Draft VICTORIA PARK GOLF COURSE REDEVELOPMENT PROJECT

Jurisdictional Delineation Report

Prepared for Shopoff Group February 2018







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1. Introduction and Purpose

Environmental Science Associates (ESA) conducted a jurisdictional delineation for the Shopoff Group (Applicant) for the Victoria Golf Course Redevelopment Project (project). The project's objective is to redevelop the existing golf course facilities into a multi-sport and multi-use facility on the approximately 170-acre project site. The purpose of this preliminary jurisdictional delineation report is to document all drainage features and wetlands within the project site potentially subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), the California Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). The existing vegetation communities and land uses of the project site are also described below to support the extent of potentially jurisdictional habitats. Representative photographs of the jurisdictional features within the project site are provided in **Appendix A**.

1.1 Project Location

The project is located within property managed by the County of Los Angeles Parks and Recreation Department, within the City of Carson, California, and generally occurs north of Interstate (I) 405, south of State Route 91, east of I-110, and west of I-710 (**Figure 1**). The project site is located southwest of the intersection of East 192nd Street and Avalon Boulevard, within the Victoria Park Golf Course facility (Figure 1). The project site comprises approximately 178 acres of land that has been developed for a golf course facility since the 1960's and is currently still in operation. The project site is bounded by roads and residential developments to the north and east, the Dominguez Channel to the south and southwest, and the Goodyear Blimp facility to the west. Land uses within the project vicinity include residential areas, commercial and industrial development, parks and recreation facilities, and a university. Onsite land uses are open to the public for the purpose of recreation.

2. Jurisdictional Authority

2.1 Waters of the U.S.

The USACE regulates "discharge of dredged or fill material" into "waters" of the United States, which includes tidal waters, interstate waters, and "all other waters, interstate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce or which are tributaries to waters subject to the ebb and flow of the tide" (33 C.F.R. 328.3(a)), pursuant to provisions of Section 404 of the Clean Water Act (CWA).



SOURCE: ESRI

Victoria Park Golf Course Redevelopment

Figure 1 Project Location Map The USACE (Federal Register 1982) and the Environmental Protection Agency (EPA) (Federal Register 1980) jointly define wetlands as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." Wetlands have the following general diagnostic environmental characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology (Environmental Laboratory 1987).

The USACE takes jurisdiction within rivers and streams to the "ordinary high water mark (OHWM)", determined by erosion, the deposition of vegetation or debris, and changes in vegetation or soil characteristics. However, if there is no federal nexus to navigable waters, these waters are considered "isolated" and thus not subject to their jurisdiction.

The USACE and the EPA have issued a set of guidance documents detailing the process for determining CWA jurisdiction over waters of the U.S. following the *Rapanos vs. United States* decision, which is summarized in the key points below. The EPA and USACE issued a summary memorandum of the guidance for implementing the Supreme Court's decision in Rapanos that addresses the jurisdiction over waters of the United States under the CWA. On August 28, 2015 the USACE and EPA issued new rules that clarifies the Rapanos decision and further defines the Waters of the U.S.

Rapanos Key Points Summary

- A. The USACE and EPA will assert jurisdiction over the following waters:
 - TNWs.
 - Wetlands adjacent to TNW.
 - Non-navigable tributaries of TNWs that are relatively permanent.
 - Where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).
 - Wetlands that directly abut such tributaries.
- B. The USACE and EPA will decide jurisdiction over the following waters based on a factspecific analysis to determine whether they have a significant nexus with a TNW:
 - Non-navigable tributaries that are not relatively permanent.
 - Wetlands adjacent to non-navigable tributaries that are not relatively permanent.
 - Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.
- C. The USACE and EPA generally will not assert jurisdiction over the following features:
 - Swales or erosion features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow).
 - Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The significant nexus test includes consideration of hydrologic and ecologic factors. The significant nexus test would take into account physical indicators of flow (OHWM), if a hydrologic connection to a Traditionally Navigable Water (TNW) exists, and if the aquatic functions of the water body have a significant effect (more than speculative or insubstantial) on the chemical, physical, and biological integrity of a TNW. The USACE and EPA will apply the significant nexus standard to assess the flow characteristics and functions of the tributary drainage to determine if it significantly affects the chemical, physical and biological integrity of the downstream TNW.

2.2 Waters of the State

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) (together "Boards") are the principal State agencies with primary responsibility for the coordination and control of water quality. The Boards regulate activities pursuant to Section 401(a)(1) of the federal CWA as well as the Porter Cologne Water Quality Control Act (Porter-Cologne Act) (Water Code Section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

In the Porter-Cologne Act, the Legislature declared that the "State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation..." (California Water Code Section 13000). Porter-Cologne Act grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. It is important to note that enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies [e.g., California Department of Fish and Wildlife (CDFW)] have the ability to enforce certain water quality provisions in state law.

2.3 Section 1602 of the California Fish and Game Code

Pursuant to Division 2, Chapter 6, Section 1602 of the CFG Code, an entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

As further defined by the California Code of Regulations (CCR) Title 14 Section 720, for the purpose of implementing Sections 1601 and 1603 of the California Fish and Game (CFG) Code, this applies to all rivers, streams, lakes, and streambeds in the State of California, including all rivers, streams and streambeds which may have intermittent flows of water. Furthermore, the Lake and Streambed Alteration (LSA) program requires notification for impacts to streams which

"includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water" (CDFW 2014).

Stream-dependent riparian habitat is defined in the CFG Code (Section 2785) as "lands which contain habitat which grows close to and which depends upon soil moisture from a nearby freshwater source." In addition, CDFW has jurisdiction over riparian habitats and wetlands associated with watercourses. As defined by CFG Code, "wetlands" means lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of a stream or lake, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated riparian habitat not associated with a lake or streambed. The CDFW reviews proposed actions, and if necessary, submits to the applicant a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alteration (LSA) Agreement. Removal of stream-dependent riparian vegetation may also require an LSA Agreement from CDFW. However, CDFW may not regulate isolated wetlands; that is, those that are not associated with a river, stream, or lake.

3. Methods

3.1 Database and Literature Review

Prior to the jurisdictional delineation, a desktop analysis was conducted to obtain contextual information relevant to the project site and immediate surroundings. ESA conducted a review of available background information pertaining to the project, geography, and topography prior to conducting the jurisdictional delineation. A site map was generated with available aerial photographs and potentially jurisdictional features were identified and marked with lines and global positioning system (GPS) coordinates to assist in field verification. Soil types mapped within the project were reviewed on the NRCS web soil survey prior to field efforts to target areas with potentially hydric soils (NRCS 2018). The National Wetlands Inventory (NWI) wetlands mapper was viewed to determine if previously mapped wetland resources occur on or immediately adjacent to the project site (USFWS 2018).

3.2 Field Survey

ESA biologist Tommy Molioo conducted the jurisdictional delineation survey on January 12, 2018, to evaluate potentially jurisdictional features within and adjacent to the project site (survey area boundary). The limits of potential jurisdictional features were recorded in the field using aerial maps and a Trimble GPS unit.

Mapping Vegetation Communities

Vegetation communities are assemblages of plant species that occur together in the same area and are defined by species composition and relative abundance. The vegetation communities mapped

on the project site were identified based on the aggregation of plants and wildlife and the composition and structure of the dominant vegetation observed at the time the field survey was conducted. Vegetation communities were characterized based on the presence of dominant plant species and delineated within the project site. Vegetation community classification and descriptions were determined according to *A Manual of California Vegetation*, 2nd Edition (Sawyer et al. 2009), the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986), and amended as deemed appropriate based on field observations and technical expertise. Plant taxonomy followed Baldwin, et al. (2012).

Delineating Wetland Waters of the U.S.

The presence/absence of wetland waters of the U.S. was determined through implementation of the methods described in the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). The definition of growing season and the basis of determining and recording indicators for hydrophytic vegetation, hydric soils, and wetland hydrology was based on the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region (Version 2.0).

A Level 2 Determination (i.e., onsite inspection) was conducted as defined in the 1987 USACE Manual. The onsite inspection evaluated the three parameters that identify and delineate the boundaries of jurisdictional wetlands, including (1) the dominance of wetland vegetation; (2) the presence of hydric soils; and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. The National List of Plant Species That Occur in Wetlands in the Arid West Region was used to determine the wetland indicator status of plants observed in the project site. The 1987 USACE Manual and 2008 Arid West Regional Supplement were used for the analysis and evaluation of any normal circumstances, atypical situations, and problem areas, as needed.

Data on vegetation, soils, and hydrologic characteristics were recorded in the field and data points were taken to identify boundaries between upland and wetland habitats. All sample locations were examined for the presence of positive hydrologic indicators (i.e., direct evidence of saturated soils, oxidized rhizospheres). Soils were examined to determine composition, matrix color and the presence of redoximorphic features or other hydric soil indicators. The percent dominance by hydrophytic vegetation was also recorded at each sample location. The Wetland Determination Data Forms for the Arid West Region (Version 2.0) were prepared for sample sites within drainage features that exhibited potential wetland features, which are located in **Appendix B**.

Delineating Non-Wetland Waters of the U.S.

The USACE-jurisdictional status of the project was determined by in-field verification of the hydrological connection between the watercourse and downstream TNW. Non-wetland waters of the U.S. were identified if the OHWM was clearly visible and if there was a visible hydrological connection to a TNW (the Pacific Ocean), but one or more of the remaining USACE wetland parameters were absent (i.e., hydrophytic vegetation or hydric soils). The OHWM of channels

was determined based on observations of physical evidence that included direct observations of flow, scour marks, and drift lines of debris. The limits of non-wetland waters were confined to the ordinary limits of flow and excluded adjacent upland areas that have been created through the previous placement of fill material from grading activities. Delineation methods and data sheets were completed in accordance with *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), and the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid States* (USACE 2010).

Delineating Waters of the State

It is assumed for the purpose of this report that USACE jurisdictional areas are also under the jurisdiction of the Los Angeles RWQCB, and are subject to Section 401 of the CWA or Porter-Cologne Act. USACE and RWQCB jurisdictional areas have been delineated using the same methodology.

Delineating Limits of CFGC Section 1602

CDFW jurisdictional waters included streams which show evidence of at least intermittent flow including the floodplain and wetland or riparian habitats associated with watercourses in accordance with Section 1600 et al. of CFG Code. These areas were delineated by the outer edge of riparian vegetation or at the top of the bank of a stream or lake, whichever was wider. Under CFG Code, "wetlands" are defined as lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools (CFG Code Section 2785).

CDFW wetlands were delineated based on a one parameter definition (California Code of Regulations Title 14 (14 CCR)) that only requires evidence of a single parameter to establish wetland conditions: Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats (14 CCR Section 13577).

4. Results

4.1 Existing Conditions

The project site is located within the Victoria Park Golf Course, which was constructed in 1966 atop the former BKK Carson Landfill that operated from 1948 to 1960 (DTSC 2016). The project site has been used for recreational golf activities continuously since 1966, which has prevented the re-introduction of native vegetation communities throughout the site. As such, the project site

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has remained in a disturbed condition for several decades and the project site is now characterized by landscaped sod grass and trees, with areas of bare ground and development (e.g. pro shop, parking lot, cart paths, etc.), and scattered pockets of native vegetation.

The drainage channel on the project site is mapped as an intermittent blue-line stream on the *Torrance, California* USGS 7.5-minute topographic quadrangle map (**Figure 2**). This blue-line stream historically and currently connects to the Dominguez Channel. The drainage channel that runs along the western portion of the project site contains a disturbed marsh habitat with non-native trees along the slopes. The elevation on the project site is relatively flat, ranging from approximately 25 feet above mean sea level (AMSL) in the northern portion of the site to approximately 30 feet AMSL in the southern portion of the site.

4.1 Soils

The U.S Department of Agriculture Natural Resources Conservation Service (NRCS) maps the majority of the project site as complexes of several soil types including the following: Urban land-Biscailuz-Hueneme, drained complex, Urban land-Thums-Windfetch complex, Urban land-Aquic Xerorthents, fine substratum-Cropley complex, and Urban land-Windfetch-Typic Haploxerolls complex (**Figure 3**). According to the NRCS, none of these soils are considered hydric. The observed surface soils show evidence of previous and continued disturbance due to golf course operations and maintenance activities. The previous grading and degradation to the natural soil horizons has created complexes of mixed native soil and urban land that has either been constructed upon, compacted, and/or consists of fill material.

Urban land-Biscailuz-Hueneme, drained complex

Biscailuz soils consist of very deep, somewhat poorly drained soils that formed in alluvium from mixed rock sources. Biscailuz soils are typically on floodplains and lowlands, with slopes ranging from 0 to 5 percent. Hueneme soils have grayish brown, loamy fine sand and light sandy loam, with moderately alkaline A horizons and stratified, calcareous C horizons of sandy loams through sands with thin silt layers, mottled, and containing segregated gypsum. These soils are mixed with fill material from previous grading of urban land, and are well drained. Hueneme soils are typically hydric in California and occur on tidal flats. However, the previous disturbances to the land has removed much of the native composition of this soil and altered the natural topography to remove any remnants of a tidal flat community. The majority of the project site consists of this soil type.



SOURCE: USGS 7.5' Topo Quad Torrance 1978, 1982

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SOURCE: SSURGO; ESRI

Victoria Park Golf Course Redevelopment

Figure 3 Soils Map

Urban land-Thums-Windfetch complex

Thums soils consist of very deep, well drained soils that formed in uplifted alluvium from mixed rock sources and have a thin mantle of human transported material at the surface. These soils typically occur on terraces and fan remnants, with slopes ranging from 0 to 12 percent. Windfetch soils consist of well drained soils that formed in a thin, discontinuous layer of human transport materials overlying uplifted alluvium from marine and other mixed rock sources. These soils typically occur on uplifted alluvium and terraces, with slopes ranging from 0 to 12 percent. This soil complex does not contain hydric soils, and has been substantially altered from its natural composition due to previous disturbances.

Urban land-Aquic Xerorthents, fine substratum-Cropley complex

Aquic xerorthents are soils that have, in one or more horizons within 100 cm of the mineral soil surface, redox depletions with chroma of 2 or less and also aquic conditions for some time in normal years (or artificial drainage). The soils typically occur on low terraces in the western part of the United States and are not extensive. Cropley soils consist of very deep, moderately well and well drained soils that formed in alluvium from mixed rock sources. Cropley soils typically occur on alluvial fans, floodplains and in small basins, with slopes ranging from 0 to 15 percent.

Urban land-Windfetch-Typic Haploxerolls complex

As described above, windfetch soils consist of well drained soils that formed in a thin, discontinuous layer of human transport materials overlying uplifted alluvium from marine and other mixed rock sources. The typic subgroup of Haploxerolls is fixed on freely drained soils that have a xeric moisture regime and do not have aquic conditions within 75 cm of the mineral soil surface. By definition, these soils are not hydric and due to the previous disturbances on the project site this complex of soils has been altered from its natural composition.

4.2 Vegetation

The project is characterized and dominated by non-native and disturbed habitat with scattered native vegetation communities and a disturbed drainage (**Figure 4**). Within the project site, the most dominant cover type is introduced perennial grassland which mainly consists of landscaped sod grass installed for use on the golf course. Other vegetation communities within the project site that were observed less frequently include California annual grassland, atriplex scrub, coastal sage scrub, freshwater marsh, and non-native woodland. Land use types on the project site include disturbed habitat, and developed land. Disturbed habitat is the second most abundant land use type on the project site. **Table 1** displays the mapped vegetation communities and calculated acres on the project site and in adjacent offsite areas within the survey area. A complete list of the botanical species observed/detected in the survey area during surveys of the site is provided in **Appendix C**. The discussion of each vegetation community is included further below.

Vegetation Community (Holland Code)	Project Site (acres)	Off Site (acres)	Survey Area Total (acres)
Riparian and Wetlands			
Freshwater Marsh (disturbed)	3.34	0.89	4.23
Uplands			
Atriplex Scrub	0.01		0.01
California Annual Grassland	4.93		4.93
Coastal Sage Scrub	5.51		5.51
Introduced Perennial Grassland	124.54	3.29	127.83
Non-Native Woodland	9.88	1.55	11.43
Other Cover Types			
Disturbed Habitat	17.03		17.03
Developed	6.36	1.56	7.93
Grand Total	171.63	7.29	178.92

TABLE 1
VEGETATION COMMUNITIES AND LAND USE TYPES

Freshwater Marsh (disturbed)

Freshwater marsh is a low to medium-growing native plant community that occurs in low-lying areas that are seasonally or permanently flooded with freshwater. Vegetation within this community is dominated by riparian herbaceous and shrub species that are generally associated with drainages and riverine features. The freshwater marsh on the project site is substantially disturbed due to past grading activities from installation of the drainage channel during golf course construction, introduction of non-native species from upstream sources, and as a result of recreational activities. Freshwater marsh occurs along the bottom of the drainage channel, immediately adjacent to the low-flow channel that has a concrete bottom. Species observed in this community include saltgrass (*Distichlis spicata*) [FACW], tule (*Schoenoplectus acutus* var. *occidentalis*) [OBL], cocklebur (*Xanthium strumarium*) [FAC], salt cedar (*Tamarix ramosissima*) [FAC], mulefat (*Baccharis salicifolia*) [FAC], Gooding's willow (*Salix gooddingii*) [FACW], and blue elderberry (*Sambucus nigra* ssp. *caerulea*) [FACU]. These plants are hydrophytic and indicative of wetland areas, and have established on sediment that has been deposited atop the concrete-bottom channel, adjacent to the low-flow channel.



SOURCE: ESRI

Victoria Park Golf Course Redevelopment



Atriplex Scrub

Two small stands of a medium-growing scrub community dominated entirely by big saltbush (*Atriplex lentiformis*) [FAC], occurs at the southwestern boundary of the project site, immediately adjacent to the Dominguez Channel. This scrub community is isolated from any other native scrub habitat, and is the only stand of atriplex on the project site. This community occurs at the top of the east and west bank of the downstream end of the drainage channel. While big saltbush can occur in either wetlands or uplands, this vegetation community functions entirely as an upland vegetation community on the project site.

California Annual Grassland

California annual grassland is generally dominated by invasive, non-native annual grasses of various species and may contain a small percentage of non-native herbaceous species. It usually occurs in areas of previous disturbance located on fine-textured, well-drained soils that are moist in winter but very dry in summer months, and frequently intergrades with disturbed habitats. The California annual grassland community on the project site occurs in patches scattered throughout the project site adjacent to areas of introduced perennial grassland and disturbed habitat. Species observed in the California annual grassland community include a mix of non-native grasses, and herbaceous ruderal forbs such as ripgut brome (*Bromus diandrus*) [UPL], red brome (*Bromus madritensis* ssp. *rubens*) [UPL], slender oat (*Avena barbata*) [UPL], Russian thistle (*Salsola tragus*) [UPL], short-podded mustard (*Hirschfeldia incana*) [UPL], cheeseweed (*Malva parviflora*) [UPL], and lamb's quarters (*Chenopodium album*) [FACU].

Coastal Sage Scrub

Areas mapped as coastal sage scrub on the project site occur as isolated stands of habitat in areas outside of active golf course fairways. These isolated stands are either remnants from the previous habitat historically on the project site or were planted during construction of the golf course. Due to the previous and existing disturbances on the project site the coastal sage scrub community is relatively sparse and low-growing. The lack of continuity with larger stands of undisturbed native scrub also reduces the quality of the habitat onsite. Species observed in the coastal sage scrub include native upland plants such as California sagebrush (*Artemisia californica*) [UPL], California buckwheat (*Eriogonum fasciculatum*) [UPL], deerweed (*Acmispon glaber*) [UPL], yerba santa (*Eriodictyon angustifolium*) [UPL], coyote brush (*Baccharis pilularis*) [UPL], and bush sunflower (*Encelia californica*) [UPL].

Introduced Perennial Grassland

Introduced perennial grassland is described by Sawyer, Keeler-Wolf (1995) where introduced grasses dominate extensive areas on uplands with textured clay, loam, and sandy soils. Species commonly observed include a mix of upland non-native grasses such as brome grasses, ryes, fescues, and bluegrasses, which are all common species within recreational parks that are regularly maintained. The regular irrigation on the project site keeps this grassland community perennially green. Areas mapped as introduced perennial grassland include all grass areas associated with the golf course. Paved concrete cart paths meander throughout the mapped

introduced perennial grassland habitat. The cart paths do not contain vegetation but were not included in Figure 4 due to the scale of the mapping effort.

Non-Native Woodland

The non-native woodland community on the project site consists of landscaped ornamental trees that are regularly maintained and were planted on the project site for aesthetic purposes related to the golf course. Trees were planted as isolated stands throughout various locations on the golf course, and as rows along fairways and the drainage channel. Species observed within the non-native woodland community include pine (*Pinus* sp.) [UPL], olive (*Olea* sp.) [UPL], Peruvian pepper (*Schinus molle*) [FACU], and Mexican fan palm (*Washingtonia robusta*) [FACW]. The non-native woodland associated with the drainage channel occurs entirely on the top of banks

Disturbed Habitat

Typical disturbed habitat areas have undergone intense physical transformation due to prior disturbance (usually from past development or agriculture) and is no longer recognizable as a native or naturalized vegetation association but continues to retain a soil substrate. Disturbed habitat areas on the project site are those that have been previously graded or had vegetation removed and now contain compacted bare ground with little to no vegetation. The only vegetation observed in these areas were scattered non-native grasses and ruderal (weedy) forbs such as red brome, short-podded mustard, and Russian thistle.

Developed

Developed land is generally described as areas that have been cleared of native vegetation and soils have been compacted and constructed upon with buildings, roads, and infrastructure. Developed land is mapped for the golf course facility buildings and parking lot. The paved cart paths that meander throughout the golf course are also considered developed land but were not mapped due to the scale of the vegetation mapping. The only vegetation observed within areas mapped as developed include landscaped non-native trees that were planted for aesthetic purposes such as pine and olive trees.

4.3 Hydrology

The hydrology on the project site is connected to the Dominguez Channel, which is part of the Dominguez Watershed. As described by the Los Angeles County of Public Works, the Dominguez Watershed is located within the southern portion of Los Angeles County, and encompasses approximately 133 square miles of land and water (LACDPW 2014). Approximately 81 percent of the watershed or 93 percent of the land is developed. Residential development covers nearly 40 percent of the watershed, and another 41 percent is made up by industrial, commercial and transportation uses. With a population of nearly 1 million, considerable demands are made on infrastructure and services within the watershed.

Hydrology within the project site is specifically provided from upland runoff upstream of the drainage channel that originates north of the project site within an historic intermittent blue-line

stream. Currently, upstream of the drainage channel flows originate from a storm drain culvert at Avalon Boulevard. Flows continue downstream through a concrete-lined channel that contains little to no vegetation. The concrete-lined channel passes below State Route 91 through a culvert and outlets into an earthen-bottom channel with a mix of native and non-native trees and riparian vegetation. Flows re-enter a concrete-lined channel at Victoria Street and continue south to a culvert at East 192nd Street before entering the drainage channel immediately north of the project site, continuing through the project site on a concrete-bottom with earthen bottom slopes. The drainage channel on the project site directly connects to the Dominguez Channel, a Relatively Permanent Water (RPW), which eventually outlets into the Los Angeles Harbor and the Pacific Ocean, a Traditional Navigable Water (TNW).

NWI Wetland Classification

The National Wetland Inventory (NWI) identifies one class of wetlands to occur within the drainage channel in the project boundary, Riverine Intermittent Streambed (R4SBCr).

R System RIVERINE: The Riverine System includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing oceanderived salts of 0.5 ppt or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.

4 Subsystem INTERMITTENT: This Subsystem includes channels that contain flowing water only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.

SB Class STREAMBED: Includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.

Subclass Modifiers

C WATER REGIME Seasonally Flooded: Surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

4.4 Jurisdictional Features Summary

The potential jurisdictional feature delineated within the survey area boundary, including the project site, is shown on **Figure 5**, and further described on the following pages. The mapped potential jurisdictional feature is based on the database and literature review and field delineation survey, and is summarized in **Table 2** below.



Figure 5 Jurisdictional Delineation Map

SOURCE: ESRI

ESA

Map ID	Type of Feature	Habitat Type
Drainage Channel	Intermittent Drainage Channel	Freshwater Marsh and Non-Native Woodland

 TABLE 2

 SUMMARY OF JURISDICTIONAL FEATURES WITHIN THE SURVEY AREA

Drainage Channel

The site has been used for recreational golf consistently since 1966 and mainly has been operated by the Los Angeles County Department of Parks and Recreation. The Drainage Channel on the western portion of the project site was installed during conversion of the former landfill into a golf course, which now drains local runoff from upstream areas to the south towards the Dominguez Channel. Historically, the topography on the project site and to the immediate north of the site, did not support a natural drainage feature; however, an intermittent blue-line stream is mapped on 1959 USGS topo maps further to the north that was connected to the Drainage Channel on the project site during development of the area in the 1960's (NETR 2018). The Drainage Channel contains a concrete-lined low-flow channel bottom, with freshwater marsh vegetation growing on sediment deposited on the channel floodplain, and earthen manufactured slopes that contain non-native woodland species. The Drainage Channel currently conveys runoff and stormwater flows from upstream sources north of the project site, downstream (south) towards the Dominguez Channel.

4.5 Potential Regulatory Jurisdiction

Waters of the U.S./State

Based on the results of the sample wetland pits discussed below, the project site does not support wetland waters of the U.S. However, the Drainage Channel is considered non-wetland waters of the U.S. potentially subject to the jurisdiction of USACE. RWQCB jurisdiction was found to be concurrent with Wetland and Non-Wetland Waters of the U.S. The potential limits of regulatory jurisdiction of the Drainage Channel are further described below.

Drainage Channel

The Drainage Channel on the project site was manufactured during construction of the golf course in the 1960's, and connects to an intermittent blue-line channel upstream and the Dominguez Channel, a RPW downstream. The Drainage Channel contains a concrete-lined low-flow channel, adjacent channel bottom that contains deposited sediment that supports an emergent marsh habitat, and upland slopes that contain non-native woodland habitat. An observable OHWM for the Drainage Channel was delineated out to the edge of the active floodplain where it meets the toe of slope of the upland banks. The OHWM was fairly uniform throughout the survey area, and averaged 25 feet in width. A change in vegetation and hydrology was observed at the edge of the active floodplain.

A single pair of data points was taken within the Drainage Channel, one (DP1) within the active floodplain adjacent to the concrete low-flow, and one (DP2) on the adjacent upland slopes. Data point DP1 contains gleyed soils with a color of Gley 1 3/10Y and a silty muck texture throughout the entire 12-inch soil sample. The sample showed no evidence of redoximorphic features and does not meet the characteristics of gloamy gleyed matrix or problematic hydric soils. Therefore, soils in this area are non-hydric, likely consisting of fill material from previous disturbances that has been regularly inundated with a high water table for an extended time period. A high water table was observed in DP1 and surface water was present immediately adjacent to DP1, in the low-flow channel. While there is evidence of wetland hydrology and vegetation at DP1, the soil sample lacks hydric soil indicators to be considered a wetland. Therefore, DP1 displays only two of the three parameters necessary to be considered a wetland by USACE, and is not a wetland water of the U.S.

A paired soil pit (DP2) was dug on the adjacent upland slopes on the channel banks to the northeast of DP1. Soil within DP2 contains an organic top layer of leaf litter within the first 3 inches, and within the remaining 12 inches displays a color of 7.5YR 2.5/2 and has a silty loam texture. No redoximorphic features were observed within the soil sample, and no hydric soil indicators were present. Therefore, DP2 lacks hydric soils capable of supporting wetland vegetation and conditions. Additionally, no signs of wetland hydrology were observed within and immediately adjacent to DP2, but hydrophytic vegetation is present with the adjacent pine and fan palm trees that can sometimes occur in wetlands. DP2 only contains one of the three wetland parameters to be considered a wetland, and is therefore, not a wetland.

CFGC Section 1602 Jurisdiction

CDFW jurisdiction included all non-wetland Waters of the U.S. described above, as well as upland banks, excluding adjacent non-native woodlands. The portion of the Drainage Channel on the project site potentially subject to CDFW jurisdiction is further described below.

Drainage Channel

In addition to the portions of Drainage Channel described under Waters of the U.S. above that are under the dual jurisdiction of the U.S. and State, CDFW jurisdiction includes the adjacent upland sloped banks. The average width of the streambed mapped during the jurisdictional delineation was 25 feet. CDFW mapped jurisdiction included the top of each bank, and included portions of the non-native woodland vegetation that are rooted in the limits of the Drainage Channel and are hydrologically supported by Drainage Channel. Additionally, these trees are predominantly non-native and do not provide suitable habitat for special-status species, particularly least Bell's vireo (*Vireo bellii pusillus*) or southwestern willow flycatcher (*Empidonax traillii extimus*). Therefore, CDFW jurisdiction is generally uniform throughout the reach of the Drainage Channel on the project site.

5 Discussion and Conclusions

The total areas mapped during the delineation survey that may be subject to the jurisdiction of USACE, RWQCB, and/or CDFW are summarized below. These estimates are preliminary and the final determination of jurisdiction will be determined by each regulatory agency during the permitting/approval process. The estimated acreages are summarized in **Table 3** and **Table 4**, and further discussed below. The drainage channel was surveyed for the entire reach from East 192nd Street downstream to the Dominguez Channel, including both areas on the project site and immediately offsite (survey area boundary).

5.1 Waters of the United States

Waters of the U.S. that are subject to the jurisdiction of the USACE under Section 404 of the CWA include the OHWM limits observed within the Drainage Channel. This feature is hydrologically connected to the Dominguez Channel, a RPW, which eventually outlets into the Los Angeles Harbor, which is directly connected to the Pacific Ocean, a TNW. As discussed above, this feature conveys upland runoff from urban development, downstream in an open channelized and sometimes earthen-bottom drainage feature, crossing below several roads through culverts, and eventually draining into the Pacific Ocean. The Drainage Channel is mapped as a riverine feature by the NWI, and based on the findings of the delineation survey is considered Non-Wetland Waters of the U.S. A total of 2.26 acres of Non-Wetland Waters of the U.S. may be impacted by bridge crossings for the project, which would require obtaining a Section 404 CWA permit from the USACE.

Aquatic Resource Name	Aquatic Resou	urces Classification	Aquatic Resource	Aquatic Resource Size (linear feet)	
	Cowardin	Location (lat/long)	Size (acres)		
Drainage Channel	Riverine Intermittent Streambed Seasonally Flooded: Artificial Substrate	33.852172° -118.271869°	1.66 (onsite) 0.65 (offsite)	2,671 (onsite) 1,069 (offsite)	

 TABLE 3

 POTENTIAL USACE/RWQCB AQUATIC RESOURCES WITHIN THE SURVEY AREA

5.2 Waters of the State

The features described above as subject to USACE's jurisdiction also potentially fall under the authority of the Los Angeles RWQCB in accordance with Section 401 of the CWA. Therefore, a total of 2.26 acres of Non-Wetland Waters of the State was delineated within the survey area, comprising 1.61 acre occurs within the project site and an additional 0.65 acre immediately offsite to the north and south. RWQCB jurisdiction may be impacted by bridge crossings for the project and would require a Section 401 water quality certification from the Los Angeles RWQCB.

5.3 CFGC Section 1602 Jurisdiction

Areas under CDFW jurisdiction mapped in the project site include all Non-Wetland Waters of the State, as well as upland banks and associated habitats (Figure 5). Areas within the Drainage Channel with potential CDFW jurisdiction have been mapped to the outer limits of a defined bed and bank, and including portions of the non-native woodland that are rooted within the Drainage Channel, for a total of 7.14 acres of potential CDFW jurisdiction within the survey area. This is comprised of 5.11 acres of potential CDFW jurisdiction on the project site, and an additional 2.03 acres occurs immediately offsite to the north and south. CDFW jurisdictional areas may be impacted by bridge crossings for the project and would require obtaining a Section 1602 Streambed Alteration Agreement from CDFW.

Map ID	Habitat Type	Onsite (acres)	Offsite (acres)	Total
Drainage Channel	Atriplex Saltbush Scrub	0.01	-	0.01
	Freshwater Marsh	3.28	0.85	4.13
	Introduced Perennial Grassland	0.51	0.22	0.73
	Non-Native Woodland	1.31	0.96	2.27
Total		5.11	2.03	7.14

 TABLE 4

 POTENTIAL CDFW JURISDICTION WITHIN THE SURVEY AREA

6. Supplemental Information

6.1 Directions to the Project

From Downtown Los Angeles, head south on Interstate 110, take the West 190th Street exit east towards Main Street, turn south (right) onto Main Street, then east (left) onto East 192nd Street. The Victoria Park Golf Course is located approximately 0.5 mile to the south (right) of East 192nd Street. Street.

6.2 Project Applicant Contact Information

Shopoff Group 2 Park Plaza, Suite 700 Irvine, CA 92614 (949) 417-1396 mbrady@shopoff.com

6.3 Field Delineator Contact Information

Tommy Molioo Sr. Associate Biologist Environmental Science Associates 2121 Alton Parkway, Suite 100 Irvine, CA 92606 (949) 753-7001 tmolioo@esassoc.com

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APPENDIX A Site Photographs



SOURCE: ESRI

ESA

Victoria Park Golf Course Redevelopment

Appendix A Site Photograph Locations



PHOTOGRAPH 1: Taken from the southern survey area boundary, facing northwest towards the Drainage Channel.



PHOTOGRAPH 2: Taken from the southern survey area boundary, facing southeast towards the Drainage Channel.



PHOTOGRAPH 3: Taken from the southern portion of the Drainage Channel, facing northwest. Note non-native trees within the limits of the Drainage Channel.



PHOTOGRAPH 4: Taken from the southern portion of the Drainage Channel, facing southeast. Note disturbed upland banks.

Appendix A Site Photographs

SOURCE: ESA, 2018

ESA



PHOTOGRAPH 5: Taken near the center of the Drainage Channel, facing northwest.



PHOTOGRAPH 7: Taken at DP1, facing northwest. Note freshwater marsh habitat in the active floodplain.



PHOTOGRAPH 6: Taken near the center of the Drainage Channel, facing southeast. Note surface water in the low-flow channel, and a mix of native and non-native vegetation.



PHOTOGRAPH 8: Taken at DP1, facing southeast. Note native and non-native species.

Appendix A Site Photographs

SOURCE: ESA, 2018

ESA



PHOTOGRAPH 9: Taken at DP2, facing northwest. Note upland vegetation on the banks of the channel.



PHOTOGRAPH 10: Taken at DP2, facing southeast. Note disturbed habitat on the upland banks.



PHOTOGRAPH 11: Taken at the northern survey area boundary, facing northwest. Note concrete-lined channel north of the project site in offsite areas.



PHOTOGRAPH 12: Taken at the northern survey area boundary, facing southeast. Note non-native woodland dominates the upstream portion of the Drainage Channel within the survey area.

Appendix A Site Photographs

APPENDIX B Wetland and OHWM Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Victoria Park Golf Course	City/County: Carson/LA Cou	unty	Sampling Date: 1/	12/18
Applicant/Owner: Shopoff Group		State: <u>CA</u>	Sampling Point: <u> </u>	P1
Investigator(s): <u>Tommy Molioo</u>	Section, Township, Range:	Sec 5, T4S, R13	N	
Landform (hillslope, terrace, etc.): <u>drainage channel</u>	Local relief (concave, convex	, none): <u>concave</u>	Slope (%	%): <u>0</u>
Subregion (LRR): <u>C</u> Lat: <u>3</u> :	3.852172° Lon	g: <u>-118.271869°</u>	Datum:	NAD83
Soil Map Unit Name: Urban land-Biscailuz-Hueneme, drained co	mplex	NWI classific	cation: <u>R4SBCr</u>	
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes <u>X</u> No	_ (If no, explain in F	Remarks.)	
Are Vegetation X, Soil X, or Hydrology significantly of	disturbed? Are "Norma	l Circumstances" pre	esent? Yes <u>X</u>	No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed,	explain any answer	s in Remarks.)	
SUMMARY OF FINDINGS - Attach site man showing	sampling point locati	one transacte	important featu	ros otc

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u>X</u> No Yes No <u>X</u> Yes <u>X</u> No	Is the Sampled Area within a Wetland?	Yes	No <u>X</u>		
Remarks:						
Drainage Channel constructed for the golf course. Conveys flows to Dominguez Channel.						

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:30) % Cover Species? Status Number of Dominant Species 1. Washingtonia robusta				
1. Washingtonia robusta 5 Yes FACW That Are OBL, FACW, or FAC: 3 (A) 2.				
2.				
3.				
4.				
5 = Total Cover That Are OBL, FACW, or FAC:100 (A/B) 1. Schoenoplectus acutus 10 Yes OBL 2. Washingtonia robusta 1 No FACW 3				
Sapling/Shrub Stratum (Plot size: 15) 10 Yes OBL 1. Schoenoplectus acutus 10 Yes OBL 2. Washingtonia robusta 1 No FACW 3				
1. Schoenoplectus acutus 10 Yes OBL Prevalence Index worksheet: 2. Washingtonia robusta 1 No FACW Total % Cover of: Multiply by: 3.				
2. Washingtonia robusta 1 No FACW Total % Cover of: Multiply by: 3.				
3.				
4.				
5				
<u>Herb Stratum (Plot size: 5</u>) 11 = Total Cover FACU species				
Herb Stratum (Plot size: 5) UPL species x 5 = 1				
1				
2. Washingtonia robusta 1 No FACW 3				
3 Prevalence Index = B/A =91				
4. Hydrophytic Vegetation Indicators:				
5. <u>X</u> Dominance Test is >50%				
7 Morphological Adaptations ¹ (Provide supporting				
data in Remarks or on a separate sheet)				
Problematic Hydrophytic Vegetation ¹ (Explain)				
Noody Vine Stratum (Plot size:)				
1. ¹ Indicators of hydric soil and wetland hydrology must				
be present.				
= Total Cover Hydrophytic				
Vegetation				
% Bare Ground in Herb Stratum % Cover of Biotic Crust Present? Yes X No				
Remarks:				

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence of indicators.)	
Depth	Matrix	<u> </u>	Redo	x Features	5			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Rem	arks
0-12	Gley 1 3/10Y	100		<u> </u>			silty muck	
·								
							<u> </u>	
. <u> </u>								
				-				
Type: C=Co	oncentration, D=Dep	oletion, RM=I	Reduced Matrix.	² Location	: PL=Pon	e Lining, R	C=Root Channel, M=Matrix.	udria Caila ³ :
Hydric Soli I	ndicators: (Applic	able to all L	RRS, unless othe	rwise note	θα.)		Indicators for Problematic Hy	aric Solis":
Histosol	(A1)		Sandy Red	OX (S5)			1 cm Muck (A9) (LRR C)	
Block Hit	(A2)			Loamy Mucky Mineral (E1)		2 CITI MUCK (AT0) (LRR B) Reduced Vertic (E18)		
Black This Hydroge	n Sulfide (A4)		Loamy Glev	ed Matrix	(F2)		Red Parent Material (TF2)	
Stratified	l avers (A5) (LRR	C)	Depleted M	atrix (F3)	(1 2)		Other (Explain in Remarks)
1 cm Mu	ck (A9) (LRR D)	-)	Redox Dark	Surface (F6)		<u> </u>	/
Depleted	Below Dark Surfac	e (A11)	Depleted D	ark Surfac	e (F7)			
Thick Da	rk Surface (A12)	. ,	Redox Dep	ressions (I	-8)			
Sandy M	lucky Mineral (S1)		Vernal Poo	s (F9)			³ Indicators of hydrophytic vege	tation and
Sandy G	leyed Matrix (S4)						wetland hydrology must be	present.
Restrictive L	.ayer (if present):							
Туре:								
Depth (inc	ches):						Hydric Soil Present? Yes	<u>No X</u>
Remarks:								

HYDROLOGY

Wetland Hydrology Indicator	s:		Ser	condary Indicators (2 or more required)
Primary Indicators (any one inc	licator is sufficient)			Water Marks (B1) (Riverine)
Surface Water (A1)		Salt Crust (B11)		Sediment Deposits (B2) (Piverine)
X High Water Table (A2)		Biotic Crust (B12)		Drift Deposits (B3) (Riverine)
Saturation (A3)	—	Aquatic Invertebrates (B13)		Drainage Patterns (B10)
Water Marks (B1) (Nonriv	erine)	Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
Sediment Deposits (B2) (N	Ionriverine)	Oxidized Rhizospheres along Livir	ıg Roots (C3)	Thin Muck Surface (C7)
Drift Deposits (B3) (Nonriv	verine)	Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
Surface Soil Cracks (B6)		Recent Iron Reduction in Plowed	Soils (C6)	Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aeria	al Imagery (B7)	Other (Explain in Remarks)		Shallow Aquitard (D3)
Water-Stained Leaves (B9))			FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes No _X_	Depth (inches):		
Water Table Present?	Yes <u>X</u> No	_ Depth (inches): <u>6</u>		
Saturation Present?	Yes No _X_	Depth (inches):	Wetland Hydrole	ogy Present? Yes <u>X</u> No
(includes capillary fringe)			 	
Describe Recorded Data (strea	im gauge, monitoring	well, aerial photos, previous inspec	ions), if available:	
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Victoria Park Golf Course	City/County: Carson/LA Cou	inty	Sampling Date:	1/12/18
Applicant/Owner: Shopoff Group		State: <u>CA</u>	Sampling Point:	DP2
Investigator(s):Tommy Molioo	Section, Township, Range:	Sec 5, T4S, R13V	N	
Landform (hillslope, terrace, etc.): <u>drainage channel</u>	Local relief (concave, convex	, none): <u>concave</u>	Slope	(%): 0
Subregion (LRR): C Lat:3	3.852168° Long	g: <u>-118.271957°</u>	Datum	: NAD83
Soil Map Unit Name: Urban land-Biscailuz-Hueneme, drained co	mplex	NWI classific	cation: <u>R4SBCr</u>	
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes <u>X</u> No	_ (If no, explain in F	Remarks.)	
Are Vegetation X, Soil X, or Hydrology significantly of	disturbed? Are "Normal	Circumstances" pre	esent? Yes <u>X</u>	No
Are Vegetation, Soil, or Hydrology naturally pro	oblematic? (If needed,	explain any answers	s in Remarks.)	
SUMMARY OF FINDINGS - Attach site man showing	sampling point locati	one transacte	important feat	uros otc

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u>X</u> Yes Yes	No NoX _ No _X	Is the Sampled Area within a Wetland?	Yes	NoX
Remarks:					
Upland slopes adjacent to the Drainage Channel on the golf course. Paired data point to DP1					

VEGETATION – Use scientific names of plants.

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species? Status	Number of Dominant Species
1. <u>Washingtonia robusta</u>	20	Yes FACW	That Are OBL, FACW, or FAC: (A)
2. Pinus sp.	20	Yes FACU	Total Number of Deminent
3.			Species Across All Strata: 2 (B)
4.			(-/
	40	= Total Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15)			That Are OBL, FACW, or FAC: (A/B)
1.			Prevalence Index worksheet:
2.			Total % Cover of: Multiply by:
3			OBL species x 1 =
٥	·		EACW species $20 \times 2 = 40$
			EAC species x 3 =
o	·		$\frac{1}{2} = \frac{1}{2} = \frac{1}$
Herb Stratum (Plot size: 5)		_ = Total Cover	$\frac{1}{10} \text{ species } \frac{20}{20} \times 4 - \frac{30}{20}$
1			
2	·		Column lotals: <u>40</u> (A) <u>120</u> (B)
2			Prevalence Index = $B/A = -3.0$
3			Hydrophytic Vegetation Indicators:
4			Dominance Test is >50%
5			\sim Dominance rest is $>30\%$
6	·		$\underline{\land}$ Prevalence index is ≤ 3.0
7			data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation ¹ (Explain)
Marsha) (in a Otratuma (Distaine		= Total Cover	
Woody Vine Stratum (Plot size:)			Indicators of hydric coil and watland hydrology must
1	·		be present.
2			
		= Total Cover	Hydrophytic Verstation
% Bare Ground in Herb Stratum % Cover	of Biotic C	rust	Present? Yes X No
Remarks:			
Tomano.			

Profile Desc	cription: (Describe t	o the depth	n needed to docur	nent the i	ndicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redo	x Features	5				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	(S
0-3				<u> </u>		. <u> </u>		organic layer; leaf lit	ter
3-12	7.5YR 2.5/2	100		<u> </u>		. <u> </u>	silty loam		
				·					
				·					
				<u> </u>					<u> </u>
				·		·			
17				21					
Hydric Soil	<u>'Type:</u> C=Concentration, D=Depletion, RM=Reduced Matrix. <u>'Location:</u> PL=Pore Lining, RC=Root Channel, M=Matrix.								
Listood			Sandy Dad	(OE)	54.7		1		
	(AI)		Sandy Redo	DX(33)					
Histic Epipedon (A2)			aurix (50) ku Minerel	1/51)			VIUCK (A IU) (LRR D) and λ (artic (E19)		
Black Histic (A3)		Loamy Muc	ky Mineral	(F1) (F2)		Reduc	ced Vertic (F18)		
Hydroge	en Sullide (A4)		Loamy Gley	ed Matrix	(FZ)			arent Material (TF2)	
	Layers (A5) (LRR C	.)		atrix (F3)			Other	(Explain in Remarks)	
1 cm Mu	ick (A9) (LRR D)		Redox Dark	Surface (F6)				
Deplete	d Below Dark Surface	e (A11)	Depleted Da	ark Surfac	e (F7)				
Thick Da	ark Surface (A12)		Redox Dep	ressions (F	-8)				
Sandy Mucky Mineral (S1) Vernal Pools (F9)		³ Indicators of hydrophytic vegetation and		ion and					
Sandy G	Bleyed Matrix (S4)						wetland	hydrology must be pre	esent.
Restrictive	Layer (if present):								
Туре:									
Depth (in	ches):						Hydric Soi	I Present? Yes	<u>No X</u>
Remarks:									

HYDROLOGY

I

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		Water Marks (B1) (Riverine)
Surface Water (A1)	_ Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Drift Deposits (B3) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drainage Patterns (B10)
Water Marks (B1) (Nonriverine)	_ Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livin	ig Roots (C3) Thin Muck Surface (C7)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Plowed S	Soils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No _X	Depth (inches):	
Water Table Present? Yes No _X	_ Depth (inches):	
Saturation Present? Yes <u>No X</u> (includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspect	ions), if available:
Remarks:		

Project Number: 180042.00 Town: Carson State: CA Stream: Intermittent Photo begin file#: 1 Photo end file#: 12 Investigator(s): T. Molioo V N Do normal circumstances exist on the site? Location Details: Victoria Park Golf Course in the City of Carson Y N Do normal circumstances exist on the site? Location Details: Victoria Park Golf Course in the City of Carson Y N Is the site significantly disturbed? Projection: N/A Datum: N/A Type: N/A Coordinates: 33.852172°N / -118.271869°W Notes: Brief site description: Disturbed Drainage Channel with a mix of native and non-native vegetation. Coordinates: 33.852172°N / -118.271869°W Notes: Brief site description: Disturbed Drainage Channel with a mix of native and non-native vegetation. Coordinates: 33.852172°N / -118.271869°W Notes: Brief site description: Disturbed Drainage Channel with a mix of native and non-native vegetation. Coordinates: 33.852172°N / -118.271869°W Notes: Brief site description: Disturbed Drainage Channel with a mix of native and non-native vegetation. Coordinates: Coordinates: Coordinates:
Stream: Intermittent Photo begin file#: 1 Photo end file#: 12 Investigator(s): T. Molioo Y ⊠ N ☐ Do normal circumstances exist on the site? Location Details: Victoria Park Golf Course in the City of Carson Y ⊠ N ☐ Is the site significantly disturbed? Projection: N/A Datum: N/A Type: N/A Coordinates: 33.852172°N / -118.271869°W Notes: Brief site description: Disturbed Drainage Channel with a mix of native and non-native vegetation. Checklist of resources (if available):
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Y ⊠ N □ Do normal circumstances exist on the site? Location Details: Victoria Park Golf Course in the City of Carson Y ⊠ N □ Is the site significantly disturbed? Projection: N/A Datum: N/A Type: N/A Coordinates: 33.852172°N / -118.271869°W Notes: Brief site description: Disturbed Drainage Channel with a mix of native and non-native vegetation. Checklist of resources (if available): △ △ Aerial Photography: (Dates: 2016) □ Stream gage data ☑ Topographic maps: (Scale: 1982) Gage number: □ Geologic Maps Period of record: ☑ Vegetation maps □ Clinometer / level ☑ Soil Maps □ History of recent effective discharges □ Rainfall/precipitation maps □ Results of flood frequency analysis □ Existing Delineation(s) for site □ Most recent shift-adjusted rating □ Global positioning system (GPS) □ Gage heights for 2-, 5-, 10-, and 25-year events and the □ Other Studies most recent event exceeding a 5-year event The dominant Wentworth size class that imparts a characteristic texture to each of a channel cross-section is recorded in the average sediment texture filed under the characteristic secture to each of a channel cross-section is recorded in the average sediment texture filed under the characteristic cess section for the zone of interest. Inch
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Rainfall/precipitation maps Results of flood frequency analysis Existing Delineation(s) for site Most recent shift-adjusted rating Global positioning system (GPS) Gage heights for 2- ,5-, 10-, and 25-year events and the Other Studies most recent event exceeding a 5-year event The dominant Wentworth size class that imparts a characteristic texture to each of a channel cross-section is recorded in the average sediment texture filed under the characteristics section for the zone of interest. Inches (in) Millimeters (mm) Wentworth size class Boulder 2.56 - 0.157 - 0.079 2.00 Very coarse sand Hydrogeomorphic Floodplain
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2.56 - - 64 - Cobble - - 0 0.157 - - 4 - - Pebble - - 0 0.079 - 2.00 - Granule -
0.157 4 <u>Pebble</u> 6 Granule 0.079 2.00 Very coarse sand
0.079 2.00 Very coarse sand
0.039 1.00
0.020 — — — 0.50 — — — — — — — — — — — — — — — — — — —
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
1/8 - 0.0025 0.0625 0.0625 0 cm 1 2 3 4 5 6 7 8
$1/16 0.0012 - - 0.031 - - \frac{\text{Coarse silt}}{\text{Medium silt}} - - - - - - - - - $
$1/32 0.00061 0.0156 \frac{1}{5}$ 0 in 1 2 3
1/64 0.00031 — — — 0.0078 — — — — — — — — — — — — — — — — — — —
1/128 - 0.00015 0.0039 Clay

Walk the channel and floodplain within the study area to get an impression of the vegetation and geomorphology present at the site. Record any potential anthropogenic influences on the channel system in "Notes" above.
Locate the low-flow channel (lowest part of the channel). Record observations. Characteristics of the low-flow channel: Average sediment texture: concrete-bottom Total veg cover: Q % Tree:% Shrub:% Herb:% Community successional stage: MA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Dominant species present: None: concrete-bottom Other:
Walk away from the low-flow channel along cross-section. Record characteristics of the lowflow/ active floodplain boundary. Characteristics used to delineate the low-flow/active floodplain boundary: Change in total veg cover Tree Shrub Change in overall vegetation maturity Change in dominant species present Other Presence of bed and bank Other: Other: Other:
Continue walking the channel cross-section. Record observations below. Characteristics of the active floodplain: Average sediment texture: Fill material; organic layer Total veg cover: 100 % Tree: 0 % Shrub: 10 % Herb: 90% Community successional stage: NA Mid (herbaceous, shrubs, saplings) Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Dominant species present: Distichlis spicata Other:

Continue walking the channel cross-section. Record indicators of the active floodplain/low terrace boundary.
Characteristics used to delineate the active floodplain/ low terrace boundary:
Change in average sediment texture
🔀 Change in total veg cover 🛛 🗌 Tree 🛛 Shrub 🗌 Herb
Change in overall vegetation maturity
Change in dominant species present
U Other Presence of bed and bank
Urift and/or debris
Other:
Walk the active floodplain/low terrace boundary both upstream and downstream of the crosssection to verify that the indicators used to identify the transition are consistently associated the transition in both directions.
Consistency of indicators used to delineate the active floodplain/low terrace boundary:
Y 🗌 N 🔀 Change in average sediment texture
Y 🔀 N 🗌 Change in total veg cover 🛛 🔀 Tree 🔤 Shrub 🔄 Herb
Y 📉 N 🔄 Change in overall vegetation maturity
Y X N Change in dominant species present
Y V Other: Y V Presence of bed and bank
$Y \square N \square Other:$
If the observatoriation used to delineate the active fleedalain /low terrace boundary were NOT
onsistently associated with the transition in both the unstream and downstream directions
reneat all stens above
Continue welking the channel gross section. Depart characteristics of the low terrace
Continue waiking the channel cross-section. Record characteristics of the low terrace.
Average sediment texture: Sandy loam
Total veg cover: 90 % Tree: 40 % Shrub: 10 % Herb: 40%
Community successional stage:
NA Mid (herbaceous, shrubs, saplings)
Early (herbaceous & seedlings) 🛛 🖂 Late (herbaceous, shrubs, mature trees)
Dominant species present:
Other:
If characteristics used to delineate the active floodplain/low terrace boundary were deemed reliable, acquire boundary.
Active floodplain/low terrace boundary acquired via:
Mapping on aerial photograph GPS
Digitized on computer

APPENDIX C Flora Compendia

Appendix C: Flora Compendia

Scientific Name	Common Name	Special Status
GYMNOSPERMS		
Pinaceae - Pine family		
Pinus sp.	Pine	
EUDICOTS		
Adoxaceae - Muskroot family		
Sambucus nigra ssp. caerulea	Blue elderberry	
Anacardiaceae - Sumac Or Cashew fami	ly	
* Schinus molle	Pepper tree	
Asteraceae - Sunflower family		
Artemisia californica	California sagebrush	
Baccharis pilularis	Coyote brush	
Baccharis salicifolia ssp. salicifolia	Mule fat	
Encelia californica	California brittlebush	
Xanthium strumarium	Cocklebur	
Boraginaceae - Borage family		
Eriodictyon angustifolium	Narrow-leaved yerba santa	CRPR 2.3
Brassicaceae - Mustard family		
* Hirschfeldia incana	Shortpod mustard	
Chenopodiaceae - Goosefoot family		
Atriplex lentiformis	Big saltbush	
* Chenopodium album	Lamb's quarters	
* Salsola tragus	Russian thistle, tumbleweed	
Fabaceae - Legume family		
Acmispon glaber	Deerweed, California broom	
Malvaceae - Mallow family		
* Malva parviflora	Cheeseweed, little mallow	
Oleaceae - Olive family		
* Olea europaea	Olive	
Polygonaceae - Buckwheat family		
Eriogonum fasciculatum	California buckwheat	
Salicaceae - Willow family		
Salix gooddingii	Goodding's black willow	
Tamaricaceae - Tamarisk family		
* Tamarix ramosissima	Saltcedar	
MONOCOTS		

Cyperaceae - Sedge family

Scientific Name	Common Name	Special Status
Schoenoplectus acutus var. occidentalis	Common tule	
Poaceae - Grass family		
* Avena fatua	Wild oat	
* Bromus diandrus	Ripgut grass	
* Bromus madritensis ssp. rubens	Red brome	
Distichlis spicata	Salt grass	
Typhaceae - Cattail family		
Typha domingensis	Southern cattail	

Legend

*= Non-native or invasive species

Special Status:

Federal: FE = Endangered FT = Threatened

State: SE = Endangered ST =Threatened

CRPR – California Rare Plant Rank

1A. Presumed extinct in California

1B. Rare or Endangered in California and elsewhere

2. Rare or Endangered in California, more common elsewhere

3. Plants for which we need more information - Review list

4. Plants of limited distribution - Watch list

Threat Ranks

.1 - Seriously endangered in California

.2 - Fairly endangered in California