA 91355** — HAZNET — S106092383, N/A

Relative: Higher **Actual: 1053 ft.**

Site 2 of 5 in cluster E

HAZNET:

Gepaid:	CAL000229937
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.34
Waste Category:	Aqueous solution with less than 10% total organic residues
Disposal Method:	Transfer Station
Contact:	MATT HAY
Telephone:	(661) 294-9966
Mailing Address:	28045 W HARRISON PKWY VALENCIA, CA 91355
County	Not reported

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27 WNW > 1 6784 ft. — **JERRY AVALOS TRUCKING**, **28459 CHIQUITO CANYON RD**, **VAL VERDE, CA 91350** — HAZNET — S105724410, N/A

Relative: Higher **Actual: 1046 ft.**

HAZNET:

Gepaid:	CAL000207708
TSD EPA ID:	Not reported
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	0.02
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Not reported
Contact:	ROBERT AVALOS
Telephone:	(818) 367-8415
Mailing Address:	28459 CHIQUITO CANYON RD VAL VERDE, CA 91350
County	Not reported

E28 NNE > 1 6790 ft. — **DEL WEST ENGINEERING**, **28128 W LIVINGSTON AVE**, **VALENCIA, CA 91355** — **RCRIS-LQG, FINDS, HAZNET** — **1001459707 / CAR000048694**

Relative: Higher — **Actual: 1063 ft.**

Site 3 of 5 in cluster E

RCRIS:
Owner: DEL WEST ENGINEERING
(805) 295-5700
EPA ID: CAR000048694
Contact: BEN MC CABE
(805) 295-5700
Classification: Large Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

HAZNET:
Gepaid: CAR000048694
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 5.00
Waste Category: Unspecified oil-containing waste
Disposal Method: Not reported
Contact: R J SOUKUP/FACILITIES MGR
Telephone: (661) 295-5700
Mailing Address: 28128 W LIVINGSTON AVE
VALENCIA, CA 91355
County Not reported

Gepaid: CAR000048694
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 4.17
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Contact: R J SOUKUP/FACILITIES MGR
Telephone: (661) 295-5700
Mailing Address: 28128 W LIVINGSTON AVE
VALENCIA, CA 91355
County Not reported

Gepaid: CAR000048694
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.01
Waste Category: Liquids with pH <UN-> 2
Disposal Method: Recycler
Contact: R J SOUKUP/FACILITIES MGR
Telephone: (661) 295-5700
Mailing Address: 28128 W LIVINGSTON AVE
VALENCIA, CA 91355
County Not reported

DEL WEST ENGINEERING (Continued) — **1001459707**

Gepaid: CAR000048694
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: San Bernardino
Tons: 7.50
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Contact: R J SOUKUP/FACILITIES MGR
Telephone: (661) 295-5700
Mailing Address: 28128 W LIVINGSTON AVE
VALENCIA, CA 91355
County Not reported

Gepaid: CAR000048694
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: San Bernardino
Tons: 14.63
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: R J SOUKUP/FACILITIES MGR
Telephone: (661) 295-5700
Mailing Address: 28128 W LIVINGSTON AVE
VALENCIA, CA 91355
County Not reported

The CA HAZNET database contains 41 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

E29 NNE > 1 6795 ft. — **DEL WEST ENGINEERING**, **28128 W LIVINGSTON AVE**, **UNINCORPORATED, CA** — **LOS ANGELES CO. HMS** — **1001472911 / N/A**

Relative: Higher — **Actual: 1063 ft.**

Site 4 of 5 in cluster E

HMS:
Facility Id: 017610-024096
Area: 7
Facility Type: I09
Permit Number: 174 — Permit Status: Permit
Facility Status: Permit
Region: Los Angeles County:

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30 North > 1 6873 ft. — **20TH CENTURY FOX,PAPI CHULO**, **28455 LIVINGSTON AVE**, **VALENCIA, CA 91355** — **HAZNET** — **S106088596 / N/A**

Relative: Higher — **Actual: 1173 ft.**

HAZNET:
Gepaid: CAC002555271
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.31
Waste Category: Latex waste
Disposal Method: Recycler
Contact: ORLANDO PEREZ, PAINTER
Telephone: (818) 800-0454

20TH CENTURY FOX,PAPI CHULO (Continued) — S106088596

Mailing Address: 805 S SAN FERNANDO RD
BURBANK, CA 91502
County: Not reported

E31 NNE > 1 6895 ft. — **REGENT AEROSPACE INC** — HAZNET — S105725099 / N/A
28110 HARRISON PKWY
VALENCIA, CA 91355

Relative: Higher
Actual: 1042 ft.

Site 5 of 5 in cluster E

HAZNET:
Gepaid: CAL000220147
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.02
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)
Disposal Method: Recycler
Contact: MIKE VARGAS
Telephone: (661) 257-3000
Mailing Address: 28110 HARRISON PKWY
VALENCIA, CA 91355
County: Not reported

Gepaid: CAL000220147
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.24
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Treatment, Tank
Contact: MIKE VARGAS
Telephone: (661) 257-3000
Mailing Address: 28110 HARRISON PKWY
VALENCIA, CA 91355
County: Not reported

Gepaid: CAL000220147
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.06
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Transfer Station
Contact: MIKE VARGAS
Telephone: (661) 257-3000
Mailing Address: 28110 HARRISON PKWY
VALENCIA, CA 91355
County: Not reported

Gepaid: CAL000220147
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.91
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: MIKE VARGAS
Telephone: (661) 257-3000
Mailing Address: 28110 HARRISON PKWY

REGENT AEROSPACE INC (Continued) — S105725099

VALENCIA, CA 91355
County: Not reported

Gepaid: CAL000220147
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Sacramento
Tons: 1.17
Waste Category: Other organic solids
Disposal Method: Disposal, Other
Contact: MIKE VARGAS
Telephone: (661) 257-3000
Mailing Address: 28110 HARRISON PKWY
VALENCIA, CA 91355
County: Not reported

The CA HAZNET database contains 4 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

F32 North > 1 6913 ft. — **TIME AVIATION SERVICES INC** — RCRIS-SQG / FINDS — 1001967326 / CAR000067363
28402 W LIVINGSTON AVE
VALENCIA, CA 91355

Relative: Higher
Actual: 1151 ft.

Site 1 of 2 in cluster F

RCRIS:
Owner: JOHN W BUTLER
(661) 702-0800
EPA ID: CAR000067363
Contact: LARRY COLLINS
(661) 702-7311
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

F33 North > 1 6913 ft. — **TIME AVIATION SERVICES** — HAZNET — S105094017 / N/A
28402 W LIVINGSTON AVE
VALENCIA, CA 91355

Relative: Higher
Actual: 1151 ft.

Site 2 of 2 in cluster F

HAZNET:
Gepaid: CAR000067363
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.42
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: LARRY COLLINGS - DIR OF QUALIT
Telephone: (661) 702-7311
Mailing Address: 28402 W LIVINGSTON AVE
VALENCIA, CA 91355 - 1415

TIME AVIATION SERVICES (Continued) — **S105094017**

County: Not reported

Gepaid: CAR000067363
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.12
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Transfer Station
Contact: LARRY COLLINGS - DIR OF QUALIT
Telephone: (661) 702-7311
Mailing Address: 28402 W LIVINGSTON AVE
VALENCIA, CA 91355 - 1415
County: Not reported

Gepaid: CAR000067363
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.06
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Transfer Station
Contact: LARRY COLLINGS - DIR OF QUALIT
Telephone: (661) 702-7311
Mailing Address: 28402 W LIVINGSTON AVE
VALENCIA, CA 91355 - 1415
County: Not reported

Gepaid: CAR000067363
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: San Bernardino
Tons: 1.04
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Contact: LARRY COLLINGS - DIR OF QUALIT
Telephone: (661) 702-7311
Mailing Address: 28402 W LIVINGSTON AVE
VALENCIA, CA 91355 - 1415
County: Not reported

Gepaid: CAR000067363
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.8
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: LARRY COLLINGS - DIR OF QUALIT
Telephone: (661) 702-7311
Mailing Address: 28402 W LIVINGSTON AVE
VALENCIA, CA 91355 - 1415
County: Not reported

The CA HAZNET database contains 4 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

TIME AVIATION SERVICES (Continued) — **S105094017**

G34 — **PROPOSED SCHOOL BUS STOP** — **CA SLIC** — **S103878798**, N/A
NNE — **28300 LIVINGSTON**
> 1 — **CASTAIC, CA 91384**
6923 ft.

Site 1 of 3 in cluster G

Relative: **Higher**
Actual: **1102 ft.**

SLIC Region 4:
Facility Status: Closure
Region: 4
SLIC: 0834
Staff: Jenny Au
Substance: TPH

G35 — **PHARMAVITE LLC** — **RCRIS-LQG** — **1001815586**
NNE — **28305 W LIVINGSTON AVE** — **FINDS** — **CAR000057190**
> 1 — **VALENCIA, CA 91355** — **HAZNET**
6924 ft.

Site 2 of 3 in cluster G

Relative: **Higher**
Actual: **1103 ft.**

RCRIS:
Owner: OTSUKA AMERICA INC
(415) 986-5300
EPA ID: CAR000057190
Contact: TIM COFFMAN
(818) 837-3633
Classification: Large Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

HAZNET:
Gepaid: CAR000057190
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 1.08
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Recycler
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200
Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County: Not reported

Gepaid: CAR000057190
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: 99
Tons: 107.84
Waste Category: Baghouse waste
Disposal Method: Disposal, Land Fill
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200

PHARMAVITE LLC (Continued) 1001815586

Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County Not reported

Gepaid: CAR000057190
TSD EPA ID: NVT330010000
Gen County: Los Angeles
Tsd County: 99
Tons: 17.6988
Waste Category: Baghouse waste
Disposal Method: Disposal, Land Fill
Contact: OTSUKA AMERICA INC
Telephone: (000) 000-0000
Mailing Address: 15451 SAN FERNANDO MISSION BLV
MISSION HILLS, CA 91345
County Los Angeles

Gepaid: CAR000057190
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: 99
Tons: 143.69
Waste Category: Baghouse waste
Disposal Method: Disposal, Land Fill
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200
Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County Not reported

Gepaid: CAR000057190
TSD EPA ID: NVT330010000
Gen County: Los Angeles
Tsd County: 99
Tons: 18.5416
Waste Category: Baghouse waste
Disposal Method: Not reported
Contact: OTSUKA AMERICA INC
Telephone: (000) 000-0000
Mailing Address: 15451 SAN FERNANDO MISSION BLV
MISSION HILLS, CA 91345
County Los Angeles

The CA HAZNET database contains 1 additional record for this site.
Please click here or contact your EDR Account Executive for more information.

G36 NNE > 1 6927 ft. | **PHARMAVITE LLC**
28310 W LIVINGSTON AVE
VALENCIA, CA 91355

Site 3 of 3 in cluster G

Relative: Higher

Actual: 1106 ft.

LOS ANGELES CO. HMS 1001959798
HAZNET N/A

PHARMAVITE LLC (Continued) 1001959798

HAZNET:
Gepaid: CAR000064444
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.62
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Recycler
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200
Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County Not reported

Gepaid: CAR000064444
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.54
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Recycler
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200
Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County Not reported

Gepaid: CAR000064444
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: San Bernardino
Tons: 0.03
Waste Category: Other organic solids
Disposal Method: Not reported
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200
Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County Not reported

Gepaid: CAR000064444
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 12.50
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200
Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County Not reported

PHARMAVITE LLC (Continued) 1001959798

Gepaid: CAR000064444
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: 99
Tons: 8.42
Waste Category: Baghouse waste
Disposal Method: Disposal, Land Fill
Contact: TIM COFFMAN MGR REG COMPLIANCE
Telephone: (818) 221-6200
Mailing Address: PO BOX 9606
MISSION HILLS, CA 91346
County Not reported

The CA HAZNET database contains 9 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

HMS:
Facility Id: 020797-037829
Area: 7
Facility Type: I01
Permit Number: 174 Permit Status: Permit
Facility Status: Permit
Region: Los Angeles County:

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37 North > 1 6928 ft. **KIMBALL MICROELECTRONICS** RCRIS-SQG 1004677121
28575 LIVINGSTON AVE FINDS CAR000093468
VALENCIA, CA 91355 HAZNET

Relative: Higher **Actual: 1252 ft.**

RCRIS:
Owner: KIMBALL INTL INC
(812) 482-1600
EPA ID: CAR000093468
Contact: FRANK FABIANO
(661) 775-3500
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

HAZNET:
Gepaid: CAR000093468
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.44
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Recycler
Contact: KENT DAVIS
Telephone: (661) 775-3500
Mailing Address: 28575 LIVINGSTON AVE
VALENCIA, CA 91355
County Not reported

KIMBALL MICROELECTRONICS (Continued) 1004677121

Gepaid: CAR000093468
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.67
Waste Category: Oxygenated solvents (acetone, butanol, ethyl acetate, etc.)
Disposal Method: Recycler
Contact: KENT DAVIS
Telephone: (661) 775-3500
Mailing Address: 28575 LIVINGSTON AVE
VALENCIA, CA 91355
County Not reported

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38 NNE > 1 7080 ft. **WALT DISNEY PICTURES & TELEVISION** HAZNET S104581097
28150 W HARRISON PARKWAY N/A
VALENCIA, CA 91355

Relative: Higher **Actual: 1046 ft.**

HAZNET:
Gepaid: CAL000180976
TSD EPA ID: CAD050806850
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.2085
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Transfer Station
Contact: WALT DISNEY PICTURES & TV
Telephone: (000) 000-0000
Mailing Address: 500 S. BUENA VISTA ST.
BURBANK, CA 91521 - 2663
County Los Angeles

Gepaid: CAL000180976
TSD EPA ID: CAD050806850
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.9875
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: WALT DISNEY PICTURES & TV
Telephone: (000) 000-0000
Mailing Address: 500 S. BUENA VISTA ST.
BURBANK, CA 91521 - 2663
County Los Angeles

Gepaid: CAL000180976
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 0.86
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Transfer Station
Contact: DEBBIE GONZALEZ ENVIRONMENTAL
Telephone: (818) 553-4061
Mailing Address: 500 S. BUENA VISTA ST.
BURBANK, CA 91521 - 6015
County Not reported

WALT DISNEY PICTURES & TELEVISION (Continued) — S104581097

Gepaid: CAL000180976
TSD EPA ID: CAD050806850
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .6255
Waste Category: Waste oil and mixed oil
Disposal Method: Transfer Station
Contact: WALT DISNEY PICTURES & TV
Telephone: (000) 000-0000
Mailing Address: 500 S. BUENA VISTA ST.
BURBANK, CA 91521 - 2663
County Los Angeles

Gepaid: CAL000180976
TSD EPA ID: CAD050806850
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .3000
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: WALT DISNEY PICTURES & TV
Telephone: (000) 000-0000
Mailing Address: 500 S. BUENA VISTA ST.
BURBANK, CA 91521 - 2663
County Los Angeles

The CA HAZNET database contains 1 additional record for this site.
Please click here or contact your EDR Account Executive for more information.

H39 ENE > 1 7331 ft. — **FIESTA RESORTS** — LOS ANGELES CO. HMS — S102064533 / N/A
27946 W HENRY MAYO DR
UNINCORPORATED, CA

Relative: Higher
Actual: 1001 ft.

Site 1 of 4 in cluster H

HMS:
Facility Id: 014852-015631
Area: 7
Facility Type: T0
Permit Number: 174 — Permit Status: Closed
Facility Status: Closed
Region: Los Angeles County:

H40 ENE > 1 7331 ft. — **VALENCIA TRAVEL VILLAGE** — LOS ANGELES CO. HMS — S102064534 / N/A
27946 W HENRY MAYO DR
UNINCORPORATED, CA

Relative: Higher
Actual: 1001 ft.

Site 2 of 4 in cluster H

HMS:
Facility Id: 014852-021889
Area: 7
Facility Type: T0
Permit Number: 174 — Permit Status: Removed
Facility Status: Removed
Region: Los Angeles County:

VALENCIA TRAVEL VILLAGE (Continued) — S102064534

H41 NE > 1 7485 ft. — **THE VALENCIA TRAVEL VILLAGE** — HAZNET — S103991139 / N/A
27946 HENRY MAYO ROAD, RTE 126
VALENCIA, CA 91384

Relative: Higher
Actual: 998 ft.

Site 3 of 4 in cluster H

HAZNET:
Gepaid: CAC001485192
TSD EPA ID: CAD982484933
Gen County: Los Angeles
Tsd County: 7
Tons: .2500
Waste Category: Other empty containers 30 gallons or more
Disposal Method: Recycler
Contact: STEWART BLAIR
Telephone: (805) 257-3333
Mailing Address: 27946 HENRY MAYO ROAD, RTE 126
VALENCIA, CA 91384
County Los Angeles

Gepaid: CAC001485192
TSD EPA ID: CAD028409019
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: .4170
Waste Category: Aqueous solution with 10% or more total organic residues
Disposal Method: Treatment, Tank
Contact: STEWART BLAIR
Telephone: (805) 257-3333
Mailing Address: 27946 HENRY MAYO ROAD, RTE 126
VALENCIA, CA 91384
County Los Angeles

H42 NE > 1 7485 ft. — **FIESTA RESORT TRAVEL VILLAGE** — CA FID UST — S101584732 / N/A
27946 HENRY MAYO RD
VALENCIA, CA 91384

Relative: Higher
Actual: 998 ft.

Site 4 of 4 in cluster H

FID:
Facility ID: 19014937 — Regulate ID: Not reported
Reg By: Active Underground Storage Tank Location
Cortese Code: Not reported — SIC Code: Not reported
Status: Active — Facility Tel: (805) 257-1135
Mail To: Not reported
27946 HENRY MAYO DR
VALENCIA, CA 91384
Contact: Not reported — Contact Tel: Not reported
DUNs No: Not reported — NPDES No: Not reported
Creation: 10/22/93 — Modified: 00/00/00
EPA ID: Not reported
Comments: Not reported

I43 NE > 1 7816 ft. — **SCHWARTZ OIL CO**, **27241 HENRY MAYO DR**, **VALENCIA, CA 91355** — **UST, EMI, HIST UST, HAZNET** — **U001567874**, **N/A**

Relative: Higher — **Actual: 996 ft.**

Site 1 of 8 in cluster I

HAZNET:

Gepaid: CAL000171310
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 1.14
Waste Category: Tank bottom waste
Disposal Method: Recycler
Contact: GINNY OSTROVE-OFFICE MGR
Telephone: (661) 259-4000
Mailing Address: 27241 HENRY MAYO DR
VALENCIA, CA 91355
County Not reported

Gepaid: CAL000171310
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 15.01
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Recycler
Contact: GINNY OSTROVE-OFFICE MGR
Telephone: (661) 259-4000
Mailing Address: 27241 HENRY MAYO DR
VALENCIA, CA 91355
County Not reported

Gepaid: CAL000171310
TSD EPA ID: Not reported
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 10.42
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: GINNY OSTROVE-OFFICE MGR
Telephone: (661) 259-4000
Mailing Address: 27241 HENRY MAYO DR
VALENCIA, CA 91355
County Not reported

Gepaid: CAC001421632
TSD EPA ID: CAD028409019
Gen County: Los Angeles
Tsd County: Los Angeles
Tons: 1.8556
Waste Category: Unspecified oil-containing waste
Disposal Method: Treatment, Tank
Contact: TRUDY EMETERIO
Telephone: (000) 000-0000
Mailing Address: 27241 HENRY MAYO
VALENCIA, CA 00000
County Los Angeles

SCHWARTZ OIL CO (Continued) — **U001567874**

Gepaid: CAC001421632
TSD EPA ID: CAD982484933
Gen County: Los Angeles
Tsd County: 7
Tons: .5000
Waste Category: Empty containers less than 30 gallons
Disposal Method: Disposal, Other
Contact: TRUDY EMETERIO
Telephone: (000) 000-0000
Mailing Address: 27241 HENRY MAYO
VALENCIA, CA 00000
County Los Angeles

The CA HAZNET database contains 1 additional record for this site.
Please click here or contact your EDR Account Executive for more information.

UST HIST:

Facility ID: 5275 — Facility Status: Not reported
Total Tanks: 4 — Region: STATE
Owner Name: SCHWARTZ OIL COMPANY INC. — Box Number: Not reported
Owner Address: 27241 HENRY MAYO RD.
VALENCIA, CA 91355

EMISSIONS :

Facility ID : 35743
Air District Code : SC
SIC Code : 5171
Total Priority Score : Not reported
Health Risk Assessment : Not reported
Non-cancer Chronic Haz Index : Not reported
Non-cancer Acute Haz Index : Not reported
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
Total Organic Hydrocarbon Gases : Not reported
Reactive Organic Gases : Not reported
Carbon Monoxide Emissions : Not reported
NOX Gas Emissions (Nitrogen - Oxygen) : Not reported
SOX Gas Emissions (Sulphur - Oxygen) : Not reported

State UST:

Facility ID: 16425
Region: STATE
Local Agency: 19000

I44 NE > 1 7816 ft. — **SCHWARTZ OIL CO.**, **27241 HENRY MAYO DR**, **VALENCIA, CA 91355** — **Cortese, LUST** — **S104160064**, **N/A**

Relative: Higher — **Actual: 996 ft.**

Site 2 of 8 in cluster I

State LUST:

Cross Street: THE OLD ROAD
Qty Leaked: Not reported
Case Number I-16425
Reg Board: 4
Chemical: Gasoline
Lead Agency: Regional Board
Local Agency : 19000

SCHWARTZ OIL CO. (Continued) S104160064

Case Type: Other ground water affected
Status: Case Closed
Review Date: Not reported Confirm Leak: Not reported
Workplan: 4/14/92 Prelim Assess: 4/14/92
Pollution Char: Not reported Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 08/30/1996
Release Date: 04/14/1992
Cleanup Fund Id : Not reported
Discover Date : 01/23/1992
Enforcement Dt : Not reported
Enf Type: Not reported
Enter Date : 05/26/1992
Funding: Federal Funds
Staff Initials: Not reported
How Discovered: OM
How Stopped: Not reported
Interim : Not reported
Leak Cause: UNK
Leak Source: Tank
MTBE Date : / /
Max MTBE GW : 0 Parts per Billion
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Priority: Not reported
Local Case # : Not reported
Beneficial: Not reported
Staff : JLC
GW Qualifier : Not reported
Max MTBE Soil : Not reported
Soil Qualifier : Not reported
Hydr Basin #: Not reported
Operator : Not reported
Oversight Prgm: RB Lead Underground Storage Tank
Oversight Prgm : UST
Review Date : 09/24/1996
Stop Date : / /
Work Suspended Not reported
Responsible PartySCHWARTZ OIL CO.
RP Address: 2615 NUTMEG ST., MORRO BAY, 93442 D
Global Id: T0603704411
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: 0
Mtbe Fuel: 1
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 4:
Report Date: 4/14/1992
Lead Agency: Regional Board
Local Agency: 19000
Case Number: I-16425
Substance: Gasoline
Case Type: Groundwater

SCHWARTZ OIL CO. (Continued) S104160064

Status: Case Closed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Federal Funds
Date the Leak was Discovered: 1/23/1992
How the Leak was Discovered: Other Means
How the Leak was Stopped: Not reported
Cause of Leak: Unknown
Leak Source: Tank
Date The Leak was Stopped: Not reported
Date Confirmation Leak Began: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: 4/14/1992
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 8/30/1996
Date Case Last Changed on Database: 9/24/1996
Enforcement Action Date: Not reported
Date Leak First Reported: 4/14/1992
Enforcement Type: Not reported
Global ID : T0603704411
Organization : Not reported
Historical Max MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil : Not reported
County: Los Angeles
Regional Board: 04
Owner Contact: Not reported
Responsible Party: SCHWARTZ OIL CO.
RP Address: 2615 NUTMEG ST., MORRO BAY, 93442 D
Significant Interim Remedial Action Taken: Not reported
Program : UST
Lat / Long : 34.4391864 / -118.609307
MTBE Counts : 0
MTBE Fuel : 1
MTBE Tested : NT
Local Agency Staff: UNK
Summary : Not reported
Hydrologic Basin # : Not reported
Beneficial Use : Not reported
Priority : Not reported
Cleanup Fund Id : Not reported
Suspended : Not reported
Local Case No : Not reported
Substance Quantity : Not reported
Abatement Method Used at the Site: Not reported
Operator : Not reported
Water System : PETER PITCHESS HONOR RANCHO, LAC SHERIFF
Well Name : WELL 01A - INACTIVE
Approx. Dist To Production Well (ft) : 4770.98173265197454216571728 31
W Global ID : W0603700046
Assigned Name : 1900046-008
MTBE Class : Not reported

SCHWARTZ OIL CO. (Continued) — S104160064

CORTESE:
Region: CORTESE
Fac Address 2: 27241 HENRY MAYO DR

I45 NE > 1 7816 ft. — **SCHWARTZ OIL CO INC** — FINDS — 1006306954 / 110012435551
27241 HENRY MAYO DR
VALENCIA, CA 91355

Relative: Higher
Actual: 996 ft.

Site 3 of 8 in cluster I

FINDS:
Other Pertinent Environmental Activity Identified at Site:
National Emissions Inventory (NEI)
National Toxics Inventory (NTI)

I46 NE > 1 7839 ft. — **LA COUNTY FIRE DEPT STATION 75** — AST — A100211166 / N/A
27223 HENRY MAYO DR
VALENCIA, CA 91355

Relative: Higher
Actual: 996 ft.

Site 4 of 8 in cluster I

AST:
Owner: LOS ANGELES COUNTY FIRE DEPT
Total Gallons: 1000

I47 NE > 1 7839 ft. — **LA CO FD FIRE STA #076** — LOS ANGELES CO. HMS, Cortese, LUST — S102064489 / N/A
27223 W HENRY MAYO DR
VALENCIA, CA 91355

Relative: Higher
Actual: 996 ft.

Site 5 of 8 in cluster I

State LUST:
Cross Street: CASTAIC CANYON RD
Qty Leaked: Not reported
Case Number: R-12547
Reg Board: 4
Chemical: Hydrocarbons
Lead Agency: Local Agency
Local Agency: 19000
Case Type: Soil only
Status: Case Closed
Abate Method: Other Means
Review Date: Not reported
Workplan: Not reported
Pollution Char: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 08/13/1997
Release Date: 06/26/1997
Cleanup Fund Id: Not reported
Discover Date: 06/04/1997
Enforcement Dt: Not reported
Enf Type: Not reported
Enter Date: 07/17/1997
Funding: Not reported
Staff Initials: Not reported
How Discovered: Tank Closure
Confirm Leak: Not reported
Prelim Assess: Not reported
Remed Plan: Not reported

LA CO FD FIRE STA #076 (Continued) — S102064489

How Stopped: Not reported
Interim: Not reported
Leak Cause: UNK
Leak Source: Tank
MTBE Date: / /
Max MTBE GW: 0 Parts per Billion
MTBE Tested: Not Required to be Tested.
Priority: Not reported
Local Case #: Not reported
Beneficial: Not reported
Staff: JLC
GW Qualifier: Not reported
Max MTBE Soil: Not reported
Soil Qualifier: Not reported
Hydr Basin #: Not reported
Operator: Not reported
Oversight Prgm: Local Implementing Agency UST (includes non-LOP cases within LOP jurisdiction)
Oversight Prgm: LIA
Review Date: 08/13/1997
Stop Date: / /
Work Suspended: Not reported
Responsible Party: LA COUNTY FIRE DEPARTMENT
RP Address: 1320 N. EASTERN AVE., LOS ANGELES CA 90063-3294
Global Id: T0603705143
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: 0
Mtbe Fuel: 0
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 4:
Report Date: 6/26/1997
Lead Agency: Local Agency
Local Agency: 19000
Case Number: R-12547
Substance: Hydrocarbons
Case Type: Soil
Status: Case Closed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Not reported
Date the Leak was Discovered: 6/4/1997
How the Leak was Discovered: Tank Closure
How the Leak was Stopped: Close Tank
Cause of Leak: Unknown
Leak Source: Tank
Date The Leak was Stopped: Not reported
Date Confirmation Leak Began: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported

LA CO FD FIRE STA #076 (Continued) — **S102064489**

Post Remedial Action Monitoring Began:	Not reported
Date the Case was Closed:	8/13/1997
Date Case Last Changed on Database:	8/13/1997
Enforcement Action Date:	Not reported
Date Leak First Reported:	6/26/1997
Enforcement Type:	Not reported
Global ID :	T0603705143
Organization :	Not reported
Historical Max MTBE Date:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil :	Not reported
County:	Los Angeles
Regional Board:	04
Owner Contact: Not reported	
Responsible Party:	LA COUNTY FIRE DEPARTMENT
RP Address:	1320 N. EASTERN AVE., LOS ANGELES CA 90063-3294
Significant Interim Remedial Action Taken:	Not reported
Program :	LIA
Lat / Long :	34.4391864 / -118.609307
MTBE Counts :	0
MTBE Fuel :	0
MTBE Tested :	NRQ
Local Agency Staff:	UNK
Summary :	DEPTH TO G.W. 25TH. BGS. FURTHER ASSESSMENT REQ'D. POTENTIAL G.W. CONTAMINATION.
Hydrologic Basin # :	Not reported
Beneficial Use :	Not reported
Priority :	Not reported
Cleanup Fund Id :	Not reported
Suspended :	Not reported
Local Case No :	Not reported
Substance Quantity :	Not reported
Abatement Method Used at the Site:	OT
Operator :	Not reported
Water System :	PETER PITCHESS HONOR RANCHO, LAC SHERIFF
Well Name :	WELL 01A - INACTIVE
Approx. Dist To Production Well (ft) :	4770.9817326519745421657172831
W Global ID :	W0603700046
Assigned Name :	1900046-008
MTBE Class :	Not reported

CORTESE:

Region:	CORTESE
Fac Address 2:	27223 HENRY MAYO DR

HMS:

Facility Id:	012416-012547		
Area:	7		
Facility Type:	TO		
Permit Number:	174	Permit Status:	Removed
Facility Status:	Removed		
Region:	Los Angeles County:		

LA CO FD FIRE STA #076 (Continued) — **S102064489**

I48 — **FIRE STATION #76** — **HIST UST** — **U001562296** / **N/A**
NE — **27223 HENRY MAYO DR**
> 1 — **VALENCIA, CA 90063**
7839 ft.

Site 6 of 8 in cluster I

Relative: Higher / **Actual: 996 ft.**

UST HIST:

Facility ID:	20631	Facility Status:	Not reported
Total Tanks:	2	Region:	STATE
Owner Name:	LOS ANGELES COUNTY MECHANICAL	Box Number:	Not reported
Owner Address:	1100 N. EASTERN AVE. LOS ANGELES, CA 90063		

I49 — **LA CO FD FIRE STA #076** — **CA FID UST** — **S101587195** / **N/A**
NE — **27223 HENRY MAYO DR**
> 1 — **NEWHALL, CA 91321**
7839 ft.

Site 7 of 8 in cluster I

Relative: Higher / **Actual: 996 ft.**

FID:

Facility ID:	19055062	Regulate ID:	00020631
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	(818) 000-0000
Mail To:	Not reported 1320 N EASTERN AVE NEWHALL, CA 91321		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

I50 — **R.M. PYLES BOYS CAMP, INC.** — **HIST UST** — **U001567871** / **N/A**
NE — **27211 HENRY MAYO DR**
> 1 — **VALENCIA, CA 91355**
7857 ft.

Site 8 of 8 in cluster I

Relative: Higher / **Actual: 996 ft.**

UST HIST:

Facility ID:	55879	Facility Status:	Not reported
Total Tanks:	1	Region:	STATE
Owner Name:	R.M. PYLES BOYS CAMP, INC.	Box Number:	Not reported
Owner Address:	27211 HENRY MAYO DRIVE VALENCIA, CA 91355		

J51 — **SCHUARTI OIL CO. INC.** — **CA FID UST** — **S101583389** / **N/A**
ENE — **27241 HENRY MAYO RD**
> 1 — **VALENCIA, CA 91355**
8897 ft.

Site 1 of 2 in cluster J

Relative: Higher

Actual: 1009 ft.

SCHUARTI OIL CO. INC. (Continued) S101583389

FID:
Facility ID: 19003595 Regulate ID: Not reported
Reg By: Active Underground Storage Tank Location
Cortese Code: Not reported SIC Code: Not reported
Status: Active Facility Tel: (805) 259-4000
Mail To: Not reported
6215 NUTMEG ST
VALENCIA, CA 91355
Contact: Not reported Contact Tel: Not reported
DUNs No: Not reported NPDES No: Not reported
Creation: 10/22/93 Modified: 00/00/00
EPA ID: Not reported
Comments: Not reported

J52
ENE
> 1
9015 ft.

NEWHALL LAND & FARMING
27230 HENRY MAYO RD
VALENCIA, CA 91355

Cortese S102064490
LUST N/A

Site 2 of 2 in cluster J

Relative:
Higher

Actual:
1010 ft.

State LUST:
Cross Street: Not reported
Qty Leaked: Not reported
Case Number I-14698
Reg Board: 4
Chemical: Gasoline
Lead Agency: Local Agency
Local Agency : 19000
Case Type: Soil only
Status: Case Closed
Review Date: Not reported Confirm Leak: Not reported
Workplan: Not reported Prelim Assess: Not reported
Pollution Char: Not reported Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 01/29/1990
Release Date: 01/29/1990
Cleanup Fund Id : Not reported
Discover Date : / /
Enforcement Dt : Not reported
Enf Type: Not reported
Enter Date : 01/22/1990
Funding: Not reported
Staff Initials: Not reported
How Discovered: Not reported
How Stopped: Not reported
Interim : Not reported
Leak Cause: Not reported
Leak Source: Not reported
MTBE Date : / /
Max MTBE GW : 0 Parts per Billion
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Priority: Not reported
Local Case # : Not reported
Beneficial: Not reported
Staff : JLC
GW Qualifier : Not reported
Max MTBE Soil : Not reported

NEWHALL LAND & FARMING (Continued) S102064490

Soil Qualifier : Not reported
Hydr Basin #: Not reported
Operator : Not reported
Oversight Prgm: Local Implementing Agency UST (includes non-LOP cases within LOP jurisdiction)
Oversight Prgm : LIA
Review Date : 01/29/1990
Stop Date : / /
Work Suspended : Not reported
Responsible Party NEWHALL LAND & FARMING CO.
RP Address: 23823 VALENCIA BOULEVARD, VALENCIA, 91355
Global Id: T0603704197
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: 0
Mtbe Fuel: 1
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 4:
Report Date: 1/29/1990
Lead Agency: Local Agency
Local Agency: 19000
Case Number: I-14698
Substance: Gasoline
Case Type: Soil
Status: Case Closed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Not reported
Date the Leak was Discovered: Not reported
How the Leak was Discovered: Not reported
How the Leak was Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date The Leak was Stopped: Not reported
Date Confirmation Leak Began: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 1/29/1990
Date Case Last Changed on Database: 1/29/1990
Enforcement Action Date: Not reported
Date Leak First Reported: 1/29/1990
Enforcement Type: Not reported
Global ID : T0603704197
Organization : Not reported
Historical Max MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil : Not reported

NEWHALL LAND & FARMING (Continued) — **S102064490**

County:	Los Angeles
Regional Board:	04
Owner Contact: Not reported	
Responsible Party:	NEWHALL LAND & FARMING CO.
RP Address:	23823 VALENCIA BOULEVARD, VALENCIA, 91355
Significant Interim Remedial Action Taken:	Not reported
Program :	LIA
Lat / Long :	34.4391864 / -118.609307
MTBE Counts :	0
MTBE Fuel :	1
MTBE Tested :	NT
Local Agency Staff:	UNK
Summary :	Not reported
Hydrologic Basin # :	Not reported
Beneficial Use :	Not reported
Priority :	Not reported
Cleanup Fund Id :	Not reported
Suspended :	Not reported
Local Case No :	Not reported
Substance Quantity :	Not reported
Abatement Method Used at the Site:	Not reported
Operator :	Not reported
Water System :	PETER PITCHESS HONOR RANCHO, LAC SHERIFF
Well Name :	WELL 01A - INACTIVE
Approx. Dist To Production Well (ft) :	4770.98173265197454216571728 31
W Global ID :	W0603700046
Assigned Name :	1900046-008
MTBE Class :	Not reported

CORTESE:

Region:	CORTESE
Fac Address 2:	27230 HENRY MAYO RD

53
West
> 1
10396 ft.

27353 SAN MARTINEZ GRANDE CANYON
SANTA CLARITA, CA 0

CHMIRS — **S105648719** / **N/A**

Relative: Higher

Actual: 1030 ft.

CHMIRS:

OES Control Number:	97-4284
Chemical Name:	crude oil
Extent of Release:	Not reported
Property Use:	Not reported
Incident Date:	Not reported
Date Completed:	Not reported
Time Completed :	Not reported
Agency Id Number :	Not reported
Agency Incident Number :	Not reported
OES Incident Number :	97-4284
Time Notified :	Not reported
Surrounding Area :	Not reported
Estimated Temperature :	Not reported
Property Management :	Not reported
More Than Two Substances Involved? :	Not reported
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported

(Continued) — **S105648719**

Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	Not reported
Others Number Of Decontaminated :	Not reported
Others Number Of Injuries :	Not reported
Others Number Of Fatalities :	Not reported
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	Yes
Waterway :	River Bed
Spill Site :	Road
Cleanup By :	To be determined
Containment :	No
What Happened :	A tanker truck loaded with 1,000 gals of crude oil was involved in a traffic accident an unknown amount of the crude oil was released. The release is ongoing. The substance going into the Santa Clarita River Bed, No flowing water in the riverbed at this
Type :	PETROLEUM
Other :	1,000 Potential
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	10/27/97
Evacuations :	0

K54
NE
> 1
11010 ft.

29300 THE OLD ROAD
SAUGUS, CA 91384

CHMIRS — **S100279945**
EMI — **N/A**
HAZNET
SWF/LF

Site 1 of 2 in cluster K

Relative: Higher

Actual: 1018 ft.

LF:

Facility ID:	19-AA-0057
Operator:	County Of Los Angeles Sheriff's Dept
Operator Phone:	(213) 974-4528
Operator Addr:	293000 The Old Road Saugus, CA 90012
Owner:	County Of Los Angeles Sheriff's Dept
Owner Address:	Not reported 293000 The Old Road Saugus, CA 90012
Owner Telephone:	(213) 974-4528
Activity:	Solid Waste Landfill
Operator's Status:	Closed
Regulation Status:	Permitted
Region:	STATE
Lat/Long:	34 / -118
Permit Date:	Not reported
Accepted Waste:	Agricultural,Construction/demolition,Mixed municipal,Other hazardous,Tires

(Continued) **S100279945**

Restrictions:

Status :	Not reported
Swisnumber :	Not reported
Site Type :	Not reported
Aka :	Not reported
Type Of Waste :	Not reported
Disposal Area :	Not reported
SWFP Date :	Not reported
WDR Number :	Not reported
Dates Of Operation :	Not reported
Closure Approved :	Not reported
Date Of Field Units :	Not reported
Surface Condition :	Not reported
Landfill Gas :	Not reported
Leachate :	Not reported
Emergency Response :	Not reported
Other Recommendation :	Not reported
Reassess Site :	Not reported
Priority For Site Assessment :	Not reported
Lea Date :	Not reported
Explanation:	Not Reported
No Further Action:	Not Reported
Permitted Throughput with Units:	154
Permitted Throughput with Units:	154
Permitted Throughput with Units:	154
Actual Throughput with Units:	Cu Yards/day
Actual Capacity with Units:	Not reported
Permitted Capacity with Units:	Not reported
Remaining Capacity with Units:	Not reported
Permitted Total Acreage:	54
Inspection Frequency:	Quarterly
Landuse Name:	Not reported
GIS Source:	External
Permit Status:	Permitted
Category:	Disposal
Unit Number:	01
Last Waste Tire Inspection Count :	Not reported
Last Waste Tire Inspection Date:	Not reported
Original Waste Tire Count:	Not reported
Original Waste Tire Count Date:	Not reported
Closure Date:	01/01/1992
Closure Type:	Actual
Disposal Acreage:	0
Remaining Capacity:	Not reported

HAZNET:

Gepaid:	CAL000022055
TSD EPA ID:	CAD000088252
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	.6000
Waste Category:	Contaminated soil from site clean-ups
Disposal Method:	Transfer Station
Contact:	LA CNTY SHERIFFS DEPT
Telephone:	(213) 526-5541
Mailing Address:	4700 RAMONA BLVD MONTEREY PARK, CA 91754 - 2169
County	Los Angeles

(Continued) **S100279945**

Gepaid:	CAL000022055
TSD EPA ID:	CAD008252405
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	6.1090
Waste Category:	Paint sludge
Disposal Method:	Recycler
Contact:	LA CNTY SHERIFFS DEPT
Telephone:	(213) 526-5541
Mailing Address:	4700 RAMONA BLVD MONTEREY PARK, CA 91754 - 2169
County	Los Angeles

Gepaid:	CAL000022055
TSD EPA ID:	CAD008252405
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	2.2935
Waste Category:	Unspecified organic liquid mixture
Disposal Method:	Recycler
Contact:	LA CNTY SHERIFFS DEPT
Telephone:	(213) 526-5541
Mailing Address:	4700 RAMONA BLVD MONTEREY PARK, CA 91754 - 2169
County	Los Angeles

Gepaid:	CAL000022055
TSD EPA ID:	CAD008252405
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	1.0425
Waste Category:	Unspecified solvent mixture Waste
Disposal Method:	Recycler
Contact:	LA CNTY SHERIFFS DEPT
Telephone:	(213) 526-5541
Mailing Address:	4700 RAMONA BLVD MONTEREY PARK, CA 91754 - 2169
County	Los Angeles

Gepaid:	CAL000022055
TSD EPA ID:	CAD099452708
Gen County:	Los Angeles
Tsd County:	Los Angeles
Tons:	.3335
Waste Category:	Tank bottom waste
Disposal Method:	Recycler
Contact:	LA CNTY SHERIFFS DEPT
Telephone:	(213) 526-5541
Mailing Address:	4700 RAMONA BLVD MONTEREY PARK, CA 91754 - 2169
County	Los Angeles

The CA HAZNET database contains 131 additional records for this site.
Please click here or contact your EDR Account Executive for more information.

CHMIRS:

OES Control Number:	9014303
Chemical Name:	Not reported
Extent of Release:	Not reported

(Continued) S100279945

Property Use:	Industrial, Utility
Incident Date:	05-DEC-90
Date Completed:	05-DEC-90
Time Completed :	1935
Agency Id Number :	19110
Agency Incident Number :	51
OES Incident Number :	9014303
Time Notified :	1835
Surrounding Area :	099
Estimated Temperature :	60
Property Management :	C
More Than Two Substances Involved? :	N
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	0
Others Number Of Decontaminated :	0
Others Number Of Injuries :	0
Others Number Of Fatalities :	0
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	CAPT. LYNN MOHR #124351
Report Date :	05-DEC-90
Comments :	Yes
Facility Telephone Number :	213 267-2401
Waterway Involved :	Not reported
Waterway :	Not reported
Spill Site :	Not reported
Cleanup By :	Not reported
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	Not reported
Evacuations :	Not reported

EMISSIONS :

Facility ID :	6488
Air District Code :	SC
SIC Code :	9223
Total Priority Score :	Not reported
Health Risk Assessment :	Not reported
Non-cancer Chronic Haz Index :	Not reported
Non-cancer Acute Haz Index :	Not reported
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD

(Continued) S100279945

Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
Total Organic Hydrocarbon Gases :	1
Reactive Organic Gases :	1
Carbon Monoxide Emissions :	1
NOX Gas Emissions (Nitrogen - Oxygen) :	4
SOX Gas Emissions (Sulphur - Oxygen) :	0

Facility ID :	58949
Air District Code :	SC
SIC Code :	9223
Total Priority Score :	Not reported
Health Risk Assessment :	Not reported
Non-cancer Chronic Haz Index :	Not reported
Non-cancer Acute Haz Index :	Not reported
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Y
Consolidated Emission Reporting Rule :	Not reported
Total Organic Hydrocarbon Gases :	65
Reactive Organic Gases :	6
Carbon Monoxide Emissions :	5
NOX Gas Emissions (Nitrogen - Oxygen) :	28
SOX Gas Emissions (Sulphur - Oxygen) :	1

Facility ID :	6488
Air District Code :	SC
SIC Code :	9223
Total Priority Score :	Not reported
Health Risk Assessment :	Not reported
Non-cancer Chronic Haz Index :	Not reported
Non-cancer Acute Haz Index :	Not reported
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
Total Organic Hydrocarbon Gases :	Not reported
Reactive Organic Gases :	Not reported
Carbon Monoxide Emissions :	Not reported
NOX Gas Emissions (Nitrogen - Oxygen) :	Not reported
SOX Gas Emissions (Sulphur - Oxygen) :	Not reported

Facility ID :	58949
Air District Code :	SC
SIC Code :	9223
Total Priority Score :	Not reported
Health Risk Assessment :	Not reported
Non-cancer Chronic Haz Index :	Not reported
Non-cancer Acute Haz Index :	Not reported
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Y
Consolidated Emission Reporting Rule :	Not reported
Total Organic Hydrocarbon Gases :	Not reported
Reactive Organic Gases :	Not reported
Carbon Monoxide Emissions :	Not reported
NOX Gas Emissions (Nitrogen - Oxygen) :	Not reported

(Continued) S100279945

SOX Gas Emissions (Sulphur - Oxygen) : Not reported

K55
NE
> 1
11010 ft.

29300 THE OLD ROAD
VALENCIA, CA 91384

CHMIRS **S100279260**
N/A

Site 2 of 2 in cluster K

Relative:
Higher

Actual:
1016 ft.

CHMIRS:

OES Control Number:	8905392
Chemical Name:	Not reported
Extent of Release:	Not reported
Property Use:	099
Incident Date:	29-MAR-89
Date Completed:	29-MAR-89
Time Completed :	1606
Agency Id Number :	19110
Agency Incident Number :	27
OES Incident Number :	8905392
Time Notified :	1446
Surrounding Area :	099
Estimated Temperature :	Not reported
Property Management :	Not reported
More Than Two Substances Involved? :	N
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	0
Others Number Of Decontaminated :	0
Others Number Of Injuries :	0
Others Number Of Fatalities :	0
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	CAPT. JOHN W. EVERETT
Report Date :	29-MAR-89
Comments :	Not reported
Facility Telephone Number :	213 267-2485
Waterway Involved :	Not reported
Waterway :	Not reported
Spill Site :	Not reported
Cleanup By :	Not reported
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	Not reported
Evacuations :	Not reported

(Continued) S100279260

56
NE
> 1
11020 ft.

DIXIE DIESEL STATION
29471 THE OLD ROAD
SAUGUS, CA 91350

Cortese LUST **S102428845**
N/A

Relative:
Higher

Actual:
1020 ft.

State LUST:

Cross Street:	Not reported		
Qty Leaked:	Not reported		
Case Number	I-12830		
Reg Board:	4		
Chemical:	Diesel		
Lead Agency:	Local Agency		
Local Agency :	19000		
Case Type:	Other ground water affected		
Status:	Case Closed		
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site		
Review Date:	Not reported	Confirm Leak:	Not reported
Workplan:	2/3/87	Prelim Assess:	2/3/87
Pollution Char:	Not reported	Remed Plan:	Not reported
Remed Action:	6/20/30		
Monitoring:	Not reported		
Close Date:	11/30/1993		
Release Date:	04/06/1987		
Cleanup Fund Id :	Not reported		
Discover Date :	/ /		
Enforcement Dt :	1/1/65		
Enf Type:	Informal Enforcement Actions,including Notices of Violations and Staff Enforcement Letters		
Enter Date :	/ /		
Funding:	Federal Funds		
Staff Initials:	Not reported		
How Discovered:	Subsurface Monitoring		
How Stopped:	Not reported		
Interim :	Not reported		
Leak Cause:	UNK		
Leak Source:	UNK		
MTBE Date :	/ /		
Max MTBE GW :	0 Parts per Billion		
MTBE Tested:	Not Required to be Tested.		
Priority:	Not reported		
Local Case # :	Not reported		
Beneficial:	Not reported		
Staff :	JLC		
GW Qualifier :	Not reported		
Max MTBE Soil :	Not reported		
Soil Qualifier :	Not reported		
Hydr Basin #:	Not reported		
Operator :	Not reported		
Oversight Prgm:	Local Implementing Agency UST (includes non-LOP cases within LOP jurisdiction)		
Oversight Prgm :	LIA		
Review Date :	11/30/1993		
Stop Date :	/ /		
Work Suspended :	Not reported		
Responsible Party	GORTIKOV/HASLEY PARTNERS, LTD		
RP Address:	15165 VENTURA BLVD, #230, SHERMAN OAKS, 91403		
Global Id:	T0603704004		
Org Name:	Not reported		

DIXIE DIESEL STATION (Continued) S102428845

Contact Person: Not reported
MTBE Conc: 0
Mtbe Fuel: 0
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 4:
Report Date: 4/6/1987
Lead Agency: Local Agency
Local Agency: 19000
Case Number: I-12830
Substance: Diesel
Case Type: Groundwater
Status: Case Closed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Federal Funds
Date the Leak was Discovered: Not reported
How the Leak was Discovered: Subsurface Monitoring
How the Leak was Stopped: Not reported
Cause of Leak: Unknown
Leak Source: Unknown
Date The Leak was Stopped: Not reported
Date Confirmation Leak Began: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: 2/3/1987
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: 6/20/1930
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 11/30/1993
Date Case Last Changed on Database: 11/30/1993
Enforcement Action Date: Not reported
Date Leak First Reported: 4/6/1987
Enforcement Type: IEA
Global ID : T0603704004
Organization : Not reported
Historical Max MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil : Not reported
County: Los Angeles
Regional Board: 04
Owner Contact: Not reported
Responsible Party: GORTIKOV/HASLEY PARTNERS, LTD
RP Address: 15165 VENTURA BLVD, #230, SHERMAN OAKS, 91403
Significant Interim Remedial Action Taken: Not reported
Program : LIA
Lat / Long : 34.4680232 / -118.4689948
MTBE Counts : 0
MTBE Fuel : 0
MTBE Tested : NRQ
Local Agency Staff: UNK
Summary : 2215 MG/KG TPH IN SOIL AT 10'. 5 MG/L TPH IN WATER

DIXIE DIESEL STATION (Continued) S102428845

2ND LEAK REPORTED 1/29/91

OLD CASE #021089-08

Hydrologic Basin # : Not reported
Beneficial Use : Not reported
Priority : Not reported
Cleanup Fund Id : Not reported
Suspended : Not reported
Local Case No : Not reported
Substance Quantity : Not reported
Abatement Method Used at the Site: Excavate and Dispose
Operator : Not reported
Water System : CLEVELAND NATIONAL FOREST
Well Name : LPA REPORTED PRIMARY SOURCE
Approx. Dist To Production Well (ft) : 1452.033932136087145347103034 2
W Global ID : W0607300028
Assigned Name : 3700028-001GEN
MTBE Class : Not reported

CORTESE:
Region: CORTESE
Fac Address 2: 29471 THE OLD ROAD

L57 ENE > 1 11058 ft. **NEWHALL LAND & FARMING CO**
28760 N CASTAIC CANYON RD
VALENCIA, CA 91355

LOS ANGELES CO. HMS **S102064571**
Cortese **N/A**
LUST

Relative: Higher
Actual: 1016 ft.

Site 1 of 2 in cluster L

State LUST:
Cross Street: Not reported
Qty Leaked: Not reported
Case Number I-05310
Reg Board: 4
Chemical: Gasoline
Lead Agency: Local Agency
Local Agency : 19000
Case Type: Soil only
Status: Case Closed
Review Date: Not reported
Workplan: Not reported
Pollution Char: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 01/10/1990
Release Date: 01/10/1990
Cleanup Fund Id : Not reported
Discover Date : / /
Enforcement Dt : Not reported
Enf Type: Not reported
Enter Date : 01/22/1990
Funding: Not reported
Staff Initials: Not reported
How Discovered: Not reported
How Stopped: Not reported
Interim : Not reported
Leak Cause: Not reported
Leak Source: Not reported
MTBE Date : / /

Confirm Leak: Not reported
Prelim Assess: Not reported
Remed Plan: Not reported

NEWHALL LAND & FARMING CO (Continued) S102064571

Max MTBE GW : 0 Parts per Billion
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.
Priority: Not reported
Local Case # : Not reported
Beneficial: Not reported
Staff : JLC
GW Qualifier : Not reported
Max MTBE Soil : Not reported
Soil Qualifier : Not reported
Hydr Basin #: Not reported
Operator : Not reported
Oversight Prgm: Local Implementing Agency UST (Includes non-LOP cases within LOP jurisdiction)
Oversight Prgm : LIA
Review Date : 01/29/1990
Stop Date : / /
Work Suspended :Not reported
Responsible PartyNEWHALL LAND & FARMING
RP Address: 23823 VALENCIA BOULEVARD, VALENCIA, 91355
Global Id: T0603703062
Org Name: Not reported
Contact Person: Not reported
MTBE Conc: 0
Mtbe Fuel: 1
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 4:
Report Date: 1/10/1990
Lead Agency: Local Agency
Local Agency: 19000
Case Number: I-05310
Substance: Gasoline
Case Type: Soil
Status: Case Closed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Not reported
Date the Leak was Discovered: Not reported
How the Leak was Discovered: Not reported
How the Leak was Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Date The Leak was Stopped: Not reported
Date Confirmation Leak Began: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 1/10/1990
Date Case Last Changed on Database: 1/29/1990
Enforcement Action Date: Not reported
Date Leak First Reported: 1/10/1990

NEWHALL LAND & FARMING CO (Continued) S102064571

Enforcement Type: Not reported
Global ID : T0603703062
Organization : Not reported
Historical Max MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil : Not reported
County: Los Angeles
Regional Board: 04
Owner Contact: Not reported
Responsible Party: NEWHALL LAND & FARMING
RP Address: 23823 VALENCIA BOULEVARD, VALENCIA, 91355
Significant Interim Remedial Action Taken: Not reported
Program : LIA
Lat / Long : 34.4392614 / -118.6062849
MTBE Counts : 0
MTBE Fuel : 1
MTBE Tested : NT
Local Agency Staff: UNK
Summary : Not reported
Hydrologic Basin # : Not reported
Beneficial Use : Not reported
Priority : Not reported
Cleanup Fund Id : Not reported
Suspended : Not reported
Local Case No : Not reported
Substance Quantity : Not reported
Abatement Method Used at the Site: Not reported
Operator : Not reported
Water System : PETER PITCHESS HONOR RANCHO, LAC SHERIFF
Well Name : WELL 01A - INACTIVE
Approx. Dist To Production Well (ft) : 5154.170056466850371916246237 5
W Global ID : W0603700046
Assigned Name : 1900046-008
MTBE Class : Not reported

CORTESE:
Region: CORTESE
Fac Address 2: 28760 CASTAIC CANYON RD

HMS:
Facility Id: 005116-005310
Area: 7
Facility Type: Not reported
Permit Number: 174 Permit Status: Not reported
Facility Status: Removed
Region: Los Angeles County:

Facility Id: 014173-014696
Area: 7
Facility Type: Not reported
Permit Number: 174 Permit Status: Not reported
Facility Status: Removed
Region: Los Angeles County:

NEWHALL LAND & FARMING CO (Continued) S102064571

L58 ENE > 1 11175 ft. Relative: Higher Actual: 1016 ft.

TRI-R-TRUCKING Cortese S101298311
28748 CASTAIC CANYON RD LUST N/A
VALENCIA, CA 91355

Site 2 of 2 in cluster L

State LUST:
Cross Street: THE OLD RD
Qty Leaked: Not reported
Case Number I-15245
Reg Board: 4
Chemical: Diesel
Lead Agency: Local Agency
Local Agency : 19000
Case Type: Soil only
Status: Case Closed
Review Date: Not reported — Confirm Leak: Not reported
Workplan: Not reported — Prelim Assess: Not reported
Pollution Char: Not reported — Remed Plan: Not reported
Remed Action: Not reported
Monitoring: Not reported
Close Date: 10/11/1994
Release Date: 10/29/1990
Cleanup Fund Id : Not reported
Discover Date : 12/08/1989
Enforcement Dt : Not reported
Enf Type: Not reported
Enter Date : 12/05/1990
Funding: Federal Funds
Staff Initials: Not reported
How Discovered: Tank Closure
How Stopped: Not reported
Interim : Not reported
Leak Cause: UNK
Leak Source: UNK
MTBE Date : / /
Max MTBE GW : 0 Parts per Billion
MTBE Tested: Not Required to be Tested.
Priority: Not reported
Local Case # : Not reported
Beneficial: Not reported
Staff : JLC
GW Qualifier : Not reported
Max MTBE Soil : Not reported
Soil Qualifier : Not reported
Hydr Basin #: Not reported
Operator : JAMES, ED OLD CASE#120690-17
Oversight Prgm: Local Implementing Agency UST (includes non-LOP cases within LOP jurisdiction)
Oversight Prgm : LIA
Review Date : 10/11/1994
Stop Date : 12/08/1989
Work Suspended : Not reported
Responsible Party TRI-R TRUCKING
RP Address: 28748 CASTIAC CYN RD, VALENCIA CA 91355
Global Id: T0603704280
Org Name: Not reported
Contact Person: Not reported

TRI-R-TRUCKING (Continued) S101298311

MTBE Conc: 0
Mtbe Fuel: 0
Water System Name: Not reported
Well Name: Not reported
Distance To Lust: 0
Waste Discharge Global ID: Not reported
Waste Disch Assigned Name: Not reported

LUST Region 4:
Report Date: 10/29/1990
Lead Agency: Local Agency
Local Agency: 19000
Case Number: I-15245
Substance: Diesel
Case Type: Soil
Status: Case Closed
Region: 4
Staff: Not reported
Source of Cleanup Funding: Federal Funds
Date the Leak was Discovered: 12/8/1989
How the Leak was Discovered: Tank Closure
How the Leak was Stopped: Close Tank
Cause of Leak: Unknown
Leak Source: Unknown
Date The Leak was Stopped: 12/8/1989
Date Confirmation Leak Began: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Date the Case was Closed: 10/11/1994
Date Case Last Changed on Database: 10/11/1994
Enforcement Action Date: Not reported
Date Leak First Reported: 10/29/1990
Enforcement Type: Not reported
Global ID : T0603704280
Organization : Not reported
Historical Max MTBE Date: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil : Not reported
County: Los Angeles
Regional Board: 04
Owner Contact: Not reported
Responsible Party: TRI-R TRUCKING
RP Address: 28748 CASTIAC CYN RD, VALENCIA CA 91355
Significant Interim Remedial Action Taken: Not reported
Program : LIA
Lat / Long : 34.4389004 / -118.6060599
MTBE Counts : 0
MTBE Fuel : 0
MTBE Tested : NRQ
Local Agency Staff: UNK
Summary : Not reported
Hydrologic Basin # : Not reported

TRI-R-TRUCKING (Continued) — S101298311

Beneficial Use :	Not reported
Priority :	Not reported
Cleanup Fund Id :	Not reported
Suspended :	Not reported
Local Case No :	Not reported
Substance Quantity :	Not reported
Abatement Method Used at the Site:	Not reported
Operator :	JAMES, ED OLD CASE#120890-17
Water System :	PETER PITCHESS HONOR RANCHO, LAC SHERIFF
Well Name :	WELL 01A - INACTIVE
Approx. Dist To Production Well (ft) :	5301.736465194323767948137824 3
W Global ID :	W0603700046
Assigned Name :	1900046-008
MTBE Class :	Not reported

CORTESE:
Region: CORTESE
Fac Address 2: 28748 CASTAIC CANYON RD

59
NE
> 1
11470 ft.

N/B I-5, CASTAIC INSP FACILITY
SANTA CLARITA, CA

CHMIRS — S100279769 / N/A

Relative: Higher
Actual: 1039 ft.

CHMIRS:

OES Control Number:	9010073
Chemical Name:	Not reported
Extent of Release:	Not reported
Property Use:	099
Incident Date:	09-FEB-90
Date Completed:	09-FEB-90
Time Completed :	645
Agency Id Number :	66
Agency Incident Number :	90-027
OES Incident Number :	9010073
Time Notified :	15
Surrounding Area :	099
Estimated Temperature :	Not reported
Property Management :	S
More Than Two Substances Involved? :	N
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	0
Others Number Of Decontaminated :	0
Others Number Of Injuries :	0
Others Number Of Fatalities :	0
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	L. ACEVEDO #8721

(Continued) — S100279769

Report Date :	20-MAR-90
Comments :	Not reported
Facility Telephone Number :	916 327-3310
Waterway Involved :	Not reported
Waterway :	Not reported
Spill Site :	Not reported
Cleanup By :	Not reported
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	Not reported
Evacuations :	Not reported

60
ENE
> 1
11471 ft.

CHEVRON STATION 9 1899
28805 THE OLD RD
VALENCIA, CA 91355

RCRIS-SQG — 1000886345
FINDS — CA0000138552
Cortese

Relative: Higher
Actual: 1019 ft.

RCRIS:
Owner: CHEVRON U S A PRODUCTS CO
(310) 694-7452
EPA ID: CA0000138552
Contact: RAMON J CRESSALL
(805) 257-2584
Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

CORTESE:
Region: CORTESE
Fac Address 2: Not reported

61
NNE
> 1
13061 ft.

HASELY CYN 1MI NORTH OF THE OLD ROAD
CASTAIC, CA 91355

CHMIRS — S100275931 / N/A

Relative: Higher
Actual: 1047 ft.

CHMIRS:

OES Control Number:	9012379
Chemical Name:	Not reported
Extent of Release:	Not reported
Property Use:	Vacant Lot
Incident Date:	13-AUG-90
Date Completed:	13-AUG-90
Time Completed :	2115
Agency Id Number :	19110
Agency Incident Number :	A-65
OES Incident Number :	9012379
Time Notified :	1956

(Continued) S100275931

Surrounding Area :	936
Estimated Temperature :	80
Property Management :	P
More Than Two Substances Involved? :	Y
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Y
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Responding Agency Personel # Of Injuries :	0
Responding Agency Personel # Of Fatalities :	0
Resp Agncy Personel # Of Decontaminated :	0
Others Number Of Decontaminated :	0
Others Number Of Injuries :	0
Others Number Of Fatalities :	0
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	MARTIN L. SCOTT #081235
Report Date :	13-AUG-90
Comments :	Yes
Facility Telephone Number :	213 267-2401
Waterway Involved :	Not reported
Waterway :	Not reported
Spill Site :	Not reported
Cleanup By :	Not reported
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Chemical 1 :	Not Reported
Chemical 2 :	Not Reported
Chemical 3 :	Not Reported
Date/Time :	Not reported
Evacuations :	Not reported

MAP FINDINGS - EDR PROPRIETARY HISTORICAL DATABASES

YEAR	NAME	ADDRESS	CITY	ST	DIR.	DIST.	ELEV.	TYPE

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

EDR Historical Gas Station & Dry Cleaner Search: No mapped sites were found in EDR's search of the EDR Historical Gas Station & Dry Cleaner Database within 0.250 mile of the Target Property.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CANYON COUNTRY	S105774538	TWO WATER WELLS RESTORATION	SIERRA HWY. / ARLINE ST.	91355	CA WDS
CASTAIC	S105628449	SCHOOL ON 18 ACRE SITE	RIDGE ROUTE ROAD	91384	SCH
LOS ANGELES COUNTY	S105637568		BERTH 70, LONG BEACH HARBOUR		CHMIRS, HAZNET
LOS ANGELES COUNTY	S105641187		BERTH 30 LONG BEACH HARBOUR		CHMIRS, HAZNET
LOS ANGELES COUNTY	S105630661		FLORENCE AVE / TELEGRAPH RD WHITTIER		CHMIRS, LUST
SANTA CLARITA	S105774545	COMMERCE CENTER BRIDGE	HWY 126 / THE OLD ROAD	91355	CA WDS
SANTA CLARITA	S105774543	CASTAIC CREEK CHANNEL LINING	HWY. 126 / THE OLD ROAD	91355	CA WDS
SANTA CLARITA	S105774544	HWY. 126 BRIDGE	HWY. 126 / CASTAIC CREEK	91355	CA WDS
SANTA CLARITA	1005441285	DEPARTMENT OF TRANSPORTATION	RTE 5 MAGIC MOUNTAIN PKWY EXIT	91355	RCRIS-SQG, FINDS
SANTA CLARITA	S105774535	GOLDEN VALLEY ROAD EXTENSION	BETWEEN SIERRA HWY / SOLEDAD CYN RD	91355	CA WDS
SANTA CLARITA	S106085278	CSI CRIME SCENE INVESTIGATION	3 MILES N OF TEMPLIN HWY ON	91355	HAZNET
VALENCIA	S106089351	CALIFORNIA INSTITUTE OF THE ARTS	VY #147 MCBEAN PRKWY / HWY 5	91355	HAZNET
VALENCIA	1000119892	PPG INDUSTRIES INC WORKS 24	25663 W AVE STANFORD	91355	RCRIS-SQG, RCRIS-TSD, FINDS, CORRACTS, CERC-NFRAP, LOS ANGELES CO. HMS
VALENCIA	S103646510	PRODUCTION GOODBYE LOVER	25135 AVENUE ANZA	91355	HAZNET
VALENCIA	S103648520	LOS ANGELES COUNTY FIRE DEPT	27223 HENRY MAYO DR- STATION 76	91355	HAZNET
VALENCIA	S105090242	TECHNICAL TROUBLE SHOOTING	24932 KEARNY AVENUE	91355	HAZNET
VALENCIA	S105774562	WATER WELL NO. W-11	S MCBEAN / COPPERHILL DR	91355	CA WDS
VALENCIA	1006839028	HOWARD CUSTOM BOATS INCORPORATED	28113 STANFORD AVENUE	91355	FINDS, EMI, HAZNET
VALENCIA	S101480564	GRUBER SYSTEMS, INC	25636 STANFORD AVENUE	91355	REF

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/21/03
Date Made Active at EDR: 12/08/03
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 11/03/03
Elapsed ASTM days: 35
Date of Last EDR Contact: 11/03/03

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites
Source: EPA
Telephone: N/A

Date of Government Version: 10/14/03
Date Made Active at EDR: 12/08/03
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 7
Date of Last EDR Contact: 11/03/03

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/11/03
Date Made Active at EDR: 10/29/03
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 09/24/03
Elapsed ASTM days: 35
Date of Last EDR Contact: 12/22/03

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 09/11/03
Date Made Active at EDR: 10/29/03
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 09/24/03
Elapsed ASTM days: 35
Date of Last EDR Contact: 12/22/03

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/17/03
Date Made Active at EDR: 11/11/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 10/01/03
Elapsed ASTM days: 41
Date of Last EDR Contact: 12/08/03

RCRIS: Resource Conservation and Recovery Information System
Source: EPA
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/10/03
Date Made Active at EDR: 10/01/03
Database Release Frequency: Varies

Date of Data Arrival at EDR: 09/11/03
Elapsed ASTM days: 20
Date of Last EDR Contact: 11/18/03

ERNS: Emergency Response Notification System
Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/02
Date Made Active at EDR: 02/03/03
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/27/03
Elapsed ASTM days: 7
Date of Last EDR Contact: 10/27/03

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01
Database Release Frequency: Biennially

Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

ROD: Records Of Decision
Source: EPA
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/09/03
Database Release Frequency: Annually

Date of Last EDR Contact: 10/08/03
Date of Next Scheduled EDR Contact: 01/05/04

DELISTED NPL: National Priority List Deletions
Source: EPA
Telephone: N/A
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/21/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 11/03/03
Date of Next Scheduled EDR Contact: 02/02/04

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/23/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03
Date of Next Scheduled EDR Contact: 01/05/04

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 08/11/03
Database Release Frequency: Annually

Date of Last EDR Contact: 10/23/03
Date of Next Scheduled EDR Contact: 01/19/04

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 10/07/03
Date of Next Scheduled EDR Contact: 01/05/04

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 08/27/03
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 202-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/23/04

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-564-3887
PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/30/03
Database Release Frequency: Annually
Date of Last EDR Contact: 11/12/03
Date of Next Scheduled EDR Contact: 02/09/04

DOD: Department of Defense Sites
Source: USGS
Telephone: 703-648-5920
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 11/12/03
Date of Next Scheduled EDR Contact: 02/09/04

STORMWATER: Storm Water General Permits
Source: Environmental Protection Agency
Telephone: 202 564-0746
A listing of all facilities with Storm Water General Permits.

Date of Government Version: N/A
Database Release Frequency: Quarterly
Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 07/15/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/17/03
Date of Next Scheduled EDR Contact: 03/15/04

RMP: Risk Management Plans
Source: Environmental Protection Agency
Telephone: 202-564-8600
When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: N/A
Database Release Frequency: N/A
Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-260-1531
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/01
Database Release Frequency: Annually
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-5521
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/02
Database Release Frequency: Every 4 Years
Date of Last EDR Contact: 10/20/03
Date of Next Scheduled EDR Contact: 01/19/04

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA
Telephone: 202-564-2501

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

SSTS: Section 7 Tracking Systems
Source: EPA
Telephone: 202-564-5008
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/01
Database Release Frequency: Annually
Date of Last EDR Contact: 10/20/03
Date of Next Scheduled EDR Contact: 01/19/04

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-564-2501
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/16/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

STATE OF CALIFORNIA ASTM STANDARD RECORDS

AWP: Annual Workplan Sites
Source: California Environmental Protection Agency
Telephone: 916-323-3400
Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 11/30/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Annually

Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 38
Date of Last EDR Contact: 12/01/03

CAL-SITES: Calsites Database
Source: Department of Toxic Substance Control
Telephone: 916-323-3400
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 11/30/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 38
Date of Last EDR Contact: 12/01/03

CHMIRS: California Hazardous Material Incident Report System
Source: Office of Emergency Services
Telephone: 916-845-8400
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/02
Date Made Active at EDR: 08/07/03
Database Release Frequency: Varies

Date of Data Arrival at EDR: 07/11/03
Elapsed ASTM days: 27
Date of Last EDR Contact: 11/24/03

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-9100
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 04/01/01
Date Made Active at EDR: 07/26/01
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 05/29/01
Elapsed ASTM days: 58
Date of Last EDR Contact: 10/27/03

NOTIFY 65: Proposition 65 Records
Source: State Water Resources Control Board
Telephone: 916-445-3846
Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/93
Date Made Active at EDR: 11/19/93
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 11/01/93
Elapsed ASTM days: 18
Date of Last EDR Contact: 10/20/03

TOXIC PITS: Toxic Pits Cleanup Act Sites
Source: State Water Resources Control Board
Telephone: 916-227-4364
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/95
Date Made Active at EDR: 09/26/95
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 08/30/95
Elapsed ASTM days: 27
Date of Last EDR Contact: 11/03/03

SWF/LF (SWIS): Solid Waste Information System
Source: Integrated Waste Management Board
Telephone: 916-341-6320
Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 11/14/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/16/03
Elapsed ASTM days: 23
Date of Last EDR Contact: 12/16/03

WMUDS/SWAT: Waste Management Unit Database
Source: State Water Resources Control Board
Telephone: 916-227-4448
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/00
Date Made Active at EDR: 05/10/00
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/10/00
Elapsed ASTM days: 30
Date of Last EDR Contact: 12/09/03

LUST: Leaking Underground Storage Tank Information System
Source: State Water Resources Control Board
Telephone: 916-341-5740
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 04/02/03
Date Made Active at EDR: 04/25/03
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/16/03
Elapsed ASTM days: 9
Date of Last EDR Contact: 10/14/03

CA BOND EXP. PLAN: Bond Expenditure Plan
Source: Department of Health Services
Telephone: 916-255-2118
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/89
Date Made Active at EDR: 08/02/94
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 07/27/94
Elapsed ASTM days: 6
Date of Last EDR Contact: 05/31/94

CA UST:

UST: Active UST Facilities
Source: SWRCB
Telephone: 916-341-5700
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 04/02/03
Date Made Active at EDR: 04/30/03
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 04/16/03
Elapsed ASTM days: 14
Date of Last EDR Contact: 10/14/03

VCP: Voluntary Cleanup Program Properties
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/30/03
Date Made Active at EDR: 12/23/03
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 12/01/03
Elapsed ASTM days: 22
Date of Last EDR Contact: 12/01/03

INDIAN UST: Underground Storage Tanks on Indian Land
Source: EPA Region 9
Telephone: 415-972-3368

Date of Government Version: 12/05/03
Date Made Active at EDR: 01/08/04
Database Release Frequency: Varies
Date of Data Arrival at EDR: 12/05/03
Elapsed ASTM days: 34
Date of Last EDR Contact: 11/24/03

CA FID UST: Facility Inventory Database
Source: California Environmental Protection Agency
Telephone: 916-445-6532
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94
Date Made Active at EDR: 09/29/95
Database Release Frequency: No Update Planned
Date of Data Arrival at EDR: 09/05/95
Elapsed ASTM days: 24
Date of Last EDR Contact: 12/28/98

HIST UST: Hazardous Substance Storage Container Database
Source: State Water Resources Control Board
Telephone: 916-341-5700
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/90
Date Made Active at EDR: 02/12/91
Database Release Frequency: No Update Planned
Date of Data Arrival at EDR: 01/25/91
Elapsed ASTM days: 18
Date of Last EDR Contact: 07/26/01

STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS

AST: Aboveground Petroleum Storage Tank Facilities
Source: State Water Resources Control Board
Telephone: 916-341-5712
Registered Aboveground Storage Tanks.

Date of Government Version: 07/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 11/03/03
Date of Next Scheduled EDR Contact: 02/02/04

CLEANERS: Cleaner Facilities
Source: Department of Toxic Substance Control
Telephone: 916-225-0873
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 11/26/03
Database Release Frequency: Annually
Date of Last EDR Contact: 01/07/04
Date of Next Scheduled EDR Contact: 04/05/04

CA WDS: Waste Discharge System
Source: State Water Resources Control Board
Telephone: 916-657-1571
Sites which have been issued waste discharge requirements.

Date of Government Version: 09/22/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

DEED: List of Deed Restrictions
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
The use of recorded land use restrictions is one of the methods the DTSC uses to protect the public from unsafe exposures to hazardous substances and wastes.

Date of Government Version: 10/07/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 10/08/03
Date of Next Scheduled EDR Contact: 01/05/04

NFA: No Further Action Determination
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

EMI: Emissions Inventory Data
Source: California Air Resources Board
Telephone: 916-322-2990
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/01
Database Release Frequency: Varies
Date of Last EDR Contact: 10/20/03
Date of Next Scheduled EDR Contact: 01/19/04

REF: Unconfirmed Properties Referred to Another Agency
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

SCH: School Property Evaluation Program
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

NFE: Properties Needing Further Evaluation
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA In Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

Date of Government Version: 11/30/03 — Date of Last EDR Contact: 12/01/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 03/01/04

HAZNET: Hazardous Waste Information System
Source: California Environmental Protection Agency
Telephone: 916-255-1136
Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/02 — Date of Last EDR Contact: 11/11/03
Database Release Frequency: Annually — Date of Next Scheduled EDR Contact: 02/09/04

LOCAL RECORDS

ALAMEDA COUNTY:

Local Oversight Program Listing of UGT Cleanup Sites
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 12/09/03 — Date of Last EDR Contact: 10/27/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 01/26/04

Underground Tanks
Source: Alameda County Environmental Health Services
Telephone: 510-567-6700

Date of Government Version: 07/03/03 — Date of Last EDR Contact: 10/27/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 01/26/04

CONTRA COSTA COUNTY:

Site List
Source: Contra Costa Health Services Department
Telephone: 925-646-2286
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 12/01/03 — Date of Last EDR Contact: 12/01/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 03/01/04

FRESNO COUNTY:

CUPA Resources List
Source: Dept. of Community Health
Telephone: 559-445-3271
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 10/07/03 — Date of Last EDR Contact: 10/08/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 02/09/04

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Kern County Sites and Tanks Listing.

Date of Government Version: 07/25/03 — Date of Last EDR Contact: 12/22/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 03/08/04

LOS ANGELES COUNTY:

List of Solid Waste Facilities
Source: La County Department of Public Works
Telephone: 818-458-5185

Date of Government Version: 06/03/03 — Date of Last EDR Contact: 11/21/03
Database Release Frequency: Varies — Date of Next Scheduled EDR Contact: 02/16/04

City of El Segundo Underground Storage Tank
Source: City of El Segundo Fire Department
Telephone: 310-524-2236

Date of Government Version: 09/11/03 — Date of Last EDR Contact: 11/17/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 02/16/04

City of Long Beach Underground Storage Tank
Source: City of Long Beach Fire Department
Telephone: 562-570-2543

Date of Government Version: 03/28/03 — Date of Last EDR Contact: 11/24/03
Database Release Frequency: Annually — Date of Next Scheduled EDR Contact: 02/23/04

City of Torrance Underground Storage Tank
Source: City of Torrance Fire Department
Telephone: 310-618-2973

Date of Government Version: 09/03/03 — Date of Last EDR Contact: 11/17/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 02/16/04

City of Los Angeles Landfills
Source: Engineering & Construction Division
Telephone: 213-473-7869

Date of Government Version: 03/01/02 — Date of Last EDR Contact: 12/16/03
Database Release Frequency: Varies — Date of Next Scheduled EDR Contact: 03/15/04

HMS: Street Number List
Source: Department of Public Works
Telephone: 626-458-3517
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/30/03 — Date of Last EDR Contact: 11/17/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 02/16/04

Site Mitigation List
Source: Community Health Services
Telephone: 323-890-7806
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/07/03
Database Release Frequency: Annually
Date of Last EDR Contact: 11/17/03
Date of Next Scheduled EDR Contact: 02/16/04

San Gabriel Valley Areas of Concern
Source: EPA Region 9
Telephone: 415-972-3178
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98
Database Release Frequency: No Update Planned
Date of Last EDR Contact: 07/06/99
Date of Next Scheduled EDR Contact: N/A

MARIN COUNTY:

Underground Storage Tank Sites
Source: Public Works Department Waste Management
Telephone: 415-499-6647
Currently permitted USTs in Marin County.

Date of Government Version: 08/19/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 11/03/03
Date of Next Scheduled EDR Contact: 02/02/04

NAPA COUNTY:

Sites With Reported Contamination
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 10/02/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

Closed and Operating Underground Storage Tank Sites
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269

Date of Government Version: 10/02/03
Database Release Frequency: Annually
Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

ORANGE COUNTY:

List of Underground Storage Tank Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 07/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 11/25/03
Date of Next Scheduled EDR Contact: 03/08/04

List of Underground Storage Tank Facilities
Source: Health Care Agency
Telephone: 714-834-3446
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 09/02/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/19/03
Date of Next Scheduled EDR Contact: 03/08/04

List of Industrial Site Cleanups
Source: Health Care Agency
Telephone: 714-834-3446
Petroleum and non-petroleum spills.

Date of Government Version: 10/24/00
Database Release Frequency: Annually
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

PLACER COUNTY:

Master List of Facilities
Source: Placer County Health and Human Services
Telephone: 530-889-7312
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 10/16/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/22/03
Date of Next Scheduled EDR Contact: 03/22/04

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Source: Department of Public Health
Telephone: 909-358-5055
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 06/03/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/20/03
Date of Next Scheduled EDR Contact: 01/19/04

Underground Storage Tank Tank List
Source: Health Services Agency
Telephone: 909-358-5055

Date of Government Version: 05/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/20/03
Date of Next Scheduled EDR Contact: 01/19/04

SACRAMENTO COUNTY:

CS - Contaminated Sites
Source: Sacramento County Environmental Management
Telephone: 916-875-8406

Date of Government Version: 07/17/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 11/03/03
Date of Next Scheduled EDR Contact: 02/02/04

ML - Regulatory Compliance Master List
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 07/17/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 11/03/03
Date of Next Scheduled EDR Contact: 02/02/04

SAN BERNARDINO COUNTY:

Hazardous Material Permits
Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 09/30/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

SAN DIEGO COUNTY:

Solid Waste Facilities
Source: Department of Health Services
Telephone: 619-338-2209
San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/00
Database Release Frequency: Varies
Date of Last EDR Contact: 11/21/03
Date of Next Scheduled EDR Contact: 02/23/04

Hazardous Materials Management Division Database
Source: Hazardous Materials Management Division
Telephone: 619-338-2268
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 10/31/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/07/03
Date of Next Scheduled EDR Contact: 01/05/04

SAN FRANCISCO COUNTY:

Local Oversite Facilities
Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920

Date of Government Version: 12/09/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

Underground Storage Tank Information
Source: Department of Public Health
Telephone: 415-252-3920

Date of Government Version: 09/11/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

SAN MATEO COUNTY:

Fuel Leak List
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921

Date of Government Version: 11/24/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 10/27/03
Date of Next Scheduled EDR Contact: 01/26/04

Business Inventory
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 11/13/03
Database Release Frequency: Annually
Date of Last EDR Contact: 10/13/03
Date of Next Scheduled EDR Contact: 01/12/04

SANTA CLARA COUNTY:

Fuel Leak Site Activity Report
Source: Santa Clara Valley Water District
Telephone: 408-265-2600

Date of Government Version: 07/02/03
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/29/03
Date of Next Scheduled EDR Contact: 03/29/04

Hazardous Material Facilities
Source: City of San Jose Fire Department
Telephone: 408-277-4659

Date of Government Version: 10/01/03
Database Release Frequency: Annually
Date of Last EDR Contact: 12/08/03
Date of Next Scheduled EDR Contact: 03/08/04

SOLANO COUNTY:

Leaking Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 08/21/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/16/03
Date of Next Scheduled EDR Contact: 03/15/04

Underground Storage Tanks
Source: Solano County Department of Environmental Management
Telephone: 707-421-6770

Date of Government Version: 08/21/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 12/18/03
Date of Next Scheduled EDR Contact: 03/15/04

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
Source: Department of Health Services
Telephone: 707-565-6565

Date of Government Version: 10/01/03
Database Release Frequency: Quarterly
Date of Last EDR Contact: 10/27/03
Date of Next Scheduled EDR Contact: 01/26/04

SUTTER COUNTY:

Underground Storage Tanks
Source: Sutter County Department of Agriculture
Telephone: 530-822-7500

Date of Government Version: 07/01/01
Database Release Frequency: Semi-Annually
Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 01/05/04

VENTURA COUNTY:

Inventory of Illegal Abandoned and Inactive Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 09/01/02 — Date of Last EDR Contact: 11/26/03
Database Release Frequency: Annually — Date of Next Scheduled EDR Contact: 02/23/04

Listing of Underground Tank Cleanup Sites
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 09/26/03 — Date of Last EDR Contact: 12/16/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 03/15/04

Underground Tank Closed Sites List
Source: Environmental Health Division
Telephone: 805-654-2813
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 07/30/03 — Date of Last EDR Contact: 10/16/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 01/12/04

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 09/02/03 — Date of Last EDR Contact: 12/16/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 03/15/04

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Source: Yolo County Department of Health
Telephone: 530-666-8646

Date of Government Version: 10/29/03 — Date of Last EDR Contact: 10/20/03
Database Release Frequency: Annually — Date of Next Scheduled EDR Contact: 01/19/04

California Regional Water Quality Control Board (RWQCB) LUST Records

LUST REG 1: Active Toxic Site Investigation
Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-576-2220
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/01 — Date of Last EDR Contact: 11/21/03
Database Release Frequency: No Update Planned — Date of Next Scheduled EDR Contact: 02/23/04

LUST REG 2: Fuel Leak List
Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457

Date of Government Version: 03/28/03 — Date of Last EDR Contact: 10/14/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 01/12/04

LUST REG 3: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147

Date of Government Version: 05/19/03 — Date of Last EDR Contact: 11/17/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 02/16/04

LUST REG 4: Underground Storage Tank Leak List
Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 08/09/01 — Date of Last EDR Contact: 12/31/03
Database Release Frequency: No Update Planned — Date of Next Scheduled EDR Contact: 03/29/04

LUST REG 5: Leaking Underground Storage Tank Database
Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-255-3125

Date of Government Version: 07/01/03 — Date of Last EDR Contact: 10/16/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 01/05/04

LUST REG 6L: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/03 — Date of Last EDR Contact: 12/08/03
Database Release Frequency: No Update Planned — Date of Next Scheduled EDR Contact: 03/08/04

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-346-7491

Date of Government Version: 11/13/03 — Date of Last EDR Contact: 10/07/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 01/05/04

LUST REG 7: Leaking Underground Storage Tank Case Listing
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-346-7491

Date of Government Version: 07/02/02 — Date of Last EDR Contact: 12/29/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 03/29/04

LUST REG 8: Leaking Underground Storage Tanks
Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4498
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/16/03 — Date of Last EDR Contact: 11/12/03
Database Release Frequency: No Update Planned — Date of Next Scheduled EDR Contact: 02/09/04

LUST REG 9: Leaking Underground Storage Tank Report
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/01 — Date of Last EDR Contact: 10/20/03
Database Release Frequency: No Update Planned — Date of Next Scheduled EDR Contact: 01/19/04

California Regional Water Quality Control Board (RWQCB) SLIC Records

SLIC REG 1: Active Toxic Site Investigations
Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220

Date of Government Version: 04/03/03 — Date of Last EDR Contact: 11/21/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 02/23/04

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 03/28/03 — Date of Last EDR Contact: 10/14/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 01/12/04

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/16/03 — Date of Last EDR Contact: 11/17/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 02/16/04

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 10/01/03 — Date of Last EDR Contact: 10/27/03
Database Release Frequency: Quarterly — Date of Next Scheduled EDR Contact: 01/26/04

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-855-3075
Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 10/20/03 — Date of Last EDR Contact: 10/07/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 01/05/04

SLIC REG 6L: SLIC Sites
Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574

Date of Government Version: 09/09/03 — Date of Last EDR Contact: 12/08/03
Database Release Frequency: Varies — Date of Next Scheduled EDR Contact: 03/08/04

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583

Date of Government Version: 05/08/03 — Date of Last EDR Contact: 10/07/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 01/05/04

SLIC REG 7: SLIC List
Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491

Date of Government Version: 05/29/03 — Date of Last EDR Contact: 12/01/03
Database Release Frequency: Varies — Date of Next Scheduled EDR Contact: 02/23/04

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-3298

Date of Government Version: 04/01/03 — Date of Last EDR Contact: 10/20/03
Database Release Frequency: Semi-Annually — Date of Next Scheduled EDR Contact: 01/05/04

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980

Date of Government Version: 12/01/03 — Date of Last EDR Contact: 12/01/03
Database Release Frequency: Annually — Date of Next Scheduled EDR Contact: 03/04/04

EDR PROPRIETARY HISTORICAL DATABASES

EDR Historical Gas Station and Dry Cleaners: EDR has searched select national collections of business directories and has collected listings of potential dry cleaner and gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning and gas station/filling station/service station establishments. The categories reviewed included, but were not limited to: *gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, dry cleaner, cleaners, laundry, laundromat, cleaning/laundry, wash & dry, etc.*

This information is meant to assist and complement environmental professionals in their conduct of environmental site assessments, and is not meant to be a substitute for a full historical investigation as defined in ASTM E1527. The information provided in this proprietary database may or may not be complete; i.e., the absence of a dry cleaner or gas station/filling station/service station site does not necessarily mean that such a site did not exist in the area covered by this report.

(A note on "dry cleaning" sites: it is not possible for EDR to differentiate between establishments that use PERC on-site as a cleaning solvent and sites that function simply as drop-off and pick-up locations or that are traditional wet cleaning/laundry facilities. Therefore, it is essential for environmental professionals to incorporate professional judgment in the evaluation of each site.)

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

BROWNFIELDS DATABASES

VCP: Voluntary Cleanup Program Properties
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/30/03
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/03
Date of Next Scheduled EDR Contact: 03/01/04

US BROWNFIELDS: A Listing of Brownfields Sites
Source: Environmental Protection Agency
Telephone: 202-566-2777
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become BCRLF cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TENTATIVE TRACT MAP NO. 53108
WOLCOTT WAY/HENRY MAYO DRIVE
VALENCIA, CA 91355

TARGET PROPERTY COORDINATES

Latitude (North):	34.424301 - 34' 25' 27.5"
Longitude (West):	118.637299 - 118' 38' 14.3"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	349543.9
UTM Y (Meters):	3810222.8
Elevation:	958 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

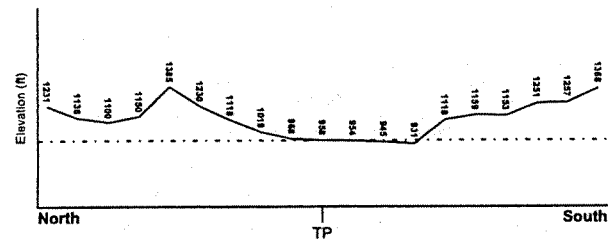
TOPOGRAPHIC INFORMATION

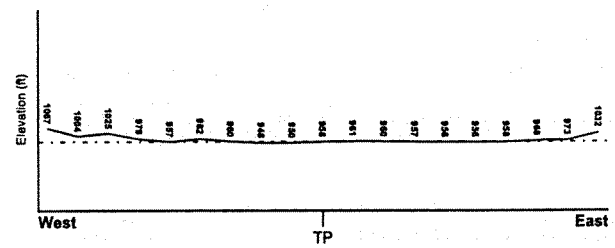
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map:	34118-D6 VAL VERDE, CA
General Topographic Gradient:	General South
Source:	USGS 7.5 min quad index

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 958 ft.

0 1/2 1 Miles

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
LOS ANGELES, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 0650430340B

Additional Panels in search area: 0650430475B

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
VAL VERDE	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era: Cenozoic
System: Tertiary
Series: Pliocene
Code: Tpc *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Continental Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	PICO
Soil Surface Texture:	sandy loam
Hydrologic Group:	Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	HIGH
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 8.40 Min: 7.90
2	14 inches	54 inches	stratified	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 8.40 Min: 7.90
3	54 inches	60 inches	stratified	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 8.40 Min: 7.90

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: clay loam
sand
gravelly - sand
gravelly - sandy loam
loamy sand
loam
silty clay loam

Surficial Soil Types: clay loam
sand
gravelly - sand
gravelly - sandy loam
loamy sand
loam
silty clay loam

Shallow Soil Types: loamy fine sand

Deeper Soil Types: loam
coarse sand

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	4565	1/4 - 1/2 Mile ENE

STATE OIL/GAS WELL INFORMATION

DISTANCE FROM TP (Miles)	DISTANCE FROM TP (Miles)
2 - 3 Miles North	2 - 3 Miles North
2 - 3 Miles North	2 - 3 Miles North
2 - 3 Miles North	2 - 3 Miles North
2 - 3 Miles North	2 - 3 Miles North
2 - 3 Miles North	2 - 3 Miles North
2 - 3 Miles North	2 - 3 Miles North
2 - 3 Miles NNW	2 - 3 Miles North
2 - 3 Miles North	2 - 3 Miles NNW
2 - 3 Miles NNW	2 - 3 Miles NW
2 - 3 Miles NNE	2 - 3 Miles NNW
1 - 2 Miles North	2 - 3 Miles NNW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

DISTANCE FROM TP (Miles)
2 - 3 Miles NNW
2 - 3 Miles NE
1 - 2 Miles NNW
1 - 2 Miles NNW
1 - 2 Miles NNW
1 - 2 Miles North
1 - 2 Miles North
1 - 2 Miles NNE
1 - 2 Miles NNW
1 - 2 Miles NW
1 - 2 Miles WNW
1 - 2 Miles WNW
2 - 3 Miles WNW
2 - 3 Miles WNW
1/2 - 1 Mile NNW
1 - 2 Miles WNW
1 - 2 Miles ENE
1 - 2 Miles WNW
1 - 2 Miles WNW
1 - 2 Miles WNW
1 - 2 Miles ENE
2 - 3 Miles East
1 - 2 Miles East
2 - 3 Miles West
1 - 2 Miles West
1 - 2 Miles West
2 - 3 Miles West
2 - 3 Miles West
2 - 3 Miles West
1/2 - 1 Mile ENE
1 - 2 Miles West
2 - 3 Miles West
2 - 3 Miles West
2 - 3 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles East
1 - 2 Miles West
1 - 2 Miles West
1 - 2 Miles West
1/4 - 1/2 Mile East
2 - 3 Miles East
2 - 3 Miles West
1 - 2 Miles East
2 - 3 Miles West
1 - 2 Miles West
1 - 2 Miles West
1/4 - 1/2 Mile West

DISTANCE FROM TP (Miles)
2 - 3 Miles NNW
2 - 3 Miles NW
1 - 2 Miles NNW
2 - 3 Miles NNW
1 - 2 Miles NNW
2 - 3 Miles NE
1 - 2 Miles North
2 - 3 Miles WNW
2 - 3 Miles ENE
1 - 2 Miles NE
1 - 2 Miles WNW
1 - 2 Miles WNW
1/2 - 1 Mile NNW
1 - 2 Miles WNW
1 - 2 Miles ENE
2 - 3 Miles WNW
1 - 2 Miles WNW
1 - 2 Miles WNW
1/2 - 1 Mile NE
2 - 3 Miles West
1 - 2 Miles WNW
1/2 - 1 Mile ENE
1 - 2 Miles West
1 - 2 Miles East
2 - 3 Miles West
1 - 2 Miles West
1 - 2 Miles West
1 - 2 Miles West
1 - 2 Miles East
1 - 2 Miles West
1 - 2 Miles West
2 - 3 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles West
1 - 2 Miles East
1 - 2 Miles West
1 - 2 Miles East
1 - 2 Miles West
1 - 2 Miles East
2 - 3 Miles West
1/4 - 1/2 Mile ENE
1 - 2 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
1/2 - 1 Mile East
2 - 3 Miles West
2 - 3 Miles West
2 - 3 Miles West
1/2 - 1 Mile West

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

DISTANCE FROM TP (Miles)
1/2 - 1 Mile West
1 - 2 Miles West
1 - 2 Miles West
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
2 - 3 Miles West
2 - 3 Miles West
1 - 2 Miles East
1 - 2 Miles East
1 - 2 Miles ESE
2 - 3 Miles East
1/4 - 1/2 Mile South
1 - 2 Miles ESE
1 - 2 Miles ESE
1 - 2 Miles ESE
2 - 3 Miles West
1 - 2 Miles ESE
2 - 3 Miles ESE
1 - 2 Miles ESE
2 - 3 Miles WSW
1/2 - 1 Mile SE
1 - 2 Miles ESE
1/2 - 1 Mile SE
1 - 2 Miles ESE
1 - 2 Miles ESE
1 - 2 Miles ESE
2 - 3 Miles ESE
1 - 2 Miles ESE
1 - 2 Miles ESE
1 - 2 Miles SE
1 - 2 Miles SE
2 - 3 Miles ESE
1 - 2 Miles SE
2 - 3 Miles ESE
1 - 2 Miles SE
1 - 2 Miles ESE
1 - 2 Miles ESE
2 - 3 Miles ESE
2 - 3 Miles ESE
1 - 2 Miles SW
1 - 2 Miles SSW
1 - 2 Miles SSW
1 - 2 Miles SW
1 - 2 Miles SW
1 - 2 Miles SW
1 - 2 Miles SSW
1 - 2 Miles SSW
1 - 2 Miles SW
1 - 2 Miles SW
1 - 2 Miles SW
1 - 2 Miles South
1 - 2 Miles SSW
1 - 2 Miles SW
1 - 2 Miles SSW

DISTANCE FROM TP (Miles)
2 - 3 Miles West
0 - 1/8 Mile SSW
2 - 3 Miles West
1 - 2 Miles West
2 - 3 Miles West
2 - 3 Miles West
1 - 2 Miles East
1 - 2 Miles East
1 - 2 Miles East
1/2 - 1 Mile ESE
2 - 3 Miles West
2 - 3 Miles West
2 - 3 Miles West
1 - 2 Miles East
1/4 - 1/2 Mile SSW
2 - 3 Miles West
1/2 - 1 Mile ESE
1 - 2 Miles ESE
1/2 - 1 Mile SE
1 - 2 Miles ESE
2 - 3 Miles WSW
2 - 3 Miles WSW
1/2 - 1 Mile SE
1 - 2 Miles ESE
1/2 - 1 Mile SE
1/2 - 1 Mile SSE
1 - 2 Miles ESE
2 - 3 Miles ESE
1 - 2 Miles SW
1 - 2 Miles ESE
2 - 3 Miles WSW
1 - 2 Miles ESE
1 - 2 Miles ESE
1 - 2 Miles SE
2 - 3 Miles ESE
1 - 2 Miles SE
1 - 2 Miles SE
1 - 2 Miles SSW
1 - 2 Miles WSW
1 - 2 Miles WSW
1 - 2 Miles South
1 - 2 Miles SW
1 - 2 Miles SW
1 - 2 Miles SSW
1 - 2 Miles SW
1 - 2 Miles South
1 - 2 Miles South
1 - 2 Miles SE
1 - 2 Miles SW
1 - 2 Miles SSE
1 - 2 Miles SW
1 - 2 Miles SSW
1 - 2 Miles South
1 - 2 Miles SSW
1 - 2 Miles SSW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

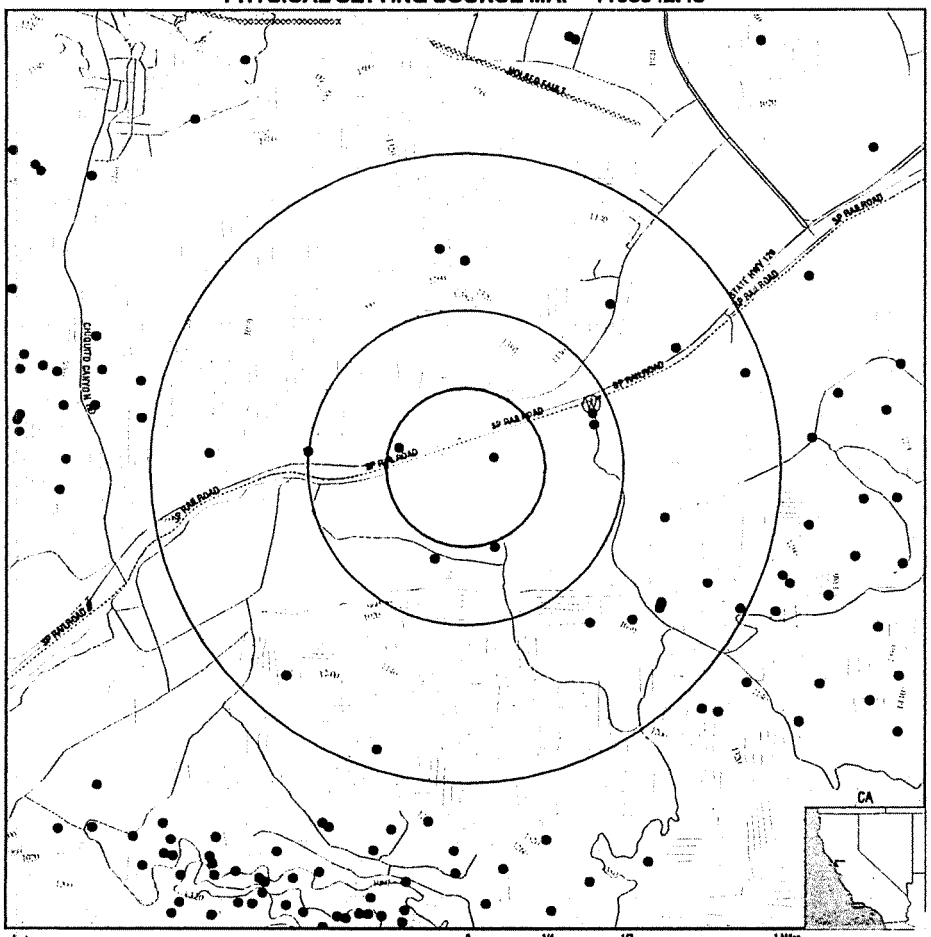
DISTANCE FROM TP (Miles)	DISTANCE FROM TP (Miles)
1 - 2 Miles SSE	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles SSW
1 - 2 Miles SE	1 - 2 Miles SSW
1 - 2 Miles SW	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles South
1 - 2 Miles SSW	1 - 2 Miles SSW
1 - 2 Miles South	1 - 2 Miles SSW
1 - 2 Miles SW	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles South
1 - 2 Miles SSE	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles South
1 - 2 Miles SSW	1 - 2 Miles SSE
1 - 2 Miles South	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles SSW
1 - 2 Miles South	1 - 2 Miles SSW
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles SSW	1 - 2 Miles South
1 - 2 Miles South	2 - 3 Miles SW
1 - 2 Miles South	1 - 2 Miles SSW
1 - 2 Miles South	1 - 2 Miles SSW
1 - 2 Miles SSE	1 - 2 Miles SSW
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles SSW	1 - 2 Miles South
1 - 2 Miles South	1 - 2 Miles SSW
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles SSW	1 - 2 Miles SSE
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles SSE	1 - 2 Miles South
1 - 2 Miles South	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles SSW
1 - 2 Miles SSW	1 - 2 Miles South
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles South	1 - 2 Miles South
2 - 3 Miles SSE	1 - 2 Miles SSE
1 - 2 Miles South	1 - 2 Miles South
1 - 2 Miles South	2 - 3 Miles SSW
2 - 3 Miles South	1 - 2 Miles South
1 - 2 Miles South	2 - 3 Miles South
2 - 3 Miles SSE	2 - 3 Miles South
2 - 3 Miles South	2 - 3 Miles SSE
2 - 3 Miles SSE	2 - 3 Miles SSE
2 - 3 Miles South	2 - 3 Miles South
2 - 3 Miles South	2 - 3 Miles South
2 - 3 Miles SSE	2 - 3 Miles South
2 - 3 Miles South	2 - 3 Miles SSE
2 - 3 Miles South	2 - 3 Miles SSE
2 - 3 Miles SSE	2 - 3 Miles South
2 - 3 Miles South	2 - 3 Miles South
2 - 3 Miles SSE	2 - 3 Miles South

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

DISTANCE FROM TP (Miles)	DISTANCE FROM TP (Miles)
2 - 3 Miles SSE	2 - 3 Miles South
2 - 3 Miles South	2 - 3 Miles SSE
2 - 3 Miles South	2 - 3 Miles SSE
2 - 3 Miles South	2 - 3 Miles South
2 - 3 Miles South	2 - 3 Miles SSW
2 - 3 Miles SSE	2 - 3 Miles SSE
2 - 3 Miles SSE	2 - 3 Miles SSE

PHYSICAL SETTING SOURCE MAP - 1108642.4s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

0 1/4 1/2 1 Miles

TARGET PROPERTY:	Tentative Tract Map No. 53108	CUSTOMER:	Building Analytics
ADDRESS:	Wolcott Way/Henry Mayo Drive	CONTACT:	Joe Montoya
CITY/STATE/ZIP:	Valencia CA 91355	INQUIRY #:	1108642.4s
LAT/LONG:	34.4243 / 118.6373	DATE:	January 08, 2004 12:47 pm

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GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
1 ENE 1/4 - 1/2 Mile Higher	CA WELLS	4565

Water System Information:

Prime Station Code:	04N/17W-14Q07 S	User ID:	19C
FRDS Number:	1909014001	County:	Los Angeles
District Number:	49	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	342538.0 1183746.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL C-6		
System Number:	1909014		
System Name:	WALNUT HILL		
Organization That Operates System:	23823 VALENCIA VALENCIA, CA 91355		
Pop Served:	50	Connections:	10
Area Served:	Not Reported		

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

North
2 - 3 Miles — OIL_GAS — CA00010927

Well Number:	5	Status:	Completed oil- directional
API Number:	03722953	Operator:	Petrominerals Corporation
Latitude:	34.459921	Longitude:	-118.636642
Region:	2	Lease:	Sadd
Section:	02	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
2 - 3 Miles — OIL_GAS — CA00010926

Well Number:	4	Status:	Completed oil- directional
API Number:	03722948	Operator:	Petrominerals Corporation
Latitude:	34.459793	Longitude:	-118.636673
Region:	2	Lease:	Sadd
Section:	02	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
2 - 3 Miles — OIL_GAS — CA00011006

Well Number:	7	Status:	Completed oil
API Number:	03722750	Operator:	Petrominerals Corporation
Latitude:	34.459727	Longitude:	-118.640970
Region:	2	Lease:	Burns Crist
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
2 - 3 Miles — OIL_GAS — CA00011004

Well Number:	5	Status:	001
API Number:	03724193	Operator:	Petrominerals Corporation
Latitude:	34.459573	Longitude:	-118.640939
Region:	2	Lease:	Burns Crist
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

North
2 - 3 Miles — OIL_GAS — CA00010953

Well Number:	1	Status:	Completed oil- directional
API Number:	03722739	Operator:	Petrominerals Corporation
Latitude:	34.458657	Longitude:	-118.639917
Region:	2	Lease:	Sadd
Section:	02	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
2 - 3 Miles — OIL_GAS — CA00011005

Well Number:	6	Status:	Completed oil
API Number:	03722740	Operator:	Petrominerals Corporation
Latitude:	34.458523	Longitude:	-118.641679
Region:	2	Lease:	Burns Crist
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
2 - 3 Miles — OIL_GAS — CA00010925

Well Number:	2	Status:	Completed oil
API Number:	03722940	Operator:	Petrominerals Corporation
Latitude:	34.458479	Longitude:	-118.639731
Region:	2	Lease:	Sadd
Section:	02	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
2 - 3 Miles — OIL_GAS — CA00010950

Well Number:	3	Status:	Completed oil- directional
API Number:	03722747	Operator:	Petrominerals Corporation
Latitude:	34.457277	Longitude:	-118.639759
Region:	2	Lease:	McGillivrae
Section:	02	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number
North 2 - 3 Miles	**OIL_GAS**	**CA00010948**

Well Number:	9	Status:	001
API Number:	03724195	Operator:	Petrominerals Corporation
Latitude:	34.456633	Longitude:	-118.641273
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North 2 - 3 Miles	**OIL_GAS**	**CA00010941**

Well Number:	10	Status:	001
API Number:	03724196	Operator:	Petrominerals Corporation
Latitude:	34.456607	Longitude:	-118.641520
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North 2 - 3 Miles	**OIL_GAS**	**CA00010946**

Well Number:	7	Status:	Completed oil
API Number:	03722727	Operator:	Petrominerals Corporation
Latitude:	34.456428	Longitude:	-118.641365
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North 2 - 3 Miles	**OIL_GAS**	**CA00010947**

Well Number:	8	Status:	001
API Number:	03724194	Operator:	Petrominerals Corporation
Latitude:	34.456353	Longitude:	-118.641056
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number
NNW 2 - 3 Miles	**OIL_GAS**	**CA00013454**

Well Number:	17	Status:	Plugged and abandoned oil
API Number:	03707260	Operator:	G. R. Nance Co., Inc
Latitude:	34.456041	Longitude:	-118.656948
Region:	2	Lease:	Towle
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North 2 - 3 Miles	**OIL_GAS**	**CA00010949**

Well Number:	2	Status:	Completed oil
API Number:	03722349	Operator:	Petrominerals Corporation
Latitude:	34.455897	Longitude:	-118.639788
Region:	2	Lease:	McGillivrae
Section:	02	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North 2 - 3 Miles	**OIL_GAS**	**CA00010945**

Well Number:	6	Status:	Completed oil
API Number:	03722340	Operator:	Petrominerals Corporation
Latitude:	34.455253	Longitude:	-118.641239
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW 2 - 3 Miles	**OIL_GAS**	**CA00010966**

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03721689	Operator:	Petrominerals Corporation
Latitude:	34.455147	Longitude:	-118.656791
Region:	2	Lease:	Hilgenfeld
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

NNW
2 - 3 Miles | **OIL_GAS** | **CA00013495**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03707259	Operator:	Federal Oil Company
Latitude:	34.454320	Longitude:	-118.652337
Region:	2	Lease:	Federal-Towle
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NW
2 - 3 Miles | **OIL_GAS** | **CA00010784**

Well Number:	88-4	Status:	Plugged and abandoned oil
API Number:	03707261	Operator:	Porsco Operating Company
Latitude:	34.454295	Longitude:	-118.659325
Region:	2	Lease:	Claiborne
Section:	04	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNE
2 - 3 Miles | **OIL_GAS** | **CA00015458**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03707262	Operator:	British-American Oil Prod Co
Latitude:	34.454254	Longitude:	-118.613133
Region:	2	Lease:	Wayside Honor Farm
Section:	01	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
2 - 3 Miles | **OIL_GAS** | **CA00010943**

Well Number:	4	Status:	Completed oil
API Number:	03722060	Operator:	Petrominerals Corporation
Latitude:	34.454010	Longitude:	-118.645937
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

North
1 - 2 Miles | **OIL_GAS** | **CA00010967**

Well Number:	1	Status:	Completed oil
API Number:	03707258	Operator:	Petrominerals Corporation
Latitude:	34.453848	Longitude:	-118.641113
Region:	2	Lease:	Mabel E. Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
2 - 3 Miles | **OIL_GAS** | **CA00010944**

Well Number:	5	Status:	Plugged and abandoned-dry hole
API Number:	03722072	Operator:	Petrominerals Corporation
Latitude:	34.453826	Longitude:	-118.647420
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
2 - 3 Miles | **OIL_GAS** | **CA00010940**

Well Number:	2	Status:	Completed oil
API Number:	03721715	Operator:	Petrominerals Corporation
Latitude:	34.453634	Longitude:	-118.643833
Region:	2	Lease:	Mabel E. Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
2 - 3 Miles | **OIL_GAS** | **CA00010942**

Well Number:	3	Status:	Completed oil- directional
API Number:	03721805	Operator:	Petrominerals Corporation
Latitude:	34.453607	Longitude:	-118.644112
Region:	2	Lease:	Mabel Strawn
Section:	03	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

NE
2 - 3 Miles | OIL_GAS | CA00007344

Well Number:	27	Status:	Plugged and abandoned-dry hole
API Number:	03707281	Operator:	Vintage Petroleum Inc
Latitude:	34.453190	Longitude:	-118.610317
Region:	2	Lease:	Honor Rancho 'A' (NCT-1)
Section:	01	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NW
2 - 3 Miles | OIL_GAS | CA00013497

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03705395	Operator:	Fernando Oil Company
Latitude:	34.452872	Longitude:	-118.657065
Region:	2	Lease:	Wel No.
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
1 - 2 Miles | OIL_GAS | CA00012074

Well Number:	81X	Status:	Plugged and abandoned-dry hole
API Number:	03721466	Operator:	Montara Petroleum Company
Latitude:	34.452826	Longitude:	-118.641111
Region:	2	Lease:	Sterling
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
1 - 2 Miles | OIL_GAS | CA00010933

Well Number:	2-10	Status:	Completed oil
API Number:	03721816	Operator:	Petrominerals Corporation
Latitude:	34.452744	Longitude:	-118.642502
Region:	2	Lease:	Sterling
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

NNW
1 - 2 Miles | OIL_GAS | CA00010932

Well Number:	1-10	Status:	Completed oil
API Number:	03721801	Operator:	Petrominerals Corporation
Latitude:	34.452663	Longitude:	-118.643893
Region:	2	Lease:	Sterling
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
2 - 3 Miles | OIL_GAS | CA00008486

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706205	Operator:	U. S. Natural Gas C & Manning
Latitude:	34.452622	Longitude:	-118.648222
Region:	2	Lease:	Strawn
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
1 - 2 Miles | OIL_GAS | CA00015649

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03705148	Operator:	Atlantic Oil Company
Latitude:	34.452428	Longitude:	-118.645253
Region:	2	Lease:	Strawn
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
1 - 2 Miles | OIL_GAS | CA00013952

Well Number:	3-10	Status:	Plugged and abandoned oil
API Number:	03721871	Operator:	Decalta International Corp
Latitude:	34.450949	Longitude:	-118.644354
Region:	2	Lease:	Sterling
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

North
1 - 2 Miles | OIL_GAS | CA00009001

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706082	Operator:	Texaco E & P Inc
Latitude:	34.450430	Longitude:	-118.639127
Region:	2	Lease:	Fernando
Section:	11	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NE
2 - 3 Miles | OIL_GAS | CA00008942

Well Number:	D-3	Status:	Plugged and abandoned-dry hole
API Number:	03707300	Operator:	Texaco E & P Inc
Latitude:	34.447757	Longitude:	-118.604933
Region:	2	Lease:	Newhall
Section:	07	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
1 - 2 Miles | OIL_GAS | CA00008939

Well Number:	B-1	Status:	Plugged and abandoned-dry hole
API Number:	03706107	Operator:	Texaco E & P Inc
Latitude:	34.444225	Longitude:	-118.630643
Region:	2	Lease:	Newhall
Section:	11	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

North
1 - 2 Miles | OIL_GAS | CA00008940

Well Number:	D-1	Status:	Plugged and abandoned-dry hole
API Number:	03706108	Operator:	Texaco E & P Inc
Latitude:	34.444098	Longitude:	-118.630303
Region:	2	Lease:	Newhall
Section:	11	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

NNE
1 - 2 Miles | OIL_GAS | CA00008941

Well Number:	D-2	Status:	Plugged and abandoned-dry hole
API Number:	03706109	Operator:	Texaco E & P Inc
Latitude:	34.444058	Longitude:	-118.619976
Region:	2	Lease:	Newhall
Section:	12	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
2 - 3 Miles | OIL_GAS | CA00009857

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03705882	Operator:	Shell Western E. & P. Inc.
Latitude:	34.443227	Longitude:	-118.667094
Region:	2	Lease:	Daugherty
Section:	09	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
1 - 2 Miles | OIL_GAS | CA00008973

Well Number:	1	Status:	Plugged and abandoned-dry hole-directional
API Number:	03706091	Operator:	Texaco E & P Inc
Latitude:	34.443164	Longitude:	-118.648605
Region:	2	Lease:	Malis
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ENE
2 - 3 Miles | OIL_GAS | CA00008944

Well Number:	F-1	Status:	Plugged and abandoned-dry hole
API Number:	03706111	Operator:	Texaco E & P Inc
Latitude:	34.440622	Longitude:	-118.601451
Region:	2	Lease:	Newhall
Section:	07	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

NW
1 - 2 Miles — **OIL_GAS** — **CA00012519**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03705621	Operator:	Marathon Oil Co
Latitude:	34.440369	Longitude:	-118.651382
Region:	2	Lease:	Mabel S. Henderson
Section:	10	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NE
1 - 2 Miles — **OIL_GAS** — **CA00013561**

Well Number:	B-1	Status:	Plugged and abandoned-dry hole
API Number:	03705490	Operator:	Exxon Corp
Latitude:	34.439071	Longitude:	-118.613720
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	12	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — **OIL_GAS** — **CA00008923**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706117	Operator:	Texaco E & P Inc
Latitude:	34.438953	Longitude:	-118.661520
Region:	2	Lease:	Seaboard-So Cal Pet. Daugherty
Section:	09	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — **OIL_GAS** — **CA00010509**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706664	Operator:	Rothschild Oil Company
Latitude:	34.438293	Longitude:	-118.660282
Region:	2	Lease:	Barbour
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

WNW
1 - 2 Miles — **OIL_GAS** — **CA00011095**

Well Number:	1-16	Status:	Plugged and abandoned-dry hole-directional
API Number:	03722947	Operator:	Pancandian Petroleum Co
Latitude:	34.437987	Longitude:	-118.659972
Region:	2	Lease:	N. L. & F.
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — **OIL_GAS** — **CA00014987**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706671	Operator:	Chevron USA, Inc.
Latitude:	34.437767	Longitude:	-118.657127
Region:	2	Lease:	Boobier
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
2 - 3 Miles — **OIL_GAS** — **CA00008754**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706631	Operator:	The British American Oil Prod
Latitude:	34.437578	Longitude:	-118.667330
Region:	2	Lease:	Kinler-So. Cal
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
1/2 - 1 Mile — **OIL_GAS** — **CA00010300**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03722056	Operator:	Santa Fe Energy Resources
Latitude:	34.434360	Longitude:	-118.637827
Region:	2	Lease:	N. L. & F.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

WNW
2 - 3 Miles — OIL_GAS — CA00010278

Well Number:	16-1	Status:	Plugged and abandoned-dry hole
API Number:	03706666	Operator:	Scope Industries
Latitude:	34.434221	Longitude:	-118.669889
Region:	2	Lease:	Kinler
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — OIL_GAS — CA00016378

Well Number:	1	Status:	Plugged and abandoned oil-directional
API Number:	03706629	Operator:	Amax Petroleum Corporation
Latitude:	34.434002	Longitude:	-118.666890
Region:	2	Lease:	Kinler
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NNW
1/2 - 1 Mile — OIL_GAS — CA00013589

Well Number:	55	Status:	Plugged and abandoned-dry hole
API Number:	03716518	Operator:	Exxon Corp
Latitude:	34.433828	Longitude:	-118.636435
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ENE
1 - 2 Miles — OIL_GAS — CA00013576

Well Number:	69	Status:	135
API Number:	03716528	Operator:	Exxon Corp
Latitude:	34.433372	Longitude:	-118.605058
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	18	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

WNW
1 - 2 Miles — OIL_GAS — CA00016403

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03706626	Operator:	Amax Petroleum Corporation
Latitude:	34.433315	Longitude:	-118.665961
Region:	2	Lease:	Barbour
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
2 - 3 Miles — OIL_GAS — CA00013452

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03721365	Operator:	G. R. Nance Co., Inc
Latitude:	34.433214	Longitude:	-118.672732
Region:	2	Lease:	Gallagher
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ENE
1 - 2 Miles — OIL_GAS — CA00013538

Well Number:	2	Status:	230
API Number:	03716535	Operator:	Exxon Corp
Latitude:	34.433129	Longitude:	-118.617295
Region:	2	Lease:	Newhall Land & Farming Co. 12
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — OIL_GAS — CA00016404

Well Number:	2	Status:	Plugged and abandoned oil
API Number:	03706627	Operator:	Amax Petroleum Corporation
Latitude:	34.432941	Longitude:	-118.663301
Region:	2	Lease:	Barbour
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

WNW
1 - 2 Miles — **OIL_GAS** — **CA00016405**

Well Number:	3	Status:	Plugged and abandoned oil
API Number:	03706628	Operator:	Amax Petroleum Corporation
Latitude:	34.432538	Longitude:	-118.661569
Region:	2	Lease:	Barbour
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — **OIL_GAS** — **CA00015495**

Well Number:	1-16	Status:	Plugged and abandoned-dry hole-directional
API Number:	03722707	Operator:	Black Hawk Resources Corp
Latitude:	34.432378	Longitude:	-118.663455
Region:	2	Lease:	N. L. & F.
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — **OIL_GAS** — **CA00016379**

Well Number:	2	Status:	Plugged and abandoned-dry hole
API Number:	03706630	Operator:	Amax Petroleum Corporation
Latitude:	34.432286	Longitude:	-118.667690
Region:	2	Lease:	Kinler
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

NE
1/2 - 1 Mile — **OIL_GAS** — **CA00013578**

Well Number:	70	Status:	Plugged and abandoned oil-directional
API Number:	03716529	Operator:	Exxon Corp
Latitude:	34.431838	Longitude:	-118.628381
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

WNW
1 - 2 Miles — **OIL_GAS** — **CA00011714**

Well Number:	10	Status:	Completed oil
API Number:	03706728	Operator:	Nuevo Energy Company
Latitude:	34.430692	Longitude:	-118.663235
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — **OIL_GAS** — **CA00014523**

Well Number:	5	Status:	Plugged and abandoned-dry hole
API Number:	03706681	Operator:	Chevron USA, Inc.
Latitude:	34.430390	Longitude:	-118.676467
Region:	2	Lease:	Sepulveda
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ENE
1 - 2 Miles — **OIL_GAS** — **CA00013556**

Well Number:	76	Status:	Plugged and abandoned oil-directional
API Number:	03716534	Operator:	Exxon Corp
Latitude:	34.430373	Longitude:	-118.608880
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WNW
1 - 2 Miles — **OIL_GAS** — **CA00014985**

Well Number:	5	Status:	Plugged and abandoned-dry hole
API Number:	03706668	Operator:	Chevron USA, Inc.
Latitude:	34.430357	Longitude:	-118.656865
Region:	2	Lease:	Blair
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

East
2 - 3 Miles | OIL_GAS | CA00013553

Well Number:	73	Status:	137
API Number:	03716531	Operator:	Exxon Corp
Latitude:	34.429852	Longitude:	-118.596595
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	18	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ENE
1/2 - 1 Mile | OIL_GAS | CA00013575

Well Number:	68	Status:	Plugged and abandoned oil
API Number:	03716527	Operator:	Exxon Corp
Latitude:	34.429832	Longitude:	-118.624709
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles | OIL_GAS | CA00013573

Well Number:	66	Status:	Plugged and abandoned oil
API Number:	03701977	Operator:	Exxon Corp
Latitude:	34.429748	Longitude:	-118.604609
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	18	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | OIL_GAS | CA00011698

Well Number:	4	Status:	Completed oil
API Number:	03706722	Operator:	Nuevo Energy Company
Latitude:	34.429525	Longitude:	-118.660914
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
2 - 3 Miles | OIL_GAS | CA00012525

Well Number:	20	Status:	Completed gas
API Number:	03722026	Operator:	Marathon Oil Co
Latitude:	34.429188	Longitude:	-118.676589
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles | OIL_GAS | CA00013580

Well Number:	72	Status:	Plugged and abandoned oil
API Number:	03716530	Operator:	Exxon Corp
Latitude:	34.429084	Longitude:	-118.612185
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | OIL_GAS | CA00011687

Well Number:	13	Status:	Completed oil
API Number:	03706731	Operator:	Nuevo Energy Company
Latitude:	34.429017	Longitude:	-118.659861
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | OIL_GAS | CA00011929

Well Number:	3	Status:	Completed oil
API Number:	03706698	Operator:	Nuevo Energy Company
Latitude:	34.428991	Longitude:	-118.674486
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles | OIL_GAS | CA00011700

Well Number:	6	Status:	Completed oil
API Number:	03706724	Operator:	Nuevo Energy Company
Latitude:	34.428895	Longitude:	-118.665581
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | OIL_GAS | CA00011691

Well Number:	17	Status:	Completed oil
API Number:	03706735	Operator:	Nuevo Energy Company
Latitude:	34.428859	Longitude:	-118.661129
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | OIL_GAS | CA00011906

Well Number:	9	Status:	Completed oil
API Number:	03706704	Operator:	Nuevo Energy Company
Latitude:	34.428846	Longitude:	-118.672105
Region:	2	Lease:	Barnes
Section:	18	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | OIL_GAS | CA00008178

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03706717	Operator:	Union Oil Company, Operator
Latitude:	34.428825	Longitude:	-118.656553
Region:	2	Lease:	Liebhart
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
2 - 3 Miles | OIL_GAS | CA00012669

Well Number:	4-17	Status:	Completed oil
API Number:	03706643	Operator:	LBth Inc
Latitude:	34.428772	Longitude:	-118.678721
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | OIL_GAS | CA00011672

Well Number:	7	Status:	Completed oil
API Number:	03706725	Operator:	Nuevo Energy Company
Latitude:	34.428739	Longitude:	-118.659057
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | OIL_GAS | CA00012675

Well Number:	8-17	Status:	Completed oil
API Number:	03706647	Operator:	LBth Inc
Latitude:	34.428703	Longitude:	-118.676495
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles | OIL_GAS | CA00013579

Well Number:	71	Status:	169
API Number:	03706299	Operator:	Exxon Corp
Latitude:	34.428699	Longitude:	-118.601974
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	18	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ENE
1/2 - 1 Mile | **OIL_GAS** | **CA00013574**

Well Number:	67	Status:	Plugged and abandoned oil
API Number:	03716526	Operator:	Exxon Corp
Latitude:	34.428670	Longitude:	-118.620842
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | **OIL_GAS** | **CA00011945**

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03706696	Operator:	Nuevo Energy Company
Latitude:	34.428605	Longitude:	-118.668116
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | **OIL_GAS** | **CA00011713**

Well Number:	1	Status:	Completed oil
API Number:	03706719	Operator:	Nuevo Energy Company
Latitude:	34.428597	Longitude:	-118.663200
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | **OIL_GAS** | **CA00011686**

Well Number:	12	Status:	Completed oil
API Number:	03706730	Operator:	Nuevo Energy Company
Latitude:	34.428564	Longitude:	-118.665148
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
2 - 3 Miles | **OIL_GAS** | **CA00012691**

Well Number:	12-17	Status:	Completed oil
API Number:	03706651	Operator:	LBth Inc
Latitude:	34.428471	Longitude:	-118.677020
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00011946**

Well Number:	10	Status:	Plugged and abandoned-dry hole
API Number:	03706705	Operator:	Nuevo Energy Company
Latitude:	34.428430	Longitude:	-118.674083
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00011925**

Well Number:	19	Status:	Completed oil- directional
API Number:	03706714	Operator:	Nuevo Energy Company
Latitude:	34.428406	Longitude:	-118.673743
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00011920**

Well Number:	14	Status:	Completed oil- directional
API Number:	03706709	Operator:	Nuevo Energy Company
Latitude:	34.428353	Longitude:	-118.674392
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
2 - 3 Miles — OIL_GAS — CA00011923

Well Number:	17	Status:	Completed oil
API Number:	03706712	Operator:	Nuevo Energy Company
Latitude:	34.428316	Longitude:	-118.670310
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — OIL_GAS — CA00008179

Well Number:	2	Status:	Plugged and abandoned-dry hole
API Number:	03706718	Operator:	Union Oil Company, Operator
Latitude:	34.428295	Longitude:	-118.654387
Region:	2	Lease:	Liebhart
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00011931

Well Number:	5	Status:	Completed oil- directional
API Number:	03706700	Operator:	Nuevo Energy Company
Latitude:	34.428251	Longitude:	-118.674051
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00011947

Well Number:	11	Status:	026
API Number:	03706706	Operator:	Nuevo Energy Company
Latitude:	34.428225	Longitude:	-118.674299
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles — OIL_GAS — CA00011696

Well Number:	21	Status:	Completed oil
API Number:	03706739	Operator:	Nuevo Energy Company
Latitude:	34.428035	Longitude:	-118.663044
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — OIL_GAS — CA00011690

Well Number:	16	Status:	Completed oil
API Number:	03706734	Operator:	Nuevo Energy Company
Latitude:	34.427951	Longitude:	-118.665115
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00011927

Well Number:	20	Status:	Completed oil- directional
API Number:	03706715	Operator:	Nuevo Energy Company
Latitude:	34.427846	Longitude:	-118.673216
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — OIL_GAS — CA00013572

Well Number:	65	Status:	Plugged and abandoned oil-directional
API Number:	03716470	Operator:	Exxon Corp
Latitude:	34.427717	Longitude:	-118.615676
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles — **OIL_GAS** — **CA00011689**

Well Number:	15	Status:	Completed oil
API Number:	03706733	Operator:	Nuevo Energy Company
Latitude:	34.427627	Longitude:	-118.662672
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — **OIL_GAS** — **CA00011928**

Well Number:	21	Status:	Completed oil- directional
API Number:	03706716	Operator:	Nuevo Energy Company
Latitude:	34.427530	Longitude:	-118.668454
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — **OIL_GAS** — **CA00011924**

Well Number:	18	Status:	Completed oil
API Number:	03706713	Operator:	Nuevo Energy Company
Latitude:	34.427495	Longitude:	-118.671113
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — **OIL_GAS** — **CA00013570**

Well Number:	63	Status:	Plugged and abandoned oil-directional
API Number:	03700147	Operator:	Exxon Corp
Latitude:	34.427306	Longitude:	-118.609028
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles — **OIL_GAS** — **CA00012728**

Well Number:	7	Status:	Completed oil
API Number:	03706669	Operator:	LBth Inc
Latitude:	34.427187	Longitude:	-118.656951
Region:	2	Lease:	Blair
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — **OIL_GAS** — **CA00011692**

Well Number:	18	Status:	Completed oil
API Number:	03706736	Operator:	Nuevo Energy Company
Latitude:	34.427181	Longitude:	-118.658714
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — **OIL_GAS** — **CA00012694**

Well Number:	15-17	Status:	Completed gas
API Number:	03706654	Operator:	LBth Inc
Latitude:	34.427042	Longitude:	-118.676337
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — **OIL_GAS** — **CA00013571**

Well Number:	64	Status:	Plugged and abandoned oil
API Number:	03716525	Operator:	Exxon Corp
Latitude:	34.426960	Longitude:	-118.612985
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles | **OIL_GAS** | **CA00011673**

Well Number:	8	Status:	Completed oil
API Number:	03706726	Operator:	Nuevo Energy Company
Latitude:	34.426952	Longitude:	-118.665577
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00011930**

Well Number:	4	Status:	Completed oil
API Number:	03706699	Operator:	Nuevo Energy Company
Latitude:	34.426911	Longitude:	-118.670122
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00012671**

Well Number:	5-17	Status:	Plugged and abandoned oil
API Number:	03706644	Operator:	LBth Inc
Latitude:	34.426888	Longitude:	-118.676553
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ENE
1/4 - 1/2 Mile | **OIL_GAS** | **CA00013560**

Well Number:	9	Status:	Plugged and abandoned-dry hole
API Number:	03716480	Operator:	Exxon Corp
Latitude:	34.426825	Longitude:	-118.629340
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

East
1 - 2 Miles | **OIL_GAS** | **CA00013567**

Well Number:	60	Status:	Plugged and abandoned oil
API Number:	03705101	Operator:	Exxon Corp
Latitude:	34.426786	Longitude:	-118.600438
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	18	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | **OIL_GAS** | **CA00011688**

Well Number:	14	Status:	Completed oil
API Number:	03706732	Operator:	Nuevo Energy Company
Latitude:	34.426778	Longitude:	-118.664989
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | **OIL_GAS** | **CA00011699**

Well Number:	5	Status:	Completed oil
API Number:	03706723	Operator:	Nuevo Energy Company
Latitude:	34.426782	Longitude:	-118.663227
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | **OIL_GAS** | **CA00011694**

Well Number:	2	Status:	Completed oil
API Number:	03706720	Operator:	Nuevo Energy Company
Latitude:	34.426764	Longitude:	-118.661155
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles — OIL_GAS — CA00011926

Well Number:	2	Status:	036
API Number:	03706697	Operator:	Nuevo Energy Company
Latitude:	34.426740	Longitude:	-118.667741
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00012698

Well Number:	19-17	Status:	Completed oil
API Number:	03706658	Operator:	LBth Inc
Latitude:	34.426701	Longitude:	-118.678872
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — OIL_GAS — CA00012727

Well Number:	27	Status:	Completed oil
API Number:	03706670	Operator:	LBth Inc
Latitude:	34.426609	Longitude:	-118.654353
Region:	2	Lease:	Blair
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — OIL_GAS — CA00011715

Well Number:	11	Status:	Completed oil
API Number:	03706729	Operator:	Nuevo Energy Company
Latitude:	34.426508	Longitude:	-118.661309
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

East
1/4 - 1/2 Mile — OIL_GAS — CA00013557

Well Number:	77	Status:	Plugged and abandoned-dry hole-directional
API Number:	03722047	Operator:	Exxon Corp
Latitude:	34.426314	Longitude:	-118.629247
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00011949

Well Number:	13	Status:	Completed oil
API Number:	03706708	Operator:	Nuevo Energy Company
Latitude:	34.426170	Longitude:	-118.670028
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
2 - 3 Miles — OIL_GAS — CA00013568

Well Number:	61	Status:	Plugged and abandoned oil-directional
API Number:	03716523	Operator:	Exxon Corp
Latitude:	34.425995	Longitude:	-118.595433
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	18	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — OIL_GAS — CA00011693

Well Number:	19	Status:	Completed oil
API Number:	03706737	Operator:	Nuevo Energy Company
Latitude:	34.425971	Longitude:	-118.661185
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

West
2 - 3 Miles — OIL_GAS — CA00011933

Well Number:	7	Status:	Completed oil- directional
API Number:	03706702	Operator:	Nuevo Energy Company
Latitude:	34.425940	Longitude:	-118.669904
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00011921

Well Number:	15	Status:	Completed oil- directional
API Number:	03706710	Operator:	Nuevo Energy Company
Latitude:	34.425719	Longitude:	-118.674696
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — OIL_GAS — CA00013593

Well Number:	59	Status:	Plugged and abandoned oil
API Number:	03716522	Operator:	Exxon Corp
Latitude:	34.425718	Longitude:	-118.603938
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	18	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1/2 - 1 Mile — OIL_GAS — CA00013592

Well Number:	58	Status:	Plugged and abandoned oil-directional
API Number:	03716521	Operator:	Exxon Corp
Latitude:	34.425693	Longitude:	-118.617125
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	13	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

West
2 - 3 Miles — OIL_GAS — CA00011932

Well Number:	6	Status:	Completed oil
API Number:	03706701	Operator:	Nuevo Energy Company
Latitude:	34.425592	Longitude:	-118.674510
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00012676

Well Number:	9-17	Status:	Completed oil
API Number:	03706648	Operator:	LBth Inc
Latitude:	34.425577	Longitude:	-118.678622
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — OIL_GAS — CA00011695

Well Number:	20	Status:	Completed oil
API Number:	03706738	Operator:	Nuevo Energy Company
Latitude:	34.425524	Longitude:	-118.664770
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00012692

Well Number:	13-17	Status:	Completed oil- directional
API Number:	03706652	Operator:	LBth Inc
Latitude:	34.425457	Longitude:	-118.676674
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles — OIL_GAS — CA00011934

Well Number:	8	Status:	036
API Number:	03706703	Operator:	Nuevo Energy Company
Latitude:	34.425331	Longitude:	-118.668913
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00012693

Well Number:	14-17	Status:	Plugged and abandoned oil
API Number:	03706653	Operator:	LBth Inc
Latitude:	34.425278	Longitude:	-118.676673
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1/4 - 1/2 Mile — OIL_GAS — CA00013584

Well Number:	50	Status:	Plugged and abandoned oil
API Number:	03716515	Operator:	Exxon Corp
Latitude:	34.425228	Longitude:	-118.640066
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1/2 - 1 Mile — OIL_GAS — CA00008933

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706695	Operator:	Texaco E & P Inc
Latitude:	34.425057	Longitude:	-118.645105
Region:	2	Lease:	Newhall
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1/2 - 1 Mile — OIL_GAS — CA00013672

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706638	Operator:	Exxon Corp
Latitude:	34.424987	Longitude:	-118.650578
Region:	2	Lease:	Castaic Junction Gas Unit #1
Section:	15	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00011948

Well Number:	12	Status:	Completed oil
API Number:	03706707	Operator:	Nuevo Energy Company
Latitude:	34.424829	Longitude:	-118.673426
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles — OIL_GAS — CA00011674

Well Number:	9	Status:	Plugged and abandoned oil
API Number:	03706727	Operator:	Nuevo Energy Company
Latitude:	34.424807	Longitude:	-118.665325
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
0 - 1/8 Mile — OIL_GAS — CA00013634

Well Number:	2	Status:	Plugged and abandoned oil-directional
API Number:	03716473	Operator:	Exxon Corp
Latitude:	34.424787	Longitude:	-118.634809
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	14	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles | **OIL_GAS** | **CA00011697**

Well Number:	3	Status:	Plugged and abandoned-dry hole
API Number:	03706721	Operator:	Nuevo Energy Company
Latitude:	34.424703	Longitude:	-118.658585
Region:	2	Lease:	Lincoln
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00012695**

Well Number:	16-17	Status:	Completed oil
API Number:	03706655	Operator:	LBth Inc
Latitude:	34.424691	Longitude:	-118.676394
Region:	2	Lease:	Vasquez
Section:	17	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00011922**

Well Number:	16	Status:	Oil well converted to water disposal
API Number:	03706711	Operator:	Nuevo Energy Company
Latitude:	34.424482	Longitude:	-118.670519
Region:	2	Lease:	Barnes
Section:	16	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
1 - 2 Miles | **OIL_GAS** | **CA00012672**

Well Number:	6	Status:	Completed oil
API Number:	03706694	Operator:	LBth Inc
Latitude:	34.423361	Longitude:	-118.668513
Region:	2	Lease:	Vasquez
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

West
1 - 2 Miles | **OIL_GAS** | **CA00013236**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706634	Operator:	Havenstrite Oil Co
Latitude:	34.423300	Longitude:	-118.658934
Region:	2	Lease:	Vasquez
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00012700**

Well Number:	3	Status:	Completed oil
API Number:	03706691	Operator:	LBth Inc
Latitude:	34.423283	Longitude:	-118.671345
Region:	2	Lease:	Vasquez
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00008995**

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03706633	Operator:	Texaco E & P Inc
Latitude:	34.423258	Longitude:	-118.676515
Region:	2	Lease:	Encinas Fee
Section:	20	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles | **OIL_GAS** | **CA00014377**

Well Number:	4	Status:	Plugged and abandoned oil-directional
API Number:	03706692	Operator:	Chevron USA, Inc.
Latitude:	34.423186	Longitude:	-118.671558
Region:	2	Lease:	Vasquez
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance — Database — EDR ID Number

West
2 - 3 Miles — OIL_GAS — CA00012699

Well Number:	2-17	Status:	Completed oil
API Number:	03706690	Operator:	LBth Inc
Latitude:	34.422999	Longitude:	-118.673648
Region:	2	Lease:	Vasquez
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — OIL_GAS — CA00013621

Well Number:	33	Status:	Plugged and abandoned oil
API Number:	03716503	Operator:	Exxon Corp
Latitude:	34.422943	Longitude:	-118.612414
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00012670

Well Number:	5	Status:	Completed oil- directional
API Number:	03706693	Operator:	LBth Inc
Latitude:	34.422886	Longitude:	-118.673919
Region:	2	Lease:	Vasquez
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — OIL_GAS — CA00013599

Well Number:	39	Status:	136
API Number:	03706409	Operator:	Exxon Corp
Latitude:	34.422889	Longitude:	-118.614261
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance — Database — EDR ID Number

East
1 - 2 Miles — OIL_GAS — CA00013630

Well Number:	16	Status:	Plugged and abandoned oil
API Number:	03716487	Operator:	Exxon Corp
Latitude:	34.422344	Longitude:	-118.608066
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — OIL_GAS — CA00013601

Well Number:	40	Status:	Plugged and abandoned oil
API Number:	03716507	Operator:	Exxon Corp
Latitude:	34.422263	Longitude:	-118.609969
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — OIL_GAS — CA00013622

Well Number:	34	Status:	Plugged and abandoned oil
API Number:	03716504	Operator:	Exxon Corp
Latitude:	34.422208	Longitude:	-118.604877
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1/2 - 1 Mile — OIL_GAS — CA00013623

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03716472	Operator:	Exxon Corp
Latitude:	34.422040	Longitude:	-118.625317
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
1 - 2 Miles — **OIL_GAS** — **CA00013626**

Well Number:	12	Status:	Plugged and abandoned oil
API Number:	03716483	Operator:	Exxon Corp
Latitude:	34.421679	Longitude:	-118.617297
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — **OIL_GAS** — **CA00014213**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706632	Operator:	Conoco Inc
Latitude:	34.421566	Longitude:	-118.678243
Region:	2	Lease:	Newhall
Section:	20	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
2 - 3 Miles — **OIL_GAS** — **CA00014751**

Well Number:	6	Status:	Plugged and abandoned-dry hole
API Number:	03716536	Operator:	Chevron USA, Inc.
Latitude:	34.420819	Longitude:	-118.596350
Region:	2	Lease:	Newhall Land & Farming
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — **OIL_GAS** — **CA00008706**

Well Number:	2	Status:	Plugged and abandoned oil
API Number:	03706663	Operator:	The Newhall Land & Farming Co
Latitude:	34.420664	Longitude:	-118.671385
Region:	2	Lease:	Socal
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
1/4 - 1/2 Mile — **OIL_GAS** — **CA00013606**

Well Number:	45	Status:	Plugged and abandoned-dry hole
API Number:	03716511	Operator:	Exxon Corp
Latitude:	34.420650	Longitude:	-118.634767
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — **OIL_GAS** — **CA00008705**

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03706662	Operator:	The Newhall Land & Farming Co
Latitude:	34.420525	Longitude:	-118.673550
Region:	2	Lease:	Socal
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles — **OIL_GAS** — **CA00013614**

Well Number:	27	Status:	Plugged and abandoned oil
API Number:	03716498	Operator:	Exxon Corp
Latitude:	34.420239	Longitude:	-118.614736
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

East
1 - 2 Miles — **OIL_GAS** — **CA00013616**

Well Number:	29	Status:	136
API Number:	03706300	Operator:	Exxon Corp
Latitude:	34.420225	Longitude:	-118.600935
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction
Distance | Database | EDR ID Number

ESE
1 - 2 Miles — OIL_GAS — CA00013631

Well Number:	17	Status:	Plugged and abandoned oil
API Number:	03716488	Operator:	Exxon Corp
Latitude:	34.420220	Longitude:	-118.606611
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1/4 - 1/2 Mile — OIL_GAS — CA00013588

Well Number:	54	Status:	Plugged and abandoned-dry hole-directional
API Number:	03716517	Operator:	Exxon Corp
Latitude:	34.420122	Longitude:	-118.638090
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles — OIL_GAS — CA00013628

Well Number:	14	Status:	Plugged and abandoned oil
API Number:	03716485	Operator:	Exxon Corp
Latitude:	34.419900	Longitude:	-118.612093
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

West
2 - 3 Miles — OIL_GAS — CA00012701

Well Number:	12-20	Status:	Completed oil- directional
API Number:	03722746	Operator:	LBth Inc
Latitude:	34.419879	Longitude:	-118.678301
Region:	2	Lease:	N. L. & F.
Section:	20	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction
Distance | Database | EDR ID Number

West
2 - 3 Miles — OIL_GAS — CA00012702

Well Number:	14-20	Status:	Completed oil
API Number:	03729957	Operator:	LBth Inc
Latitude:	34.419675	Longitude:	-118.678146
Region:	2	Lease:	N. L. & F.
Section:	20	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1/2 - 1 Mile — OIL_GAS — CA00013594

Well Number:	6	Status:	Plugged and abandoned oil
API Number:	03716477	Operator:	Exxon Corp
Latitude:	34.419343	Longitude:	-118.618768
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles — OIL_GAS — CA00013635

Well Number:	20	Status:	Plugged and abandoned oil
API Number:	03716491	Operator:	Exxon Corp
Latitude:	34.419305	Longitude:	-118.603759
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles — OIL_GAS — CA00013620

Well Number:	32	Status:	Plugged and abandoned oil
API Number:	03716502	Operator:	Exxon Corp
Latitude:	34.419300	Longitude:	-118.608938
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
2 - 3 Miles

OIL_GAS CA00013595

Well Number:	35	Status:	Plugged and abandoned oil
API Number:	03716505	Operator:	Exxon Corp
Latitude:	34.419067	Longitude:	-118.598330
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1/2 - 1 Mile

OIL_GAS CA00013624

Well Number:	10	Status:	Plugged and abandoned oil
API Number:	03716481	Operator:	Exxon Corp
Latitude:	34.418972	Longitude:	-118.622942
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles

OIL_GAS CA00013612

Well Number:	25	Status:	136
API Number:	03716496	Operator:	Exxon Corp
Latitude:	34.418950	Longitude:	-118.618369
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles

OIL_GAS CA00013559

Well Number:	8	Status:	Plugged and abandoned oil
API Number:	03716479	Operator:	Exxon Corp
Latitude:	34.418401	Longitude:	-118.616208
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

WSW
2 - 3 Miles

OIL_GAS CA00007251

Well Number:	8-20	Status:	Completed oil
API Number:	03722323	Operator:	Vintage Petroleum Inc
Latitude:	34.418247	Longitude:	-118.677247
Region:	2	Lease:	N. L. & F.
Section:	20	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WSW
2 - 3 Miles

OIL_GAS CA00007269

Well Number:	11-20	Status:	Completed oil- directional
API Number:	03722738	Operator:	Vintage Petroleum Inc
Latitude:	34.418095	Longitude:	-118.676968
Region:	2	Lease:	N. L. & F.
Section:	20	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1/2 - 1 Mile

OIL_GAS CA00013590

Well Number:	56	Status:	Plugged and abandoned oil-directional
API Number:	03716519	Operator:	Exxon Corp
Latitude:	34.418097	Longitude:	-118.625511
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WSW
2 - 3 Miles

OIL_GAS CA00007247

Well Number:	4-20	Status:	Drilling-idle
API Number:	03722308	Operator:	Vintage Petroleum Inc
Latitude:	34.418068	Longitude:	-118.677339
Region:	2	Lease:	N. L. & F.
Section:	20	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
1 - 2 Miles — OIL_GAS — CA00013627

Well Number:	13	Status:	Plugged and abandoned oil
API Number:	03716484	Operator:	Exxon Corp
Latitude:	34.418069	Longitude:	-118.607116
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1/2 - 1 Mile — OIL_GAS — CA00013607

Well Number:	46	Status:	Plugged and abandoned oil
API Number:	03716512	Operator:	Exxon Corp
Latitude:	34.417857	Longitude:	-118.625595
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1/2 - 1 Mile — OIL_GAS — CA00013603

Well Number:	42	Status:	Plugged and abandoned gas
API Number:	03716509	Operator:	Exxon Corp
Latitude:	34.417819	Longitude:	-118.621121
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles — OIL_GAS — CA00013617

Well Number:	3	Status:	Plugged and abandoned oil
API Number:	03716474	Operator:	Exxon Corp
Latitude:	34.417690	Longitude:	-118.619161
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
1 - 2 Miles — OIL_GAS — CA00013636

Well Number:	21	Status:	Plugged and abandoned oil
API Number:	03716492	Operator:	Exxon Corp
Latitude:	34.417500	Longitude:	-118.602317
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1/2 - 1 Mile — OIL_GAS — CA00013586

Well Number:	52	Status:	137
API Number:	03716516	Operator:	Exxon Corp
Latitude:	34.417322	Longitude:	-118.627121
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles — OIL_GAS — CA00013629

Well Number:	15	Status:	Plugged and abandoned oil
API Number:	03716486	Operator:	Exxon Corp
Latitude:	34.417226	Longitude:	-118.610494
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
1/2 - 1 Mile — OIL_GAS — CA00013591

Well Number:	57	Status:	Plugged and abandoned-dry hole-directional
API Number:	03716520	Operator:	Exxon Corp
Latitude:	34.417166	Longitude:	-118.629478
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
1 - 2 Miles | **OIL_GAS** | **CA00013613**

Well Number:	26	Status:	Plugged and abandoned oil
API Number:	03716497	Operator:	Exxon Corp
Latitude:	34.416961	Longitude:	-118.613448
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles | **OIL_GAS** | **CA00013600**

Well Number:	4	Status:	Plugged and abandoned oil
API Number:	03716475	Operator:	Exxon Corp
Latitude:	34.416748	Longitude:	-118.604866
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
2 - 3 Miles | **OIL_GAS** | **CA00013596**

Well Number:	36	Status:	Plugged and abandoned oil
API Number:	03706353	Operator:	Exxon Corp
Latitude:	34.416730	Longitude:	-118.594291
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
2 - 3 Miles | **OIL_GAS** | **CA00013619**

Well Number:	31	Status:	Plugged and abandoned oil-directional
API Number:	03716501	Operator:	Exxon Corp
Latitude:	34.416720	Longitude:	-118.598237
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
1 - 2 Miles | **OIL_GAS** | **CA00013577**

Well Number:	7	Status:	Plugged and abandoned oil
API Number:	03716478	Operator:	Exxon Corp
Latitude:	34.416152	Longitude:	-118.608730
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles | **OIL_GAS** | **CA00010738**

Well Number:	1	Status:	Plugged and abandoned-dry hole-directional
API Number:	03722352	Operator:	Quintana Petroleum Corp
Latitude:	34.414731	Longitude:	-118.646321
Region:	2	Lease:	NL&F-Trifield
Section:	22	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles | **OIL_GAS** | **CA00013583**

Well Number:	5	Status:	Plugged and abandoned oil
API Number:	03716476	Operator:	Exxon Corp
Latitude:	34.414706	Longitude:	-118.612305
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles | **OIL_GAS** | **CA00013633**

Well Number:	19	Status:	Plugged and abandoned oil
API Number:	03716490	Operator:	Exxon Corp
Latitude:	34.414621	Longitude:	-118.603049
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SE
1 - 2 Miles | OIL_GAS | CA00013632

Well Number:	18	Status:	Plugged and abandoned oil
API Number:	03716489	Operator:	Exxon Corp
Latitude:	34.414409	Longitude:	-118.620771
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WSW
2 - 3 Miles | OIL_GAS | CA00010733

Well Number:	1-21	Status:	Plugged and abandoned oil-directional
API Number:	03722347	Operator:	Quintana Petroleum Corp
Latitude:	34.414386	Longitude:	-118.675377
Region:	2	Lease:	N. L. & F.
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | OIL_GAS | CA00013610

Well Number:	23	Status:	Plugged and abandoned oil
API Number:	03716494	Operator:	Exxon Corp
Latitude:	34.414335	Longitude:	-118.616708
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles | OIL_GAS | CA00013611

Well Number:	24	Status:	Plugged and abandoned oil
API Number:	03716495	Operator:	Exxon Corp
Latitude:	34.413945	Longitude:	-118.605969
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
2 - 3 Miles | OIL_GAS | CA00013615

Well Number:	28	Status:	Plugged and abandoned oil
API Number:	03716499	Operator:	Exxon Corp
Latitude:	34.413946	Longitude:	-118.600944
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles | OIL_GAS | CA00013646

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03706359	Operator:	Exxon Corp
Latitude:	34.413921	Longitude:	-118.609888
Region:	2	Lease:	Newhall Corporation
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | OIL_GAS | CA00013625

Well Number:	11	Status:	Plugged and abandoned oil
API Number:	03716482	Operator:	Exxon Corp
Latitude:	34.413576	Longitude:	-118.613921
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | OIL_GAS | CA00013558

Well Number:	78	Status:	Plugged and abandoned-dry hole
API Number:	03722728	Operator:	Exxon Corp
Latitude:	34.413208	Longitude:	-118.623247
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	23	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
2 - 3 Miles | OIL_GAS | CA00013618

Well Number:	30	Status:	Plugged and abandoned oil
API Number:	03716500	Operator:	Exxon Corp
Latitude:	34.413191	Longitude:	-118.598683
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
2 - 3 Miles | OIL_GAS | CA00013597

Well Number:	37	Status:	Plugged and abandoned oil
API Number:	03713506	Operator:	Exxon Corp
Latitude:	34.413175	Longitude:	-118.596309
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | OIL_GAS | CA00013587

Well Number:	53	Status:	136
API Number:	03706358	Operator:	Exxon Corp
Latitude:	34.413070	Longitude:	-118.622358
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | OIL_GAS | CA00013609

Well Number:	22	Status:	136
API Number:	03716493	Operator:	Exxon Corp
Latitude:	34.412628	Longitude:	-118.617868
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
1 - 2 Miles | OIL_GAS | CA00013602

Well Number:	41	Status:	Plugged and abandoned oil
API Number:	03716508	Operator:	Exxon Corp
Latitude:	34.412374	Longitude:	-118.603543
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | OIL_GAS | CA00013647

Well Number:	2	Status:	Plugged and abandoned-dry hole
API Number:	03716471	Operator:	Exxon Corp
Latitude:	34.412161	Longitude:	-118.612355
Region:	2	Lease:	Newhall Corporation
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
1 - 2 Miles | OIL_GAS | CA00013648

Well Number:	3	Status:	Plugged and abandoned oil
API Number:	03706298	Operator:	Exxon Corp
Latitude:	34.411406	Longitude:	-118.606614
Region:	2	Lease:	Newhall Corporation
Section:	24	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | OIL_GAS | CA00011180

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03712619	Operator:	Oryx Energy Co.
Latitude:	34.411341	Longitude:	-118.641297
Region:	2	Lease:	Newhall Land and Farming
Section:	22	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

ESE
2 - 3 Miles — OIL_GAS — CA00013581

Well Number:	48	Status:	Plugged and abandoned oil
API Number:	03716513	Operator:	Exxon Corp
Latitude:	34.411173	Longitude:	-118.598564
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WSW
1 - 2 Miles — OIL_GAS — CA00008951

Well Number:	2	Status:	Plugged and abandoned-dry hole
API Number:	03712659	Operator:	Texaco E & P Inc
Latitude:	34.410582	Longitude:	-118.664094
Region:	2	Lease:	N. L. & F.
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

ESE
2 - 3 Miles — OIL_GAS — CA00013582

Well Number:	49	Status:	Plugged and abandoned oil
API Number:	03716514	Operator:	Exxon Corp
Latitude:	34.410224	Longitude:	-118.599815
Region:	2	Lease:	Newhall Land & Farming Co.
Section:	19	Township:	04N
Range:	16W	Map Number:	252
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

WSW
1 - 2 Miles — OIL_GAS — CA00008950

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03712658	Operator:	Texaco E & P Inc
Latitude:	34.409984	Longitude:	-118.662582
Region:	2	Lease:	N. L. & F.
Section:	21	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SW
1 - 2 Miles — OIL_GAS — CA00008934

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03712660	Operator:	Texaco E & P Inc
Latitude:	34.409727	Longitude:	-118.656815
Region:	2	Lease:	Newhall
Section:	22	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00012400

Well Number:	152	Status:	Plugged and abandoned oil
API Number:	03712654	Operator:	Medallion Calif Prpts Co
Latitude:	34.408044	Longitude:	-118.638431
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — OIL_GAS — CA00012416

Well Number:	142	Status:	136
API Number:	03712895	Operator:	Medallion Calif Prpts Co
Latitude:	34.407981	Longitude:	-118.644284
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles — OIL_GAS — CA00011167

Well Number:	134	Status:	136
API Number:	03712888	Operator:	Oryx Energy Co.
Latitude:	34.407966	Longitude:	-118.653138
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction Distance	Database	EDR ID Number

SSW
1 - 2 Miles — OIL_GAS — CA00012393

Well Number:	145	Status:	136
API Number:	03712898	Operator:	Medallion Calif Prpts Co
Latitude:	34.407775	Longitude:	-118.643927
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles — OIL_GAS — CA00011135

Well Number:	62	Status:	Plugged and abandoned oil
API Number:	03712875	Operator:	Oryx Energy Co.
Latitude:	34.407770	Longitude:	-118.657084
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles — OIL_GAS — CA00011160

Well Number:	104	Status:	136
API Number:	03713283	Operator:	Oryx Energy Co.
Latitude:	34.407720	Longitude:	-118.658997
Region:	2	Lease:	Rancho San Francisco
Section:	28	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — OIL_GAS — CA00011168

Well Number:	135	Status:	Plugged and abandoned oil
API Number:	03712889	Operator:	Oryx Energy Co.
Latitude:	34.407666	Longitude:	-118.640469
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction Distance	Database	EDR ID Number

SW
1 - 2 Miles — OIL_GAS — CA00011144

Well Number:	86	Status:	Plugged and abandoned oil
API Number:	03713265	Operator:	Oryx Energy Co.
Latitude:	34.407367	Longitude:	-118.654801
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles — OIL_GAS — CA00012359

Well Number:	66	Status:	036
API Number:	03710663	Operator:	Medallion Calif Prpts Co
Latitude:	34.407327	Longitude:	-118.650194
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles — OIL_GAS — CA00012370

Well Number:	41	Status:	Plugged and abandoned oil
API Number:	03712855	Operator:	Medallion Calif Prpts Co
Latitude:	34.407234	Longitude:	-118.652701
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00012396

Well Number:	148	Status:	Completed oil
API Number:	03710658	Operator:	Medallion Calif Prpts Co
Latitude:	34.407218	Longitude:	-118.631878
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012402**

Well Number:	154	Status:	Completed oil
API Number:	03712656	Operator:	Medallion Calif Prpts Co
Latitude:	34.406719	Longitude:	-118.641473
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012416**

Well Number:	144	Status:	036
API Number:	03712897	Operator:	Medallion Calif Prpts Co
Latitude:	34.406710	Longitude:	-118.636999
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012431**

Well Number:	127	Status:	Completed oil
API Number:	03712881	Operator:	Medallion Calif Prpts Co
Latitude:	34.406675	Longitude:	-118.646809
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | **OIL_GAS** | **CA00011122**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03706028	Operator:	Oryx Energy Co.
Latitude:	34.406603	Longitude:	-118.608929
Region:	2	Lease:	Sunray-McCulloch NCS
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SW
1 - 2 Miles | **OIL_GAS** | **CA00012442**

Well Number:	111	Status:	Completed oil
API Number:	03713290	Operator:	Medallion Calif Prpts Co
Latitude:	34.406594	Longitude:	-118.653065
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles | **OIL_GAS** | **CA00012421**

Well Number:	116	Status:	Completed oil
API Number:	03713295	Operator:	Medallion Calif Prpts Co
Latitude:	34.406485	Longitude:	-118.652590
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles | **OIL_GAS** | **CA00012394**

Well Number:	146	Status:	Completed oil
API Number:	03712899	Operator:	Medallion Calif Prpts Co
Latitude:	34.406463	Longitude:	-118.650544
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
1 - 2 Miles | **OIL_GAS** | **CA00011172**

Well Number:	155	Status:	Plugged and abandoned oil
API Number:	03712657	Operator:	Oryx Energy Co.
Latitude:	34.406209	Longitude:	-118.626209
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SW
1 - 2 Miles | **OIL_GAS** | **CA00012439**

Well Number:	107	Status:	Completed oil
API Number:	03713286	Operator:	Medallion Calif Prpts Co
Latitude:	34.406113	Longitude:	-118.650383
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles | **OIL_GAS** | **CA00011158**

Well Number:	56	Status:	Plugged and abandoned oil
API Number:	03712868	Operator:	Oryx Energy Co.
Latitude:	34.406045	Longitude:	-118.654267
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012415**

Well Number:	141	Status:	Completed oil
API Number:	03712894	Operator:	Medallion Calif Prpts Co
Latitude:	34.405879	Longitude:	-118.634270
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00011162**

Well Number:	110	Status:	Plugged and abandoned oil
API Number:	03713289	Operator:	Oryx Energy Co.
Latitude:	34.405769	Longitude:	-118.649093
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012428**

Well Number:	124	Status:	Completed oil
API Number:	03712878	Operator:	Medallion Calif Prpts Co
Latitude:	34.405729	Longitude:	-118.644447
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012429**

Well Number:	125	Status:	Completed oil
API Number:	03712879	Operator:	Medallion Calif Prpts Co
Latitude:	34.405673	Longitude:	-118.636915
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW
1 - 2 Miles | **OIL_GAS** | **CA00012389**

Well Number:	27	Status:	Plugged and abandoned oil
API Number:	03712645	Operator:	Medallion Calif Prpts Co
Latitude:	34.405593	Longitude:	-118.652138
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012391**

Well Number:	29	Status:	Completed oil
API Number:	03712647	Operator:	Medallion Calif Prpts Co
Latitude:	34.405587	Longitude:	-118.650284
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012373**

Well Number:	45	Status:	Completed oil
API Number:	03712858	Operator:	Medallion Calif Prpts Co
Latitude:	34.405456	Longitude:	-118.647783
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012374**

Well Number:	47	Status:	036
API Number:	03712860	Operator:	Medallion Calif Prpts Co
Latitude:	34.405450	Longitude:	-118.645909
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
1 - 2 Miles | **OIL_GAS** | **CA00012395**

Well Number:	147	Status:	036
API Number:	03712900	Operator:	Medallion Calif Prpts Co
Latitude:	34.405297	Longitude:	-118.629468
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012423**

Well Number:	119	Status:	Completed oil
API Number:	03713297	Operator:	Medallion Calif Prpts Co
Latitude:	34.405276	Longitude:	-118.639661
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012419**

Well Number:	114	Status:	Completed oil
API Number:	03713293	Operator:	Medallion Calif Prpts Co
Latitude:	34.405266	Longitude:	-118.647463
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012412**

Well Number:	137	Status:	Completed oil
API Number:	03712890	Operator:	Medallion Calif Prpts Co
Latitude:	34.404787	Longitude:	-118.647592
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SE
1 - 2 Miles | **OIL_GAS** | **CA00012462**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03705637	Operator:	Mcor Oil and Gas Corporation
Latitude:	34.404634	Longitude:	-118.610344
Region:	2	Lease:	McCulloch NC
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00011169**

Well Number:	138	Status:	Plugged and abandoned oil
API Number:	03712891	Operator:	Oryx Energy Co.
Latitude:	34.404547	Longitude:	-118.641614
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SW
1 - 2 Miles — **OIL_GAS** — **CA00011164**

Well Number:	121	Status:	Plugged and abandoned oil
API Number:	03700071	Operator:	Oryx Energy Co.
Latitude:	34.404364	Longitude:	-118.652213
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012411**

Well Number:	136	Status:	Idle oil
API Number:	03706405	Operator:	Medallion Calif Prpts Co
Latitude:	34.404333	Longitude:	-118.648944
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012365**

Well Number:	23	Status:	Idle oil
API Number:	03712642	Operator:	Medallion Calif Prpts Co
Latitude:	34.404289	Longitude:	-118.648162
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012426**

Well Number:	122	Status:	Completed oil
API Number:	03713299	Operator:	Medallion Calif Prpts Co
Latitude:	34.404277	Longitude:	-118.635216
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012436**

Well Number:	102	Status:	Completed oil
API Number:	03713282	Operator:	Medallion Calif Prpts Co
Latitude:	34.404219	Longitude:	-118.646290
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00011132**

Well Number:	59	Status:	136
API Number:	03712871	Operator:	Oryx Energy Co.
Latitude:	34.403982	Longitude:	-118.639738
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012410**

Well Number:	132	Status:	108
API Number:	03712886	Operator:	Medallion Calif Prpts Co
Latitude:	34.403961	Longitude:	-118.631592
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012390**

Well Number:	28	Status:	Completed oil
API Number:	03712646	Operator:	Medallion Calif Prpts Co
Latitude:	34.403889	Longitude:	-118.645343
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SW
1 - 2 Miles | **OIL_GAS** | **CA00011136**

Well Number:	63	Status:	Plugged and abandoned oil
API Number:	03712876	Operator:	Oryx Energy Co.
Latitude:	34.403850	Longitude:	-118.652649
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012443**

Well Number:	112	Status:	036
API Number:	03713291	Operator:	Medallion Calif Prpts Co
Latitude:	34.403810	Longitude:	-118.642229
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00011155**

Well Number:	48	Status:	136
API Number:	03712861	Operator:	Oryx Energy Co.
Latitude:	34.403796	Longitude:	-118.641751
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012387**

Well Number:	25	Status:	108
API Number:	03712644	Operator:	Medallion Calif Prpts Co
Latitude:	34.403766	Longitude:	-118.650434
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012440**

Well Number:	108	Status:	Completed oil
API Number:	03713287	Operator:	Medallion Calif Prpts Co
Latitude:	34.403720	Longitude:	-118.641008
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00011154**

Well Number:	46	Status:	Plugged and abandoned oil
API Number:	03712859	Operator:	Oryx Energy Co.
Latitude:	34.403691	Longitude:	-118.643456
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012355**

Well Number:	58	Status:	Completed oil
API Number:	03712870	Operator:	Medallion Calif Prpts Co
Latitude:	34.403614	Longitude:	-118.643000
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00011138**

Well Number:	75	Status:	Plugged and abandoned oil
API Number:	03713254	Operator:	Oryx Energy Co.
Latitude:	34.403439	Longitude:	-118.639869
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles — **OIL_GAS** — **CA00011165**

Well Number:	131	Status:	Plugged and abandoned oil
API Number:	03712885	Operator:	Oryx Energy Co.
Latitude:	34.403208	Longitude:	-118.644255
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012332**

Well Number:	97	Status:	036
API Number:	03713277	Operator:	Medallion Calif Prpts Co
Latitude:	34.403133	Longitude:	-118.637277
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
1 - 2 Miles — **OIL_GAS** — **CA00012417**

Well Number:	143	Status:	Completed oil
API Number:	03712896	Operator:	Medallion Calif Prpts Co
Latitude:	34.402996	Longitude:	-118.626936
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012444**

Well Number:	113	Status:	108
API Number:	03713292	Operator:	Medallion Calif Prpts Co
Latitude:	34.402974	Longitude:	-118.645075
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012425**

Well Number:	120	Status:	Completed oil
API Number:	03713298	Operator:	Medallion Calif Prpts Co
Latitude:	34.402959	Longitude:	-118.639979
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012407**

Well Number:	129	Status:	Plugged and abandoned oil
API Number:	03712883	Operator:	Medallion Calif Prpts Co
Latitude:	34.402778	Longitude:	-118.637995
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00011170**

Well Number:	140	Status:	Plugged and abandoned oil
API Number:	03712893	Operator:	Oryx Energy Co.
Latitude:	34.402426	Longitude:	-118.650340
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
1 - 2 Miles — **OIL_GAS** — **CA00011179**

Well Number:	6-7	Status:	Plugged and abandoned oil
API Number:	03712618	Operator:	Oryx Energy Co.
Latitude:	34.402421	Longitude:	-118.623989
Region:	2	Lease:	Newhall Corp.-Wolfson
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
1 - 2 Miles | **OIL_GAS** | **CA00012377**

Well Number:	52	Status:	136
API Number:	03712865	Operator:	Medallion Calif Prpts Co
Latitude:	34.402382	Longitude:	-118.637472
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012382**

Well Number:	20	Status:	Plugged and abandoned oil
API Number:	03712839	Operator:	Medallion Calif Prpts Co
Latitude:	34.402287	Longitude:	-118.646443
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012383**

Well Number:	21	Status:	Completed oil
API Number:	03712640	Operator:	Medallion Calif Prpts Co
Latitude:	34.402204	Longitude:	-118.641034
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00011173**

Well Number:	17	Status:	Plugged and abandoned oil
API Number:	03712636	Operator:	Oryx Energy Co.
Latitude:	34.402171	Longitude:	-118.644209
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
1 - 2 Miles | **OIL_GAS** | **CA00012365**

Well Number:	72	Status:	Completed oil
API Number:	03713251	Operator:	Medallion Calif Prpts Co
Latitude:	34.402078	Longitude:	-118.637615
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012388**

Well Number:	26	Status:	046
API Number:	03700069	Operator:	Medallion Calif Prpts Co
Latitude:	34.402025	Longitude:	-118.650858
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012358**

Well Number:	65	Status:	Completed oil
API Number:	03713245	Operator:	Medallion Calif Prpts Co
Latitude:	34.402027	Longitude:	-118.635092
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00011142**

Well Number:	84	Status:	136
API Number:	03713263	Operator:	Oryx Energy Co.
Latitude:	34.402023	Longitude:	-118.632798
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction Distance	Database	EDR ID Number
SSW 1 - 2 Miles	**OIL_GAS**	**CA00012386**

Well Number:	24	Status:	Completed oil
API Number:	03712643	Operator:	Medallion Calif Prpts Co
Latitude:	34.401942	Longitude:	-118.648270
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South 1 - 2 Miles	**OIL_GAS**	**CA00012379**

Well Number:	54	Status:	Completed oil
API Number:	03712866	Operator:	Medallion Calif Prpts Co
Latitude:	34.401892	Longitude:	-118.639475
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South 1 - 2 Miles	**OIL_GAS**	**CA00012372**

Well Number:	44	Status:	Completed oil
API Number:	03712775	Operator:	Medallion Calif Prpts Co
Latitude:	34.401655	Longitude:	-118.639119
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SW 2 - 3 Miles	**OIL_GAS**	**CA00011166**

Well Number:	133	Status:	Plugged and abandoned-dry hole
API Number:	03712887	Operator:	Oryx Energy Co.
Latitude:	34.401605	Longitude:	-118.657611
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction Distance	Database	EDR ID Number
South 1 - 2 Miles	**OIL_GAS**	**CA00012420**

Well Number:	115	Status:	Completed oil
API Number:	03713294	Operator:	Medallion Calif Prpts Co
Latitude:	34.401452	Longitude:	-118.635262
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW 1 - 2 Miles	**OIL_GAS**	**CA00012435**

Well Number:	101	Status:	Completed gas
API Number:	03713281	Operator:	Medallion Calif Prpts Co
Latitude:	34.401368	Longitude:	-118.642110
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South 1 - 2 Miles	**OIL_GAS**	**CA00012441**

Well Number:	109	Status:	Completed oil
API Number:	03713288	Operator:	Medallion Calif Prpts Co
Latitude:	34.401373	Longitude:	-118.632033
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW 1 - 2 Miles	**OIL_GAS**	**CA00011145**

Well Number:	98	Status:	136
API Number:	03713278	Operator:	Oryx Energy Co.
Latitude:	34.401273	Longitude:	-118.647984
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

SSE
1 - 2 Miles — **OIL_GAS** — **CA00011174**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03712813	Operator:	Oryx Energy Co.
Latitude:	34.401215	Longitude:	-118.625593
Region:	2	Lease:	Newhall Corp.-Wolfson
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012398**

Well Number:	150	Status:	Completed oil
API Number:	03712652	Operator:	Medallion Calif Prpts Co
Latitude:	34.400628	Longitude:	-118.643242
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00011159**

Well Number:	57	Status:	136
API Number:	03712869	Operator:	Oryx Energy Co.
Latitude:	34.400633	Longitude:	-118.633068
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012378**

Well Number:	53	Status:	Completed oil
API Number:	03700070	Operator:	Medallion Calif Prpts Co
Latitude:	34.400601	Longitude:	-118.639246
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012408**

Well Number:	13	Status:	Completed oil
API Number:	03712632	Operator:	Medallion Calif Prpts Co
Latitude:	34.400556	Longitude:	-118.641637
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012406**

Well Number:	128	Status:	Completed oil
API Number:	03712882	Operator:	Medallion Calif Prpts Co
Latitude:	34.400510	Longitude:	-118.635290
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00011141**

Well Number:	8	Status:	Plugged and abandoned oil
API Number:	03712627	Operator:	Oryx Energy Co.
Latitude:	34.400424	Longitude:	-118.639481
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles — **OIL_GAS** — **CA00012380**

Well Number:	19	Status:	Completed oil
API Number:	03712638	Operator:	Medallion Calif Prpts Co
Latitude:	34.400273	Longitude:	-118.643826
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
1 - 2 Miles | **OIL_GAS** | **CA00011171**

Well Number:	15	Status:	Plugged and abandoned oil
API Number:	03712634	Operator:	Oryx Energy Co.
Latitude:	34.400228	Longitude:	-118.637345
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012344**

Well Number:	80	Status:	Completed oil
API Number:	03713259	Operator:	Medallion Calif Prpts Co
Latitude:	34.400233	Longitude:	-118.630250
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012375**

Well Number:	50	Status:	Plugged and abandoned oil
API Number:	03712863	Operator:	Medallion Calif Prpts Co
Latitude:	34.400173	Longitude:	-118.635511
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012422**

Well Number:	118	Status:	Completed gas
API Number:	03713296	Operator:	Medallion Calif Prpts Co
Latitude:	34.400144	Longitude:	-118.637997
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012384**

Well Number:	22	Status:	Plugged and abandoned oil
API Number:	03712641	Operator:	Medallion Calif Prpts Co
Latitude:	34.400086	Longitude:	-118.646126
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
1 - 2 Miles | **OIL_GAS** | **CA00011143**

Well Number:	85	Status:	136
API Number:	03713264	Operator:	Oryx Energy Co.
Latitude:	34.400023	Longitude:	-118.627790
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012364**

Well Number:	71	Status:	Completed oil
API Number:	03713250	Operator:	Medallion Calif Prpts Co
Latitude:	34.399995	Longitude:	-118.636071
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00011134**

Well Number:	61	Status:	Plugged and abandoned oil
API Number:	03712873	Operator:	Oryx Energy Co.
Latitude:	34.399819	Longitude:	-118.633035
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSE
1 - 2 Miles | **OIL_GAS** | **CA00011175**

Well Number:	2-7	Status:	Plugged and abandoned oil
API Number:	03712614	Operator:	Oryx Energy Co.
Latitude:	34.399762	Longitude:	-118.625771
Region:	2	Lease:	Newhall Corp.-Wolfson
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012427**

Well Number:	123	Status:	Completed oil
API Number:	03713300	Operator:	Medallion Calif Prpts Co
Latitude:	34.399348	Longitude:	-118.631520
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00012437**

Well Number:	105	Status:	Completed oil
API Number:	03713284	Operator:	Medallion Calif Prpts Co
Latitude:	34.399089	Longitude:	-118.635275
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012330**

Well Number:	95	Status:	Completed oil
API Number:	03713275	Operator:	Medallion Calif Prpts Co
Latitude:	34.399072	Longitude:	-118.644607
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSW
1 - 2 Miles | **OIL_GAS** | **CA00011146**

Well Number:	30	Status:	Plugged and abandoned oil
API Number:	03712648	Operator:	Oryx Energy Co.
Latitude:	34.398936	Longitude:	-118.643101
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012346**

Well Number:	82	Status:	Oil well converted to water disposal
API Number:	03713261	Operator:	Medallion Calif Prpts Co
Latitude:	34.398705	Longitude:	-118.644657
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
1 - 2 Miles | **OIL_GAS** | **CA00012404**

Well Number:	16	Status:	Completed oil
API Number:	03712635	Operator:	Medallion Calif Prpts Co
Latitude:	34.398624	Longitude:	-118.641791
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles | **OIL_GAS** | **CA00011161**

Well Number:	11	Status:	Plugged and abandoned oil
API Number:	03712630	Operator:	Oryx Energy Co.
Latitude:	34.398612	Longitude:	-118.635003
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

South
1 - 2 Miles — OIL_GAS — CA00012354

Well Number:	55	Status:	134
API Number:	03712867	Operator:	Medallion Calif Prpts Co
Latitude:	34.398571	Longitude:	-118.630682
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00011157

Well Number:	5	Status:	Plugged and abandoned oil
API Number:	03712624	Operator:	Oryx Energy Co.
Latitude:	34.398424	Longitude:	-118.637341
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00012361

Well Number:	69	Status:	Completed oil
API Number:	03712348	Operator:	Medallion Calif Prpts Co
Latitude:	34.398417	Longitude:	-118.632561
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00011140

Well Number:	79	Status:	136
API Number:	03713258	Operator:	Oryx Energy Co.
Latitude:	34.398406	Longitude:	-118.628660
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

South
1 - 2 Miles — OIL_GAS — CA00012405

Well Number:	18	Status:	Plugged and abandoned oil
API Number:	03712637	Operator:	Medallion Calif Prpts Co
Latitude:	34.398318	Longitude:	-118.633195
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00012352

Well Number:	90	Status:	Completed oil
API Number:	03713269	Operator:	Medallion Calif Prpts Co
Latitude:	34.398310	Longitude:	-118.640767
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00011133

Well Number:	6	Status:	Plugged and abandoned oil
API Number:	03712625	Operator:	Oryx Energy Co.
Latitude:	34.398284	Longitude:	-118.639583
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — OIL_GAS — CA00012341

Well Number:	74	Status:	Completed gas
API Number:	03713253	Operator:	Medallion Calif Prpts Co
Latitude:	34.397992	Longitude:	-118.637507
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSE
2 - 3 Miles — **OIL_GAS** — **CA00011176**

Well Number:	3-5	Status:	Plugged and abandoned oil
API Number:	03712615	Operator:	Oryx Energy Co.
Latitude:	34.397752	Longitude:	-118.619935
Region:	2	Lease:	Newhall Corp.-Wolfson
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
1 - 2 Miles — **OIL_GAS** — **CA00012347**

Well Number:	83	Status:	Completed oil
API Number:	03713262	Operator:	Medallion Calif Prpts Co
Latitude:	34.397611	Longitude:	-118.625051
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012430**

Well Number:	126	Status:	Completed oil
API Number:	03712880	Operator:	Medallion Calif Prpts Co
Latitude:	34.397520	Longitude:	-118.630159
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00011185**

Well Number:	4	Status:	Plugged and abandoned oil
API Number:	03712823	Operator:	Oryx Energy Co.
Latitude:	34.397141	Longitude:	-118.635448
Region:	2	Lease:	Ranch San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
1 - 2 Miles — **OIL_GAS** — **CA00012327**

Well Number:	92	Status:	Completed oil
API Number:	03713272	Operator:	Medallion Calif Prpts Co
Latitude:	34.396986	Longitude:	-118.634592
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
2 - 3 Miles — **OIL_GAS** — **CA00012351**

Well Number:	9	Status:	Plugged and abandoned oil
API Number:	03712628	Operator:	Medallion Calif Prpts Co
Latitude:	34.396931	Longitude:	-118.641918
Region:	2	Lease:	Rancho San Francisco
Section:	27	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles — **OIL_GAS** — **CA00012356**

Well Number:	60	Status:	136
API Number:	03712872	Operator:	Medallion Calif Prpts Co
Latitude:	34.396745	Longitude:	-118.628691
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
1 - 2 Miles — **OIL_GAS** — **CA00012376**

Well Number:	51	Status:	Completed oil
API Number:	03712864	Operator:	Medallion Calif Prpts Co
Latitude:	34.396733	Longitude:	-118.630947
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
1 - 2 Miles | OIL_GAS | CA00011183

Well Number:	1	Status:	Plugged and abandoned oil
API Number:	03712620	Operator:	Oryx Energy Co.
Latitude:	34.396683	Longitude:	-118.637431
Region:	2	Lease:	Ranch San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | OIL_GAS | CA00012362

Well Number:	7	Status:	Completed oil
API Number:	03712626	Operator:	Medallion Calif Prpts Co
Latitude:	34.396671	Longitude:	-118.639707
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | OIL_GAS | CA00012366

Well Number:	73	Status:	Completed oil
API Number:	03713252	Operator:	Medallion Calif Prpts Co
Latitude:	34.396613	Longitude:	-118.626457
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | OIL_GAS | CA00012433

Well Number:	10	Status:	Completed oil
API Number:	03712629	Operator:	Medallion Calif Prpts Co
Latitude:	34.396484	Longitude:	-118.632944
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
2 - 3 Miles | OIL_GAS | CA00012409

Well Number:	130	Status:	Completed oil
API Number:	03712884	Operator:	Medallion Calif Prpts Co
Latitude:	34.396445	Longitude:	-118.640268
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | OIL_GAS | CA00012349

Well Number:	88	Status:	036
API Number:	03713267	Operator:	Medallion Calif Prpts Co
Latitude:	34.396179	Longitude:	-118.621185
Region:	2	Lease:	Rancho San Francisco
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | OIL_GAS | CA00012333

Well Number:	99	Status:	Completed oil
API Number:	03713279	Operator:	Medallion Calif Prpts Co
Latitude:	34.396163	Longitude:	-118.624061
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | OIL_GAS | CA00011177

Well Number:	4-5	Status:	Plugged and abandoned oil
API Number:	03712616	Operator:	Oryx Energy Co.
Latitude:	34.395879	Longitude:	-118.617688
Region:	2	Lease:	Newhall Corp.-Wolfson
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

South
2 - 3 Miles — OIL_GAS — CA00012414

Well Number:	14	Status:	Completed oil
API Number:	03712633	Operator:	Medallion Calif Prpts Co
Latitude:	34.395152	Longitude:	-118.631109
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles — OIL_GAS — CA00011184

Well Number:	3	Status:	Plugged and abandoned oil
API Number:	03712622	Operator:	Oryx Energy Co.
Latitude:	34.394860	Longitude:	-118.635153
Region:	2	Lease:	Ranch San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles — OIL_GAS — CA00012424

Well Number:	12	Status:	Plugged and abandoned oil
API Number:	03712631	Operator:	Medallion Calif Prpts Co
Latitude:	34.394753	Longitude:	-118.637298
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles — OIL_GAS — CA00012381

Well Number:	2	Status:	Completed oil
API Number:	03712621	Operator:	Medallion Calif Prpts Co
Latitude:	34.394727	Longitude:	-118.633015
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction Distance	Database	EDR ID Number

SSE
2 - 3 Miles — OIL_GAS — CA00011139

Well Number:	78	Status:	Plugged and abandoned oil
API Number:	03713257	Operator:	Oryx Energy Co.
Latitude:	34.394692	Longitude:	-118.624488
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles — OIL_GAS — CA00012434

Well Number:	100	Status:	Completed oil
API Number:	03713280	Operator:	Medallion Calif Prpts Co
Latitude:	34.394668	Longitude:	-118.638161
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles — OIL_GAS — CA00011153

Well Number:	43	Status:	136
API Number:	03712857	Operator:	Oryx Energy Co.
Latitude:	34.394590	Longitude:	-118.628831
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles — OIL_GAS — CA00012353

Well Number:	91	Status:	Plugged and abandoned-dry hole
API Number:	03713270	Operator:	Medallion Calif Prpts Co
Latitude:	34.394369	Longitude:	-118.618793
Region:	2	Lease:	Rancho San Francisco
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction
Distance | Database | EDR ID Number

South
2 - 3 Miles | OIL_GAS | CA00012348

Well Number:	87	Status:	Completed oil
API Number:	03713266	Operator:	Medallion Calif Prpts Co
Latitude:	34.394335	Longitude:	-118.634652
Region:	2	Lease:	Rancho San Francisco
Section:	26	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | OIL_GAS | CA00011186

Well Number:	91	Status:	Plugged and abandoned oil
API Number:	03713271	Operator:	Oryx Energy Co.
Latitude:	34.394339	Longitude:	-118.619154
Region:	2	Lease:	Ranch San Francisco
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | OIL_GAS | CA00011178

Well Number:	5-5	Status:	Plugged and abandoned oil
API Number:	03712617	Operator:	Oryx Energy Co.
Latitude:	34.394288	Longitude:	-118.614897
Region:	2	Lease:	Newhall Corp.-Wolfson
Section:	25	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | OIL_GAS | CA00012328

Well Number:	93	Status:	Completed oil
API Number:	03713273	Operator:	Medallion Calif Prpts Co
Latitude:	34.394049	Longitude:	-118.628014
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

Direction
Distance | Database | EDR ID Number

South
2 - 3 Miles | OIL_GAS | CA00012345

Well Number:	81	Status:	Completed oil
API Number:	03713260	Operator:	Medallion Calif Prpts Co
Latitude:	34.393239	Longitude:	-118.630727
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | OIL_GAS | CA00011148

Well Number:	34	Status:	Plugged and abandoned oil
API Number:	03712848	Operator:	Oryx Energy Co.
Latitude:	34.393161	Longitude:	-118.633157
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | OIL_GAS | CA00012343

Well Number:	77	Status:	Completed oil
API Number:	03713256	Operator:	Medallion Calif Prpts Co
Latitude:	34.393159	Longitude:	-118.622675
Region:	2	Lease:	Rancho San Francisco
Section:	36	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | OIL_GAS | CA00012368

Well Number:	36	Status:	Plugged and abandoned oil
API Number:	03712850	Operator:	Medallion Calif Prpts Co
Latitude:	34.393110	Longitude:	-118.630378
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSE
2 - 3 Miles | **OIL_GAS** | **CA00011150**

Well Number:	37	Status:	136
API Number:	03712851	Operator:	Oryx Energy Co.
Latitude:	34.393077	Longitude:	-118.626334
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | **OIL_GAS** | **CA00012397**

Well Number:	149	Status:	Completed oil
API Number:	03712651	Operator:	Medallion Calif Prpts Co
Latitude:	34.393039	Longitude:	-118.633617
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | **OIL_GAS** | **CA00012392**

Well Number:	31	Status:	Plugged and abandoned oil
API Number:	03712649	Operator:	Medallion Calif Prpts Co
Latitude:	34.392956	Longitude:	-118.628634
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | **OIL_GAS** | **CA00012331**

Well Number:	96	Status:	Completed oil
API Number:	03713276	Operator:	Medallion Calif Prpts Co
Latitude:	34.392238	Longitude:	-118.616366
Region:	2	Lease:	Rancho San Francisco
Section:	36	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
2 - 3 Miles | **OIL_GAS** | **CA00012399**

Well Number:	151	Status:	Completed oil
API Number:	03712653	Operator:	Medallion Calif Prpts Co
Latitude:	34.391926	Longitude:	-118.629748
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | **OIL_GAS** | **CA00011151**

Well Number:	39	Status:	136
API Number:	03712853	Operator:	Oryx Energy Co.
Latitude:	34.391584	Longitude:	-118.624342
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | **OIL_GAS** | **CA00012357**

Well Number:	64	Status:	Completed oil
API Number:	03712877	Operator:	Medallion Calif Prpts Co
Latitude:	34.391463	Longitude:	-118.628809
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

South
2 - 3 Miles | **OIL_GAS** | **CA00012350**

Well Number:	89	Status:	Completed oil
API Number:	03713268	Operator:	Medallion Calif Prpts Co
Latitude:	34.391404	Longitude:	-118.627480
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

South
2 - 3 Miles | **OIL_GAS** | **CA00012369**

Well Number:	38	Status:	Plugged and abandoned oil
API Number:	03712852	Operator:	Medallion Calif Prpts Co
Latitude:	34.391367	Longitude:	-118.626333
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSW
2 - 3 Miles | **OIL_GAS** | **CA00008320**

Well Number:	1	Status:	Plugged and abandoned-dry hole
API Number:	03720085	Operator:	Union Oil Co of Ca
Latitude:	34.391242	Longitude:	-118.645217
Region:	2	Lease:	R.S.F.
Section:	34	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | **OIL_GAS** | **CA00012413**

Well Number:	139	Status:	Completed oil
API Number:	03712892	Operator:	Medallion Calif Prpts Co
Latitude:	34.391064	Longitude:	-118.622780
Region:	2	Lease:	Rancho San Francisco
Section:	36	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | **OIL_GAS** | **CA00012342**

Well Number:	76	Status:	Completed oil
API Number:	03713255	Operator:	Medallion Calif Prpts Co
Latitude:	34.390795	Longitude:	-118.620289
Region:	2	Lease:	Rancho San Francisco
Section:	36	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS

Direction
Distance | Database | EDR ID Number

SSE
2 - 3 Miles | **OIL_GAS** | **CA00012401**

Well Number:	153	Status:	Completed oil
API Number:	03712655	Operator:	Medallion Calif Prpts Co
Latitude:	34.390584	Longitude:	-118.625977
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

SSE
2 - 3 Miles | **OIL_GAS** | **CA00012367**

Well Number:	33	Status:	Plugged and abandoned oil
API Number:	03712847	Operator:	Medallion Calif Prpts Co
Latitude:	34.389545	Longitude:	-118.624664
Region:	2	Lease:	Rancho San Francisco
Section:	35	Township:	04N
Range:	17W	Map Number:	253
Base and Meridian:	San Bernardino	Total Depth:	Not Reported
Spud Date:	Not Reported	Abandonment Date:	Not Reported

GEOCHECK®- PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct. > 4 Pci/L
91355	13	0	0.00

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 Indoor average level > 4 pCi/L.
: Zone 2 Indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 Indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 91355

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.750 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

APPENDIX H:

References

REFERENCES

1. 1994 Fault Activity Map of California and Adjacent Areas (1:750,000 scale), California Department of Conservation, Division of Mines and Geology.
2. County of Los Angeles Department of Public Works, Hydrologic Records, records request October 14, 2003.
3. County of Los Angeles Public Works Department, Building and Safety Division, and http://assessor.co.la.ca.us/DataMaps/pais.asp., October 23, 2003.
4. EDR Sanborn® Map Report, Inquiry No. 1108642.5s, January 8, 2004.
5. EPA Map of Radon Zones, 1993.
6. Munger Map Book of California/Alaska Oil and Gas Fields, 37th Edition, June 1993.
7. The EDR Aerial Photograph Print Service, Inquiry No. 1108642-9, January 15, 2004 and Continental Aerial Photography, Cypress, California 1952, 1972, 1980, 1988, 1990, 1993, 1995 and 1999.
8. The EDR Historical Topographic Map Report, Inquiry No. 1063369-5, October 16, 2003.
9. The EDR Radius Map with GeoCheck®, Inquiry No. 1108642.4s, January 8, 2004.
10. USGS Map, Newhall, California Quadrangle, 1952, photo-revised 1988.

APPENDIX I:

Glossary of Acronyms

Glossary Of Acronyms

(for words that frequently appear in environmental reports)

ASTs = above-ground storage tanks

ACMs = asbestos-containing materials

BTEX = benzene, toluene, ethylbenzene and xylenes

bgs = below ground surface

EDR = Environmental Data Resources, Inc.

LQG = Large Quantity Generator of hazardous waste

LUSTs = leaking underground storage tanks

MTBE = methyl-tertiary-butyl ether

mg/kg = milligrams per kilogram

mg/l = milligrams per liter

PCE = perchloroethene

ppb = parts per billion

ppm = parts per million

SQG = Small Quantity Generator of hazardous waste

TCE = trichloroethene

TPH-d = Total Petroleum Hydrocarbons as diesel

TPH-g = Total Petroleum Hydrocarbons as gasoline

TRPH = Total Recoverable Petroleum Hydrocarbons

ug/kg = micrograms per kilogram

ug/l = micrograms per liter

USTs = underground storage tanks

VOCs = volatile organic compounds