

BIENNIAL REPORT

2002 - 2004

County of Los Angeles Department of Public Works

WATERSHED MANAGEMENT DIVISION



INTRODUCTION

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Objective

Since its inception in August 2000, Watershed Management Division (WMD) has been playing an increasingly active role in shaping and promoting watershed management in Los Angeles County. During the 2002-2004 biennium, WMD continued to work at the forefront of making sustainable watershed development in Los Angeles County a reality through conservation, protection, and conscientious management of natural resources. This



anticipation of future National Pollutant Discharge Elimination System (NPDES) Permit for the discharge of municipal storm water from the municipal separate storm sewer systems (MS4) and upcoming Total Maximum Daily Loads (TMDLs) requirements, are also presented in this report .

The objective of this report is to provide stakeholders, including other Los Angeles County Departments, cities, organizations, and environmental agencies, an update of Public Works' efforts to protect the communities and the environment through innovative watershed management strategies and projects.



report documents the achievements and challenges each watershed section, as well as the overall WMD, experienced in the past two years. The report on WMD sections provides a Background and the Mission of each section and details the Accomplishments, Projects, Lessons Learned in the past biennium, and Future Plans. An overview of experiences gained in the planning and designing of new and innovative multiuse watershed management projects, as well as lessons learned from efforts to reorganize the Division in



Mission

The Department of Public Works will lead the planning and implementation of watershed management in the County of Los Angeles. Working with those who have a stake in our watersheds' future, protection, conscientious resources, water conservation the quality of stormwater. Our goal is to protect our environment, and to provide a the citizens of our County.



we will integrate flood management of natural and efforts to improve runoff and groundwater. communities and the higher quality of life for

Organization Structure

Over the two-year period, WMD's Table of Organization changed several times due to staffing needs, priorities, and workloads. Primary changes focused on placing management responsibilities for certain watersheds in different sections. For example, the Dominguez Watershed moved from the Santa Monica Bay Section to the Los Angeles River/Harbor Watershed Section, and the Santa Clara River/Antelope Valley Watershed Section was merged with San Gabriel River Watershed Section. The Santa Monica Bay Watershed was divided into two units due to accelerated efforts to meet TMDL mandates. Other changes included adding project management responsibilities for multiuse projects, transferring maintenance related environmental permitting functions to Flood Management Division, and transferring the Public Relations and Outreach Unit to the Public Relations Group in February of 2003. The environmental clearing house function was transferred to Land Development Division in July 2004. Following these changes, the current structure of WMD is now comprised of five autonomous sections, one technical support unit, and a water policy manager.

Three of the five sections are organized along major hydrologic watershed boundaries to concentrate on the needs of the watersheds. These sections are the San Gabriel River/Santa Clara River Watershed, the Los Angeles River/Harbor Watershed, and the Santa Monica Bay Watersheds Sections. The two remaining sections are the Water Quality Section and the

Watershed Engineering, Mapping, FEMA and LACDA Section. The technical support unit of WMD is the Research, Legislation, and Funding Unit. The water policy manager is a component of WMD that provides direct assistance to Administration in defining policy direction on water issues that promote efficient management of Los Angeles County water supplies. Figure I is WMD's Organization Chart.

In June 2002, Administration approved WMD's Table of Organization with 95 positions. In general, the Table of Organization included higher-level engineering positions and introduced a new 'Environmental Scientist' series to be developed by the County of Los Angeles Department of Human Resources. The higher level engineering positions are deemed necessary due to the political and collaborative nature of watershed management. Environmental Scientists are needed to internally provide a broader perspective on project development and technical evaluation in the areas of biological resources, water chemistry, environmental protection, ecology, physical science, and natural sciences.

In anticipation of additional department-wide responsibilities related to TMDLs and the likelihood for the 2006 NPDES Permit to be a watershed-based permit, WMD is in the process of developing a reorganization plan to more fully integrate functions related to the current and future water quality objectives into the corresponding watershed sections.

Five-Year Strategic Plan

In August 2000, the Long-Range Initiative (LRI) Committee developed the Five-Year Strategic Plan that formed the basis of Public Works watershed management philosophy. The Plan directed WMD's efforts and provided a blueprint for future activities. The Plan was intended to be a "living document" to assist Public Works on its activities and priorities. The Plan included a comprehensive division organization and structure, personnel requirements, activity lists, financial strategies, and implementation timelines. WMD began meeting on a regular basis with Administration to evaluate progress, implementation dates, and revise goals and strategies, as required.



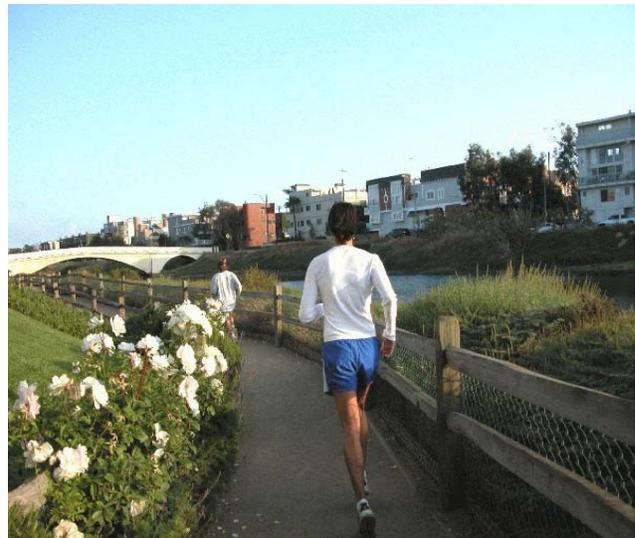
On February 3, 2003, the Strategic Planning Committee within WMD, created a subcommittee, consisting of mid-level managers in WMD, for the purpose of reorganizing the Division to better address the additional responsibilities related to TMDL development and implementation. WMD also expects that the 2006 NPDES MS4 Permit will be issued with specific requirements for the six major watersheds in Los Angeles County. In anticipation of the growing workload, the subcommittee has been in the process of developing a plan and a schedule to integrate functions between the Water Quality Section and watershed sections.

The plan laid out six strategies:

1. Implement and coordinate watershed management programs to balance competing priorities, optimize resources, and eliminate redundant activities.
2. Generate partnerships and coalitions to facilitate program development and implementation.
3. Provide assistance to secure funding (Public Works and Watershed Team/Partnered projects.)
4. Promote legislation and regulations.
5. Provide technical/engineering expertise and support to watershed teams and internal customers.
6. Become an information clearing house for facilities mutual assistance and community outreach.



Based on the current proposal, the Water Quality Section will be restructured to provide oversight to the Stormwater Quality Management Plan programs, establishing sampling procedures, maintaining sampling quality assurance and quality control, coordinating sampling events, ensuring consistency in monitoring program reporting, TMDL development, field support functions, Best Management Practices (BMPs) and facilities inspections. For the individual watershed sections, staff resources will expand accordingly to address TMDL implementation, project management responsibilities for multiuse projects transferred to WMD in November 2002, ongoing watershed management planning efforts, and stakeholder involvement.



In addition to meeting the goals established by the LRI on watershed management, WMD also plays an active role in supporting, coordinating, and ensuring that WMD's long-range objectives are consistent with Public Works' strategic planning efforts. Since June 2001, Public Works embarked on a department-wide strategic planning process to examine the social, environmental, legislative, and internal issues that can affect how we provide service in the next three to five years. This examination led to the identification of three critical strategic planning issues and the subsequent development of eleven Action Plans to provide Service Excellence, Fiscal Responsibility, Organizational Effectiveness, and Workforce Excellence:

Issues:

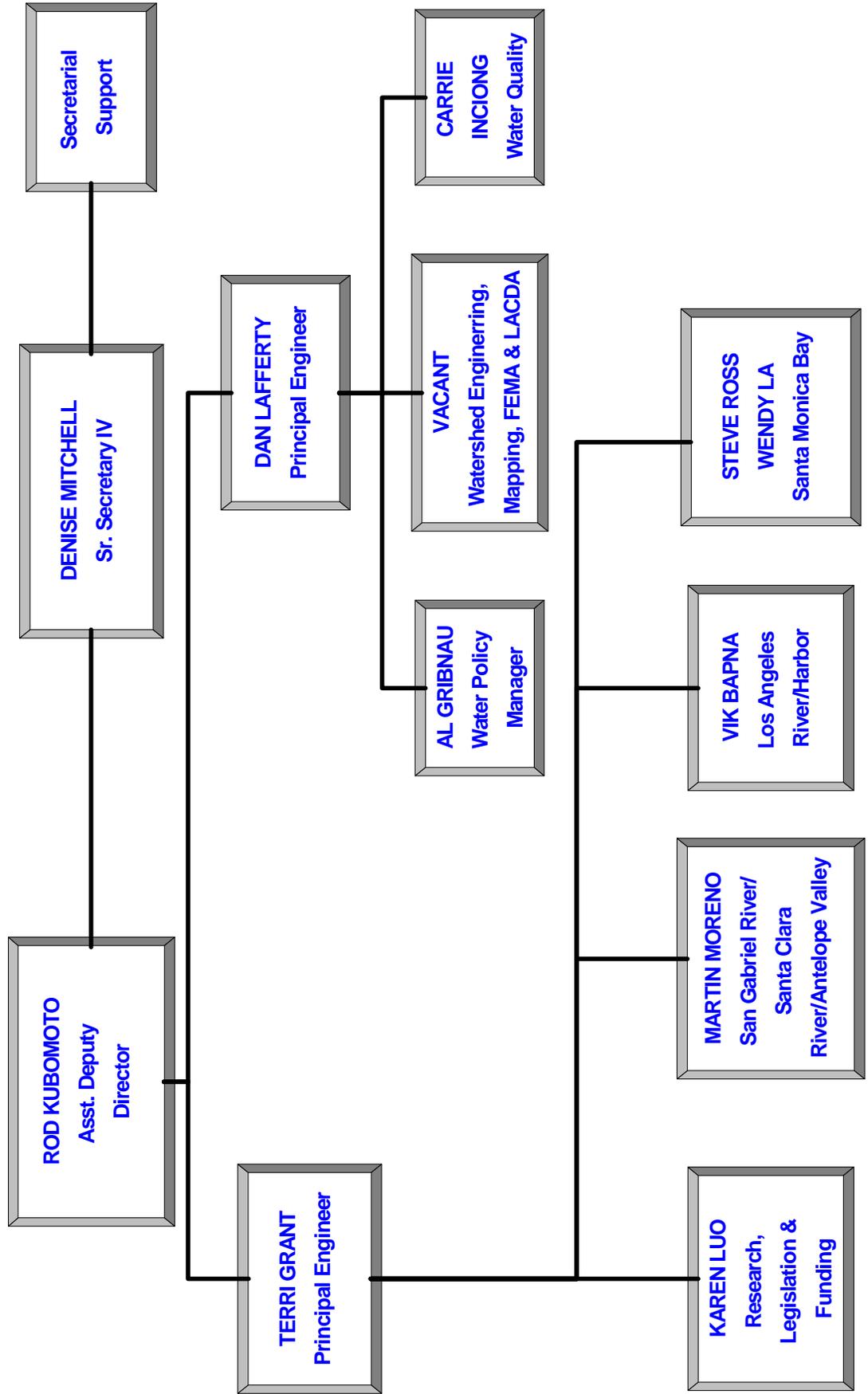
- (1) Quality of the County's Infrastructure, (2) Large Unfunded Mandates in Water Quality and Waste Reduction, and (3) Enhance Workforce Configuration and Opportunities

Action Plans:

- (1) Infrastructure Assessment, (2) Quality of the Environment (3) External Communication (4) Contract Cities' Services, (5) Fund Assessment and Funding Strategies, (6) Budget Simplification and Process Improvement, (7) Integrated Planning, (8) Re-engineering and Continuous Process Improvement, (9) Career Paths and Workforce Planning Strategies, (10) Delegation of Authority, and (11) Internal Communication



**FIGURE 1.
WATERSHED MANAGEMENT DIVISION
ORGANIZATION CHART**



2002-2004

BIENNIAL REPORT



WATERSHED MANAGEMENT DIVISION

LOS ANGELES RIVER/HARBOR WATERSHED

VIK BAPNA, Watershed Manager

Section Background

The Los Angeles River Watershed Section (now Los Angeles River/Harbor Watershed Section) was created in August 2000.

Early influences on watershed management within the watershed included controversy surrounding the Los Angeles County Drainage Area (LACDA) Project, the Sun Valley Watershed Project, the Los Angeles River Master Plan, and the Arroyo Seco Restoration Feasibility Study. Stakeholder groups for these projects were established at the time of the creation of the Section.

The Los Angeles River Watershed Section initially focused on Public Works' already established collaboration with stakeholders on the previously-mentioned projects involving 1) an effort to restore or revitalize the channels within the watershed and 2) a more conscientious effort to consider watershed management alternatives.

During the past two years, a number of changes have occurred within the Section. In July 2003, the Dominguez Channel Watershed and associated responsibilities were added to the Section as part of an overall Division reorganization.

With this addition, the continued development and completion of the Dominguez Channel Watershed Management Master Plan (WMMP) was taken on by the Section. In order to reflect the addition of the

Dominguez Channel Watershed, the Section's name was changed from "Los Angeles River Watershed" to "Los Angeles River/Harbor Watershed".

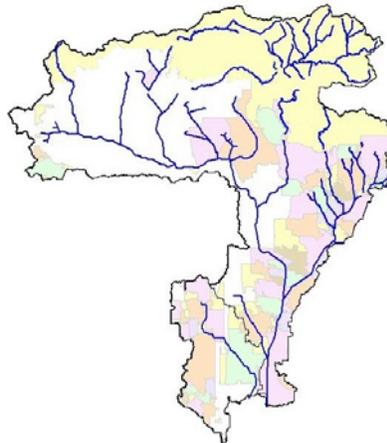
The overall focus of the Section has also changed during the past two years. Shortly after the Section's creation, the focus was on planning projects and fostering stakeholder relationships. The efforts of the past two years have been directed toward implementation of projects developed from the planning efforts. A large number of Project Concept Reports (PCRs) were completed and several projects are now well into the design phase.

The Section has also been given several additional responsibilities. This includes assuming project management responsibilities for our projects until the construction phase. In order to prepare for this new responsibility, each of the Section staff was required to attend Project

Management training.

The development of a trash TMDL for the Los Angeles River Watershed has also added a significant new dimension to the Section's focus. Planning efforts and implementation projects are now focusing on meeting Federal Clean Water Act (CWA) requirements to control trash and other water quality pollutants.

As a result of these added responsibilities, the Section has seen a growth in the number of staff. The Section presently has 11 staff; two years ago, there were six staff.



Mission

To create a balance between urban and natural resources within the Los Angeles River/Harbor Watershed. Improve Angelenos' quality of life by developing multiuse projects which will enhance water quality, increase flood protection, promote groundwater recharge, provide recreational and habitat opportunities, and create open space. Work with stakeholders including politicians, interest groups, and jurisdictional agencies to further our watershed management implementation efforts.

Accomplishments

Grants —Applied For and Received

During the past two years, the Los Angeles River/Harbor Watershed Section has pursued funding opportunities for the Section's proposed projects. Often, funding has been sought jointly with other project stakeholders. Some of the funding opportunities include the Cal-Fed grant program, Propositions 12, 40 (Urban Park Act), and 50, and Proposition A.

Several Grants have been successfully obtained by the Section and its stakeholders. In conjunction with City of Pico Rivera, Propositions 12 and 40 funds were secured for the Rio Hondo and San Gabriel Coastal Basins Spreading Grounds Project (totaling

approximately \$2 million).

The Tujunga Wash Restoration Project was awarded Proposition 12 funds of \$1.9 million, and the Rivers and Mountains Conservancy (RMC) awarded the Dominguez Gap Wetlands Restoration Project \$200,000 in Proposition 12 funds and nearly \$2.3 million from the Consolidated Cal-Fed Grant.

The total amount of grant money awarded to the Section in the past two years was more than \$6 million.

The Section has applied for grants for other projects including Wrigley Greenbelt and the Sun Valley Park Groundwater Monitoring Project.

Project Concept Reports and Feasibility Studies

During the past two years, the Los Angeles River/Harbor Watershed Section has completed more than 20 PCRs and feasibility studies.

Some of the more notable studies and reports include: Tuxford Green, which partially addresses one of the most problematic flooding issues in the Los Angeles County, Rio Hondo and San Gabriel Coastal Basins Spreading Grounds Phase II, which will result in bike trails and community access within Los Angeles County Flood Control District (LACFCD) spreading grounds, Los Angeles River Headwaters, which will create a bike path and right-of-way improvements along the Los

Angeles River, and Tujunga Central Restoration Project that uses various alternatives to naturalize Central Tujunga Wash within an existing city park.





Other multiobjective PCRs and Feasibility Studies completed by the Section include:

- Bell/Cudahy Riverfront Greenway
- Brookside Area Channel Improvements
- Best Management Practice Effectiveness Study
- DDI 23—Watershed Study
- Dominguez Channel Top Park
- Dominguez Retention Basin Analysis
- Elisian Valley Street Ends

- Longden Yard Site Improvements
- Lower Arroyo Channel Naturalization
- Nichols Sediment Placement Site
- Olive Circle Flooding
- Project 46I Channel Replacement
- Project 5202 Sycamore Grove Park Stream Daylighting
- Rubio Regional Relief
- Rubio Wash Channel Cover
- Santa Ana/Salt Lake Drainage Study
- Sun Valley Steam Plant
- Sun Valley Strathern Pit
- Sun Valley Sheldon Pit
- Tuxford Green

Designs

Design plans for the following projects were completed during the past two years or are currently in the design phase:

- Tuxford Green
- Sun Valley Park Project (currently in construction)
- Dominguez Gap Wetlands Multiuse Project
- Sun Valley Steam Plant Project
- Tujunga Wash Restoration
- Rio Hondo and San Gabriel Coastal Basins Spreading Grounds Phase II

Watershed Accomplishments

The Section completed several other projects during the past two years. These include three Earth Day events within the two Los Angeles River and Dominguez Channel Watersheds, the Los Angeles River Trash Boom Demonstration Project, and the Los Angeles River Landscape and Signage Guidelines. The guidelines will be used as a foundation for landscaping and signage guidelines throughout the Los Angeles River/Harbor Watershed and for other watersheds within Los Angeles County.



Other Section

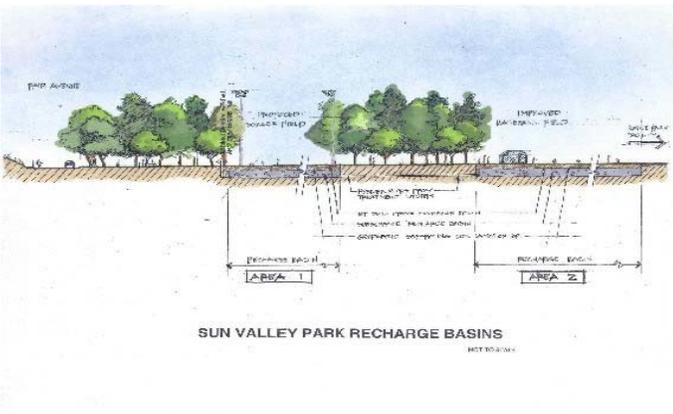
accomplishments in the past two years include:

- Development of a Sun Valley Water Quality Monitoring Program.
- Leadership of the Council of Arroyo Seco Agencies
- Completion of the Dominguez WMMP.
- Completion and Board acceptance of the Sun Valley Program Environmental Impact Report.
- Completion of the LACDA Stormwater Project Management Plan.
- Creation of a working relationship with and obtaining funding from the U.S. Army Corps of Engineers (Corps) in several watersheds including Sun Valley, Arroyo Seco, and Tujunga Wash.
- Completion of water quality sampling in Rio Hondo, Compton Creek, and Arroyo Seco Watersheds.

Projects in the Los Angeles River/ Harbor Watershed

Sun Valley Park

Public Works, in collaboration with the Sun Valley Watershed Stakeholders Group, designed an innovative watershed management project at the Sun Valley Park and Recreation Center that will provide not only relief



of flooding, but also other benefits such as reduced stormwater pollution, increased groundwater supply, recreational opportunities, and community beautification.

The project will provide these benefits by capturing upstream residential runoff and conveying it to

underground treatment units and two underground infiltration basins within the park for beneficial groundwater recharge.

The project will also enhance the recreational facilities and aesthetics at the park by installing a new soccer field, sports lighting for the soccer field, new irrigation and turf for the existing baseball fields, new bleacher seats, educational signage, and a vegetated swale with native landscaping.

Because this project provides multiple benefits, it has attracted multiple partners, including the City of Los Angeles and TreePeople. The City has agreed to maintain the facilities within the park after construction. TreePeople dedicated \$473,000 from a Proposition 12 Murray-Hayden grant to partially fund the project's recreational enhancements.

Construction of the project began in the summer of 2004. The project is the first of this type to be implemented in an intensely urbanized area. It will also be the first project implemented as part of the overall Sun Valley Watershed Master Plan (WMP) and will serve as a blueprint for similar projects within the Plan.

Landscape and Signage Guidelines

The Los Angeles River Master Plan (Master Plan), was adopted by the Los Angeles County Board of Supervisors in June 1996, provides a vision for a continuous greenway along the Los Angeles River and Tujunga Wash. The Master Plan recommended that Landscaping and Signage Guidelines be developed to facilitate consistency in the implementation of projects along the River and to ensure that the River's flood capacity would not be affected. With approval from the Master Plan Advisory Committee, Public Works completed these Guidelines which will be applied to all subsequent projects along the Los Angeles River and its tributaries.

The Master Plan identified the need for a signage program to facilitate connections between communities

and recreational facilities along the River. The Signage Guidelines, finalized in August 2003, provide specifications for the design, placement, and installation of safety, informational, regulatory, and directional signage. The sign specifications include a heron logo and a river background to provide unique and consistent awareness of the Los Angeles River.



The Master Plan proposed the Landscape Guidelines to provide consistent native landscaping along the River for sustaining habitat, to ensure that flood control maintenance and access are not impacted, and to facilitate the permit process. The Guidelines provide design specifications for amenity features, planting setbacks, and plant palettes. In January 2004, the

Master Plan Advisory Committee reviewed and approved the guidelines. The County of Los Angeles Board of Supervisors adopted the guidelines in March 2004.

Overall, the Landscape and Signage Guidelines adhere to Public Works' commitment for implementing the Master Plan and improving LACFCD right of ways.

Tujunga Wash Restoration Project

Tujunga Wash is a 9-mile rectangular channel constructed in the 1950s by the Corps that conveys runoff from Hansen Dam to the Los Angeles River. Currently, approximately 65 feet of LACFCD-owned right of way, along both sides of the channel, lacks landscaping and recreational amenities. With its extensive right of way, Tujunga Wash is recognized for its potential for greenway enhancements in the Master Plan.

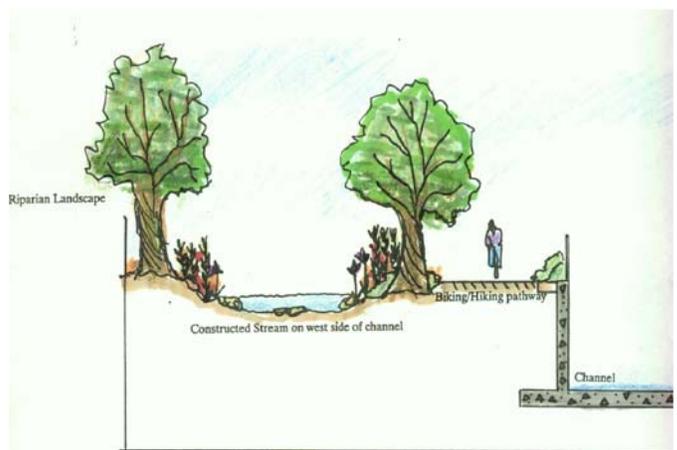


Public Works, in cooperation with the Los Angeles County Board of Supervisors Zev Yaroslavsky's office and the Mountains Recreation and Conservation Authority (MRCA), is currently in the design phase for the Tujunga Wash Restoration Project. This project extends from Vanowen Street to Oxnard Street in the Valley Glen community of the City of Los Angeles for a distance of approximately 6,000 feet on both sides of Tujunga Wash. After several community meetings, the preferred scope of the project is to create an alternative naturalized stream course on the west bank of the channel; heavily landscape both sides of the channel with native trees, shrubs, and perennials; construct meandering walkways and a bikeway, and install various turnouts and interpretive exhibits, all within the existing flood control right of way.

The constructed stream is planned to mimic a small tributary in this region, having a natural, unlined streambed and ephemeral flows. By intercepting flows and allowing runoff to flow through a naturalized stream, the project improves water quality, increases aesthetic value, and creates riparian habitat for a number of species. The project area will also be transformed into a greenway that will provide open space opportunities for a multitude of residents in this dense, urban community.

The Tujunga Wash Restoration Project has attracted grant funding from a variety of sources, including the California Resources Agency, California Department of Water Resources, and Los Angeles County Proposition A funds. In addition, Public Works has committed over \$1 million of LACFCD funding for the project.

The total project cost is estimated at \$7.7 million. It is anticipated that design for the project will be completed in 2004 with construction to follow in spring 2005. Maintenance of the project improvements will be shared by Public Works and MRCA. Public Works will maintain the hydraulic structures and MRCA will be responsible for maintenance of all greenway improvements.



Stormwater Management Plan

The County of Los Angeles has an intricate system of flood control facilities that work together to safely convey runoff and protect properties from flooding. The LACDA Project, completed by the Corps and Public Works in 2001, alleviated severe, potential flood hazard by increasing the capacity of the lower Los Angeles River system, saving \$32 million annually on previously-required flood insurance premiums. As development and land use changes continue, it is vital that a plan be developed to effectively manage stormwater to ensure that the adequate level of flood



protection is provided by the project in the future.

The Stormwater Management Plan is a requirement of the LACDA Project and Project Cooperation Agreement between the Corps and the LACFCD. The Plan consists of a hydrologic and hydraulic model of the entire Los Angeles River system that will paint a complete picture of how land use and stormwater quantities are intertwined, and provide a means to predict flooding impacts based on development changes. This Plan would ensure that any future changes in stormwater inflow or physical changes to the flood control system do not reduce the authorized 133-year level of flood protection along the LACDA Project area.

Currently, the Corps and Public Works completed the hydraulic model for the LACDA Project reaches along the Rio Hondo Channel and the lower Los Angeles River. The next phase of the project is to extend this hydraulic model upstream to the Los Angeles River headwaters and follow up with major tributaries including the upper San Gabriel River. In addition, a hydrologic model will be developed for the entire Los Angeles River system. The development of this model is anticipated to take three years. Following model development, a computerized database will be established to track changes in land use, as well as physical changes to the system that will affect the level of flood protection.

Subwatershed Plans

The Los Angeles River/Harbor Watershed Section has led and/or been involved with the creation of several subwatershed plans. These subwatersheds include:

- Arroyo Seco (lead)
- Compton Creek
- Dominguez Channel (lead)

- Rio Hondo
- Sun Valley (lead)

The following sections contain information about the progress and current status of these subwatershed plans.

Arroyo Seco

The Arroyo Seco Watershed encompasses 47 square miles and extends from the San Gabriel Mountains to its confluence with the Los Angeles River just north of downtown Los Angeles. Portions of the Cities of La Cañada Flintridge, Pasadena, South Pasadena, and Los Angeles are within the watershed.

Public Works assumed leadership responsibility for the Council of Arroyo Seco Agencies, which serves as a forum for the agencies involved in the watershed to exchange information and collaborate on projects.



The Corps completed the Reconnaissance Phase of a WMP for the Arroyo Seco in 2004 and started on the Feasibility Phase. As the lead local sponsor for the WMP, Public Works set up cost-share agreements with other local agencies and worked with the Corps to receive credit for in-kind services.

Channel naturalization in Pasadena's Lower Arroyo Park, modified channel geometry in the Brookside area, and daylighting of Project 5202, through Sycamore Grove Park in Los Angeles, were recommended in a series of PCRs completed in 2004.

Compton Creek

The Compton Creek Watershed encompasses an area of 42 square miles and is made up of portions of nine different cities and several Los Angeles County unincorporated areas. The Los Angeles & San Gabriel Rivers Watershed Council received a grant of \$200,000 from Proposition 13 for the development of a WMP for the Compton Creek Watershed.

A Steering Committee was formed to guide the development of the WMP with input from stakeholders. The Steering Committee consists of Los Angeles County Supervisorial Districts 1 and 2, regulatory agencies, cities, nonprofit organizations and Public Works.

This WMP is being undertaken by the Los Angeles & San Gabriel Rivers Watershed Council, under contract with the State Water Resources Control Board (SWRCB) and local oversight of the Regional Water Quality Control Board (RWQCB), Los Angeles Region. The approved Scope of Work for this effort focuses on four themes:

- Water quality issues (especially trash, pathogens [coliform bacteria], metals [copper, lead] and acidity [pH balance])
- Open space issues (including passive recreational areas, and linkages between them such as



bikeways, equestrian trails, and pedestrian pathways)

- Wetland and urban ecology issues (including potential for restoring riparian habitat and using treatment wetlands as a multipurpose strategy for implementing TMDLs)
- Drainage-corridor naturalization issues (including urban forestry strategies that could involve educational programming with local schools)

These themes also reflect requirements for the Compton Creek WMP to function as a Tributary Plan for the Lower Los Angeles and San Gabriel RMC. WMD provides technical expertise as well as data for the Plan.

Dominguez Channel

The Dominguez Channel Watershed encompasses an area of 120 square miles and it is made up of portions of 17 different cities. Public Works received a grant of \$200,000 from Proposition 13 for the development of a WMMP for the Dominguez Channel Watershed. The preparation of this WMMP involved a proactive approach by stakeholders in the watershed to plan and implement watershed management solutions.



The first step in preparing the WMMP was to establish the Dominguez Watershed Advisory Council (DWAC). The purpose is to create and support implementation of the WMMP. This group, established after submittal of the grant application, includes local government representatives, environmental groups, regulating agencies, members of business and industry, water and sewer service providers, and private citizens.

The WMMP is a comprehensive document to assist stakeholders in the protection, enhancement, and restoration of the environment and beneficial uses of the Dominguez Channel Watershed. The WMMP provides an overview of current conditions within the watershed, identifies and addresses watershed problems

and issues, provides solutions to those problems in the form of an action plan of recommended measures and projects, and identifies potential funding opportunities to assist with implementation of the Plan.

The goals of the Dominguez Channel WMMP are to:

1. Protect and enhance water quality.
2. Conserve, reuse, and recharge the water supply.
3. Protect, enhance, and restore native habitat and biological resources.
4. Promote public awareness and involvement in watershed management.
5. Implement stewardship of the watershed in balance with economic and environmental impacts.



Rio Hondo

The Rio Hondo Watershed is the second largest tributary watershed to the Los Angeles River and hydrologically links the Los Angeles and San Gabriel Rivers via Whittier Narrows and Santa Fe Dams. Comprised of a watershed area encompassing approximately 142 square miles, the Rio Hondo is a primary source of drinking water to a multitude of residents within Los Angeles County.

In 2001, the San Gabriel Valley Council of Governments (SGVCOG) received a \$200,000 Proposition 13 Watershed Planning Grant for the Rio Hondo Watershed through the SWRCB. A Project Management Team (PMT) was formed to lead this effort that included Public Works, the SGVCOG, RMC, LARWQCB, and the consultant team of Moore Iacofano Goltsman, Inc.



In addition, a Project Advisory Committee (PAC) was formed that included the 22 cities within the watershed, water agencies, non-profit groups, elected officials, regulators, and other government agencies. Finally, various subcommittees were formed to address issues including water quality and regional project implementation strategies.

The Rio Hondo WMP is a multiobjective plan that seeks to restore the beneficial uses of Rio Hondo and achieve the overall vision of a healthy watershed. This will be accomplished through the proper management of the following watershed goals: Water Quality, Water Conservation and Supply, Habitat, Recreation, Stewardship, Open Space, Public Health and Safety, and Flood Protection. The WMP will provide an organized framework for constituents of the Rio Hondo Watershed to work together, identify high-priority projects that would achieve short-and long-range watershed goals identified, and help secure future funding and other resources to implement these projects.

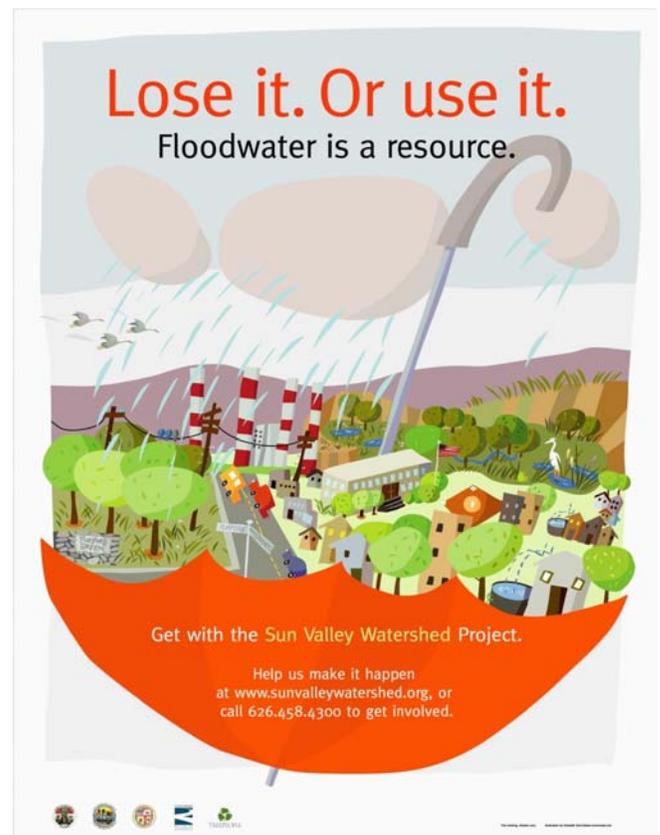
The Rio Hondo WMP is anticipated to be completed in late summer 2004. Following the completion of this WMP, a core advisory committee will continue to meet regularly to coordinate implementation of the various projects and programs recommended in the WMP.

Sun Valley

The mission of the Sun Valley Watershed Project is “to solve the local flooding problem while retaining all stormwater runoff from the watershed, increasing water conservation, recreational opportunities, wildlife habitat, and reducing stormwater pollution.”

To accomplish this mission, Sun Valley’s 4.4-square mile urban/industrial watershed is to be retrofitted with various watershed management techniques and BMPs. The Sun Valley Watershed Group, led by Public Works, developed the Sun Valley WMP for that purpose. This WMP, and its Draft Program Environmental Impact Report, were approved by the Board of Supervisors in March 2004.

Currently, three Phase I projects identified by the WMP are in the design phase and are scheduled for implementation within the next three years. These Phase I projects, in combination with other identified projects within the WMP, will provide the Sun Valley community with an innovative, cost effective, and sustainable solution to flooding.



Lessons Learned

- Federal budget fluctuations can have a substantial effect on the Corps' timeline for completing jointly-funded feasibility studies and projects. This should be considered when approaching the Corps for funding and project assistance.
- Several lessons were learned in contract management as the Section moved from a planning function to take on the role as Project Managers.
- Grant Management—The funding agency should be contacted for guidance before attempting to write a grant proposal. This not only helps the manager understand the specific objectives of the funding agency, but it also creates a project recognition with the agency.
- Interdepartmental relationships have been found to be extremely important to the on-time delivery of projects. One key is to request assistance and information early in the project planning process and make certain that involved divisions are aware of the project early in the planning process.
- Political support from the County of Los Angeles Board of Supervisors and city councils are paramount to successful project implementation and funding support.



Future

The Los Angeles River/Harbor Watershed Section proposes to continue to further its missions and learn from past efforts. It will continue to lead studies and projects to resolve flood protection issues, while improving the County of Los Angeles' recreational and natural resources. Some of the anticipated goals for the next two years include:

- Moving from project development to construction of projects. The Section will continue to work with the designs and PCRs that have been completed to see them through to construction.
- Completion of Sun Valley pilot projects and focus on other projects in Sun Valley.
- 100% compliance with new TMDLs
- A renewed focus on Project Management
- Monitoring effectiveness of initial pilot projects
- Finding new and innovative funding sources and partnerships for both project construction and long-term sustainable maintenance.
- Maintaining the momentum from adopted watershed plans by continuing stakeholder relationships and implementing proposed projects.





Section Background

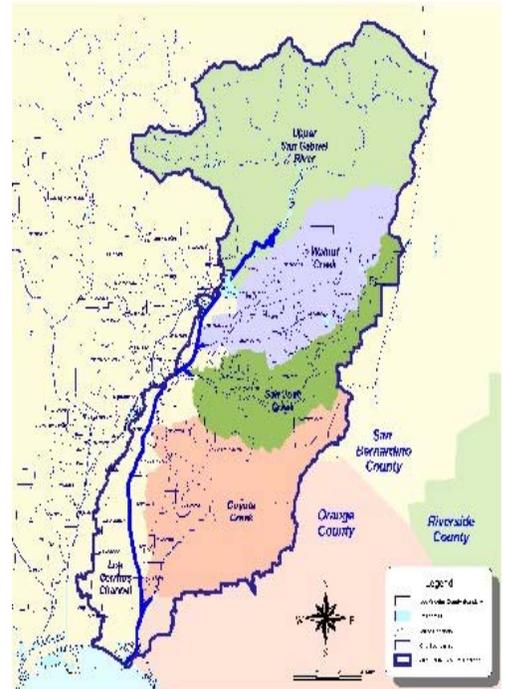
San Gabriel River Watershed

The San Gabriel River Watershed Unit administers the planning and implementation of projects that meet the Division's watershed management objectives in the San Gabriel River Watershed.

San Gabriel River Watershed

The Unit coordinates watershed management efforts in a watershed that encompasses an area of over 640 square miles and a river that extends for 58 miles from the headwaters in the Angeles National Forest to the ocean. The watershed consists of four main sub-watersheds: Coyote Creek, San Jose Creek, Walnut Creek, and the San Gabriel Mountains. Approximately 75 percent of the watershed is highly urbanized with more than four million people living in the valley and coastal areas. The remaining portion lies within the mountain region of the Angeles National Forest. The mountains region is heavily impacted by recreational users.

The urban areas are protected by regional flood control and water conservation facilities built primarily by the Corps and the LACFCD.



Santa Clara River/Antelope Valley Watershed

The Santa Clara River/Antelope Valley Watershed Unit administers the planning and implementation of projects that meet the Division's watershed management objectives in the Santa Clara River and Antelope Valley Watersheds.

Santa Clara River Watershed

The Santa Clara River is one of the few natural river systems remaining in Southern California. The River originates in the Angeles National Forest near the community of Acton and flows from the headwaters westwardly for approximately 80 miles to the Pacific Ocean. Throughout its length, the River crosses through cities, farmland, and undeveloped lands of both the Los

Angeles County and Ventura County. The Los Angeles County portion of the watershed is home to a population of over 250,000 with City of Santa Clarita being home to nearly 160,000.

Prior to the formation of WMD, coordinated watershed planning was limited. The City of Santa Clarita has been very proactive in planning and creating open space and recreational opportunities for the region.

The pace of residential and commercial developments within the Los Angeles County portion of the watershed began to increase again in the past five years compared to the mid-1990s. Most notably the Newhall Ranch development

located near the intersection of the Interstate 5 and Highway 126, is poised to begin soon. All new subdivisions are subject to pre and post construction Best Management Practices, such as construction site management and installation of catch basin insert filters, as required by the NPDES MS4 Permit. Compliance with emerging TMDLs and the need for long-term sustainable potable water supplies will be challenging.



Antelope Valley Watershed

The Antelope Valley Watershed is geographically unique since it does not outlet to the ocean. The LACFCD does not serve the portion of the County north of Avenue S. Funding to construct and maintain drainage and appurtenant structures and to implement many of the NPDES MS4 Permit programs is limited. In 1987, recognizing the mounting need for flood protection and water supply in this developing Valley, the Los Angeles County Board of Supervisors adopted a valleywide Master Drainage Plan to be partially funded from new development fees. This plan identified a backbone network of flood control and water replenishment improvements that consists of: 8 retention basins, 114 miles of channels, 73 miles of storm drains, 6 groundwater recharge areas, and 279

miles of "natural" floodplains in rural areas.

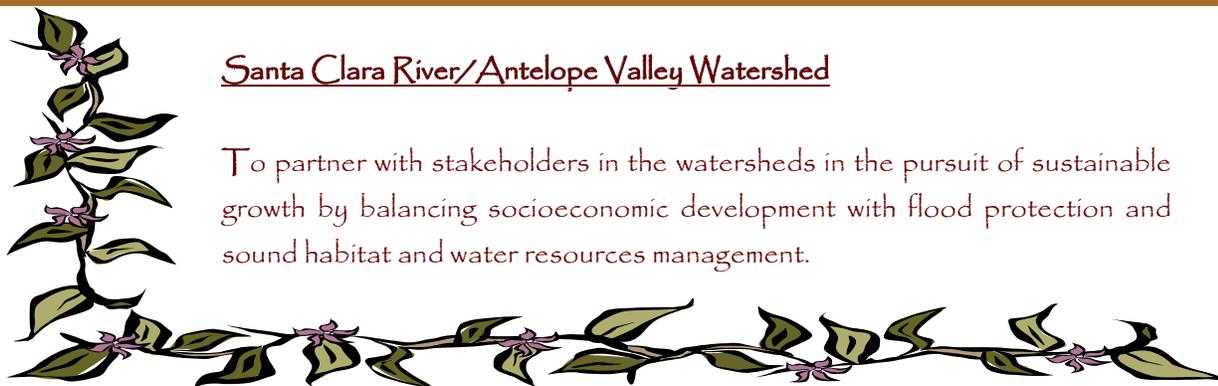
Since 1987, the Cities of Lancaster and Palmdale have adopted their own drainage plans and developer fees, which mostly conform to the County of Los Angeles' Master Plan. The Cities' actions to incorporate County areas and the gradual decrease in new home construction in the early 1990s, has resulted in a severe drop in revenue from developer fees needed to fund construction of new facilities within Los Angeles County unincorporated communities. These fees could be used as seed money for development of a regional drainage plan to address the chronic flooding conditions in the unincorporated County community of Quartz Hill and other areas lacking flood control infrastructure, or to reevaluate the entire Antelope Valley Drainage Master Plan from a watershed management perspective. However, plan implementation would require a source of funding. In 1991, Public Works worked with the cities and the communities to develop a proposal to either include the entire valley within the LACFCD, or form a new Flood Control District. The Valley residents took an advisory vote and the majority voted against the proposition. Later, in 1995, residents in Antelope Valley, including those in Kern County, voted against the formation of the Antelope Valley Storm Water Conservation and Flood Control District.

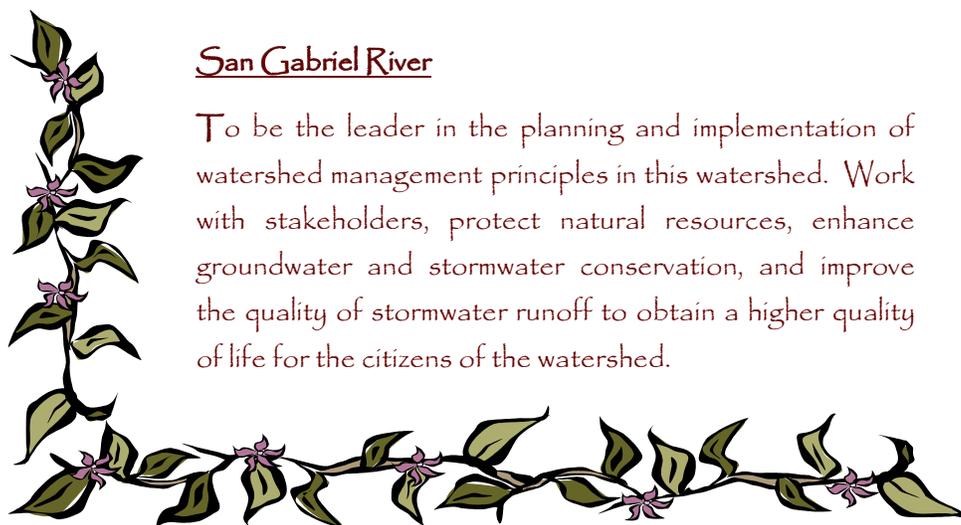


Mission

Santa Clara River/Antelope Valley Watershed

To partner with stakeholders in the watersheds in the pursuit of sustainable growth by balancing socioeconomic development with flood protection and sound habitat and water resources management.





San Gabriel River

To be the leader in the planning and implementation of watershed management principles in this watershed. Work with stakeholders, protect natural resources, enhance groundwater and stormwater conservation, and improve the quality of stormwater runoff to obtain a higher quality of life for the citizens of the watershed.

Accomplishments

San Gabriel River Watershed

The San Gabriel Canyon Planting Event was completed on July 31, 2003, and the Valinda Earth Day was completed on April 28, 2004.

The following are San Gabriel River watershed management projects and plans that are in various stages of planning or implementation:

- San Gabriel River Master Plan
- San Gabriel Canyon Spreading Grounds
- San Gabriel Coastal Spreading Grounds
- Woodland Duck Farm
- Lario Creek/Zone I Ditch Project
- San Gabriel River Discovery Center
- La Mirada Creek Project

- Coyote Creek Watershed Management Plan
- San Gabriel River and Coyote Creek Trash Net Pilot Program

These projects involved extensive outreach to a diverse group of stakeholders such as regulatory agencies, municipalities, utility companies, environmental groups, and other Los Angeles County departments. Each entity provides a different role in identifying both opportunities and constraints during planning and implementation efforts. This San Gabriel River Unit's role has been to lead and collaboratively plan multiobjective projects that seamlessly integrate flood protection, groundwater recharge, water quality, water conservation, and recreation and habitat enhancement elements.

Santa Clara River Watershed

Proposition I3

Arundo donax is a non-native plant that threatens the survival of native flora and has been identified by the LARWQCB as a threat to surface water quality in the watershed. In August 2002, the Ventura County Resource Conservation District (RCD), which also facilitates the Ventura County Arundo Task Force, was

awarded \$1.5 million grant. The Section assisted with the grant application and will continue to assist with project implementation. In addition, the RCD is finalizing a request for proposals to hire an environmental consultant to develop the programmatic California Environmental Quality Act/National Environmental Policy Act (CEQA/NEPA) documentation and assist with the long-term implementation plan.

Stakeholders Outreach

During the past few years, the Unit has held meaningful discussions with many people who live in the watershed. Meetings with representatives from the City of Santa Clarita, Friends of Santa Clara River, Santa Clarita Organization for Planning the Environment, Sierra Club, as well as Acton, Aqua Dulce, and Castaic Town Councils have shed light on their concerns about the watershed's condition. Overall, these groups are troubled by the ongoing loss of open space and sensitive habitats in the watershed. They also questioned whether the watershed's aquifers will have enough water to support the region's projected population of more than 300,000 by 2020, and felt that the government needs to commit more resources to protect the watershed.

Santa Clara River Enhancement and Management Plan

In 1991, several agencies and river stakeholders initiated a river enhancement and management plan that included participation from Federal, State, and County agencies, farmers, industry, property owners, regulatory agencies, and environmentalists. This stakeholder group exam-

ined the entire length of the Santa Clara River and its 500-year floodplain. Specifically, the study included the following components: river history, flood protection, water resources, biological resources, aggregate resources, cultural resources, and recreation.

The effort culminated into a draft set of river-wide, as well as reach-specific recommendations, designed to foster a sustainable coexistence between man and the river. The final draft of the Santa Clara River Enhancement and Management Plan document was completed in January 2004. The document was circulated in February via the Internet (<http://sdgis.amec.com/scremp/index.htm>) and the public library system.



Projects in the San Gabriel River Watershed

San Gabriel River Master Plan

Public Works has been leading the development of the San Gabriel River Corridor Master Plan since September 1999 in an effort to increase and enhance the river's recreation, open space, habitat, flood protection, and water supply opportunities. The Master Plan is a multiobjective planning document in which over 150 stakeholders have met on a regular basis to develop the future vision of the river. These stakeholders consist of representatives from the 19 cities that touch the river, other public regulatory agencies, water districts, and community and environmental groups. This planning effort has produced a consensus-based document that identifies over 134 river enhancement projects, along a 58-mile-long corridor extending from Cogswell Dam in the Angeles Na-

tional Forest to Seal Beach. A programmatic Environmental Impact Report, signage and landscaping guidelines are also being prepared in conjunction with the Master Plan document to assist in the implementation and uniformity of projects within the San Gabriel River corridor. The Master Plan is scheduled to be completed and adopted by the County of Los Angeles Board of Supervisors in late Summer 2004.



The Stakeholders selected five of the 134 projects to study specific opportunities available and prepare conceptual designs to include in the Master Plan. Public Works is the project sponsor or a partnering agency in three of these five concept design studies: San Gabriel Canyon Spreading Grounds, Lario Creek, and the San Gabriel River Discovery Center.

San Gabriel Canyon Spreading Grounds

Once a gravel quarry, the 165-acre site now encompasses two deep spreading basins adjacent to the San Gabriel River. The facility offers a vast open space where the San Gabriel Mountains meet the valley floor. The basins are currently surrounded by bare soils and concrete drainage ditches. WMD is proposing to create a more visually appealing place, that will provide the public passive recreational amenities while incorporating native landscaping to improve the habitat.

The initial phase of this transformation will be the development of a 1.5-acre “Zanjero” park along the northeastern edge of the spreading grounds. The park’s name stems from the Spanish word “Zanja” that was used to describe the intricate network of ditches that were used by farmers throughout the San Gabriel Valley to irrigate their fields and orchards as far back as the mid-1800s.

The park will include scenic open space, native landscaping, and the restoration and enhancement of an existing watercourse. In addition, interpretive signage at the park will serve to educate the public about the important functions that our water conservation facilities provide.



The park will also serve as a stationing area and rest stop for hikers and bicyclists accessing the San Gabriel River Regional Bike Trail, the United States Forest Service Interpretive Center, and the Azusa Canyon River Park. The restoration of the existing watercourse will enable Public Works to convey increased flows to the spreading

basins, while providing an enhanced, aesthetically pleasing water feature, which was requested by many stakeholders. The stakeholders selected the spreading grounds as one of the five concept design studies for the San Gabriel River Master Plan because of its importance as a node linking various other

projects together. The City of Azusa has agreed to long term maintenance of the park elements.

The proposed improvements at this facility will provide an excellent example of how existing water conservation infrastructure can be enhanced to serve other multipurpose objectives, while still carrying out its water supply functions.

Lario Creek

Public Works has partnered with North East Trees, a local, non-profit organization, on the Lario Creek project. This project proposes to transform a man-made water supply ditch into a natural meandering stream course and provide passive/low impact recreational opportunities including trail links, interpretive signage, cultural and environmental education displays, and outdoor classroom settings. The naturalized stream will provide an increased water



conveyance capacity, which will allow for additional recharge opportunities at the Rio Hondo Spreading Grounds. Lario Creek was selected as one of the San Gabriel River Master Plan’s concept design studies. It will also serve as a trail link between the proposed San Gabriel River Discovery Center museum, several existing local hiking and equestrian trails, and the

regional bike trails located along the San Gabriel and the Rio Hondo/Los Angeles Rivers.

San Gabriel River Discovery Center

Public Works has been an active partner in planning the San Gabriel River Discovery Center with its primary sponsors: the Upper San Gabriel Municipal Water District, the San Gabriel and Lower Los Angeles RMC, and the County of Los Angeles Department of Parks and Recreation.

The San Gabriel River Discovery Center is one in a series of education centers planned along the San Gabriel River and one of the five Master Plan concept design studies. The Discovery Center will be located at the existing Whittier Narrows Nature Center. The goal of the Discovery Center is to create an interactive resource to educate its users on local watershed issues. The proposed center will have a 16,000 square foot footprint, comprised of museum space for exhibits and displays, an auditorium, a visitor orientation center, a video theater, a conference room/library, and offices. The Discovery Center will provide a valuable resource to a wide spectrum of users from local student groups that will be able to learn about the natural processes of the water cycle, to

business professionals who will be able to hold conferences in this central San Gabriel River location. The contract for planning and architectural design services is anticipated to be awarded in July 2004, with unveiling of the completed Discovery Center scheduled for early 2008.



La Mirada Creek Project

The purpose of the La Mirada Creek Project is to provide flood mitigation along with multiuse benefits to the unimproved section of La Mirada Creek, located south of La Mirada Creek Park and north of Imperial Highway, in the City of La Mirada. This portion of the natural creek is unlined and has a history of flooding the adjacent residences up to their front door steps. To eliminate this flooding, the project will add a parallel drain while incorporating proposed multiuse benefits such as:

- 1) Linking the project to existing bike, walking, and equestrian trails.
- 2) Enhancing existing habitat along the riparian corridor.
- 3) Constructing a wetland "detention basin".



- 4) Incorporating water quality improvement elements.

The San Gabriel River Watershed Unit is in the process of preparing a project concept report for this project with technical assistance from Design Division. This concept is being developed in conjunction with the City of La Mirada and the RMC.

Projects in the Santa Clara River Watershed

Nutrient TMDL

The Water Quality Section participated in the Nutrient TMDL development process. The Nutrient TMDL was adopted by the LARWQCB in Fall 2003 and it is expected that the US EPA will approve it in late 2004. The County of Los Angeles Sanitation District and wa-

ter treatment facilities will take the lead in addressing the Nutrient TMDL requirements.

The Chloride TMDL for the Santa Clara River is still being developed by the LARWQCB.

Aqua Dulce Watershed Management Plan

Portions of Aqua Dulce are subject to chronic flooding conditions. The area relies on groundwater for its potable water supply. In recent years, demand for groundwater has risen while its quality has been questioned. Hence, working with residents of Aqua Dulce, the Santa Clara River/Antelope Valley Watershed Unit's goal is to identify feasible solutions to the area's flooding, water supply, and water quality problems using watershed management techniques. An example of such a solution would be a regional retention basin designed for the dual purpose of flood mitigation and groundwater recharge.



Mint Canyon Watershed Alternative Feasibility Study

Mint Canyon is subject to flooding and is identified as Zone A flood hazard area in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). A feasibility study of the 21,000-acre subwatershed (tributary to the Santa Clara River) has been completed to identify multipurpose solutions to mitigate



the existing flood hazard, thereby eliminating the need for property owners in the area from having to purchase flood insurance.

The feasibility of recharging the groundwater was also a component of this effort. In addition, the LARWCB has identified Mint Canyon as being impaired for nutrients, so the study will include an investigation of ways to improve water quality.

Corps Feasibility Study

Public Works has negotiated an agreement with the Corps and the Ventura County Watershed Protection District (VCWPD) to conduct a joint Santa Clara River Watershed Feasibility Study. The study will model the hydrology, hydraulics, and sediment transport characteristics of the watershed. The goal of the study is to identify flood protection, water conservation, water quality enhancement, and environmental restoration

problems and opportunities. It is anticipated that the Corps will determine there is Federal interest in some of the study's proposed projects and contribute funds for construction. The cost of the feasibility study is estimated at \$8.1 million; Public Works would contribute \$1.7 million; the Corps and VCWPD would contribute \$4.1 and \$2.3 million, respectively. The study is projected to be completed in three to four years.

Lessons Learned

- Capture stakeholder visions and ideas. Be sure to record issues and concerns expressed during facilitated stakeholder meetings.
- Federal and State budgets can fluctuate and impact project schedules and scopes. Consider adding flexibility to projects when outside funding sources are involved.
- Grant opportunities—There are various grant funding opportunities available. Be sure to coordinate grant applications with internal stakeholders.

Future

The San Gabriel River/Santa Clara River/Antelope Valley Watershed Section will continue to pursue its missions by conducting studies and preparing project concepts in coordination with internal and external stakeholders. Some of the Section's goals include:

- Completing the San Gabriel River Master Plan in summer 2004.
- Taking an active role in the Coyote Creek Watershed Management Plan.
- Complying with upcoming TMDL requirements
- Investigating potential San Gabriel River Master Plan projects for implementation.
- Guiding stakeholders as they implement San Gabriel River Master Plan projects.
- Conducting Santa Clara River Watershed Feasibility Study in partnership with the Corps and the Ventura County Watershed Protection District.
- Involving the development community in long-term watershed management.
- Conducting an assessment of watershed management needs in the Antelope Valley including the Quartz

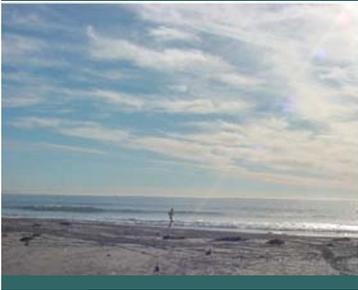
Hill Drainage area.

- Seek out stakeholder partnerships with the goal of optimizing watershed visions and projects and maximizing financial resources available for implementation.
- Observe sound fiscal practices as the Section implements project based budgeting.



2002-2004

BIENNIAL REPORT



WATERSHED MANAGEMENT DIVISION

SANTA MONICA BAY WATERSHEDS

STEVE ROSS and WENDY LA, Watershed Managers

Section Background

The Santa Monica Bay Watershed Section was created to develop and implement multipurpose projects to meet the Division's watershed management objectives including flood hazard mitigation, water quality improvements, water conservation, and aesthetic enhancements of County of Los Angeles' facilities.



This Section consists of two units. The South Santa Monica Bay includes the urban watersheds south of Topanga down through the Palos Verdes peninsula, including the Ballona Creek Watershed. The cities include: Los Angeles, Culver City, Beverly Hills, Inglewood, El Segundo, Manhattan Beach, Hermosa Beach, Redondo Beach, Torrance, and Rancho Palos Verdes. The urban watershed consists of two main regions: Ballona Creek and the south bay cities including Marina del Rey.

The North Santa Monica Bay consists of the Malibu Creek, Topanga Creek, and other rural subwatersheds. The North Santa Monica Bay Unit actively leads regional efforts relative to TMDLs implementation, including the organization of the North Santa Monica Bay Task Force kick-off, which is charged with the development and implementation of the Regional Watershed Implementation Plan described later in the North Santa Monica Bay projects section.

The North Santa Monica Bay unit also actively participates in many of the watershed-related groups, such as the Santa Monica Bay Restoration Commission, Onsite Wastewater Treatment System Task Force, the Malibu Creek Watershed Advisory Council, Malibu Creek Lagoon Working Group, Local Coastal Plan Technical Advisory Committee, Executive Ad Hoc Santa Monica Bay TMDL Committee, and the Topanga Creek Watershed Committee.



Mission

South Santa Monica Bay

To generate new ideas and projects to improve the quality of life in the Santa Monica Bay Watershed by providing responsive, efficient, and high quality public service. This will be done through watershed management incorporating flood protection, water conservation, water quality improvements, and other beneficial watershed improvements.

North Santa Monica Bay

To generate innovative ideas and regional solutions to improve the quality of life in the North Santa Monica Bay Watershed by leading collaborative efforts and combining resources with local agencies to provide responsive, efficient, and high quality public service through watershed management techniques of incorporating flood protection, water conservation, water quality improvements, and other beneficial watershed improvements.

Accomplishments

South Santa Monica Bay

The South Santa Monica Bay Unit worked on a variety of watershed improvement projects made possible through partnerships and grant funding. The following is a list of projects that are in various stages of planning study, concept development, or project implementation.

Propositions 12 and 13 Grant Projects that were awarded:

- Ballona Creek and Manhattan Beach Low Flow Diversions Projects
- Ballona Litter Monitoring Project
- Ballona Creek Watershed Management Plan
- Methodology for Prioritizing Structural Best Management Practices Study

General Projects and Studies:

- Ballona Creek Wetlands Walkway Project
- Marina del Rey/Ballona Creek Trash & Debris Study
- Lower Ballona Creek Restoration Study
- South Santa Monica Bay Dry-Weather Bacteria TMDL program
- South Santa Monica Bay TMDL Low-Flow Diversion Program.
- Santa Monica Bay Restoration Commission \$3 mil-

lion Water Quality Improvement Grant

- Marina del Rey Bacteria TMDL Implementation Program
- The Santa Monica Bay Restoration Joint Powers Authority
- Ballona Creek Earth Day 2003 and 2004

The Unit worked closely with stakeholders including: elected officials, Federal, State, and local agencies, environmental groups, and local businesses and residents to enhance the quality of life in the Malibu Creek, Topanga Creek, Ballona Creek, other Rural and Urban watersheds.

North Santa Monica Bay

The North Santa Monica Bay Unit worked on a variety of watershed improvement projects made possible through partnerships and grant funding. The following is a list of projects that are in various stages of planning study, concept development, or project implementation within the North Santa Monica Bay watersheds:

Grant projects that were awarded:

- National Oceanographic and Atmospheric Administration (NOAA) Grant
- North Santa Monica Bay Water Quality Improvement Grant

General Projects and Studies:

- Malibu Creek Watershed Management Area Plan (aka Plan Blue)
- Las Virgenes Creek Restoration Study
- North Santa Monica Bay White Paper



- North Santa Monica Bay Regional Watersheds Implementation Plan
- Santa Monica Bay Beaches Dry-Weather Bacteria TMDL Implementation Projects
- Santa Monica Bay Beaches Wet-Weather Bacteria TMDL Implementation Plan
- Malibu Creek Bacteria TMDL Implementation Plan
- Malibu Creek Earth Day 2003 and 2004

The Unit worked closely with elected officials, Federal, State, and local agencies, environmental groups, and local businesses and residents to enhance the quality of life in the Malibu Creek, Topanga Creek, and other rural watersheds.

Projects in the South Santa Monica Bay Watersheds

Marina del Rey Back Basins and Mother's Beach Bacteria TMDL

County of Los Angeles was named as the lead agency for the Marina del Rey Back Basins and Mother's Beach Bacteria TMDL. Public Works, with the County of Los Angeles Department of Beaches and Harbors, is taking the lead in coordinating compliance efforts. The TMDL became effective on March 22, 2004. A Jurisdictional Group was formed with City of Los Angeles, Culver City, CalTrans, and other stakeholders to comply with each TMDL requirement. Three main deliverables were required within 120 days from the TMDL effective date: a coordinated monitoring plan, small drain study, and a discharge report. All three items were submitted to the LARWQCB. The jurisdictional group

hired a consultant to prepare the dry-and wet-weather implementation plans. The draft is due to the LARWQCB by March 30, 2005, and the final by July 30, 2005. The jurisdictional group intends to pursue an integrated approach.



Watershed Area Plans

Ballona Creek Watershed Management Plan:

Public Works partnered with the Santa Monica Bay Restoration Commission, the City of Los Angeles, and Ballona Creek Renaissance to develop a Ballona Creek Watershed Management Plan. The plan is funded by State Proposition 13 - Costa-Machado Water Act Grant. The objectives are to conduct a comprehensive assessment of the watershed's water quality conditions and to identify potential water qual-



ity and multiuse projects for future funding opportunities. Public Works will strategically select and prioritize cost-effective Best Management Practices (BMPs) for achieving a set of water quality improvement/habitat restoration goals. A long-term, community-based watershed monitoring plan, identifying existing and future funding sources for plan implementation will be developed. The final Management Plan will be released in September 2004.

South Santa Monica Bay Beaches Bacteria TMDL

Dry Weather Bacteria TMDL

The South Santa Monica Bay Beaches Dry-Weather Bacteria TMDL became effective on July 15, 2003. The TMDL requires there be zero bacteriological exceedances during summer dry weather and less than three exceedances during winter dry weather by July 15, 2006. Public Works plans on diverting to the sewer system all County-owned storm drains originally identified in the TMDL as problematic, as well as those drains producing significant dry-weather runoff into the bay. A regular flow monitoring program was initiated

for the drains outletting into the South Santa Monica Bay.

This program will ensure compliance with waste load allocations and ensure attainment of the beneficial uses.

Program Development Division currently has eleven low-flow diversion projects in the design phase. Construction of three low-flow diversions are scheduled for August 2004 and the other eight low-flow diversions are scheduled for August 2005.

Manhattan Beach Low-flow Diversion Project

The design, engineering, and construction of a dry-weather diversion at the Manhattan Beach Pump Plant to connect it to the Los Angeles County Sanitation system for treatment was completed in March 2004. The primary function of the diversion system is to divert dry-weather low-low laden

with high bacteria. The system can also serve as secondary contaminant to capture trash and other pollutants. Water quality monitoring will occur for one year.



Wet Weather Bacteria TMDL

In South Santa Monica Bay, the County of Los Angeles and the Cities are actively participating in Jurisdictional Groups 2, 3, 5, 6, 7, and 8 set up by the LARWQCB. The Jurisdictional Groups are developing Implementation Plans to comply with the Wet-Weather Bacteria TMDL. Final Implementation Plans are due to the LARWQCB by July 15, 2005.

reviewing work products, providing watershed expertise and record information, and selecting a consultant to prepare the Wet-Weather Implementation Plan.

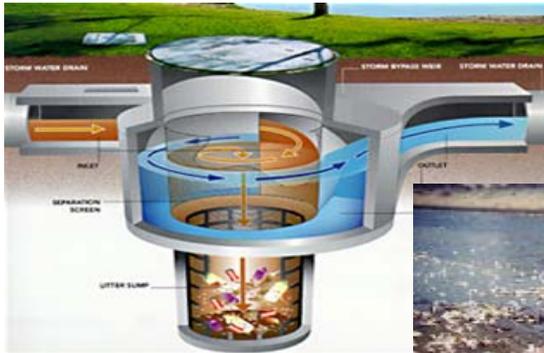
The City of Los Angeles is lead for groups 2, 3, and 8, Redondo Beach is lead for Groups 5 and 6, and Rancho Palos Verdes is lead for Group 7. Public Works actively participates in the groups providing technical assistance,



Ballona Creek Litter Monitoring Project

Public Works plans to reduce trash entering Ballona Creek by 50 percent by installing catch basin trash reduction devices and Continuous Deflective Separator (CDS) units throughout the unincorporated County area of Baldwin Hills.

Reducing trash in Ballona Creek and the Santa Monica Bay will improve water quality and ensure attainment of beneficial uses for these water bodies. As more trash reduction BMPs are constructed, improved water quality will benefit everyone.



Projects in the North Santa Monica Bay Watersheds

Las Virgenes Creek Restoration Study and Project

Las Virgenes Creek begins in Ventura County on State-owned land where the creek is natural. Below the Ventura County line, the creek runs through mostly urban area in the City of Calabasas and Unincorporated County areas. At the Ventura-Los Angeles County line, the creek is primarily channelized with a concrete channel downstream to



Agoura Road in the City of Calabasas. From Agoura Road to Lost Hills Road, the channel runs through urbanized areas as a natural creek. From Lost Hills Road to its confluence with Malibu Creek, Las Virgenes Creek is natural and runs through State-owned land.

The Unit managed the consultant contract for the Las Virgenes Restoration and Feasibility Study in 2002-03. The study recommended three alternatives for restoration from the Ventura-Los Angeles County line to approximately two miles downstream at Lost Hills

Road. The three alternatives considered a more naturalized environment, while continuing to provide flood protection. The first alternative suggests complete restoration, which is defined as removal of all the concrete along the creek corridor. The two other alternatives consider more feasible options to complete restoration with improved

water quality benefits, enhanced aesthetics, an improved wildlife corridor, and enhancement of vegetation and wildlife habitat. The study was completed in November 2003.

Out of the feasibility study, a PCR will follow. The PCR will recommend a project based on the preferred and most feasible alternative. The PCR will further study water quality aspects to include current and future TMDLs and the current plans for the Regional Watersheds Implementation Plan.

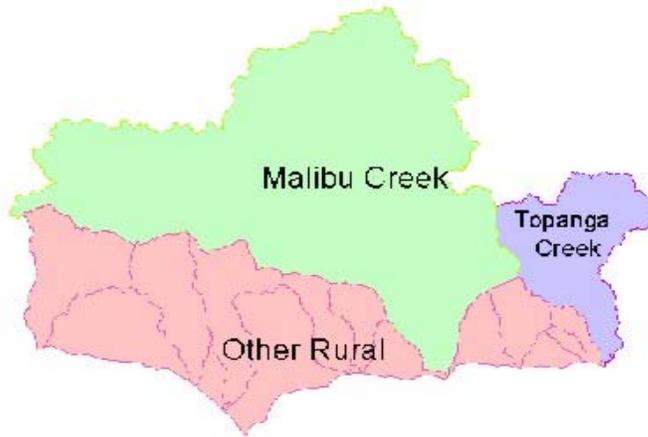
Regional Watersheds Implementation Plan

In 2002, Los Angeles County Supervisorial District 3 (SD-3) saw a need for regional solutions for meeting water quality regulatory requirements. SD-3 requested Public Works to prepare an informational White Paper for the area known as the North Santa Monica Bay Watershed.

Out of the White Paper came recommendations to establish the North Santa Monica Bay Watershed Task to develop the North Santa Monica Bay Regional Watersheds Implementation Plan (RWIP). The RWIP will identify and implement projects and funding mechanisms to comply regionally with water quality regulations, namely the MS4 NPDES Permit, TMDLs, and Assembly Bill 885. This is the

first time the entire North Santa Monica Bay Watershed will work together towards water quality regulatory compliance in a regionally consistent and collaborative manner.

The Unit worked closely with SD-3, the cities of the watersheds, and the County of Ventura to establish an Executive Committee. The Unit also worked with interested stakeholders, including public agencies, regulators, environmental groups, homeowners, and special interest groups to participate in the RWIP preparation through



subcommittees. For more details, please visit the website <http://www.ladpw.org/NSMB>.

North Santa Monica Water Quality Improvement Grant

The LACFCD with the City of Malibu and CalTrans have been granted funding under the Proposition 13 Non-Point Source Program for the North Santa Monica Bay Water Quality Improvement Project.

The objective of the North Santa Monica Bay Water Quality Improvement Project is to help meet bacteriological standards set forth in the Santa Monica Bay Wet-Weather Bacteria TMDL while also addressing future TMDLs, improve water quality at natural creeks and public beaches in North Santa Monica Bay, and limit the impact of non-point source discharges to the creeks and in turn the bay. The proposed project areas also encompass Areas of Special Biological Significance, from Latigo Canyon to the Los Angeles County border.

North Santa Monica Bay Watersheds are unique in that



they contain both rural and urbanized areas. There are also a more limited number of municipal storm drains and a much larger number of private sanitary disposal systems proportionally in the North Santa Monica Bay Watersheds than in the rest of Santa Monica Bay. These are some of the reasons why North Santa Monica Bay Watersheds are largely impacted by non-point sources.

This grant funding of \$954,000 will allow for the development of a Technical Advisory Committee, the creation of project prioritization criteria, and the implementation of at least one structural BMP protect to improve water quality, including monitoring of BMP efficiency and maintenance. All of this information will be extremely valuable in complying with the bacteria TMDLs and improving storm water quality.

Santa Monica Bay Dry-Weather Bacteria TMDL Implementation Plan

On July 15, 2003, the Santa Monica Bay Beaches Wet- and Dry-Weather Bacteria TMDLs regulations became effective. The Dry-Weather TMDL requires that by July 15, 2006, there be no exceedance of bacteriological standards at Santa Monica Bay beaches during summer dry weather.

In order to comply with this regulation, Public Works is committed to developing innovative treatment solutions in North Santa Monica Bay. Field investigations were conducted throughout the 2003 dry-weather season to identify potential pollutant sources.

Project concepts are being developed to research treatment of multiple pollutants for both summer and winter dry-weather flows, especially where the option of low-flow diversions to sewer lines are not available. We propose to develop BMPs to address not only bacteria but also other water quality impairments in North Santa

Monica Bay like organics.

Once these concepts have been approved, they will be programmed for design and construction to meet the TMDL compliance deadline and improve water quality.



Santa Monica Bay Wet-Weather Bacteria TMDL Implementation Plan

In December 2002, the Regional Board approved the Wet-Weather Bacteria TMDL for Santa Monica Bay beaches. The TMDL

regulations designate the County of Los Angeles as a responsible agency along with others that drain to the Santa Monica Bay. In the TMDL, Santa Monica Bay is divided into seven jurisdictional groups, which encompass each of the 27 coastal



subwatersheds draining into Santa Monica Bay. Each of the seven jurisdictional groups has a designated lead agency (based on land area), plus a number of responsible agencies, which drain to that group of subwatersheds, as well.

In North Santa Monica Bay, County of Los Angeles has been designated lead responsible agency for

Jurisdictional Group I. The TMDL requires each of Santa Monica Bay's seven jurisdictional groups to submit an implementation plan within 20 months of the July 15, 2003 start date. Jurisdictional Groups I and 4 have embraced an "integrated, iterative, and adaptive"



implementation approach for meeting the TMDL requirements. As part of this integrated approach, we propose to address not only bacteria, but also other water quality impairments in North Santa Monica Bay like metals, organics, and sediment. A TMDL implementation plan development is being

coordinated between the County of Los Angeles, the City of Malibu, and CalTrans.

Malibu Creek and Lagoon Basins Bacteria TMDL Implementation Plan

On January 29, 2004, the LARWQCB issued a draft Malibu Creek and Lagoon Basins Bacteria TMDL. The draft TMDL requires that responsible agencies, including the County of Los Angeles, develop and submit an implementation plan. This implementation plan would outline how compliance with the TMDL would be cooperatively achieved within the implementation schedule. The implementation plan is required to be submitted to the LARWQCB one year



after the TMDL effective date. The Malibu Creek Watershed Management Committee (WMC) consisting of many of the responsible agencies named in the TMDL has been meeting regularly under the requirements of the MS4 NPDES Permit. The Malibu Creek WMC has now agreed to expand their scope to address TMDL regulations and requested for the County of Los Angeles to chair this committee and lead the efforts to develop a collaborative implementation plan.

Lessons Learned

South Santa Monica Bay

The Unit has aggressively pursued grants to fund several proposed projects and studies that provide watershed enhancements. An example of lessons learned occurred when the City of Los Angeles and Public Works applied for the same grant to divert dry-weather low-flow to the nearby sewer system from the same storm drains. This duplicated effort resulted from a lack of communication with the City. In order to minimize or eliminate the possibility of overlapping efforts, the Unit will increase coordination efforts with all levels of government, as well with the local community groups. This has been a valuable lesson learned that can assist in better serving the watershed in the future.

North Santa Monica Bay

The North Santa Monica Bay Watersheds are unique when compared to the highly urbanized watersheds in South Santa Monica Bay. Traditional engineering solu-

tions such as low-flow diversions and infiltration may not work as well in a highly rural area with private onsite wastewater treatment systems. Therefore, due to the unique challenges in the North Santa Monica Bay Watersheds, it would be more cost effective and efficient to address these issues as a region. This way staff can concentrate on developing tailor-made solutions specific to meeting the various challenges in the watersheds.

The Unit also actively led regional efforts relative to TMDLs implementation and actively participated in many of the watershed-related groups, such as the Santa Monica Bay Restoration Commission Onsite Wastewater Treatment System Task Force, the Malibu Creek Watershed Advisory Council, Malibu Creek Lagoon Working Group, Local Coastal Plan Technical Advisory Committee, Executive Ad-Hoc Santa Monica Bay TMDL Committee. In working with these groups, the Unit has been able to leverage against work that has already been completed in the region.

Future

South Santa Monica Bay

The Unit will continue to proactively address water quality regulations for the watershed. This includes taking the leadership role in organizing the responsible agencies and stakeholders to address future TMDLs where the County of Los Angeles is the lead agency. In addition to the existing responsibilities, the future role of the watershed managers would include project management duties beyond concept development in a collaborative effort with the stakeholders. The extended responsibility will ensure a seamless transition from the conceptual phase to the project delivery phase.

North Santa Monica Bay

Our long-term goal is to optimize the balance of available human and natural resources to provide flood protection, improve the quality of stormwater runoff, preserve existing open space for recreation and habitat, increase and enhance groundwater supply, and decrease the need for portable water supply by finding reuse options. We will develop, manage, and implement multipurpose projects that incorporate new technologies and method-

ologies for achieving the stakeholder's goals of maximizing the beneficial uses.

Currently, several watershed organizations meet regularly, but their efforts are not coordinated among all the watersheds or stakeholders in the North Santa Monica Bay. There is an underlying need among municipalities and stakeholders to collaborate in order to achieve regulatory compliance and watershed restoration with a regional and watershed based approach. Coordination among several entities is critical to minimize duplication of efforts and maximize the benefits obtained.

Good water quality is a critical component of a healthy watershed. Therefore, the Unit envisions the RWIP will set the stage for NPDES, TMDLs, and Assembly Bill 885 compliance and serve as a model for water quality compliance throughout the Los Angeles County. The RWIP will enable regulated agencies to comply with water quality regulation in the most responsible and cost-effective manner. The RWIP is to have a holistic view of regional water resources management while addressing multiple pollutants with implementation flexibility, through both non-structural and structural BMPs, as well as, multiuse projects.

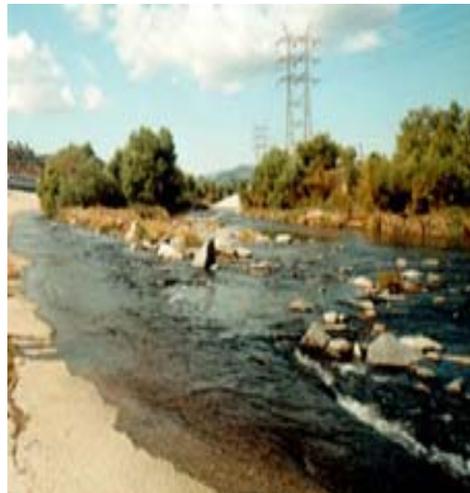




Section Background

The Water Quality Section, formerly known as the NPDES Section, is responsible for managing efforts to comply with the 2001 NPDES MS4 Phase I Permit requirements for the LACFCD and coordinating the NPDES Permit compliance efforts of the other departments in the County of Los Angeles. The Section will also be responsible for administering compliance of the 2003 NPDES MS4 Phase II Permit for the north Los

Angeles County area when it becomes effective.



In addition to its NPDES Permit responsibilities, the Section participates in the development of the Federal CWA Section 303(d) requirement for TMDLs and other water quality related policies.

Recently, the Section has also assumed new water quality monitoring responsibilities associated with TMDL development and implementation.

Mission

To ensure compliance with the requirements of the NPDES Permit through the development and implementation of programs such as TMDLs that control stormwater pollution and protect the beneficial uses of the water bodies of the state and to assume the leadership role for Stormwater Quality Improvement in the County by proactively encouraging, supporting and participating in research and public education efforts aimed at stormwater quality improvements and prevention.



Accomplishments

Illicit Connection / Illicit Discharge Unit

- Continued to lead the BMPs Task Force.
- Submitted to the LARWQCB the *Dry-Weather Discharge Treatment Feasibility Study*.
- Received LARWQCB approval of the NPDES Phase II MS4 Permit for north Los Angeles County, awaiting approval from the SWRCB.



- Created a proposed Trash TMDL Implementation Work Plan for Ballona Creek and Los Angeles River.
- Initiated a trend analysis on illicit connections and illicit discharges.
- Conducted Trash TMDL Baseline Monitoring (including installation of CDS units and catch basin inserts in the Los Angeles River and Ballona Creek Watersheds).
- Prepared the Annual Stormwater Monitoring Reports.
- Prepared the NPDES Annual Programs Reports.

TMDL Development and Monitoring Unit

- Aided in the organization of and participated in sampling events for the development of the Ballona Creek TMDLs.



- Aided in the organization of and participated in sampling events for the development of the San Gabriel River TMDLs.
- Aided in the development of:
 - Santa Monica Bay Beaches Wet-Weather Bacteria TMDL.
 - Santa Monica Bay Beaches Dry-Weather Bacteria TMDL.
 - Marina del Rey Mother's Beach and Back Basins Bacteria TMDL.

- Malibu Creek Watershed Bacteria TMDL.
- Cabrillo Beach and Los Angeles Harbor Bacteria TMDL.
- Santa Clara River Nutrients TMDL.
- Los Angeles River Nitrogen Compounds TMDL.
- Ballona Creek Metals TMDL.
- Los Angeles River Metals TMDL.

- Commented on the *Water Control Policy for developing California's CWA Section 303(d) List and Draft Functional Equivalent Document*.
- Initiated a workgroup to develop a water quality database to be used as a data repository.
- Developed a monitoring plan for North Santa Monica Bay Pre-Implementation Monitoring and associated water quality database.



Special Studies Unit

- Awarded a \$200,000 contract to conduct a Peak Flow Impact Study.
- Awarded a \$130,000 contract to conduct the Bioassessment Monitoring Study in Los Angeles County.
- Executed a \$600,000 agreement to partially fund the Bight 2003 Estuary Sampling Project.
- Awarded a contract to conduct the New Development Impact Study.
- Initiated the Post-Construction Stormwater BMPs Effectiveness Study in the Fall of 2003.
- Prepared and submitted to the LARWQCB the *Technical Manual for Stormwater Best Management Practices in the County of Los Angeles*.
- Coordinated the Shoreline Monitoring Plan for Santa Monica Bay.
- Developed and submitted to the LARWQCB a list of County of Los Angeles storm drains potentially discharging to Areas of Special Biological Significance during dry weather and storm drains directly discharging to the Santa Monica Bay.
- Awarded a contract to fund the development of Sediment Toxicity Monitoring Protocols.
- Negotiated a Memorandum of Agreement with the City of Los Angeles to conduct weekly shoreline water quality monitoring on behalf of the County of Los Angeles and other stormwater dischargers discharging directly to the Santa Monica Bay .
- Prepared and submitted to the SWRCB eight Monitoring and Reporting Plans and Quality Assurance Project Plans for Low-Flow Diversion Projects.

Field Support



- Inspected Public Works facilities and construction sites for NPDES compliance and BMP implementation.
- Provided field support activities for the IC/ID Model Program and actively investigated reported illicit connections.
- Provided support and safety advise for NPDES Permit-required sampling activities.
- Organized personnel for collecting water quality samples related to TMDL implementation and source identification plans, including the Malibu Creek pollutograph.
- Conducted flow measurements related to

TMDL implementation plans, including the installation of water quality sampling devices in storm drains that required confined-space entry.

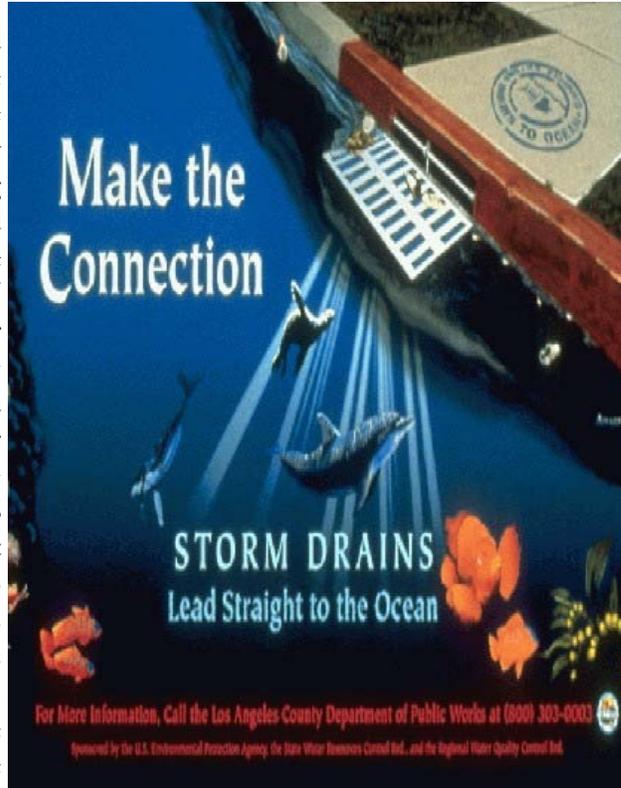
- Collected various storm drain identification data as required for the Santa Monica Bay Beaches and Marina del Rey Harbor Bacteria TMDLs.
- Provided field support for the Trash TMDL Baseline Monitoring study.
- Provided field support for Public Works' Earth Day events.
- Assisted environmental advocacy groups in sampling exercises in San Gabriel, Rio Hondo, and Ballona Creek Watersheds.



Municipal Stormwater NPDES Permit

History of the NPDES MS4 Permit

The CWA of 1972 created the framework to regulate discharges into waters of the United States. Initially focused mainly on regulating wastewater treatment and industrial discharges, the CWA was amended in 1987 to regulate stormwater discharges. Specifically, the amendment established regulation of stormwater discharges through the issuance of an NPDES Permit. The NPDES Permit is issued by the State to municipalities and prohibits nonstormwater discharges into the stormwater system. The Permit also regulates the water quality exiting the



stormwater system through application of BMPs to the maximum extent practicable.

To date, there have been three NPDES Permits issued to the Los Angeles County. The first NPDES Permit was issued in June 1990, the second was issued in July 1996, and the current Permit was issued in December 2001. A Phase II NPDES Permit has been approved by the Lahontan RWQCB for the north Los Angeles County area and County of Los Angeles is awaiting SWRCB's approval. Negotiations for the 2006 NPDES Phase I Permit are expected to commence in the winter 2004.

Phase I 2001 NPDES Permit

The current NPDES Permit was issued on December 13, 2001 by the LARWQCB under Order No. 01-182, NPDES No. CAS004001. The LACFCD and 84 incorporated cities were the listed Permittees. The City of Long Beach, which was part of the 1996 NPDES Permit, received its own NPDES Permit in 1999 under order No. 99-060 and is, therefore, not part of the 2001 Permit.



The Permit includes the Stormwater Quality Management Program (SQMP).

The SQMP are:

1. Public Information and Participation
2. Industrial/Commercial Facilities Control
3. Development Planning
4. Development Construction
5. Public Agency Activities
6. Illicit Connections/Illicit Discharges (IC/ID)

Phase II NPDES Permit

The Phase II NPDES Permit targets the north Los Angeles County area and is administered by the Lahontan RWQCB. It establishes water quality requirements for stormwater/urban runoff in small urbanized areas not already covered by the Phase I NPDES Permit. This Phase II NPDES Permit will impact the County's unincorporated areas in the Antelope Valley that are located within and beyond the LACFCD boundary. This area was required to apply for coverage under the Phase II NPDES Permit by August 8, 2003.

The Phase II NPDES Permit is to be less stringent than the Phase I Permits but still requires Permittees to implement BMPs that reduce pollutants to the maximum extent practicable. The Permit requires the regulated areas to develop and

implement a Stormwater Management Plan (SWMP) that describes BMPs, measurable goals, and timetables for implementation in six Minimum Control Measures.

The Minimum Control Measures are:

- Public Education and Outreach
- Public Information and Involvement
- Illicit Discharge Detection Elimination
- Construction Site Runoff Control
- Post Construction Runoff Control
- Pollution Prevention/Good Housekeeping.

Public Works and the LACFCD submitted for Phase II NPDES Permit coverage in August 2003. The Minimum Control Measures will be implemented upon approval of the Phase II NPDES Permit by the SWRCB.

The Lahontan RWQCB informed Public Works in June 2004 they are considering retracting the Phase II NPDES MS4 Permit due to State budget cuts.



Total Maximum Daily Load (TMDL)

The CWA of 1972, the goal of which was “fishable, swimmable, and drinkable” waters, included Section 303, which was intended to serve as a safety net for the Nation's impaired waters. The CWA required all wastewater treatment plants and industrial discharges to meet certain minimum standards. If these dischargers met the minimum standards and a water body was still impaired, the CWA required that all of the dischargers to the water body improve the quality of their discharge until the water body attained its designated beneficial uses.

In California, the State's water quality is regulated under the Porter-Cologne Act and the delegated authority of the CWA to the nine semi-autonomous Regional Water

Quality Control Boards and the State Water Resources Control Board. Each RWQCB assigns “beneficial uses” to each surface and groundwater body in its area of jurisdiction. These uses are memorialized in Basin Plans. There are approximately two dozen beneficial uses, ranging from drinking water supply to aquatic habitat to contact and non-contact recreation. The SWRCB and RWQCBs evaluate all water bodies within a region using new and existing monitoring data to determine if the water quality is supporting the designated beneficial uses.

If a RWQCB determines that a water body is not supporting its beneficial use, that water body is placed on the Federal 303(d) Impaired Water Bodies list. Once on the list, a plan called a TMDL is scheduled for development with the goal of reducing or



eliminating the water body's impairments. While Section 303(d) of the CWA has been in effect since 1972, only a few TMDLs had been developed across the country prior to the early 1990s. TMDL development intensified after the recent filing of a third-party lawsuit, brought by environmental advocacy groups against the United States Environmental Protection Agency (USEPA). The LARWQCB, the SWRCB, and the USEPA entered into a consent decree in 1999, requiring the development of TMDLs for 92 Analytical Units in the Los Angeles and Ventura County area by 2012, which is expected to be accomplished with 67 TMDLs.



A TMDL plan specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards. In order to return an impaired water body to support its beneficial uses, the pollution above that maximum has to be “budgeted” by allocating it among the various dischargers to the water body. Allocations are usually assigned to point and non-point sources such as wastewater treatment plants, industrial dischargers, municipal stormwater dischargers, and overland runoff. Natural sources should also be evaluated and included in the allocation process.

After a TMDL has been adopted by the RWQCB, the TMDL must be approved by the SWRCB, the Office of Administrative Law, and the USEPA. At any point prior to approval of the TMDL at the USEPA level, the TMDL may be returned to the RWQCB to be reconsidered. When the USEPA approves the TMDL, the RWQCB is notified, and they in turn notify all of the TMDL's responsible parties. This date is known as the “effective date” of the TMDL.

The TMDL itself holds no power of enforcement even after it becomes effective. Enforcement of the TMDL is achieved by incorporating it into the NPDES Permit.

One important aspect of the NPDES Permit is that

compliance is based on the timely implementation of BMPs to the maximum extent practicable, rather than the achievement of numerical limits. BMPs are commonly prefabricated proprietary devices, like oil-water separators; specially designed applications, such as vegetated runoff conveyances; or programs such as public education believed to improve runoff quality by their construction or execution. The alternative to BMP implementation requirements is for a Stormwater Permit to dictate water quality objectives that must be met.

As of August 2004, the following TMDLs have become effective for water bodies in the Los Angeles County:

- Santa Clara River: Nutrients
- Santa Monica Bay Beaches: Dry Weather Bacteria, Wet Weather Bacteria
- Los Angeles River: Trash, Nutrients
- Ballona Creek: Trash
- San Gabriel River, East Fork: Trash
- Marina del Rey: Bacteria



As of August, 2004, the following TMDLs are under development for water bodies in the Los Angeles County:

- Malibu Creek Watershed: Bacteria, Nutrients
- Los Angeles River: Metals
- Ballona Creek: Bacteria, Metals, and Organics
- San Gabriel River: Nutrients
- Marina del Rey: Organics and Metals
- Cabrillo Beach (Inner) LA Harbor area and Los Angeles Main Harbor Channel : Beach Closures (Bacteria)
- Malibu: Bacteria and Nutrients

Special Studies

The 2001 NPDES Permit contains provisions for several special studies, as outlined below.

Dry-weather Discharge Treatment Feasibility Study

This study, submitted to the LARWQCB on July 1, 2003, evaluated known dry-weather discharges to impaired water bodies throughout the permitted area and ranked them as candidates for discharge to the

sanitary sewer system or for on-site treatment. The study, done in-house, identified more than 80 candidate treatment projects.

Technical Manual for Stormwater Best Management Practices in the Los Angeles County

This manual, submitted to the LARWQCB on February 2, 2004, combined the Public Works' existing Standard Urban Stormwater Mitigation Plan (SUSMP) manual with pertinent portions of the California Stormwater Quality Association New Development BMP Handbook. The manual,



written for the development and engineering communities, is tailored to the conditions of Los Angeles County and includes information on pollutants of concern, BMP effectiveness, and BMP costs. The LARWQCB has sent the manual to four outside parties for peer review.

Peak Flow Impact Study

Public Works is funding this study to determine the impacts, if any, that upstream development causes on the physical integrity of natural streams. In the event of impacts, the study will develop and recommend

mitigative Best Management Practices. The project is being managed by the Southern California Coastal Waters Research Project.

Bioassessment Monitoring and Regional Index of Biological Indicator Study

Public Works has begun sampling freshwater streams and estuaries for biodiversity as a potential sign of water body health. Twenty sites are being sampled annually throughout the Los Angeles County for the life of the

NPDES Permit. In addition, Public Works will participate in a regional research project to create an Index of Biological Indicators for Southern California.

BMP Effectiveness Study

This study will evaluate five different types of stormwater BMPs by sampling and calculating influent and effluent loading. The study requires retrofitting

previously installed publicly-owned BMPs with monitoring equipment.

Bigt 2003 Estuaries Sampling Project

Public Works is funding the sampling of the estuaries and offshore sediments of the five major river systems in the Los Angeles County. Sediment will be sampled for general chemistry, physical attributes, toxicity, and species types and diversity. This research is being

coordinated by the Southern California Coastal Waters Research Project as part of its quadrennial snapshot of the California coastline between Point Conception and Mexico.

New Development Impacts Study

Public Works, partnering with the City of Santa Clarita, will be monitoring impacts due to new development and comparing stormwater quality between subwatersheds with and without post construction BMPs. In the

absence of subwatersheds where samples can be feasibly obtained, Public Works and the City will develop and calibrate a rainfall/runoff/water quality model to simulate the assumed effects of post construction BMPs.

Other Responsibilities

Task Forces and Committees

Numerous committees and task forces have been established to support the many agencies and stakeholders who have interests and responsibilities in

the NPDES Permit, TMDLs, and related matters. These committees include:

Watershed Management Committees

Each of the six major Watershed Management Areas within the NPDES Permit area (Malibu Creek and adjacent rural areas, Ballona Creek and adjacent urban areas, Dominguez Channel and Los Angeles Harbor, Los Angeles River, San Gabriel River, and Santa Clara River) is organized into a Watershed Management Committee (WMC) comprised of a representative from

the LACFCD and each city within that watershed. Each WMC is required to meet at least quarterly under the 2001 NPDES Permit; however, Malibu Creek and Ballona Creek WMCs have elected to meet monthly. The LACFCD serves as the chair and/or secretary for the Dominguez, Los Angeles, San Gabriel, and Santa Clara WMCs.

Executive Advisory Committee

The Executive Advisory Committee's role is to facilitate programs within each watershed and to enhance consistency among all of the programs. Traditionally,

representatives from each WMC attend the Executive Advisory Committee Meetings.

Los Angeles BMP Task Force

Public Works formed and supports a voluntary committee, Los Angeles County BMP Task Force, comprised of stakeholders interested in stormwater BMPs. Public Works designed and sponsors a web page for the Task Force: www.BMPLA.org.



The mission of the Task Force is to be an ongoing forum to facilitate the selection, implementation and financing of effective BMPs through data gathering, analysis and exchange and stakeholder coordination and outreach.

Other Ongoing and Ad Hoc Committees

Section staff also serve on committees that were formed either by Public Works or other agencies for special purposes, such as the:

- Santa Monica Bay Restoration Project Technical Advisory Committee.
- Southern California Stormwater Monitoring Coalition.
- Santa Monica Bay Beaches Bacteria TMDLs Technical Steering Committee.
- Santa Monica Bay Beaches Bacteria TMDLs Jurisdictional Groups Representation.
- California Stormwater Quality Association.
- Santa Monica Mountains Local Coastal Plan Technical Advisory Committee.
- Southern California Coastal Waters Research Project.
- Grant application committees formed by various stakeholders to apply for water quality improvement grants.
- Bight 2003 Regional Monitoring Steering Committee.

Monitoring

The Section is responsible for complying with monitoring requirements associated with the NPDES MS4 Phase I Permit. All section staff are trained in water quality sampling or storm sampling coordination. Section staff sample during dry-and wet-weather conditions. During the storm season, the section staff are on call and are mobilized for any storm with greater than 0.25 inches of rain. Sampling events are designed to provide representative water quality data for each watershed during dry and wet weather.

The Section is also responsible for development, implementation, and

compliance monitoring for TMDLs. If additional data is required during the development of a TMDL, the Section will collaborate with stakeholders to develop a monitoring plan to acquire additional data. Once a TMDL is established, the Section will team with the watershed sections to gather any information needed to design implementation solutions. After implementation solutions are in place, the Section designs and carries out a monitoring plan to ensure compliance with the TMDL. Finally, the Section collects data to be used during TMDL reopener periods to support modifications to the TMDL, if necessary.



Low-Flow Diversions

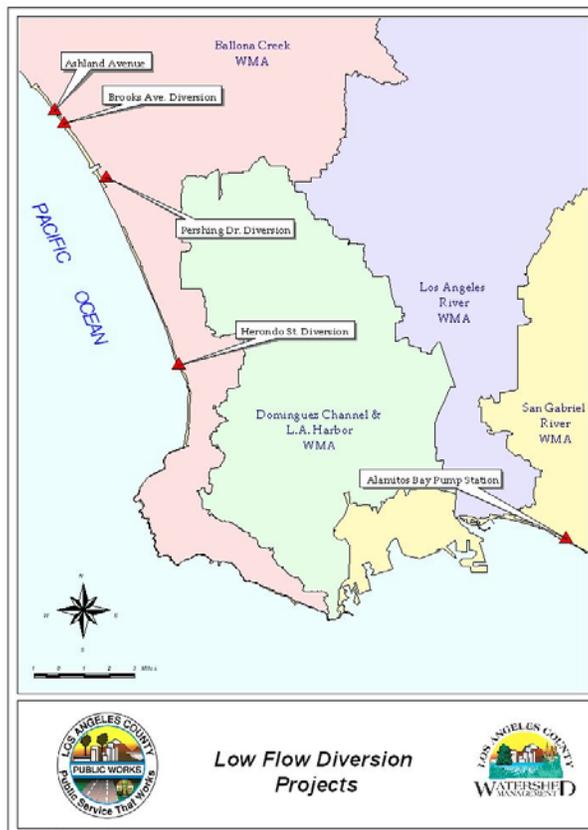
One method used to improve water quality is the installation of low-flow diversions, which are designed, constructed, and maintained by Public Works and are operating at numerous shoreline locations stretching from Santa Monica to Long Beach. These underground diversions re-route residual dry-weather flows from the storm drains to wastewater treatment plants where bacteria and other pollutants are removed.

The systems work during dry months when there are still residual storm drain flows, which may be highly polluted. The residual flows come from overwatering lawns, hosing off driveways, washing cars in the street, and other activities. As the runoff flows to the storm drain, it mixes with litter, motor oil, cigarette butts, fertilizer, pesticides, animal droppings, and anything else along the way. The resulting runoff may

contain high concentrations of bacteria, metals, and organics that can create health risks for swimmers, harm marine life, and cause beach closures.

During the storm season, the flows bypass the diversions to preserve capacity at the wastewater treatment plants. A rain gage shutoff is also used to handle unexpected storm events. For the rest of the year, however, all storm drain flows are routed to the wastewater treatment plant and away from the beach.

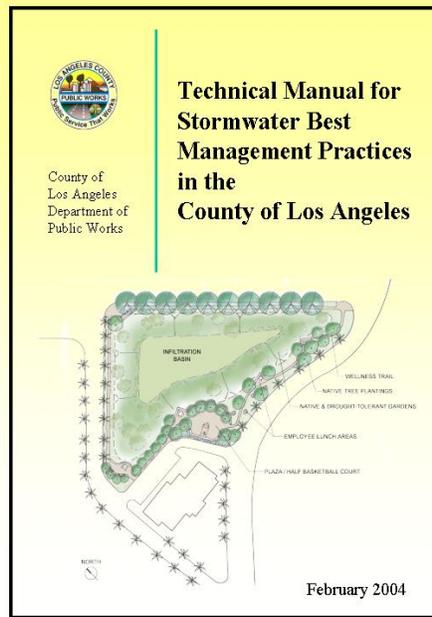
Although these projects are highly effective, they are just one element in the County of Los Angeles' overall water quality enhancement effort. The most critical item is to educate the public that stormwater pollution is everyone's responsibility. The diversions remove a percentage of contaminants in specific areas, however, the ultimate solution is for all residents and businesses to minimize the amount of pollution entering the storm drains.



Technical Manual for Stormwater Best Management Practices in the County of Los Angeles

In March 2000, the LARWQCB established requirements for a SUSMP to be implemented on priority development and redevelopment projects. The 2001 NPDES Permit stipulated that a technical manual be created to aid in the siting and design of BMPs in the Los Angeles County.

The Technical Manual for Stormwater BMPs in the County of Los Angeles was written by WMD staff, with the input of interested Permittee cities. The manual draws heavily from the previous SUSMP manual, created as a result of the 1996 NPDES Permit, and the California Stormwater Quality Association's New Development Best Management Handbook. The purpose



of the manual is to provide technical guidance to the development and engineering communities in the design of BMPs. These BMPs are designed into the project during the planning phase and are meant to treat or recharge runoff in accordance with SUSMP requirements.

The manual discusses SUSMP activity areas, different source control BMPs, and various non-proprietary treatment control BMPs. The manual also includes tables and charts for calculating treatment flow rates and volumes, as well as design criteria for the various BMPs.

Lessons Learned

The Section cannot over-emphasize the value of stakeholder involvement. The Permittee cities feel especially vulnerable, and often look to the Public Works for guidance. If anything, in some instances, coordination outside of Public Works has been more successful than coordination within Public Works. Some divisions are still learning the significance of the NPDES Permit.

One particularly successful coordination effort occurred with the quarterly meetings of neighboring principal stormwater Permittees, such as Ventura County and the City of Long Beach. This enables WMD to stay abreast of Permit activities in other municipalities and it becomes valuable information when WMD is involved with the LARWQCB on the terms of the NPDES Permit.



Water quality problems that are the responsibility of Public Works cannot be properly addressed without considering the issues of surrounding areas and other municipalities. Watershed boundaries do not follow governmental boundaries and, therefore, the value of partnerships cannot be overlooked. This is emphasized in the nature of the NPDES Permit and TMDLs, which require cooperation between co-permittees and co-responsible agencies in order to meet compliance and avoid fines and liability.

Forming collaborative and effective working relationships with other affected agencies help not only to find solutions to water quality problems but also helps Public Works gain new insight into how best to comply with the still relatively new world of NPDES and TMDL regulations. On the other hand, being the Principal Permittee on the NPDES Permit and sometimes the

lead responsible agency on TMDLs puts Public Works into an advisory and leadership role with other cities. In this capacity, Public Works is continuing to reevaluate its role and responsibility in communicating water quality-related information to cities. Ensuring that communications from Public Works reaches all levels of affected city government is apparent when consultants are hired by cities to help them meet compliance with regulations. Public Works can no longer assume that communicating with one level of city government will ensure that the message will reach other levels. Communications must now occur at all levels, from the mayor's office, to public works director's or city engineer's, to water quality staff and hired consultants.

In addition to the need for partnerships and increased communications with other agencies, Public Works is continuing to realize the value of understanding legal aspects of water quality regulations and policies from the Federal and State levels. Knowledge of legalities is extremely important in order to properly evaluate all the potential impacts of the NPDES Permit, TMDLs, and other policies. As an example, with the emergence of several recent TMDLs, legal comments are as numerous, if not as important, as technical comments.

The process from applying to adopting the current NPDES Permit took about 18 months. For this reason, Public Works intends to start preparing the Report of Waste Discharge during late summer 2004.

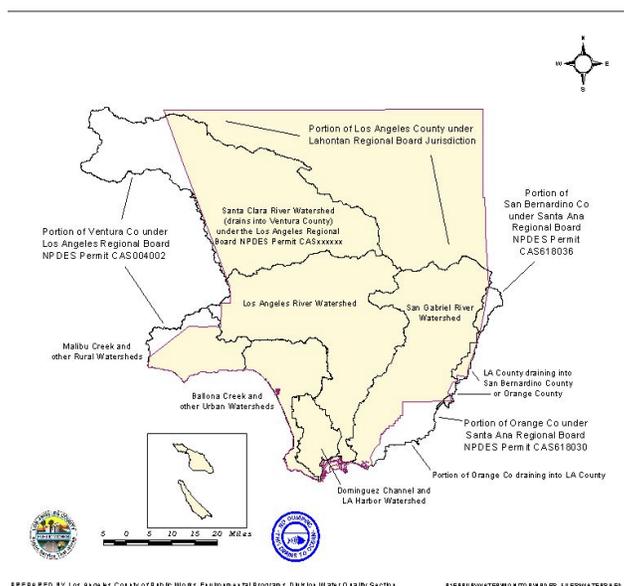
Future

This Section foresees that the 2006 NPDES MS4 Phase I Permit may actually be composed of general provisions for all Permittees and specific provisions assigned due to the consent decree of at least 37 more TMDLs assigned to various water bodies within Los Angeles County that will be developed within the next Permit period. The TMDL requirements will require reorganizing the Division to incorporate development and reassessments of water quality standards by the Water Quality Section, implementation by the

watershed sections, and monitoring, data analysis, and data management by a new section, yet to be approved and created. Enormous funds and more technical expertise will be required to comply with these TMDLs.

After SWRCB approval, Phase II NPDES Permit requirements will take effect in the County's unincorporated areas of Antelope Valley. Similar, but less stringent than the Phase I NPDES Permit, the Phase II NPDES Permit will also require ongoing compliance and funding.

Map of Los Angeles County Permitted Area



2002–2004

BIENNIAL REPORT



WATERSHED MANAGEMENT DIVISION

WATERSHED ENGINEERING, MAPPING, FEMA AND LACDA

VACANT, Section Head

Section Background

This Section combined various functions in an effort to bring integrated support and services to the general public and to help facilitate the delivery of Public Works' projects. Support and services are provided in four major categories: groundwater recharge planning, development of projects, FEMA and mapping coordination, and environmental document reviews.

One of the objectives of the Groundwater Planning/Special Projects Unit is to explore opportunities to enhance water conservation efforts throughout Los Angeles County without compromising Public Works flood control functions. The Unit works with the watershed sections when a project has a potential water conservation benefit. The Unit works on projects to develop tools for the watershed sections to assist them in assessing and evaluating groundwater opportunities. The Unit also supports the Water Quality Section with special reports and projects related to TMDLs requirements.

The Drainage Unit tracked and maintained historical files for over 2,500 unmet drainage needs and 1,500 flooding complaints. Based on the degree of urgency, determined by the cities and the LACFCD, a significant number of established drainage needs had been alleviated by construction projects. In August 2003, the flooding complaints and

non-storm engineering advice functions were transferred to Water Resources Division. The unmet drainage needs function was transferred to the watershed sections.

The FEMA and Mapping Coordination Unit ensures the County of Los Angeles is in compliance with FEMA regulations which allow for reduced flood insurance premiums to residents of the County of Los Angeles. This Unit also assists the public, banking and lending institutions, realtors, and other divisions with floodplain-related questions or issues.

The Environmental Document Review Unit is responsible for coordinating review of environmental documents within Public Works. This Unit screens and then distributes documents to appropriate divisions for review and comments. Comments received are compiled into a response to be sent to the submitting agency. This function was transferred to Land Development Division July 1, 2004.



Mission

To provide engineering based support and high quality service that ensure proactive groundwater recharge planning, compliance with FEMA regulations, and coordination of the environmental document review.

Accomplishments

- Reviewed 15 consultants' applications for Letters of Map Revision (LOMRs) and Conditional Letters of Map Revision (CLOMRs) prior to submittal to FEMA. Approved LOMRs generally result in the waiver of flood insurance requirements for homeowners.
- Obtained a letter of grant obligation from FEMA, in the amount of \$1.8 million, for the elevation of the 17 repetitive loss property homes in Malibou Lake.
- Completed the creation of the Flood Zone website and developed a database to track Flood Zone calls.
- As part of the County of Los Angeles requirements to comply with the National Flood Insurance Program regulation, the Section prepared and submitted the County of Los Angeles' Annual Community Rating Systems Recertification report to FEMA for 2002, 2003, and 2004.
- As part of Public Works' annual obligation to the Department Operation Center (DOC), the section provides staff to the DOC to handle all flood-related incoming calls from the public.
- Public Works hired a private environmental law firm specializing in NEPA/CEQA regulations to train Public Works employees in 2002. As a result, the Environmental Document Review Unit gained a better understanding of its duties.
- Public Works hired a private consultant to facilitate streamlining of the Environmental Document Review Unit. All the divisions involved in the reviews, and the County of Los Angeles Department of Regional Planning, came together, explained their review process, and discussed their concerns at the end of these meetings. The Unit was able to:
 - a) Gain a better understanding of other divisions' requirements which helped the Unit develop a more effective document screening process.
 - b) Provide a better work plan to Information Technology Division for the streamlining and computerizing of the Unit's processing.
- Coordinated the implementation of the 8-Point Plan with affected divisions. The purpose of the 8-Point Plan is to study the effectiveness of eight selected trash reduction BMPs.
- Prepared a recommendation report based on the findings of the 8-Point Plan.
- Coordinated with the Corps and with the County of Los Angeles Department of Beaches and Harbors on the Los Angeles County Shoreline Beach Erosion Study.
- Completed all basic requirements obligated under the Proposition 13 grant for the San Gabriel River Rubber Dams No. 2 and 3 project.
- Assisted the Water Quality Section in the preparation of a BMP Technical Report requested by the LARWQCB.
- Co-chaired the working group formed to develop a workplan in support of Management Appraisal and Performance Plan (MAPP) Goal # 4 for the creation of a Water Quality Data Reduction and Analysis Unit.
- Completed Phase I of the groundwater recharge study.
- Transferred to electronic format (scanned) all environmental documents from 1996 to the present.

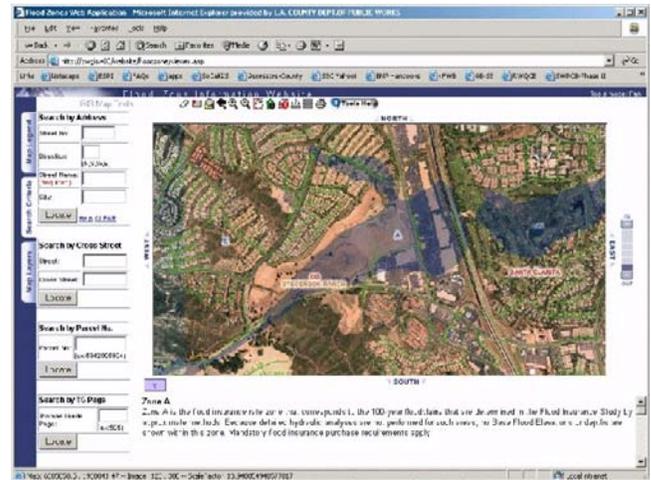


Projects in the Watershed Engineering, Mapping & FEMA Support

Flood Zones Website

Created with the assistance of Information Technology Division, the flood zone website will assist the public in retrieving flood zone information for their properties.

Currently, the website is fully operational for internal use only, pending resolution of certain legal issues.



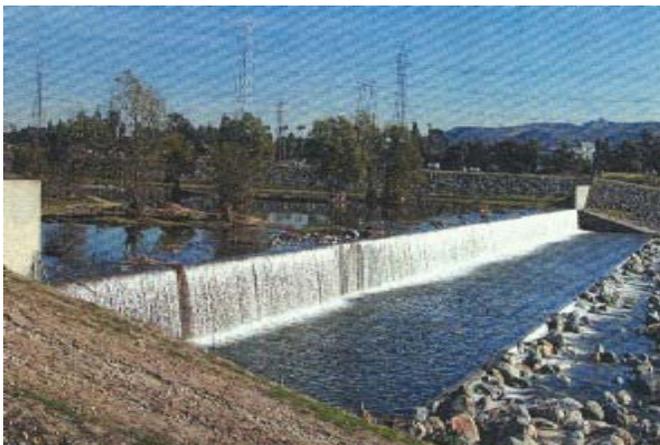
San Gabriel River Rubber Dams Construction

During storms, water flows rapidly down the San Gabriel River. While this protects local communities from flooding, large amounts of fresh water that could be added to the local groundwater supply is lost.

By capturing this valuable resource and recharging it into the groundwater supply, it can reduce the dependency on imported water from northern California and create a healthier environment for both regions.

Rubber dams are long, hollow tubes filled with air that can be inflated to capture water or deflated to allow storm flows to pass.

This project is to construct two additional rubber dams



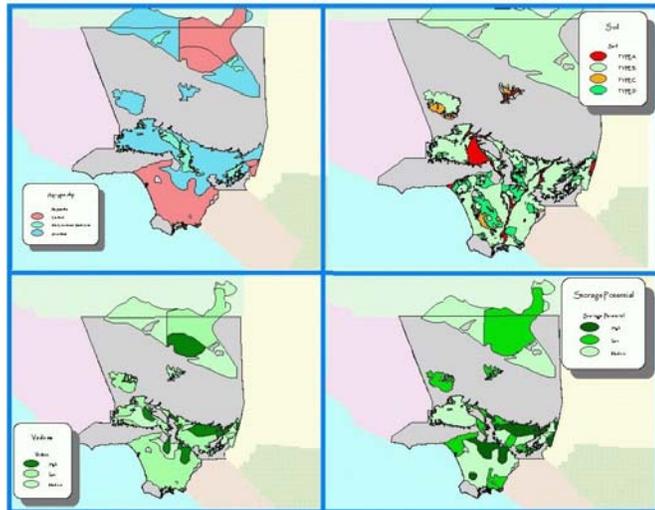
in the San Gabriel River to hold back water long enough to percolate and recharge the groundwater supply. The expected annual yield of water conserved by this project is 3,600 acre-feet.

The estimated total construction cost is approximately \$6.6 million. Of the \$6.6 million, \$2.15 million will be funded by a Proposition 13 grant from the California Department of Water Resources.

The Los Angeles County Board of Supervisors awarded a construction contract for the project on June 29, 2004. The construction is scheduled to begin on September 16, 2004, and is anticipated to be completed by April 15, 2005.

Los Angeles Basin Groundwater Recharge Study and GIS Tool

The purpose of this study is to identify favorable groundwater recharge sites throughout Los Angeles County and to develop a planning device to facilitate groundwater recharge planning efforts. About a third of Los Angeles County's local water supplies come from local groundwater sources. Identifying additional sites, for recharge, will help Public Works plan additional facilities to capture more local runoff and reduce the dependency on imported water sources.



In addition to a hard copy of the study findings, the consultant will provide a GIS Smart Tool. The GIS-based tool will consist of an interface that will query and draw information from a spatial database that identifies the fundamental suitability of a property for groundwater recharge, based on evaluation parameters including aquifer type, surface soil type, infiltration capacity, vadose zone quality, and storage potential.

The Beta version of the GIS tool has been completed and staff is conducting tests to determine its functionality, ease-of-use, and versatility.

Environmental Document Review

The Environmental Document Review Unit acted as a clearing house for Public Works and received California Environmental Quality Act documents or Joint Documents of National Environmental Policy Act documents from various outside agencies for review. The Unit received and processed approximately 350 documents per year.



Hazard Mitigation Grant Program Malibou Lake

During major storms, rising water floods most homes near Malibou Lake. This usually results in multiple disaster relief claims filed with FEMA. Homes that have filed two or more claims, in the last 10 years, are classified as “repetitive loss property homes.” This classification requires the communities where these homes are located to conduct a floodplain management plan study to mitigate the flooding problem. Failure to develop and implement a solution will result in the loss of rights to file future claims.



Public Works obtained a grant from FEMA in the amount of \$1.8 million (\$1.4 million Federal-share and the \$0.4 million homeowners' share) for the elevation of seventeen homes in the Malibou Lake community of Agoura Hills. Per the instruction of the new State Office of Emergency Services program manager, the Malibou Lake homeowner requested for an additional \$1.8 million to augment the currently approved grant of \$1.8 million.

Lessons Learned

The Section has benefited from its experiences and learned the following lessons:

- As a supporting Section, lessons are drawn from projects that always affect one or more watersheds. The Section has come to realize that it is essential to work closely with affected watershed managers on all projects. Conversely, the Section should be aware of projects originating in other sections in order to maximize efficiency and avoid duplication of efforts.
- The public is gradually increasing its awareness and understanding of the available options for dealing with flood hazards as well as the need to promote prudent use and management of the Nation's floodplains. Proper planning and employment of constructive land use techniques will create a balance on issues of human habitation on floodplains.
- The current method of processing environmental documents is cumbersome and manually intensive. Based on examination of the current process, the Section has developed five recommendations for streamlining the coordination efforts for environmental document review.

Future

Groundwater Planning/Special Studies

In addition to the existing responsibilities, the future role of the Groundwater Planning/Special Studies Unit will include the development of new program concepts to provide a set of guidelines and standards for protection of groundwater supplies, water conservation and water quality, and water recycling and reuse. In addition to traditional means of groundwater recharge, the Unit will continue to explore nontraditional means of groundwater recharge and look to enhance quality of life issues by focusing on multiuse projects.

The Groundwater Planning/Special Studies Unit will also provide technical support to the different Sections in the Division. This includes Geographical Information Systems (GIS) support in the form of development



of end-user applications, data creation, and analysis of spatial data. In addition, the Unit will provide data management support for the creation and maintenance of tabular databases that will either be performed independently or in conjunction with GIS applications or spatial data sets.



FEMA and Mapping Coordination

FEMA's current map modernization program will produce updated nationwide digital flood insurance rate maps for convenient public access. These digitized maps are expected to be more accurate in flood zone delineations than the existing flood insurance rate maps. This effort will enhance, in a large measure, our overall ability to manage floodplain related issues and problems.

2002-2004

BIENNIAL REPORT



WATERSHED MANAGEMENT DIVISION

RESEARCH, LEGISLATION, AND FUNDING

Karen Luo, Unit Head

Section Background

The Research, Funding, and Legislation Unit was created to provide watershed management services that support and enable efficient and successful delivery of watershed management projects. In the past two years, the Unit's responsibility has expanded from its initial functions. In order to address the growing workload, the Unit has added positions to provide support services in five major categories: technical guidance and research on watershed management-related issues; preparing and monitoring WMD's budget and expenditures; reviewing, distributing, and compiling analyses on regulations and legislations; performing special administrative assignments and projects; and reporting, contract administration, and scheduling support for the division.

One new objective of the Unit is to keep WMD's watershed sections

abreast of new products and changes to design standards and criteria affecting watershed development and water quality. Working with Public Works' Technical Review Committee, the Unit participates in and coordinates departmental efforts to evaluate existing design standards and assess opportunities to provide watershed management benefits through effective reengineering.

The Unit continues to facilitate funding related issues that include reviewing, distributing, coordinating, and documenting WMD's responses on inquiries for grants and funding opportunities. Another challenge which the Unit has undertaken is the centralization and standardization of project and budget information, which is an effort to help streamline operations and improve accuracy and responsiveness of the division.



Mission

To provide watershed management services in a manner that achieves WMD Goals through: efficient grant, contract, and funding administration, innovative program research, and quality completion of special assignments. The Unit will provide WMD with prompt services and set the standard of direction and leadership.

Accomplishments

In the 2002-2004 biennium, the Research, Legislation, and Funding Unit continued to provide a number of supporting functions for WMD and accomplished the following:



- Proactively pursued grants. This includes developing and updating marketing and lobbying packages that were sent to legislators and lobbyists in both Sacramento and Washington D.C. The packages highlighted information on a selected number of watershed management projects and the benefits of multiuse projects.
- Coordinated legislative analysis. The Unit is responsible for compiling and providing analyses for regulations and proposed legislation affecting watershed management issues and policies.
- Transitioned from program-based budgeting to project-based budgeting. The funding component of this Unit is responsible for preparing WMD's annual budget request. In the past two years, WMD has successfully transitioned from the traditional program-based budgeting to project-based budgeting, an effort that has provided an additional level of detail to the budget estimate.
- Administered contracts. In order to build consensus among the stakeholders, the Unit is responsible for providing scientific and technical information, assisting in the development of public policies to promote watershed management, and supporting planning efforts of the Basin Plan. WMD entered into contracts with the Los Angeles and San Gabriel



W a t e r s h e d
C o u n c i l a n d t h e
S o u t h e r n
C a l i f o r n i a C o a s t a l
W a t e r s R e s e a r c h
P r o j e c t A u t h o r i t y
t o m e e t t h e s e
L o n g - t e r m
o b j e c t i v e s .

- Measured and

reported on performance. In support of the Public Works' Strategic Planning Process and the framework set forth by the Chief Administrative Office's *Performance Counts*, WMD provided result-based measurements for activities under a selected number of programs related to increased flood protection and water conservation and water quality.

- Centralized project information. In 2003, the Unit developed and launched the Project Management Database that enables WMD staff to access and enter project information from and into a centralized database.
- Managed and prepared watershed management studies and concepts. The Unit continues to manage and is actively involved in the development of studies and concepts that support the implementation of watershed management projects.
- Coordinated efforts among the divisions that participated in the Technical Review Committee. As a co-chair of Public Works' Technical Review Committee, WMD participates and coordinates departmental efforts in identifying existing policies, hydrologic analysis, flood control inlet and outlet standards, design criteria, nomographs, and maintenance requirements that warrant reengineering to provide watershed management benefits.



- Provided administrative and operational support. The Unit continues to provide a wide range of administrative and operational support services to help increase efficiency and responsiveness of WMD. This ongoing support includes processing training and Information Technology Division requests, P3 scheduling, Proposition A administration, updating the watershed stakeholder directory, and providing monthly updates to the Countywide Contracts Monitoring System.

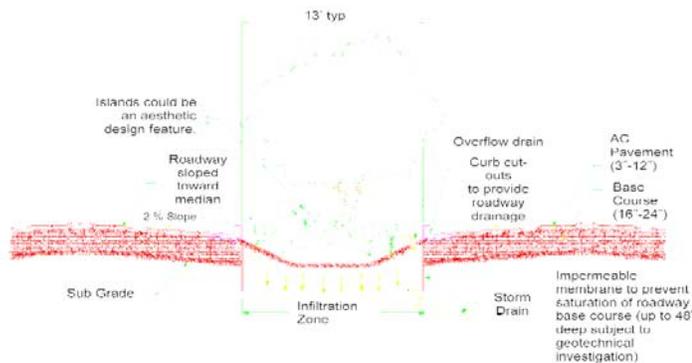
Projects in the Funding, Research, & Legislation

The Unit is unique in that most of the work performed is 'behind the scenes.' Some of these 'behind the scenes' projects include contract administration, budget preparation, project information management,

compilation of periodic project status reports, review and dissemination of grants and funding information, and legislative review. However, the Unit is also working on a number of special projects and studies.

Median Swale Design

In coordination with the Public Works' Technical review committee, WMD completed and received administrative approval on the depressed landscaped median design concept in February 2004. The concept provides technical guidance on the design of landscaped medians with the objective to



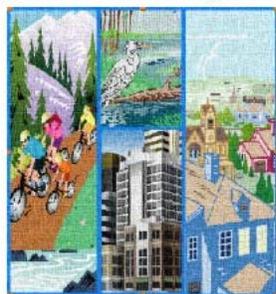
increase watershed management benefits, such as improved water quality and increased opportunities for groundwater infiltration, beyond the habitat and aesthetic enhancement features delivered by traditional landscaped medians.

Marketing Package

As the importance of watershed management projects increased due to TMDLs and the NPDES Permit, the amount of funding did not increase. However, grant opportunities through Proposition 12, 13, 40, and 50 did arise. In order to proactively pursue state monies and grants, the Unit created a marketing package. The package included the descriptions of WMD's high-priority, multiuse projects:

- Compton Creek Beautification
- Dominguez Gap Wetland Study
- Los Angeles River Master Plan Implementation
- LACDA Stormwater Management Plan
- Los Angeles River and Tujunga Wash Restoration Feasibility Study
- San Gabriel River Rubber Dams
- Santa Clara Groundwater Feasibility Study
- Sun Valley Watershed Multiuse Project
- Tujunga Wash Greenway Project
- Tujunga Wash Restoration Project

Improving Quality of Life



Watershed Management

COUNTY OF LOS ANGELES

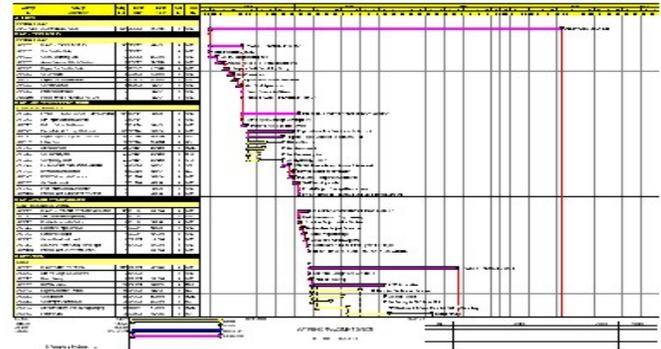
- Antelope Valley Water Replenishment and Flood Control Project
- Arroyo Seco Watershed Management Plan

These packages were delivered to the Los Angeles County's lobbyists and State legislators in Sacramento and Washington D.C.

P3 Scheduling Support

In November 2003, WMD assumed the responsibility of providing project management support for multiuse projects. This added responsibility requires a WMD project manager to oversee the entire project delivery cycle from initiation through completion. In support of WMD's project management efforts, the Research, Legislation, and Funding Unit is responsible for providing scheduling support for the division. The Unit develops and maintains all active project schedules through use of Primavera Project Planner (P3). To better assist WMD project managers in developing baseline schedules, the Unit established a library of

fragments containing typical durations and relationships for activities in each phase of the project delivery cycle.



Project Management Database

In order to better manage project and budget information for the division, the Unit initiated and



completed the development of a project management database in 2003. The objective of creating a project management database is to streamline, standardize, and centralize project information. The database is accessible to all WMD staff, enabling project managers to enter project status and budget information into one centralized location. The Unit works with WMD staff to enter contract and labor estimates for watershed projects into the database by service providers. A centralized database for budget information will help increase accuracy and efficiency in the WMD's preparation of the annual budget request.

Special Studies and Projects

In addition to providing operational and administrative support to the division, the Unit is also charged with conducting and managing special studies and projects that can help establish the basis or facilitate the implementation of watershed management projects. Some of these special studies and projects include:

- Establishing an Economic Value for Watershed Management Techniques-The goal of this study is to develop a methodology for establishing the monetary value provided by the application of watershed best management practices. The ability to quantify the monetary value of a project is often needed to justify the implementation of the project.
- Project Initiation Memos - In an effort to comply with trash and bacteria TMDLs, WMD completed and received administrative approval on the County-wide implementation programs for low-flow

diversions, partial-capture and full-capture systems in April 2004.

- Maintenance and Patrolling Costs for Multiuse Corridors - The Unit performed an assessment of the costs required to properly maintain and patrol multiuse corridor projects that may be implemented in the next 15 years. The result of the assessment indicated that the annual costs total approximately \$115 million.
- Langford Street Community Greening Project-A Project Concept Report was developed to improve a parcel of County-owned roadside property into a landscaped open space for the Community of East Los Angeles.
- Holmes Avenue Drain - The Holmes Avenue Drainage Project Concept Report, proposing the construction of a limited capacity storm drain to

reduce ponding and improve street drainage in the Glen Avenue Drainage System, was completed in July 2004.

- Buelah Circle Road Drain Feasibility Study - The

study evaluated three best management alternatives and identified the most effective and feasible solution to reduce odor emitting form nuisance flow in the unincorporated community of City Terrace.

Budget

The Unit prepares and monitors WMD's budget. Considerable time and effort goes into this endeavor. There are actually two different budgets going on simultaneously: the current "working budget" and the budget for the upcoming fiscal year. In the past two years, budget preparation has changed to "Project Based Budgeting" from the former program based. Budgeting by project has added another level of detail to the budgeting process. The Unit continues to prepare justifications for staffing increases and to establish duties and responsibility statements for consideration and approval by Human Resources Division.

Lessons Learned

In the past two years, this Unit has slowly acquired more and more expertise in the different responsibilities. The budget process has become more efficient and responsive to the needs of WMD but improvement is still needed in providing long-term projections. The Unit has helped WMD to become more proactive in obtaining funding and securing grants for our projects. Several

lessons have been learned about the County of Los Angeles contracting process and the use of consultants to achieve cost-effectiveness without loss of continuity. The Unit has learned that although research and evaluation of new technology and standards is time consuming and resource demanding, providing technical guidance and research is a growing need for the Division.

The Future

The challenges of the Unit continue to be seamlessly integrating the current unit functions with those of the watershed sections. The Unit will need to be proactive in managing the financial and contracting functions. As the Unit's budget expertise grows, it will effectively provide for WMD's needs and growth.

Developing and continuously maintaining project schedules will support both the Unit and Management in tracking and managing progress and resource needs

of watershed projects.

The Unit will continue to coordinate with WMD's project managers to centralize and

standardize project and budget information through effective use of the Project Management Database. The database will ultimately serve as a centralized reservoir of information to support WMD's budget preparation and project management of watershed multiuse projects.



The Unit expects to become more involved in specialized engineering projects, such as managing the study for water quality catch basins, establishing the monetary value of applying watershed best management practices (BMPs), and assisting WMD's watershed sections in evaluating and prioritizing regional drainage needs throughout Los Angeles County.



FINANCIAL SUMMARY

Income Successes and Challenges

WMD is funded primarily by LACFCD funds. Additional minimal funding sources are Road funds, County Engineer General funds, Aviation funds, and Waterworks and Sewer Maintenance funds, primarily for conducting NPDES compliance inspections. WMD also receives funds from the Antelope Valley Master Plan of Drainage Fee.

WMD continues to pursue revenue from outside funding sources to help support the delivery of watershed management studies and projects. In the past two years, a series of California bond issues have provided WMD with opportunities to compete for bond funds. The major Propositions still active are Propositions 12, 13, 40, and 50. WMD has also derived limited funding from local Proposition A, 1992 and 1996, for water quality projects. We are also the local sponsor on several Corps project studies that we hope will lead to Federal funding of construction.

As regulations become more stringent, the need for increased funding has grown more critical. Yet, the recent State budget crisis has further strained the already stressed funds that support watershed management and water quality enhancement efforts. The enactment of trash TMDLs for Los Angeles River and Ballona Creek



Watersheds, as well as the bacteria TMDLs established for Santa Monica Bay, has made this need more evident. The need will expand in other watersheds to comply with a total of more than 60 TMDLs. The funds needed to properly address these regulations are staggering. Current cost estimates countywide to meet all possible TMDLs range from \$43-\$263 billion. Public Works and WMD will need new revenue sources to properly implement these water quality requirements and still maintain the high level of services that the public expects.

In an effort to generate the necessary funds to comply with water quality mandates, implement and adequately maintain the growing number of watershed management projects, Public Works is assessing the feasibility of launching a funding initiative campaign to develop a plan that details goals and strategies of the initiative through interactive community outreach as well as education and consensus building.

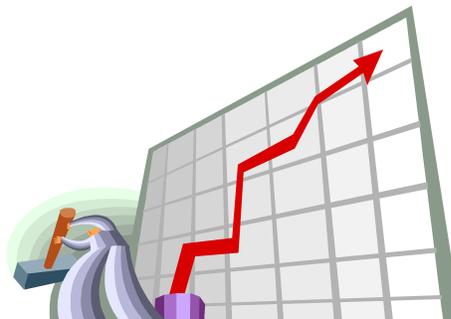
WMD will need to work with other Public Works' staff, Los Angeles County Departments, cities, stakeholders, politicians, Board of Supervisors, regulators, the media, and the public to accomplish these goals.



Estimated Expenditures

The total working budget for WMD in Fiscal Year 2002-03 was \$17.8 million and included \$5.5 million in contracting, and in Fiscal Year 2003-04 was \$17.8 million and included \$4.4 million in contracting. The largest programs continue to focus on the following two functions :

- Clean Water Act Programs for



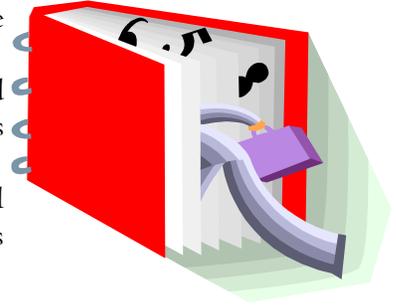
NPDES compliance and TMDL development and implementation throughout the watersheds.

- Stream corridor master planning, watershed master planning, and the development of watershed multiuse projects.

ACRONYMS

BMPs: Best Management Practices
CDS: Continuous Deflective Separator
CEQA: California Environmental Quality Act
Corps: U.S. Army Corps of Engineers
CWA: Clean Water Act
DWAC: Dominguez Watershed Advisory Council
EPA: Environmental Protection Agency
FCD: Flood Control District
FEMA: Federal Emergency Management Agency
FIRM: Flood Insurance Rate Maps
IC/ID: Illicit Connection/Illicit Discharge
LACDA: Los Angeles County Drainage Area
LRI: Long-Range Initiative
MRCA: Mountains Recreation and Conservation Authority
MS4: Municipal Separate Storm Sewer System
NEPA: National Environmental Policy Act
NPDES: National Pollutant Discharge Elimination System
NOAA: National Oceanographic and Atmospheric Administration
PAC: Project Advisory Committee
PCRs: Project Concept Reports
PMT: Project Management Team

RCD: Resource Conservation District
RMC: Rivers and Mountains Conservancy
RWIP: Regional Watersheds Implementation Plan



RWQCB: Regional Water Quality Control Board
SCARP: Santa Clara Arundo Removal Program
SCR: Santa Clara River
SD-3: Supervisory District 3
SGVCOG: San Gabriel Valley Council of Governments
SQMP: Stormwater Quality Management Program
SUSMP: Standard Urban Stormwater Mitigation Plan
SWMP: Stormwater Management Plan
SWRCB: State Water Resources Control Board
TMDL: Total Maximum Daily Loads
VCWPD: Ventura County Watershed Protection District
WCA: Water Conservation Authority
WMC: Watershed Management Committee
WMD: Watershed Management Division
WMMP: Watershed Management Master Plan
WMP: Watershed Master Plan

