ATTACHMENT 5

JURISDICTIONAL DELINEATION REPORT

JURISDICTIONAL DELINEATION REPORT
TALBERT LAKE DIVERSION PROJECT

Prepared for:
Pacific Advanced Civil Engineering, Inc.
17520 Newhope Street
Fountain Valley, California 92708

Contact:
Bruce Phillips
(714) 481-7300

Prepared by:
BonTerra Consulting
151 Kalmus Drive, Suite E-200
Costa Mesa, California 92626
(714) 444-9199

Contact:
Gary A. Medeiros
Associate Principal
Regulatory Services

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SECTION 1.0 INTRODUCTION

This delineation report was prepared for the City of Huntington Beach to provide baseline data concerning the type and extent of resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB) for the Talbert Lake Diversion project site (hereafter referred to as "the project site").

The project site includes the 356-acre Talbert Lake portion of Huntington Central Park and a proposed diversion structure located within the East Garden Grove – Wintersburg Channel (C05), which is located in the City of Huntington Beach, Orange County, California (Exhibits 1 and 2). The project site is located north of Talbert Avenue, east of Goldenwest] Street, south of Slater Avenue, and west of Gothard Street (Exhibit 3). The proposed diversion structure alternatives are at Goldenwest Street and Murdy Park (Exhibits 3A, 3B, and 3C). The project site is located on the U.S. Geological Survey (USGS) Seal Beach and Newport Beach 7.5-minute topographic quadrangle maps at Township 5 South, Range 11 West, Section 26. Topography on the project site is relatively flat. Elevations on the project site range from sea level to approximately 45 feet above mean sea level (msl).

This delineation was conducted on January 26, 2007, in accordance with the requirements of the USACE and the CDFG, and represents BonTerra Consulting's best effort to determine the type and extent of the jurisdiction boundaries based on the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2006), in addition to the policies and guidance letters provided by these regulatory agencies. It should be noted that the delineation must be reviewed by these agencies to obtain final determination of jurisdictional boundaries.

1.1 PROJECT DESCRIPTION AND BACKGROUND

1.1.1 TALBERT LAKE DIVERSION PROJECT

The Huntington Beach Talbert Lake Diversion Project is a water quality treatment program that would divert up to 3 million gallons per day (MGD) of dry weather urban runoff from the regional East Garden Grove – Wintersburg Channel (EGGWC) through pre-treatment devices and into an approximate 15-acre area in Huntington Central Park. Treatment would involve a series of natural treatment wetlands with the goal of improving and protecting the water quality of Huntington Harbour, Anaheim Bay, outer Bolsa Bay, downstream receiving water bodies of the EGGWC.

1.1.2 DIVERSION STRUCTURE

Runoff from the EGGWC would be diverted just upstream of Goldenwest Street by installing an inflatable rubber dam (or equivalent diversion structure) within the channel. The dry weather urban runoff would be distributed to several discharge points in Huntington Central Park, with each discharge point leading into a series of shallow wetlands, ponds, and eventually into Talbert Lake. Following treatment, approximately 1 MGD would be pumped from the Lake and used for irrigation in Huntington Central Park and the Huntington Sports Complex. The remaining inflow to the Lake would either evaporate, infiltrate into the groundwater table, or be discharged into Slater Channel via the existing overflow weir (proposed for modification) at the northwestern corner of the Lake. To the maximum extent possible, the project would be operated to balance the runoff intake with park irrigation, passive infiltration, and evaporation in

Regional Location

Exhibit 1

Talbert Lake Diversion Project Jurisdictional Delineation

N W E S

10 5 0 10 Miles

BonTerra CONSULTING

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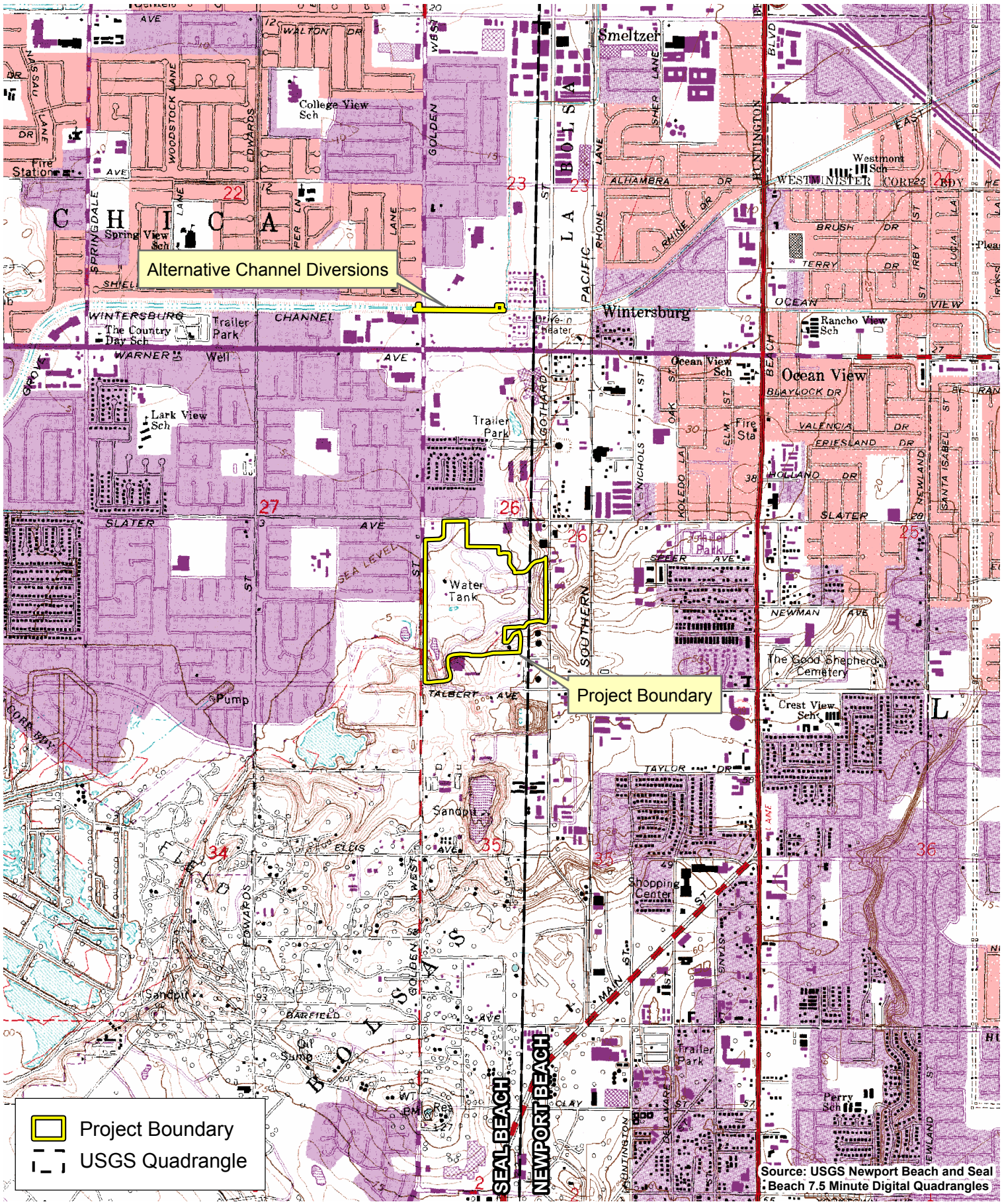

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Local Vicinity

Exhibit 2

Talbert Lake Diversion Project

N
W E
S

2,000 1,000 0 2,000 Feet

BonTerra CONSULTING

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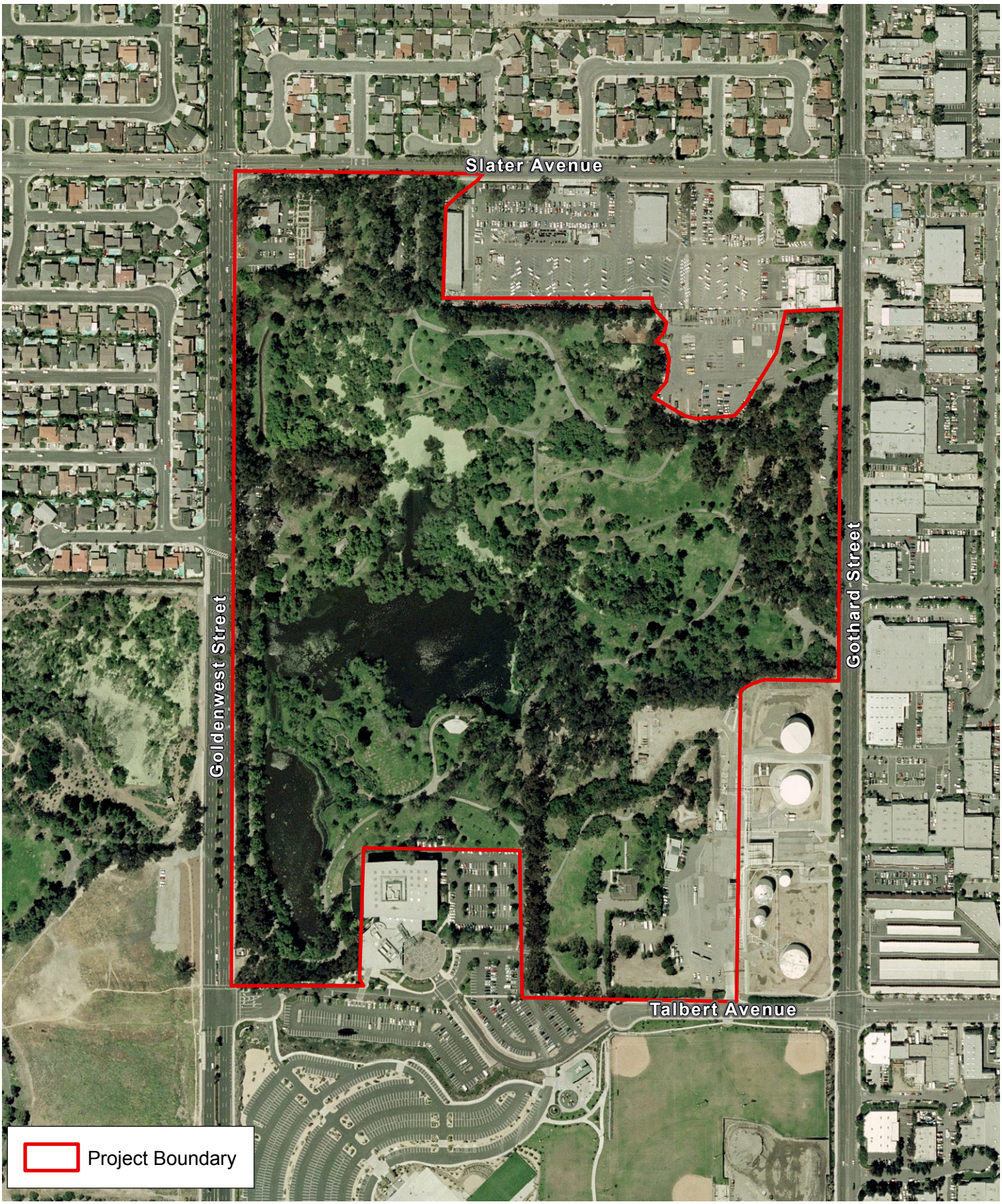

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Project Site

Exhibit 3

Talbert Lake Diversion Project Jurisdictional Delineation

N
W E
S

400 200 0 400 Feet

BonTerra CONSULTING

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Alternative Channel Diversion Structure 1 Impacts

Exhibit 3A

Talbert Lake Diversion Project Jurisdictional Delineation

N W E S

150 75 0 150 Feet

Bonterra CONSULTING

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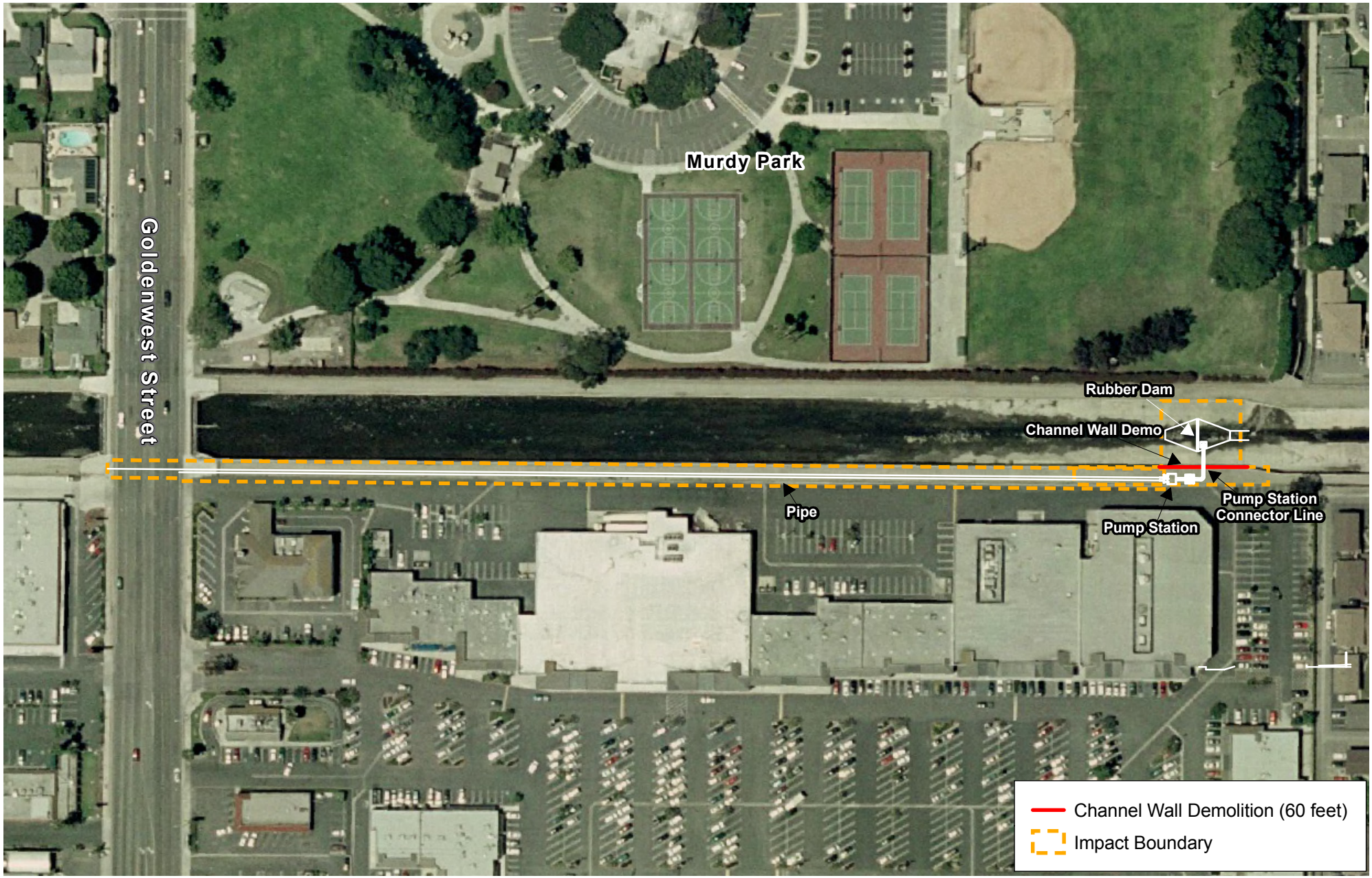

Alternative Channel Diversion Structure 2 Impacts

Exhibit 3B

Talbert Lake Diversion Project Jursidictional Delineation

N W E S

150 75 0 150 Feet

Bonterra CONSULTING

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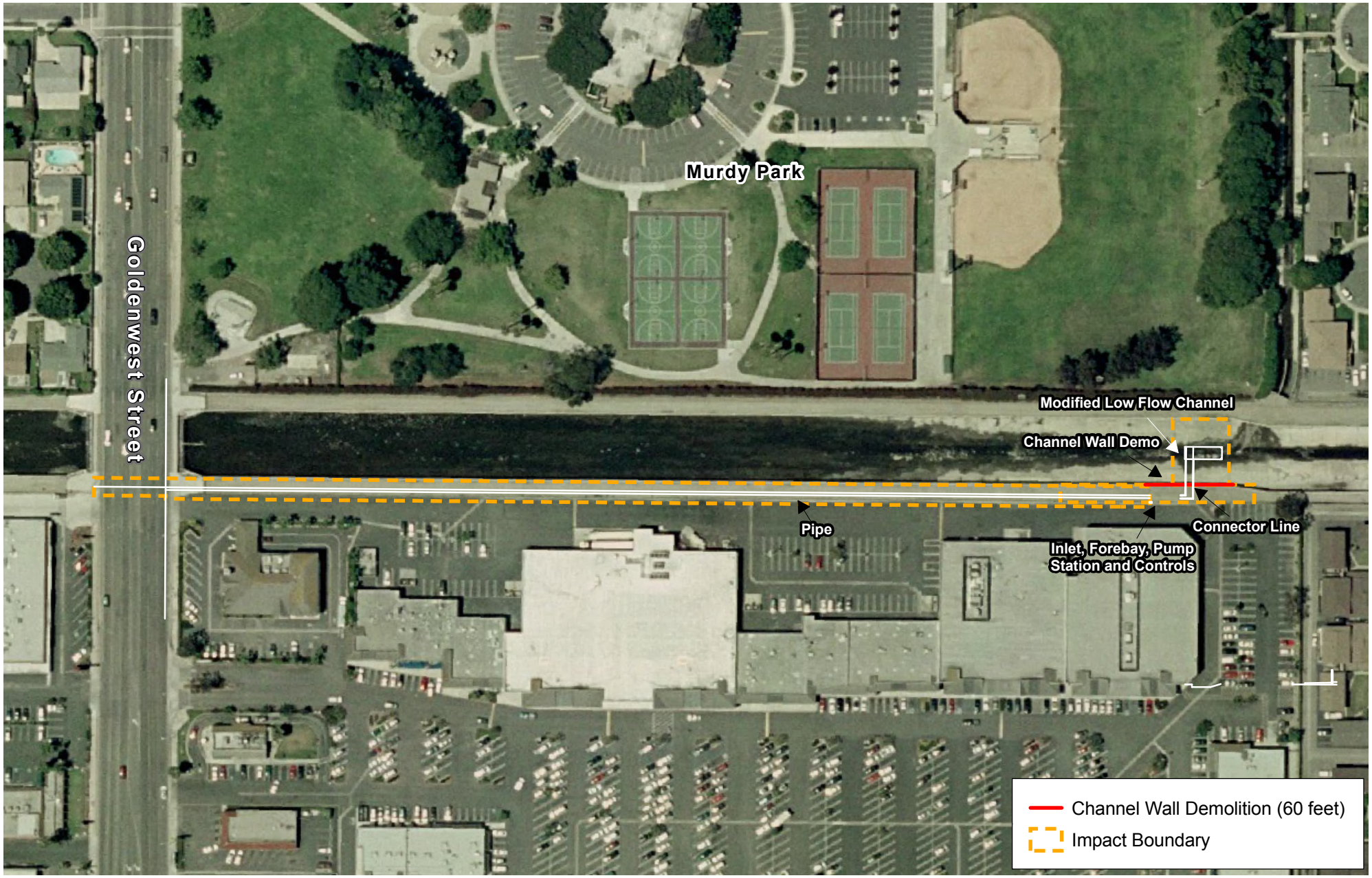

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Alternative Channel Diversion Structure 3 Impacts

Exhibit 3C

Talbert Lake Diversion Project Jursidictional Delineation

N W E S

150 75 0 150 Feet

Bonterra CONSULTING

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order to eliminate the need to pump dry weather urban runoff from the Slater Channel into the EGGWC.

The EGGWC diversion facility would include multiple sediment removal and storage elements and would be compatible with the overall flood-control channel system in order to avoid any impacts to the existing facility. The EGGWC is a rectangular concrete channel approximately 75 feet wide and 14 feet high (75′ x 14′). Monitoring data for EGGWC indicate that dry weather urban runoff typically ranges from 1 cubic foot per second (cfs) to 10 cfs. The diversion structure may include an inflatable dam (or equivalent) across the EGGWC. Several inlets would be installed along the invert of the low flow channel so as to divert water into the forebay. The diversion structure would be designed to avoid any impact to the flood-control capacity of the existing channel.

The ponded water upstream of the diversion structure would act as a desilting area to remove coarse sediment and debris prior to diverting the flow to Huntington Central Park. The forebay and pump station would be located beneath the access road right-of-way on the southern side of the EGGWC. The forebay would provide a secondary sedimentation location for additional removal of settleable solids. The pump station would be designed to have a capacity of 7 MGD, but the operating level for the Talbert Lake Diversion Project would be less than 3 MGD.

The diverted flow would be pumped to Huntington Central Park through an abandoned water line within Goldenwest Street's right-of-way. The abandoned water line to be used for diversion extends from the EGGWC to Huntington Central Park. The use of the abandoned pipeline would isolate diversion-related construction activities to within the EGGWC right-of-way, and within Goldenwest Street's right-of-way adjacent to Huntington Central Park.

1.1.3 CONSTRUCTED WETLANDS

The dry weather urban runoff from the EGGWC would be distributed throughout Huntington Central Park at up to three discharge points upstream of the Lake. Each discharge point would direct the flow into individual wetland treatment systems, which would be comprised of a series of wetland ponds and shallow wetlands. The flow at each of the three locations would discharge directly into a wetland pond. The wetland pond would be the first stage of treatment allowing sediment and other particulates to settle out of suspension. In areas of the park where storm drains discharge into wetland treatment cells, the initial wetland pond would also act as a forebay to trap sediment, trash, and other debris after a storm event. The majority of wetlands maintenance would typically occur in the initial wetland pond at the beginning of each wetland treatment system. Maintenance activities would involve trash and debris removal and periodic sediment removal.

The wetland treatment cells have been designed within the footprint of the existing wetlands. The design incorporates mature wetland areas. Mature willow riparian habitat along the banks of the wetland treatment cells would be protected during construction to minimize the temporary impact to the wetland habitat during construction. The design of the wetland system involves removing exotic species and replacing them with native riparian habitat. Exhibits 3 and 4 show the vegetation mapping in the existing and proposed conditions, respectively.

Each wetland treatment system would include a sequence of wetland ponds and shallow wetlands. The depth of the wetland ponds would vary from 6′ to 12′ deep depending upon the size of the pond. The shallow wetlands would vary from 1′ to 2′ deep and consist of emergent vegetation such as cattails (*Typha* sp.) and bulrush (*Scirpus* sp.). The proposed grading plan for the wetlands and the Lake is shown in Exhibit 5. The shallow wetlands would consist of surface and subsurface flow wetlands. The specialized design of "subsurface wetland treatment"

elements would utilize current state-of-the-art design of the wetland treatment areas based on current research in this field. The data and design criteria developed from experimental Subsurface Flow (SSF) wetland research can be applied directly to the park wetland system in order to optimize pollutant removal and to better evaluate the efficiency of the system using current data. These SSF wetland systems would provide approximately a thousand-fold increase in surface area for the growth of bacterial bio-filters, which increases the rate of contaminant degradation or removal.

The plant species and planting pattern for the shallow wetlands would be designed to provide a healthy and dense population of cattails and bulrush. The establishment of these wetland species would be an important part of achieving the water quality objectives of the project. The wetland cells would be a primary location for biological and chemical treatment processes. The plants provide surface area for bacteria that attack dissolved pollutants, help maintain a consistent water temperature, and prevent algal re-growth. The wetland plants also provide a large quantity of fixed organic carbon important for microbial growth and denitrification.

The individual wetland treatment systems would convey the flow to a submerged intake pipe near the northeastern corner of the Lake. After treatment in the wetland system, the flow would then be discharged into the Lake through a subsurface flow wetland island within the Lake. The pipe connecting the wetlands to the Lake would operate by gravity flow and would be sized to provide adequate residence time within the wetlands prior to discharging the diverted urban runoff into the Lake.

1.1.4 TALBERT LAKE

The outflow from the constructed wetland treatment area would be collected within a pipe system and discharged into the Lake through a subsurface flow wetland island, which would maximize the pollutant removal and uptake.

The Lake would function as a natural treatment polishing element of the overall water treatment system through the application of different naturalized dynamic treatment elements including submerged aeration, submerged media bio-filtration, and wetland planter shelves. Once in the Lake, water would be continually treated by a system of underwater bio-filters, constructed wetlands, in-lake circulation, aeration, and carefully managed lake vegetation. This system has been designed to maintain the highest possible level of water quality in the Lake for the sake of both the environmental health and the aesthetics of the Lake.

The Talbert Lake project will include modifications to the Lake's horizontal and vertical geometry in order to optimize the long-term performance and health of the lake system. The Lake would have a constructed lake edge designed to prevent shoreline erosion, enhance safety for visitors, and provide an attractive appearance. Various shoreline designs would be used but all would be similar in many regards. Each design would incorporate durable material such as concrete veneer or grouted rock beneath the finished surface. The finished surface of the Lake's constructed edge may include an eroded concrete finish, a wetland planter shelf shoreline, a grass shoreline, or a natural shoreline.

The other important characteristic of the geometry influencing lake quality is the average operating water depth, since this determines the effects of temperature and since biological reaction time increases with temperature. An average operating depth of eight feet would eliminate light penetration, maintain a lower average temperature, allow temperature stratification, and minimize evaporation.

The Lake's edge would be designed to provide safe conditions for persons visiting it and to eliminate any need for fencing around it. Areas of the Lake designated for public access would be equipped with a concrete bulkhead that would provide secure footing for anyone who happens to step or fall into the Lake. The Lake's edge would drop from the water's edge to a depth of 18 inches. This would ensure that anyone who accidentally falls into the lakes would be able to easily stand up and exit it. Beyond the bottom will fall into the Lake at a gentle slope of not more than a 4:1 ratio (horizontal:vertical). This gentle slope would allow anyone who wades into the lake to easily return to the shore, while the steady slope would make it clear that the lake grows deeper toward the middle. The 4:1 slope would extend to a depth of at least 4 feet. This depth is intended to be deep enough so that anyone who cannot swim well should have second thoughts about wading to this depth. Beyond the 4-foot depth, the slope of the bottom is typically 3:1 or flatter. The proposed grading plan for the wetlands and the lake is shown in Exhibit 5.

1.1.5 TALBERT LAKE FLOOD CONTROL CAPABILITY

Huntington Central Park provides temporary storage of storm water in both Talbert Lake and the wetlands that surround it. The post-project surface area of the lake and wetland at normal operating level is approximately 16 acres. During a 100-year flood event, the surface area during the maximum stage will be approximately 42.5 acres. The Lake and wetland system have a tributary watershed of 706 acres (Exhibit 6) The maximum storage volume in the Lake is about 150 acre-feet (af). During the 100-year flood event, the maximum storage in the Lake is about 118 af. The outflow from Talbert Lake occurs via an overflow weir to a 54″ reinforced concrete pipe (RCP) that would transition to an 84″ RCP under Goldenwest Street. The 84″ RCP outlets into Slater channel west of Goldenwest Street. [

The network of wetland treatment cells and the Lake would be designed to maintain a consistent operating level during dry weather conditions. During dry weather periods, the only inflow to the Lake would be the diverted flow from EGGWC and small flows from the tributary watersheds. Ideally, dry weather flows would never leave the site, but would instead be captured and retained within the Lake, treated, and reused for landscaping, irrigation, and groundwater recharge. Excess flow from Talbert Lake would pass through a submerged "polishing" wetland system before reaching the overflow weir leaving the Lake. During rain events, storm water runoff from the tributary watershed would enter the Lake and a portion of the rainfall representing the "first flush" volume would be retained and then slowly discharged. During larger rainfall events, excess water would be discharged downstream into Slater Channel via the Lake overflow weir and culvert under Goldenwest Street.

1.1.6 INFLOW

The peak flow rate into the Lake during a 100-year flood event is 892 cfs. The peak outflow from the Lake is 174 cfs. Storm water enters the Lake at three locations around Huntington Central Park. The primary inflow location is 500 feet west of Gothard Street and 300 feet north of the Standard Oil property. The majority of the storm water that enters Talbert Lake comes from this location. The second inflow location is at the northwestern corner of the Park adjacent to Slater Ave. Storm water runoff from the watershed north of Talbert Lake is conveyed through a grass swale and 18″ RCP along the northwestern corner of the park. The swale and 18″ RCP have limited capacity due to the flat gradient and the fact that, during high flows, storm water overflows from the swale into the Lake. The third inflow location is at the southwestern corner of the Park near the intersection of Talbert Avenue and Goldenwest Street. Storm water runoff from the Huntington Beach Sports Complex is conveyed through a catch basin and RCP into the southwestern corner of Talbert Lake.

1.1.7 PROJECT BENEFITS

The project will provide multiple benefits to the region that include protection of the beneficial uses of coastal waters, enhancement of habitat value, education, groundwater recharge, seawater barrier enhancements, and recreational benefits. The project design will include several phases of treatment intended to maximize pollutant removal by subjecting the flow to various processes. Following treatment, treated urban runoff will be used to rehabilitate Talbert Lake and recharge the groundwater aquifer in the project vicinity. In addition, the project will also include the creation of 4.62 acres of southern willow scrub habitat resources in and around Talbert Lake as a project design feature to replace southern willow scrub habitat that will be impacted during project construction.

1.2 REGULATORY AUTHORITY

1.2.1 SUMMARY OF REGULATIONS

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into the "waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "waters of the U.S." where the material has the effect of: (1) replacing any portion of a "waters of the U.S." with dry land or (2) changing the bottom elevation of any portion of "waters of the U.S." These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure within these waters. The selection of disposal sites for dredged or fill material is done in accordance with Section 404(b)(1) guidelines, which were developed by the U.S. Environmental Protection Agency (USEPA).

Waters of the United States

"Waters of the U.S." can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term "waters of the U.S." includes all waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide, such as:

- Wetlands;
- All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, 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;
- All impoundments of waters otherwise defined as "waters of the U.S." under the definition;
- All tributaries to navigable waters, interstate waters, and impoundments of waters of the U.S.;
- The territorial seas; and
- All wetlands adjacent to waters, other than waters that are themselves wetlands.

Ordinary High Water Mark

The landward limit of tidal "waters of the U.S." is the high tide line. In non-tidal waters where adjacent wetlands are absent, jurisdiction extends to the "ordinary high water mark" (OHWM). In the absence of wetlands in non-tidal waters, the intent of jurisdictional limits are determined by the OHWM. The OHWM is defined as: "that line on the shore established by the fluctuations of

water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR §328.3[e]).

A wetland is a subset of jurisdictional waters and is defined by the USACE and USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR §328.3[b]). Wetlands generally include swamps, marshes, bogs, and areas containing similar features. The definition and methodology for identifying wetland resources have now been refined by the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2006), a supplement to the 1987 Corps Manual. This methodology was used to identify the type and extent of wetland resources within the boundaries of the project site.

On June 19, 2006, a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions finding that certain wetlands constituted "waters of the U.S." under the CWA (Rapanos v. United States) Although Justice Scalia's opinion would have greatly restricted the USACE's jurisdiction, only three other justices joined Scalia's opinion. Justice Kennedy, who provided the fifth vote needed to overturn the Court of Appeals' decisions, wrote a separate opinion that would narrow the USACE's jurisdiction, but not as much as Justice Scalia desired. Without a clear majority opinion, the legal effect of this decision is uncertain. But it does provide valuable information about the direction the USACE will consider in defining jurisdiction over certain bodies of water, such as man-made ditches, desert washes, and ephemeral streams.

As noted above, although Justice Kennedy sided with Justice Scalia in overturning the earlier court rulings, Justice Kennedy did so for a different reason. Justice Kennedy indicated that he relied on the Supreme Court's 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision on wetlands features, which states that wetlands are subject to jurisdiction only if there is a "significant nexus" between the wetland and some other navigable water such as a stream or lake. To prove such a "significant nexus," Justice Kennedy stated that the USACE must show that the wetlands in question, either alone or in combination with other similarly situated lands, significantly affect the chemical, physical, and biological integrity of other, navigable waters. According to Justice Kennedy, that evidence had not been provided in either the *Rapanos v. United States* or the *Carabell v. United States* cases (referred to as "Rapanos" cases). Therefore, the case was remanded back to the lower court for reconsideration.

On June 5, 2007, the USACE published a memorandum that provides guidance to USEPA regions and USACE districts that implement the Supreme Court's decision in the Rapanos cases.. The memorandum includes a chart that summarizes its key points which are intended to be used as a reference tool along with a complete discussion of issues and guidance furnished throughout the memorandum.

In summary, the USACE asserts jurisdiction over the following waters: (1) traditional navigable waters; (2) wetlands adjacent to traditional navigable waters; (3) non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and (4) wetlands that directly abut such tributaries.

The agencies decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with traditional navigable water: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable

tributaries that are not relatively permanent; and (3) wetlands adjacent to, but do not directly abut, a relatively permanent non-navigable tributary.

The agencies generally do not assert jurisdiction over the following features: (1) swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) and (2) ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The agencies will apply the significant nexus standard during the permitting process as follows:

1. A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters.

2. Significant nexus includes consideration of hydrologic and ecologic factors.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality within California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "waters of the State" and to all "waters of the U.S.," including wetlands (isolated and non-isolated).

Section 401 of the CWA gives the RWQCB the authority to regulate, through a Water Quality Certification, any proposed federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide "certification that there is reasonable assurance that an activity which may result in the discharge to 'waters of the U.S.' will not violate water quality standards." Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine Regional Boards' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate "waters of the State" (which are defined as any surface water or groundwater, including saline waters) The Porter-Cologne Act has become an important tool in the post-SWANCC and Rapanos eras with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a "Report of Waste Discharge" when there is no federal nexus, such as a Section 404. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

California Department of Fish and Game

Historically, the CDFG had jurisdictional authority over wetland resources associated with rivers, streams, and lakes under Sections 1600–1607 of the *California Fish and Game Code*. Legislation repealing Fish and Game Code Sections 1600–1607 became effective on January 1, 2004. This legislative action further added Sections 1600–1616 to the Fish and Game Code. The most important change is that public and private notifications are now treated in the same fashion. Specifically, activities of State and local agencies as well as public utilities that are project proponents are now regulated by the CDFG under Section 1602 of the code. This regulates any work that will: (1) substantially divert or obstruct the natural flow of any river,

stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) 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. CDFG enters into a Streambed Alteration Agreement (SAA) with a project proponent and can impose conditions on the agreement.

Because the CDFG includes streamside habitats under its jurisdiction that, under the federal definition, may not qualify as wetlands on a particular project site, its jurisdiction may be broader than that of the USACE. Riparian forests in California often lie outside the plain of ordinary high water regulated under Section 404 of the CWA, and often do not have all three parameters (wetland hydrology, hydrophytic vegetation, and hydric soils) sufficiently present to be regulated as a wetland. However, riparian forests are frequently within CDFG regulatory jurisdiction under Section 1602.

The notification process is the completion of the applications which will serve as the basis for the CDFG's issuance of a Section 1602 SAA. Section 1602 of the Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state.

The CDFG jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFG takes jurisdiction from the top of bank of the stream or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish, other aquatic plant and/or wildlife species, and watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

1.2.2 REGULATED ACTIVITIES

Permit authorizations from the USACE, the RWQCB, and the CDFG are required prior to the initiation of any construction-related project activity for any development proposal that involves impacts to drainages, streams, or wetlands within and/or immediately adjacent to a project site through: filling; stockpiling; conversion to a storm drain; modifications to an existing storm drain or channel; channelization; bank stabilization; road or utility transmission line crossings; or any other modification to an existing drainage, stream, or wetlands habitat. Also, both permanent and temporary impacts to jurisdictional resources are regulated activities requiring permit authorization from these agencies.

There are several types of regulatory permit authorizations that must be obtained prior to the initiation of any construction-related activities associated with the implementation of this project.

There are two primary permits that are routinely issued by the USACE. These include a "Nationwide Permit" (NWP) and an "Individual Permit" (IP). An NWP is a type of general permit that authorizes certain specified activities nationwide. An IP is a permit that is issued following an individual evaluation and a determination that the proposed activity is not contrary to the public interest. Standard permits and letters of permission are types of individual permits. The specific permit required depends on the project description and extent of jurisdictional impacts.

It should be noted that the USACE will likely issue conditional approval of the Section 404 permit subject to the receipt of Section 401 Water Quality Certification from the RWQCB. This conditional approval is referred to by the USACE as "Denial Without Prejudice." It should also

be noted that USACE, RWQCB, and CDFG applications can be processed concurrently. Also, the RWQCB and CDFG application submittals will not be deemed complete until the application fees have been paid and a certified California Environmental Quality Act (CEQA) document is provided with a signed copy of the receipt of payment of filing fees to the County Clerk for the Notice of Determination (NOD). It should also be noted that effective January 1, 2007, CDFG filing fees were increased to $1,800 for Negative Declarations and $2,500 for EIRs for projects approved pursuant to a certified regulatory program. In addition, land use jurisdictions can no longer make "de minimis" findings if they determine that the project will not impact resources under the CDFG's jurisdiction. Therefore, the finding of "No Impact" to CDFG jurisdictional resources must now be made by CDFG prior to the payment of CDFG fees.

SECTION 2.0 METHODOLOGY

Literature Review: BonTerra Consulting reviewed United States Geological Survey (USGS) topographic maps; aerial photographs from digital color aerial photography; the Soil Survey Geographic (SSURGO) database for Orange County and western portions of Riverside County, California (USDA NRCS 2007b, USDA 1978), and the National Hydric Soils List (USDA NRCS 2007a) to identify areas that may fall under an agency's jurisdiction.

Jurisdictional Delineation: In December 2006, the USACE issued the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. This regional supplement is designed for use with the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Both manuals provide technical methods and guidelines for determining the presence of "waters of the U.S." and wetland resources. A three-parameter approach is used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. Wetlands generally include swamps, marshes, bogs, and similar areas. In order to be considered a wetland, an area must exhibit at least minimal hydric characteristics within the three parameters. However, problem areas may periodically or permanently lack certain indicators due to seasonal or annual variability of the nature of the soils or plant species on site. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement. Non-wetland "waters of the U.S." are delineated based on the limits of the OHWM, which can be determined by a number of factors including: erosion, the deposition of vegetation or debris, and changes in the vegetation.

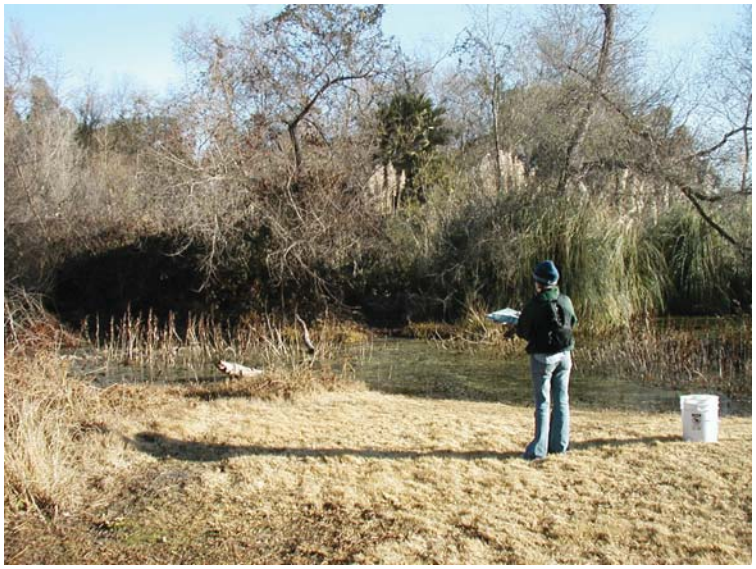
It should be noted that the RWQCB shares the USACE jurisdiction unless isolated conditions are present. If isolated waters conditions are present, the RWQCB takes jurisdiction using the OHWM and/or the three-parameter wetlands methodology that the USACE uses. CDFG jurisdiction is defined as the top of a bank of the stream/channel/basin or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, or lake. The analysis contained in this report involved field surveys and verification of current conditions conducted on January 26, 2007. The surveys were conducted by BonTerra Consulting Associate Principal Gary Medeiros and Ecologist Allison Rudalevige. During this field survey, jurisdictional areas containing vegetation, soils, and evidence of hydrology were recorded on a 1″ = 100′ scale aerial photograph. Photographs of the jurisdictional areas were taken (Exhibits 4A, 4B and 4C).

2.1 VEGETATION

Hydrophytic vegetation or hydrophytes are defined as any macrophytic plant that typically adapts to and subsequently grows within water or on a substrate that is, at least periodically, deficient in oxygen as a result of excessive saturation conditions that range from open water to

The outlet off Slater Avenue facing south.

Central portion of the west side of Talbert Lake facing east.



The west side of the project site facing east toward Talbert Lake.

Wetland vegetation on the eastern portion of Talbert Lake facing south.

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Site Photographs

Exhibit 4A

Talbert Lake Diversion Project Jurisdictional Delineation

BonTerra CONSULTING

R:/projects/PACE/J002/Graphics/ex4a_sp_020507.pdf

Soil Test Pit #2..

Soil Test Pit #4.

Soil Test Pit #3.

The Slater Channel outlet adjacent to Goldenwest Street.

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Site Photographs

Exhibit 4B

Talbert Lake Diversion Project Jurisdictional Delineation

BonTerra CONSULTING

R:/projects/PACE/J002/Graphics/Juris/ex4B_sp_020507.pdf

CO5 Channel at Diversion Structures 2 and 3 facing north.

CO5 Channel at Diversion Structures 2 and 3 facing east.

CO5 Channel at Diversion Structures 2 and 3 facing west.

CO5 Channel at Diversion Structure 1 facing west.

Site Photographs

Exhibit 4C

Talbert Lake Diversion Project Jurisdictional Delineation

BonTerra CONSULTING

R:/projects/PACE/J002/Graphics/Juris/ex4C_SPc_103107.pdf

D:/Projects/PACE/J002/Graphics/ex_SPc_102907.ai

periodically saturated soils. These plant species are specialized and can survive in permanently saturated to periodically saturated soils where oxygen levels are very low or anaerobic. The USFWS has identified approximately 2,000 plant species of this type within the state of California ("Zone 0" in Reed 1988)) and 5,000 species throughout the U.S. Generally, vegetative cover is estimated and is ranked according to its dominance. Dominant species are chosen for each stratum of the community. These are usually the most abundant species that individually or collectively amount to 50 percent of the total coverage of vegetation. Any other species, by itself, accounts for 20 percent of the total vegetation cover (also known as the "50/20 Rule") and are recorded on the "Wetland Determination Data Form – Arid West Region" (see Appendix B) [. The wetlands indicator status of each species is also recorded on the data forms based on the previously mentioned USFWS wetlands plant species ("Zone 0', Reed 1988) list

Plant indicator status categories are as follows:

- Obligate Wetland (OBL): Plants that occur almost always (estimated to be 99 percent) in wetlands under natural conditions, but which may also occur rarely (estimated to be 1 percent) in non-wetlands (i.e., cattails or common water hyacinth).

- Facultative Wetlands (FACW): Plants that occur usually (estimated 67 percent to 99 percent) in wetlands, but also occur (estimated 1 percent to 33 percent) in non-wetlands (i.e., mule fat or willow).

- Facultative (FAC): Plants with similar likelihood (estimated 33 percent to 67 percent) of occurring in both wetlands and non-wetlands (i.e., valley oak).

- Facultative Upland (FACU): Plants that occur sometimes (estimated 1 percent to less than 33 percent) in wetlands, but occur more often (estimated greater than 99 percent) in non-wetlands (i.e., giant rye).

- Obligate Upland (UPL): Plants that occur rarely (estimated 1 percent) in wetlands, but occur almost always (estimated greater than 99 percent) in non-wetlands under natural conditions.

The procedure for hydrophytic vegetation indicators will be determined through Indicator 1: "Dominance Test" using the "50/20 Rule", Indicator 2: "Prevalence Test", or Indicator 3: "Morphological Adaptation" procedures identified in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2006).

2.2 HYDROLOGY

Wetlands hydrology is represented by either (1) all of the hydrological elements or characteristics of areas permanently or periodically inundated or (2) areas containing soils that are saturated for a sufficient duration of time to create hydric soils suitable for the establishment of plant species that are typically adapted to anaerobic soil conditions. The presence of wetland hydrology is evaluated at each intersect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in soil test pits. In instances where stream flow is divided into multiple channels with intervening sandbars, the entire area between the channels is considered within the OHWM. Therefore, an area containing these features would meet the indicator requirements for wetlands hydrology.

2.3 SOILS

The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that is formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions or conditions of limited oxygen in soil located at or near the surface and that favor the establishment of hydrophytic vegetation (See U.S. Department of Agriculture, Natural Resources Conservation, Hydric Soil List, February 2007). It should be noted that hydric soils created under artificial conditions of flooding and inundation sufficient for the establishment of hydrophytic vegetation would also meet this hydric soils indicator.

The soil conditions are verified through test pits along each transect to a depth of at least 20 inches, except where noted because of restrictive layers. It should be noted that at some sites, it may be necessary to make exploratory soil test pits up to 40 inches deep to more accurately document and understand the variability in soil properties and hydrologic relationships on the site. Soil test pit locations are usually dug within the drainage invert or at the edge of a drainage course within vegetated areas. Soil extracted from each soil test pit is then examined for texture and color using the standard plates within the Munsell Soil Color Chart (1994) and recorded on the Data Form. The Munsell Soil Color Chart is an aid to designating color labels to soils based on gradations of three simple variables: hue, value, and chroma. Any indicators of hydric soils, such as redoximorphic features, buried organic matter, organic streaking, reduced soil conditions, gleyed or low-chroma soils, or sulfuric odor are also recorded on the Data Form. If hydric soils are found, progressive pits are dug along the transect moving laterally away from the active channel area until hydric soil features are no longer present within the top 20 inches of the soil profile.

2.4 LITERATURE

BonTerra Consulting referred to the following documents in the preparation of this jurisdictional delineation to identify areas that may fall under agency jurisdiction: USGS Seal Beach and Newport Beach 7.5-minute topographic quadrangles; color aerial photography provided by Aerial Express (2005); the Soil Survey Geographic (SSURGO) database for Orange County and Western Part of Riverside County, California (USDA NRCS 2007b), and the National Hydric Soils List (USDA NRCS 2007a). A description of this literature is provided below.

USGS Topographic Quadrangle: The Seal Beach and Newport Beach quadrangle maps show geological formations and their characteristics describing the physical settings of the area through topographic contour lines and other major surface features. These features include lakes, streams, rivers, buildings, roadways, landmarks, and other factors that may fall under the jurisdiction of one or more of the regulatory agencies. In addition, the USGS map provides topographic information useful in determining elevations, latitude, longitude, and Universal Transverse Mercator Grid coordinates within a project site.

Based on the USGS quadrangle information, a depression covers much of the western half of the project site. The eastern half of the project site has a slight rise in elevation. No on-site lakes, marshes, or ponds were identified from the review of the USGS quadrangle nor were they detected during site surveys.

Color Aerial Photography: BonTerra Consulting reviewed an existing color aerial photograph prior to the January 26, 2007, site visit. The aerial photograph was useful in identifying the extent of the drainage and any riparian vegetation that could be present on the project site.

The aerial photography shows a water body covering most of the western half of the project site. Dense vegetation occurs around the water and scattered throughout the park.

U.S. Department of Agriculture, Natural Resources Conservation Service: The presence of hydric soil is one of the chief indicators of jurisdictional wetlands. BonTerra Consulting reviewed the soil survey data and has determined that the project site is underlain by Bolsa silt loam, drained; Bolsa silty clay loam; Bolsa silty clay loam, drained; Myford sandy loam, and Zeralfic Arents, loamy (Exhibits 5 and 5A). Of these soils, Myford sandy loam (2 to 9 percent slopes) is listed as hydric on the National Hydric Soils List for the Orange County and Western Part of Riverside Area, California (USDA NRCS 20076a). A brief description of each of the soil series mapped on the project site is provided in Appendix C of this report.

SECTION 3.0 RESULTS

3.1 VEGETATION

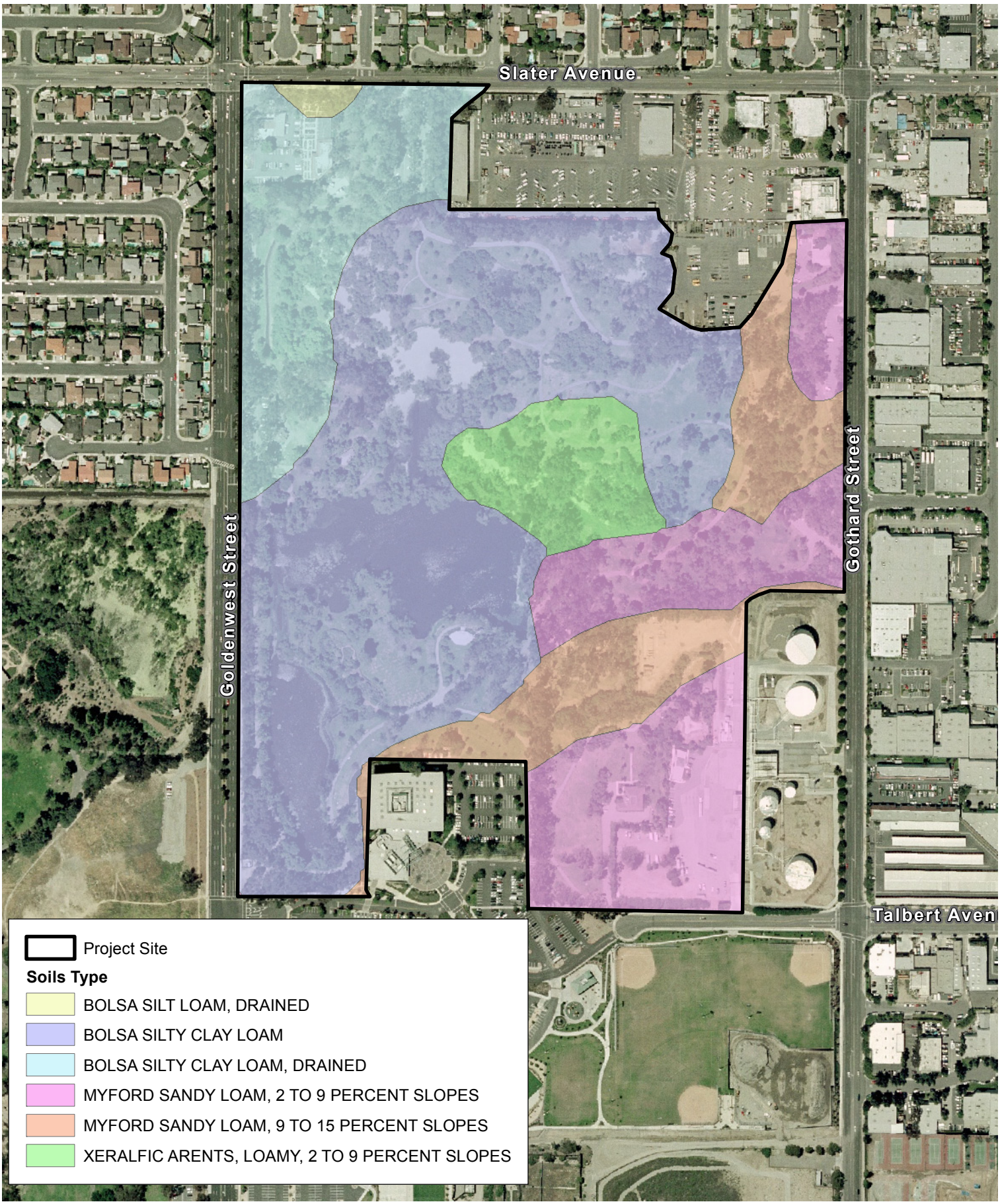
The project site consists of ornamental and wetland vegetation. Ornamental vegetation includes turf grass, myoporum (*Myoporum laetum*), gum trees (*Eucalyptus* sp.), and London plane trees (*Platanus acerifolia*). Arroyo willow (*Salix lasiolepis*) and black willow (*Salix goodingii*) were dominant species in and around Talbert Lake and are considered facultative wetland indicators (Reed, 1988). Native vegetation types are present and generally consist of wetland vegetation types, which are located in low areas of the park that are either permanently or seasonally inundated with water. These native vegetation types include willow riparian scrub, mule fat scrub, and fresh water marsh.

3.2 HYDROLOGY

Talbert Lake is an approximate 16-acre man-made lake that was constructed in 1968 by the City of Huntington Beach within Huntington Central Park. The Lake receives runoff from areas around the park and from adjacent developments. The Lake also receives water from a high ground water table. However, Talbert Lake often dries up during the summer months during dry years. During wet years, the lake may reach surface elevations that flow into Slater Channel immediately adjacent and to the west of the project site. Surface water, a primary wetland hydrology indicator, covered most of the western half of the project site. Saturated soil was observed in Soil Test Pits #1, 2, and 3. Therefore, wetlands hydrological conditions exist on portions of the project site.

3.3 SOIL

Four soil test pits were dug adjacent to the ponding areas on the project site to determine depth to free water and/or the presence of hydric soils. Soil Test Pit #1 contained clay loams with redox concentrations, saturated soil, and free water at a depth of 18 inches. Soil Test Pit #2 contained clay loams with redox concentrations, saturated soil, and no free water. Soil Test Pit #3 contained hydric (gleyed) soils to a depth of 14 inches, saturated soil at a depth of 6 inches, and free water at a depth of 14 inches. Therefore, the hydric soil criterion for wetlands within these areas was met. Soil Test Pit #4 was dug in an area further away from the lake. This soil pit did not contain hydric soil indicators or saturated soil, and the soil criterion for wetlands was not met.



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Soil Types

Exhibit 5

Talbert Lake Diversion Project Jurisdictional Delineation

N
W E
S

400 200 0 400 Feet

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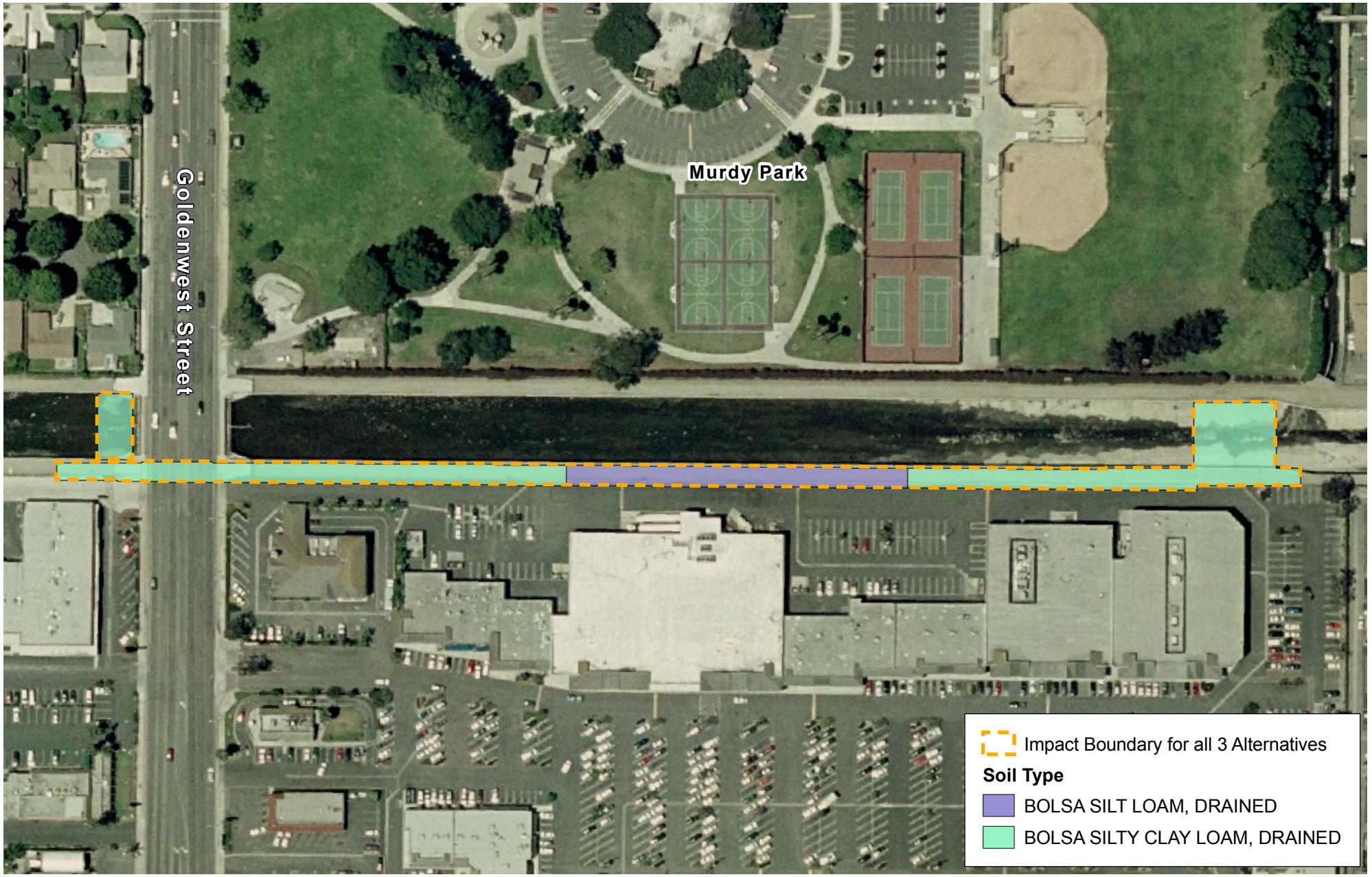

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Soil Types for Alternative Channel Diversions

Exhibit 5A

Talbert Lake Diversion Project Jurisdictional Delineation

N W E S

150 75 0 150 Feet

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SECTION 4.0 JURISDICTIONAL DELINEATION

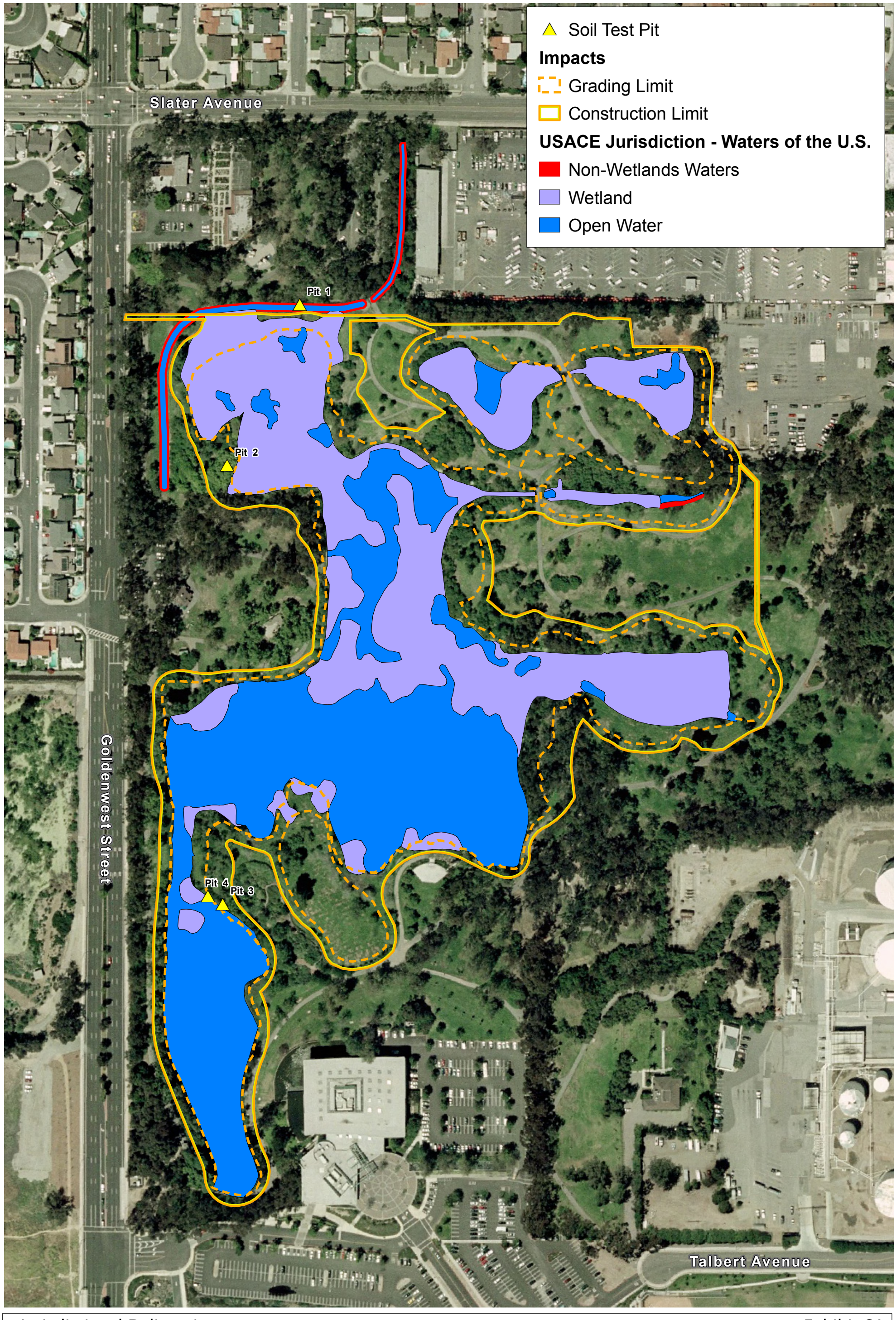
4.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

Wetlands Determination: As previously described in Section 2.1 of this report, an area must exhibit all three wetland parameters to be considered a jurisdictional wetland as provided in the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. Based on the results of the field investigations, it was determined that multiple areas on the project site contained all three parameters. Based on the field observations and data collection, approximately 19.44 acres of "waters of the U.S.," including 9.23 acres of wetlands, occur on the project site (Exhibit 6A; Table 1). Based on the most current concept layout, a total of 9.21 acres of wetlands would be impacted by the proposed project (Table 2). Three alternative channel diversion structures are proposed. No wetlands occur within the areas where these alternative structures would be constructed..

"Waters of the United States" (Non-Wetland) Determination: Most of the western half of the project site exhibited evidence of hydrology sufficient to document that the OHWM meets the criteria for USACE jurisdictional waters. Based on the field observations and data collection, approximately 19.44 acres of USACE jurisdictional "waters of the U.S." occurs on the project site (Exhibit 6A; Table 1). Of this, approximately 0.07 acre was delineated as non-wetland "waters of the U.S." and 10.14 acres were delineated as open water. Areas of open water contained surface water and were unvegetated (i.e., had less than five percent total plant cover) or were dominated by non-native vegetation. Of the three alternative channel diversion structures under consideration in the proposed project, Structure 1 contained 0.07 acre of "waters of the U.S." (0.02 acre non-wetland "waters of the U.S.," 0.05 acre open water); Structure 2 contained 0.13 acre of open water; and Structure 3 contained 0.11 acre of open water (Exhibits 7A, 7B, and 7C; Table 2). Based on the most current concept layout, a total of 19.10 acres of USACE jurisdictional waters will be impacted by project implementation, including 0.02 acres of "Non-Wetlands" including 9.87 acres of "Open Water" (Table 2). Based on the most current concept layout, a total of 0.06, 0.17, or 0.11 acre of non-wetland "waters of the U.S.," including open water, would be impacted by channel diversion Structures 1, 2, and 3, respectively (Table 2).

TABLE 1
EXISTING USACE JURISDICTIONAL WATERS

USACE Jurisdiction	Talbert Lake	C05 Channel Diversion Structure 1	C05 Channel Diversion Structure 2	C05 Channel Diversion Structure 3
Wetlands	9.23	0.00	0.00	0.00
Non-Wetlands Waters of the U.S.	0.07	0.01	0.00	0.00
Open Water	10.14	0.05	0.17	0.11
Total Waters of the U.S.	**19.44**	**0.06**	**0.17**	**0.11**



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Jurisdictional Delineation

Exhibit 6A

Talbert Lake Diversion Project Jursidictional Delineation

N W E S

200 100 0 200 Feet

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TABLE 2
IMPACTS TO USACE JURISDICTIONAL WATERS

USACE Jurisdiction	Talbert Lake		C05 Channel Diversion Structure 1		C05 Channel Diversion Structure 2		C05 Channel Diversion Structure 3	
	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary	Permanent	Temporary
Wetlands	8.52	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Non-Wetlands Waters of the U.S.	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Open Water	9.82	0.05	0.00	0.05	0.05	0.13	0.02	0.09
Total Waters of the U.S.	**18.36**	**0.74**	**0.00**	**0.06**	**0.05**	**0.13**	**0.02**	**0.09**

4.2 CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD DETERMINATION

The RWQCB jurisdictional boundaries will be defined as those determined for the USACE under "waters of the United States" for drainages on the project site that are not isolated. As noted above, the jurisdictional limits were defined as top of the channel to top of the channel across the drainage.

4.3 CALIFORNIA DEPARTMENT OF FISH AND GAME DETERMINATION

The CDFG jurisdiction on the project site was generally defined by the outer edge of the "dripline" of hydrophytic vegetation, where present. When hydrophytic vegetation was not present on the project site, the CDFG jurisdiction was generally defined as from the top of the bank to the top of the bank. Based on the field investigations and data collection, approximately 21.51 acres of CDFG jurisdiction occurs on the project site (see Exhibit 6B and Table 3). Three alternative channel diversion structures are proposed. Approximately 0.06, 0.17, and 0.11 acre under CDFG jurisdiction occurs in structures 1, 2, and 3, respectively (Exhibits 7A, 7B, and 7C; Table 3). Based on the most current design plants, a total of 20.16 acres of CDFG jurisdiction would be impacted by the proposed project. Based on the most current concept layout, a total of 0.06, 0.17, and 0.11 acre under CDFG jurisdiction will be impacted by channel diversion structures 1, 2, and 3, respectively.

TABLE 3
CDFG JURISDICTIONAL WATERS

Talbert Lake Project Facilities	Existing (Acre)	Permanent Impact (Acre)	Temporary Impact (Acre)
Talbert Lake	21.51	19.08	1.08
C05 Channel Diversion Structure 1	0.06	0.00	0.06
C05 Channel Diversion Structure 2	0.17	0.05	0.13
C05 Channel Diversion Structure 3	0.11	0.02	0.09

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Jurisdictional Delineation

Exhibit 6B

Talbert Lake Diversion Project Jursidictional Delineation

N W E S

200 100 0 200 Feet

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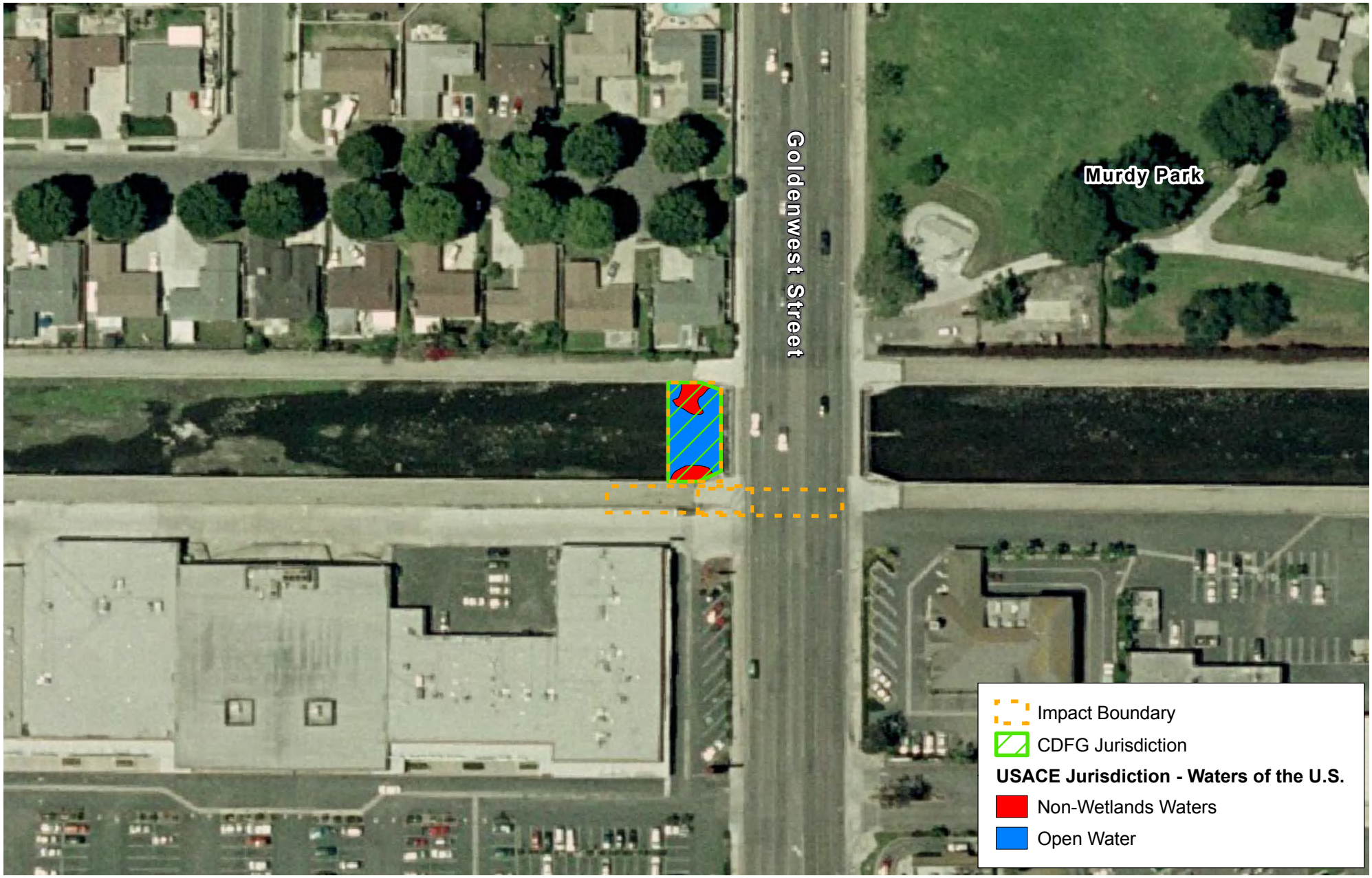

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Jurisdictional Delineations for Alternative Channel Diversion Structure 1

Exhibit 7A

Talbert Lake Diversion Project Jurisdictional Delineation

N W E S

100 50 0 100 Feet

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Jurisdiction Delineations for Alternative Channel Diversion Structure 2

Exhibit 7B

Talbert Lake Diversion Project Jurisdictional Delineation

N W E S

150 75 0 150 Feet

Bonterra CONSULTING

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D:/Projects/Pace/J002/Diversion_Alt3_Juris_102907.mxd

Jurisdictional Delineations for Alternative Channel Diversion Structure 3

Exhibit 7C

Talbert Lake Diversion Project Jurisdictional Delineation

N W E S

150 75 0 150 Feet

Bonterra CONSULTING

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SECTION 5.0 CONCLUSION OF REGULATORY APPROVAL PROCESS

The following is a summary of the various permits, agreements, and certifications required prior to initiation of any construction-related activities which involve impacts to areas under the jurisdiction of the USACE, the CDFG, or the RWQCB.

5.1 U.S. ARMY CORPS OF ENGINEERS

Regulatory authorization (in the form of an Individual Permit [IP]) would be required from the USACE Regulatory Branch-Los Angeles District Office if any permanent and/or temporary construction-related activity results in a discharge of material (i.e., an impact) into USACE jurisdictional "waters of the U.S." that are greater than ½ acre or 300 linear feet. Based on the current project design, approximately 19.10 acres within USACE jurisdiction would be impacted as a result of project implementation, and 0.06, 0.17, or 0.11 acre would be impacted for the alternative channel diversion structures. Therefore, the proposed project would require authorization under an IP.

Please note that as of June 6, 2007, the USACE is now required to coordinate with the following agencies:

State Historic Preservation Office: The USACE must submit the application package to the State Historic Preservation Office (SHPO) for a 30-day review prior to initiating the actual regulatory process.

EPA Regional Office and USACE Headquarters: In addition, coordination on Jurisdictional Determinations (JDs) under Clean Water Act (CWA) Section 404 in light of the *SWANCC* and *Rapanos* Supreme Court Decisions' guidelines require that the USACE Regulatory Branch Offices coordinate with the EPA Regional Office and USACE Headquarters (HQ) for all Jurisdictional Delineations (JD) determinations. A summary of the process is as follows:

- Approved Jurisdictional Determination Form:
  An "Approved Jurisdictional Determination Form" is prepared and submitted and the JD to the USACE District Office.

- USACE Los Angeles District Office:
  The district office must transmit an electronic copy of every draft JD form (and supporting documentation) proposing to assert or decline jurisdiction over an intrastate, non-navigable, isolated water to the EPA Regional Office and the USACE HQ for their review within 21 days of receipt from the Landowner.

- EPA Regional Office Review:
  The EPA Regional Office has 15 days to review the JD with the local USACE District Office and is also responsible for ensuring that EPA HQ also receives copies of every JD form. The agencies will coordinate and attempt to resolve any JD issues at the local level within 15 calendar days after EPA's receipt of the form. The EPA may notify the USACE at any time within the 15 day period that it does not intend to provide comments on a particular draft JD. Within these 15 calendar days, the EPA Regional Office may elect to elevate the review to their Regional Administrator (RA) and so notify the USACE district in writing. The written notification shall briefly explain the rationale for the EPA's position. If the EPA provides no notification within the 15 calendar days, the USACE district may proceed and finalize the JD.

- JD Elevated to EPA Regional Administrator:
  When the JD is elevated to the RA, the RA and the District Engineer (DE) shall have 10 calendar days from the date of the EPA's notification to the USACE to resolve the issue. If the issue is not resolved between the RA and DE, the RA shall, within these 10 calendar days, elevate the JD to EPA HQ and concurrently provide written notification to the DE that the JD is being elevated. Upon receipt of notification from EPA that the matter has been elevated, the DE shall immediately provide the draft JD record to USACE HQ. If the EPA does not provide elevation notification within the 10 calendar days or if a resolution is otherwise reached, the USACE district may proceed and finalize the JD.

- The Corps and EPA HQ will review and provide guidance on elevated draft JDs as follows:

  (1) The USACE and the EPA shall coordinate efficiently and appropriately to reach agreement on the JD.

  (2) The USACE and the EPA shall initiate discussions no later than 5 calendar days after notification of elevation (as noted above) to determine if an interagency agreement exists on the elevated JD.

    (i) If a mutual decision is reached on the assertion or declination of jurisdiction, a joint HQ-level decision memo discussing the rationale of the decision will be provided to EPA and USACE field offices no later than 14 calendar days after HQ interagency discussions were initiated; or

    (ii) If a mutual decision is not reached at the EPA and USACE HQ, the EPA shall prepare a joint HQ-level decision memo that explains its (i.e., the EPA's) rationale in support of an approved JD. This HQ-level decision memo will be provided to the EPA and USACE field offices no later than 21 calendar days after interagency discussions were initiated. Copies of the joint memo will be provided to all USACE districts and to the EPA's Regional Offices.

    (iii) Upon receipt of the joint HQ-level decision memo, the USACE district may issue an Approved JD pursuant to the memo and post the JD form on its website.

A "Pre-Application Field Meeting" with the USACE, CDFG, RWQCB, and USFWS should be scheduled as soon as possible following the initiation of the public review process for the CEQA documentation for the project. The purpose of the Pre-Application meeting is to review:

- The Jurisdictional Delineation Report (JD), which includes the locations and types of "Waters of the U.S" including: "Wetlands", "Non-Wetlands Waters of the U.S.", and "Open Water" within the project site; project description and impacts associated with project implementation; and proposed mitigation. The USACE and CDFG will be asked to provide formal approval of the JD;

- Environmental documentation, project site plans, project purpose and need statement, project location, anticipated project schedule, identification of sensitive plant and wildlife species, and other relevant information; and

- The submittal of a Pre-Construction Notification (PCN).

Please note that the City of Huntington Beach will be required to obtain a CWA Section 401 Water Quality Certification from the RWQCB before the USACE will issue the Section 404 permit.

5.2 REGIONAL WATER QUALITY CONTROL BOARD

As noted above, issuance of the USACE Section 404 permit will be contingent upon the approval of a Section 401 Water Quality Certification from the Santa Ana RWQCB. Also, the RWQCB requires certification of the project's CEQA documentation prior to the approval of the Section 401 Water Quality Certification. The RWQCB, as a responsible agency, will use the project CEQA document to satisfy its own CEQA compliance requirements.

Upon acceptance of a complete permit application, the RWQCB has 60 days to 1 year to make a decision on the permit request. That is, USACE regulations indicate that the RWQCB has 60 days from the date of receipt of a completed application that requests water quality certification to act on the application (under 33 CFR Section 325.2[b][1][ii]). Please note that the USACE District Engineer may specify a longer time (up to one year) or shorter time based on their determination of a reasonable processing time (per 33 CFR Section 325.2[b][1][ii]). If the RWQCB determines that more than 60 days is needed to process the request, it may request additional time from the USACE. Also, please note that the RWQCB has the option of issuing a "denial without prejudice" which does not mean that the request is denied, but that it requires more information in order to make a decision. This effectively stops the processing clock until this information is provided.

The RWQCB is required (under 23 California Code of Regulations [CCR] §3858[a]) to have a "minimum 21 day public comment period" before any action can be taken on the 401 application. This period closes when the RWQCB acts on the application. Since projects often change or are revised during the 401 permit process, the comment period can remain open. The public comment period starts as soon as an application has been received. Generally, the RWQCB Section 401, USACE Section 404, and CDFG Section 1602 permit applications run concurrently and close at about the same time.

The RWQCB will require the Applicant to address urban storm water runoff during and post-construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and will be required for a complete application. Please note that the application will also require a 401 Application Fee, which is based on a number of factors including the amount of project impacts (i.e., cubic yards of dredge or fill).

5.3 CALIFORNIA DEPARTMENT OF FISH AND GAME

The CDFG regulates all work (including initial construction and ongoing operation and maintenance) that may substantially divert or obstruct the natural flow of, substantially change or use any material from the bed, channel, or bank of any river, stream, or lake through its Streambed Alteration Program. An Applicant must enter into an agreement with the CDFG to ensure no net loss of wetland values and acreages.

Both USACE and CDFG jurisdictional delineations were completed at the same time. As previously indicated, the extent of CDFG jurisdiction on the project site has been identified. Based on the current design plans, approximately 20.16 acres within the jurisdiction of the CDFG will be impacted as a result of the project implementation, as well as 0.06, 0.17, or 0.11 acre for the alternative channel diversion structures. Therefore, the City must obtain authorization from the CDFG pursuant to Section 1602 Streambed Alteration Agreement (SAA). The SAA must address the initial construction as well as long-term operation and maintenance of the inlet structures and conveyance lines, which may require periodic maintenance.

Prior to construction, notification (SAA application) must be submitted to CDFG describing any proposed streambed alteration contemplated by a proposed project. In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., mitigated negative declaration) must be included in the submittal, consistent with CEQA requirements. The CDFG will prepare a draft SAA, which will include standard measures to protect sensitive plant and wildlife resources during project construction as well as during ongoing operation and maintenance of any project element that occurs within a CDFG jurisdictional area.

If an SAA is required, the CDFG may want to conduct an on-site inspection. The CDFG then prepares a draft agreement which will include measures to protect fish and wildlife resources directly or indirectly impacted by project construction. The draft agreement will then be transmitted to the Applicant within 60 calendar days of the CDFG's determination that the notification is complete. It should be noted that the 60-day timeframe may not apply to long-range agreements.

The Applicant has 30 calendar days to notify CDFG concerning the acceptability of the proposed terms, conditions, and measures. If the Applicant agrees with these terms, conditions and measures, the agreement must be signed and returned to the CDFG. The agreement becomes final upon CDFG execution and SAA issuance. Please note that all application fees must be paid and final certified CEQA documentation must be provided prior to CDFG's execution of the agreement.

5.4 RECOMMENDATIONS

Agency Concurrence and Pre-Application Meeting: A copy of the jurisdictional delineation should be submitted to each regulatory agency (i.e., USACE, CDFG, and RWQCB) with a request for their concurrence.

It is recommended that an on-site Pre-Application Meeting be conducted to review the project, the impacts that would result from project implementation, and proposed mitigation. At the Pre-Application Meeting, the Applicant would also need to demonstrate how project impacts have been avoided and/or minimized. The Jurisdictional Delineation should then be updated to reflect any changes to project design that result in reductions in impacts to these resources.

Potential Mitigation: As previously noted, project impacts to USACE and CDFG jurisdiction would be approximately 19.10 and 20.16 acres, respectively, as well as 0.06, 0.17, or 0.11 acre for the alternative channel diversion structures. As noted above, the regulatory agencies require that avoidance and minimization be analyzed to the greatest extent practicable and mitigation compensation be assigned where impacts cannot be avoided. The proposed project is a water quality treatment program that is intended to remove and treat runoff diverted from the East Garden Grove – Wintersburg Channel (C05) as part of the County-wide water quality improvement program. The program will provide a constant and reliable source of water to Talbert Lake to maintain lake elevations year-round which will directly benefit both migratory and resident wildlife species. The project will also include the creation of 4.62 acres of southern willow scrub habitat resources in and around Talbert Lake as a project design feature. These project design features will serve to offset both the temporary loss of willow riparian scrub habitat and address the potential effects associated with the long-term operation and maintenance of the water quality treatment program.

SECTION 6.0 REFERENCES

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APPENDIX A

DESIGN PLANS

APPENDIX B

WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: PACE 1002 Talbert Lake City/County: Huntington Beach/Orange Sampling Date: 1/26/07

Applicant/Owner: City of Huntington Beach State: CA Sampling Point: #1

Investigator(s): Gary Medeiros & Allison Rudalevige Section, Township, Range: 26, T5S, R11W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33° 42' 26" N Long: 118° 00' 18" W Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis		Y	FACW
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. Typha Sp.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: #1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
18	2.5Y 2.5/1						clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Depth to free water = 18"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 18

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: PACE J002 Talbert Lake City/County: Huntington Beach / Orange Sampling Date: 1/26/07

Applicant/Owner: City of Huntington Beach State: CA Sampling Point: #2

Investigator(s): Gary Medeiros & Allison Rudalevige Section, Township, Range: 26, T5S, R11W

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: 33°42' 22"N Long: 118° 00' 20"W Datum: NAD 83

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis		Y	FACW
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: #2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
20	2.5Y 3/2						clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: PACE J002 Talbert Lake City/County: Huntington Beach/Orange Sampling Date: 1/26/07
Applicant/Owner: City of Huntington Beach State: CA Sampling Point: #3
Investigator(s): Gary Medeiros + Allison Rudalevige Section, Township, Range: 26, T5S, R11W
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): _____ Lat: 33°42'12"N Long: 118°00'20"W Datum: NAD 83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No _____	Is the Sampled Area within a Wetland? Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus sp.		Y	
2. Salix lasiolepis		Y	FACW
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
Total Number of Dominant Species Across All Strata: _____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:
Willows along bank in vicinity of soil test pit

SOIL

Sampling Point: #3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-14	gleyed 2.5/10Y	100						clay loam
14-20	10YR/4/1	100						sandy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Saturated at 6", water present at 14"

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes X No ___ Depth (inches): 14

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 6

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Lake levels change during the summer, with less water present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: PACE 1002 Talbert Lake City/County: Huntington Beach/Orange Sampling Date: 1/26/07
Applicant/Owner: City of Huntington Beach State: CA Sampling Point: #4
Investigator(s): Gary Medeiros + Allison Rudalevige Section, Township, Range: 26, T5S, R11W
Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
Subregion (LRR): _____ Lat: 33°42'12" N Long: 118°00'20" W Datum: NAD 83
Soil Map Unit Name: _____ NWI classification: _____
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X No _____	Is the Sampled Area within a Wetland? Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus sp.		Y	
2. Salix lasiolepis		Y	FACW
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
Total Number of Dominant Species Across All Strata: _____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:
Willows along bank in vicinity of soil test pit.

SOIL

Sampling Point: #4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
14	2.5Y/2.5/1	100						
14-20	2.5Y/5/3	100						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (If present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No free water at 20". Area irrigated

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

APPENDIX C

SOIL SURVEY

The soil classifications identified below and in Exhibit 5 were obtained from the U.S. Department of Agriculture, Natural Resources Conservation Service.

Bolsa Series

The soils of the Bolsa series are deep, somewhat poorly drained soils formed in mixed alluvium. They are in flood plains and basins. The mean annual precipitation is about 13 inches and the mean annual temperature is about 62 ºF. Bolsa silt loam, drained, fallow (colors are for dry soil unless otherwise noted).

Ap1–0 to 6 inches; light brownish-gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) when moist; weak, medium subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine roots; common fine tubular pores; strongly effervescent, disseminated lime; moderately alkaline (pH 8.0); abrupt, smooth boundary (0 to 10 inches thick).

Ap2–6 to 12 inches; light brownish-gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) when moist; weak, medium, subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine and common medium roots; common fine tubular pores; strongly effervescent, disseminated lime; moderately alkaline (pH 8.0); clear, smooth boundary (0 to 12 inches thick).

C1–12 to 18 inches; light brownish-gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) when moist; few very faint mottles; weak, medium, subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine and common medium roots; common fine tubular pores; strongly effervescent, disseminated lime; moderately alkaline (pH 8.0); abrupt, smooth boundary (0 to 10 inches thick).

C2–18 to 29 inch; light brownish-gray (10YR 6/2) silt loam, dark grayish brown (10YR 4/2) when moist; weak, medium, subangular blocky structure; hard, firm, slightly sticky and slightly plastic; few fine and common medium roots; common fine tubular pores; strongly effervescent, disseminated lime; moderately alkaline (pH 8.0); abrupt, smooth boundary (0 to 12 inches thick).

C3–29 to 39 inches; light brownish-gray (10YR 6/2) silty clay loam, dark grayish brown (10YR 4/2) when moist; few, fine, prominent, reddish-yellow (7.5YR 6/6) mottles, strong brown (7.5YR 5/6) when moist; weak, fine and medium, prismatic structure; very hard, firm, sticky and plastic; few fine and common medium roots; common fine tubular pores; salts in fine threads; strongly effervescent, disseminated lime; moderately alkaline (pH 8.0); clear, smooth boundary (0 to 14 inches thick).

C4–39 to 49 inches; light brownish-gray (2.5Y 6/2) silty clay loam, dark grayish brown (2.5Y 4/2) when moist; common, fine, prominent, reddish-yellow (7.5R 6/6) mottles, strong brown (7.5YR 5/6) when moist; weak, fine and medium, prismatic structure; very hard, firm, sticky and plastic; few fine roots; common fine tubular pore; salts in fine thread; strongly effervescent, disseminated lime; moderately alkaline (pH 8.0); clear, smooth boundary (0 to 14 inches thick).

C5–49 to 55 inches; light brownish-gray (2.5Y 6/2) and dark-gray (2.5Y 4/) silty clay loam high in organic matter; dark grayish brown (2.5Y 4/2) and dark gray (2.5Y 4/) when moist; common, fine prominent, reddish-yellow (7.5YR 6/6) mottles, strong brown (7.5YR 5/6) when moist; weak, coarse, prismatic structure; very hard, very firm, very sticky and plastic; few fine and medium root; many fine tubular pores; moderately alkaline (pH 8.0); clear, smooth boundary (0 to 10 inch thick).

C6–55 to 69 inches; light gray (2.5Y 7/2) silty clay loam, grayish brown (2.5Y 5/2) when moist; many, fine, prominent, brownish-yellow (10YR 6/6) mottles, yellowish brown (10YR 5/6) when

moist; moderate, fine, platy structure; hard, firm, sticky and plastic; common fine pores; salts in fine threads; moderately alkaline (pH 8.0).

Range in Characteristics: The soil between depths of 4 and 12 inches usually is moist in some part from sometime in November until sometime in May and is dry all the rest of the year if not irrigated. The mean annual soil temperature at depth of 20 inches is about 62 ºF. The soil is saturated within 40 to 60 inches of the surface from about February to May unless drained. The soil is calcareous to a depth of 40 inches or more and is mildly or moderately alkaline. The 10- to 40-inch section averages 18 to 30 percent clay and less than 15 percent fine sand or coarser particles. Organic matter decreases irregularly as depth increases.

The A horizon is light brownish gray and pale brown in 10YR hue. It ranges from sandy loam to silty clay loam.

The C horizon is light gray, light brownish gray or pale brown in 10YR or 2.5Y hue. It has distinct or prominent mottles below a depth of about 30 inches. This horizon is mainly silt loam and silty clay loam but has thin strata of sandier material in some pedons. It has buried A horizons in many pedons.

Geographic Setting: Bolsa soils are nearly level and are in flood plains and basins at elevations of 10 to 300 feet. They formed in stratified alluvium derived from mixed sources. The climate is dry subhumid meso-thermal with cool moist winters and foggy dry summers. Mean annual precipitation is 12 to 15 inches. Mean annual temperature is about 62 ºF; average January temperature is about 53 ºF; average July temperature is about 70 ºF. The frost-free season is 300 to 365 days.

Drainage and Permeability: Somewhat poorly drained; slow runoff; moderately slow permeability. Many areas have been drained by the lowering ground water levels and by pumping or by flood control channels.

Use and Vegetation: They are used for urban and for growing irrigated truck crops, lima beans and dryland barley. Vegetation in uncultivated areas is annual grasses and forbs.

Distribution and Extent: Coastal plains and valleys in southern California. The series is of moderate extent in MLRA 19 and 14.

Taxonomic Class: fine-silty, mixed, superactive, calcareous, thermic Aquic Xerofluvents.

Myford Series

The soils of the Myford Series are deep, moderately well drained soils formed on terraces. The mean annual precipitation is about 16 inches and the mean annual air temperature is about 62 ºF. Myford sandy loam, rangeland. (Colors are for dry soil unless otherwise noted).

A1–0 to 1 inch; pale brown (10YR 6/3) sandy loam, brown (10YR 4/3) when moist; weak, medium platy structure; slightly hard, friable, nonsticky and nonplastic; ;many very fine roots; many very fine tubular pores; medium acid (pH 6.0); abrupt smooth boundary (1 to 11 inches thick)

A2–1 to 4 inches; pinkish-gray (7.5YR 6/2) sandy loam, brown (7.5YR 4/2) when moist; weak, medium, platy structure; hard, friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; medium acid (pH 6.0); clear, smooth boundary. (3 to 10 inches thick)

A3–4 to 12 inches; pinkish-gray (7.5YR 7/2) sandy, loam, brown (7.5YR 4/2) when moist; massive; hard; friable, nonsticky and nonplastic; common very fine roots; many very fine tubular pores; medium acid (pH 6.0); abrupt smooth boundary. (1 to 9 inches thick)

Bt1–12 to 18 inches; brown (7.5YR 4/2) sandy clay, dark brown (7.5YR 3/2) when moist; strong, very coarse, prismatic structure; extremely hard, very firm, very sticky and very plastic; few very fine roots; common very fine pores; common moderately thick clay films on peds and in pores; medium acid (pH 6.0); clear, smooth boundary. (5 to 9 inches thick)

Bt2–18 to 28 inches; brown (7.5YR 4/2) sandy clay loam, dark brown (7.5YR 3/2) when moist; moderate, coarse, prismatic parting to strong, coarse, angular blocky structure; extremely hare\d, very firm, very sticky and very plastic; few very fine roots; common very fine pores; few thin clay films line pores; neutral (pH 7.0); clear, smooth boundary. (7 to 10 inches thick)

Btk1–28 to 35 inches, brown (10YR 5/3) sandy clay loam, dark brown (10YR 4/3) when moist; weak, coarse, prismatic parting to moderate, coarse, angular blocky structure; very hard, firm, sticky and plastic; few very fine roots; common very fine pores; few thin clay films line pores; violently effervescent, lime occurs in small masses; moderately alkaline (ph 8.0); clear, smooth boundary. (5 to 10 inches thick)

Btk2–35 to 41 inches; light-brown (7.5YR 6/4) sandy clay loam, brown (7.5YR 4/2) when moist; weak, coarse, prismatic parting to moderate, coarse, angular blocky structure; very hard, firm, slightly sticky and plastic; few very fine roots; common very fine pores; common moderately thick clay films on peds and lining pores; slightly effervescent, lime occurs in filaments; moderately alkaline (pH 8.0); diffuse, smooth boundary. (4 to 7 inches thick)

Bt1–41 to 49 inches; light-brown (7.5YR 6/4) light sandy clay loam, brown (7.5YR 4/2) when moist; weak, coarse, prismatic parting to moderate, coarse, angular blocky structure; very hard, firm, slightly sticky and plastic; few very fine roots; common moderately thick clay films on peds and lining pores; moderately alkaline (pH 8.0); diffuse, smooth boundary. (6 to 9 inches thick)

Bt2–49 to 61 inches; light-brown (7.5YR 6/4) light sandy loam, brown (7.5YR 4/2) when moist; weak, coarse, prismatic parting to moderate, coarse, angular blocky structure; very hard, firm, slightly sticky and plastic; few very fine roots; many very fine pores; common moderately thick clay films on peds and lining pores; slightly acid (pH 6.5); diffuse, smooth boundary. (7 to 12 inches thick)

Bt3–61 to 71 inches; light-brown (7.5YR 6/4) light sandy clay loam, brown (7.5YR 4/2) when moist; weak, coarse, prismatic parting to moderate, coarse, angular blocky structure; very hard, firm, slightly sticky and plastic; few very fine roots; many very fine pores; common moderately thick clay films on peds and lining pores; slightly acid (pH 6.5); clear, wavy boundary. (6 to 10 inches thick)

C–71 to 79 inches; very pale-brown (10YR 7/3) sandy loam, brown (10YR 5/3) when moist; massive; slightly hard, friable, nonsticky and nonplastic; common very fine pores; slightly acid (pH 6.5).

Range in Characteristics: The solum ranges from 45 to 75 inches thick. Mean annual soil temperature at a depth of 20 inches is 60 to 63 ºF. The soil between depths of about 5 and 15 inches is usually moist in some part from about November 15 until late May, and is continuously dry the rest of the year.

The A horizon is pinkish gray or light brown, light brownish gray, pale brown, grayish brown or brown in 7.5YR or 10YR hue. It is sandy loam, or fine sandy loam. This horizon has weak structure or is massive and ranges from strongly acid to slightly acid. The A3 horizon is one unit higher in value than the A1 horizon.

The Bt horizon is brown, dark brown, or yellowish brown in 7.5YR or 10YR hue. It is sandy clay or heavy clay loam in the upper part and sandy clay loam or clay loam in the lower part and averages 28 to 30 percent clay in the entire horizon. The upper boundary of the Bt horizon is abrupt and the clay increase from the A horizon to the Bt horizon is 18 to 28 percent. This horizon has prismatic or angular blocky structure. It ranges from medium acid to moderately alkaline in the upper part and is moderately alkaline in the lower part. Exchangeable sodium is 15 to 35 percent below depth of one meter.

Geographic Setting: Myford soils are nearly level to moderately steep and are on terraces at elevations of less than 1,500 feet. The climate is dry subhumid mesothermal with dry summers and cool moist winters. Mean annual precipitation is 12 to 20 inches. Mean annual temperature is about 62 ºF; average January temperature is about 53 ºF; average July temperature is about 70 ºF. The frost-free season is 270 to 350 days.

Drainage and Permeability: Moderately well drained; medium to rapid runoff; very slow permeability.

Use and Vegetation: Used for production of citrus, pasture, range, barley, and for urban development. Principal vegetation is annual grasses and forbs with some scattered low-growing brush.

Distribution and Extent: Southern California. The series is of moderate extent in MLRA 19.

Taxonomic Class: Fine-loamy, mixed, superactive, thermic Typic Palexeralfs.

Xeralfic Arents, Loamy

Xeralfic Arents, loamy, are moderately well drained or well drained soils. About 85 percent of the acreage is cut and fill land, and 15 percent undisturbed soil. Cut and fill land is the result of mechanical manipulation of terrace areas, usually of Myford and Yorba soils or other similar soils, for urban use. The building pads are nearly level. Elevation ranges from 50 to 1,500 feet. Precipitation is 12 to 16 inches, and the mean annual air temperature is about 61 ºF. The frost-free season is 300 to 350 days.

The texture of Xeralfic Arents, loamy, is generally sandy clay loam when reshaping is completed. Colors vary in 5YR, 7.5 YR, and 10 YR hue. Most characteristics of the undisturbed soil have been altered because of mechanical mixing. Few remnants of former argillic horizons remain, and they are not continuous.

Reaction ranges from slightly acid to moderately alkaline. Permeability is slow to very slow depending on compaction and mixing during construction. The shrink-swell hazard is moderate to high.

APPENDIX D

MITIGATED NEGATIVE DECLARATION

APPENDIX E

RESULTS OF FOCUSED SURVEYS FOR THE SOUTHWESTERN WILLOW FLYCATCHER AND LEAST BELL'S VIREO

This Report Can Be Found As Attachment 4 Of The MND