Appendix E: Southern Los Cerritos Wetlands Restoration Project – Jurisdictional Delineation Report

SOUTHERN LOS CERRITOS WETLANDS RESTORATION PROJECT

Jurisdictional Delineation Report

PREPARED FOR: LOS CERRITOS WETLANDS AUTHORITY 100 Old San Gabriel Canyon Road Azusa, CA 91702

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Jurisdictional Delineation Report: Southern Los Cerritos Wetlands Restoration Project

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Acronyms and Abbreviations

ACOE Army Corps of Engineers

Cal-IPC California Invasive Plant Council

CCA California Coastal Act

CCC California Coastal Commission

CDFW California Department of Fish and Wildlife

CFR Code of Federal Regulations

CSLC California State Lands Commission

CPRC California Public Resource Code

CWA Clean Water Act

CWC California Water Code

GPS Global Positioning System

JDR Jurisdictional Delineation Report

LCW Los Cerritos Wetlands

LCWA Los Cerritos Wetlands Authority

MCVII A Manual of California Vegetation, Second Edition

MHTL Mean High Tide Line

NWI National Wetlands Inventory

OHWM Ordinary High Water Mark

RHA Rivers and Harbors Act

RWQCB Regional Water Quality Control Board

SLR Sea Level Rise

USDA United States Department of Agriculture

USEPA United States Environmental Protection Agency

USFWS United States Fish and Wildlife Service

USGS United States Geological Survey



1.0 Introduction

This report presents the preliminary findings of potential U.S. Army Corps of Engineers (ACOE) and California Coastal Commission (CCC) jurisdiction over the project area associated with the Southern Los Cerritos Wetlands Area. The results of the report will also discuss the potential jurisdictions of California Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW).

1.1 Project Location

The project area is primarily located approximately 0.08 miles southeast of the San Gabriel River Pacific Coast Highway Bridge in the City of Seal Beach, California in the County of Orange (Exhibit A). The Project's central geographic location is Latitude 33.751066°; Longitude -118.099411° primarily in section 11 of Township 5 South, and Range 12 West, on the United Stated Geological Survey (USGS) Seal Beach and Los Alamitos 7.5-minute series topographical quadrangles. The project area is bounded by the San Gabriel River to the west, oil extraction operations to the north, and residential neighborhoods and park space to the east and south (Exhibit B). The property is bordered by industrial, open space and residential land uses.

The property is currently accessible from Pacific Coast Highway via 1st street which extends through the property and leads to the neighboring oil operations. This asphalt access road bisects the site and is subject to several easements for other landowners and for the utilities that run parallel to it both above and below ground. The site is currently closed to the public and is only accessible during public programming or with prior approval from the property owner. The main 100-acre parcel is owned by the Los Cerritos Wetlands Authority (LCWA) who controls access to the property's gates that connect to trails and old maintenance roads that traverse the site. A small 5-acre parcel that the project area partially covers is owned by the California State Lands Commission who the LCWA has a long-term access agreement with to manage that property.

1.2 Project Description

The Los Cerritos Wetlands Authority (LCWA) is a governmental entity developed in 2006 by a joint powers agreement between the State Coastal Conservancy, the Rivers and Mountains Conservancy, and the cities of Seal Beach and Long Beach. It was created with the purpose "to provide for a comprehensive program of acquisition, protection, conservation, restoration, maintenance and operation, and environmental enhancement of the Los Cerritos Wetlands area consistent with the goals of flood protection, habitat protection and restoration, and improved water supply, water quality, groundwater recharge, and water conservation." The LCWA has acquired 165 acres of coastal habitat since its inception. This acreage includes the 100-acre South LCWA Site (AKA Hellman Ranch Lowlands) which falls completely within the proposed project boundary. A majority of the site is comprised of native coastal salt marsh habitat as well as areas occupied by non-native plant species alliances. Mixed in with this are features such as a tidal creek, salt flats, tidal flats, utilities, a developed asphalt roadway, dirt maintenance roadways, dumped fill, and various manmade remnants that have accumulated over time. The 103.54 acre project area also includes 3.5 acres of a parcel of land owned by the California State Lands Commission with whom the



LCWA holds a non-exclusive lease agreement to manage the property. The State Lands Parcel Site is comprised of a mix of tidal wetland in the northern portion of the property where the culvert connects to the San Gabriel River. The majority of this parcel is comprised of a concrete pad that is approximately 0.83 acres. The remaining portion to the southern end of the property was also developed and currently occupied by degrading asphalt that is being covered in various non-native plant species as well as patches of the special status plant species Southern Tarplant (*Centromadia parryi* ssp.*australis*).

The Southern Los Cerritos Wetlands Area is part of the first phase of restoration of the overall Los Cerritos Wetlands Complex that encompasses approximately 503 acres of coastal habitat, both land and water. This restoration project area has been subject to historical degradation and fragmentation and is in need of improved tidal connection as well as other restorative measures in order to improve the site's ecological function and protect the local area from sea level rise due to climate change (Coastal Restoration Consultants, 2021).

The purpose of the proposed project is to restore and enhance the ecological and biological function of historic wetland and transitional habitats as well as provide opportunities for public access. This project will design a tidal wetland restoration plan that takes into consideration sea level rise, cultural resources, the local community, and other private and public entities. Dredging, moving of fill, and removal of contaminated material will likely need to take place throughout the site in order to achieve the goal of maximizing contiguous tidal salt marsh habitat. Currently tidal waters enter the project area through an approximately 48-inch-wide culvert connected to the San Gabriel River. While this culvert does provide some tidal prism, it is heavily muted due to the size and position of this culvert. Therefore, the project will be aiming to create improved tidal connections and is targeting the adjacent Haynes Cooling Channel to achieve this objective. Additionally, there are possible opportunities to work with local surrounding landowners to create a more optimal tidal connection that would allow for higher rates of hydrologic exchange between the marsh and the ocean.



2.0 Methodology

2.1 Presurvey Investigations

A distinct project boundary was determined prior to conducting formal investigations in the field for this Jurisdictional Delineation Report (JDR). The extent of the project boundary was designed to encompass all the areas with potential for overlap with the project activities. Once the boundary was finalized, Tidal Influence wetland ecologists closely reviewed former reports, aerial photographs, and topographic maps of the site to determine areas that were critical to investigate in the field. A grid was overlain on the project area and potential sampling points were chosen where the grid intersected areas that were potential waters of the U.S. and State (including wetlands). The National Wetland Inventory (NWI) was also utilized to create a map of potential wetlands (Exhibit C). While the NWI map was helpful to project potential sampling points it was limited in its accuracy and did not fully capture tidal wetlands within the project boundary. Due to this limitation, previous reports investigating the property were used in conjunction with the NWI map to gain a better understanding of where the current wetland areas potentially occurred. Specifically, a Jurisdictional Delineation of Wetlands and Waters of the United States conducted by Chambers Group, Inc in June 1996 was used in conjunction with other literature from the Los Cerritos Wetlands Restoration Project Program EIR (PEIR) to understand and verify locations of jurisdictional areas throughout the project area.

2.2 Field Survey

The fieldwork for this investigation was conducted by Tidal Influence ecologists Eric Zahn, Marcelo Ceballos, Hannah Craddock, Mark Hannaford, Wanisa Jaikwang, and Jesse Aragon on February 19th, February 26th, March 5th, March 12th, and May 24th, 2021. Previous wetland delineation and biological assessment reports were utilized prior to field visits to select initial survey points. The remotely selected points were shifted based on field conditions and the exact locations were documented with a handheld Trimble Geo 7X handheld Global Positioning System (GPS) device with sub-meter accuracy and marked with a flag. All ecological observations were documented during these field surveys.

Vegetation and land cover data collected for the PEIR in 2018 by Coastal Restoration Consultants were used as reference to delineate jurisdictional waters (including wetlands) occurring within the project area on March 12th, 2021. The Jurisdictional Wetlands Determination Report by Chambers Group from 1996 was also referenced during the preliminary literature investigation. This vegetation data was expanded upon during additional biological surveys when newly encountered plant species and/or communities were observed. A total of 18 soil sampling points were analyzed for potential jurisdictional waters/wetlands (Exhibit D). Each of these 18 points were evaluated according to routine wetland delineation procedures described in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual (Wetland Manual) and the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0.

At each sample point, the existence of significantly disturbed conditions, naturally problematic conditions, and "normal circumstances" were considered and recorded on the Wetlands Determination Data Form



for the Arid West Region. All notable site conditions were recorded including observations of recent restoration activity or management of that area as wetlands.

Within an approximately 2-meter squared area around the sample point, the dominant and subdominant plant species were identified, and the wetland indicator status was noted for each plant species. A sampling location was determined to support hydrophytic vegetation if more than 50% of the dominant species were listed as Obligate (OBL), Facultative Wetland (FACW), or Facultative (FAC) species on the Army Corps of Engineers' National Wetland Plant List (Lichvar et al., 2016) or if the hydrophytic plant prevalence index was less than or equal to 3.0.

A soil pit was dug at each of the points to investigate soil characteristics and the potential for hydric soil indicators. All soil pits (field data points for soil inspection and observation) were dug to a depth of 20 inches below natural grade or to the point of obstruction (e.g., compaction or debris) if a 20-inch-deep soil pit was not possible. Soil pits were located in obvious wetland and non-wetland areas to determine the wetland/non-wetland boundary and the presence or absence of hydric soils. Each pit was examined for changes in texture with depth. The depth of each soil texture type was indicated, and soil matrix colors were determined and recorded for each soil texture type according to the Munsell Soil Color Charts (2009). Subsurface soil taken from soil pits was also analyzed visually for redoximorphic features and other hydric soil indicators using *Field Indicators of Hydric Soils in the United States: A guide for Identifying and Delineating Hydric Soils* (USDA, 2006). A sampling location was determined to support hydric soils if at least one hydric soil indicator was present in the soil pit or if problematic hydric soils indicators were observed.

Finally, each sample point was surveyed for the presence of wetland hydrology indicators, including primary indicators like surface water, saturation, biotic crust, salt crust, aquatic invertebrates, and/or other primary wetland hydrology indicators; and secondary indicators like drainage patterns, saturation visible on aerial imagery, and/or other secondary wetland hydrology indicators. Soil pits were utilized to determine the presence or absence of many of these indicators. A sampling location was determined to support wetland hydrology if at least one primary indicator or at least two secondary indicators were observed.

Field data collected by hand on the wetland determination data forms were transcribed to electronic copies during which any existing data gaps were filled and all data was processed to ensure data quality assurance and quality control.



3.0 Regulatory Jurisdictions

The Southern Los Cerritos Wetlands Restoration Project area is located within the city of Seal Beach, California and it contains potential wetland and other aquatic features, environments, and habitats. These waters and wetland features are regulated under federal and state laws. Each of the laws are administered independently and in coordination by the following federal and state agencies: ACOE, United States Fish and Wildlife Service (USFWS), the United States Environmental Protection Agency (USEPA), CCC, CDFW and RWQCB.

If determined applicable by the respective agencies, this JDR provides information for the LCWA to apply for the following authorizations, permits, and policy compliance:

3.1 Federal Regulations

- Section 404 of the Clean Water Act (CWA) (as regulated by ACOE and USEPA)
- Section 401 of the CWA (as regulated by RWQCB)
- Section 10 of the Rivers and Harbors Act (RHA) (as regulated by ACOE)
- Executive Order 11990 (federal protection of wetlands; regulated by relevant federal agencies)

3.2 State of California Regulations

- California Public Resource Code (CPRC) Division 20 Section 30000 et seq. (California Coastal Act; as regulated by the CCC)
- Section 13000 et seq. of the California Water Code (CWC) (the 1969 Porter-Cologne Water Quality Act; as regulated by RWQCB)
- California Fish and Wildlife Code (CFWC) Chapter 6 Section 1600 et seq. (as regulated by CDFW)
- CPRC Division 5 Chapter 7 Section 5810 et seq. (preservation of wetlands; as administered by CDFW and other relevant state resource agencies)
- Executive Order W-59-93 (state policy guidelines for wetlands conservation)

3.3 Description of Federal Regulations

3.3.1 Clean Water Act (CWA)

Pursuant to Section 404 of the CWA, ACOE regulatory jurisdiction is built upon a connection or nexus between the water body and interstate commerce. The connection may be direct, through a tributary system linking a stream channel with navigable waters used in interstate or foreign commerce, or indirect, through a nexus identified in the ACOE regulation. ACOE regulates any activity that would result in the discharge of dredged or fill material into jurisdictional waters of the U.S., which include those waters listed in 33 Code of Federal Regulations 328. ACOE has the principal authority to issue CWA Section 404 Permits with review by the USEPA. The RWQCB certifies that any discharge into jurisdictional waters of the U.S. will comply with state water quality standards, pursuant to Section 401 of the CWA. RWQCB is the lead authority to determine a CWA Section 401 Water Quality Certification or Waiver according to the USEPA.



3.3.2 Rivers and Harbors Act (RHA)

The ACOE regulates discharges of dredged or fill material into waters of the United States. These waters include wetland and non-wetland bodies of water that meet specific criteria. Pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 US Code [u.s.c.] 403), ACOE regulatory jurisdiction, regulates almost all work in, over, and under waters listed as "navigable waters of the U.S." The ACOE regulates activity that results in the alteration of a navigable water of the United States, including the excavation or filling of any such water.

3.3.3 Executive Order 11990

Each federal agency is responsible for preparing the implementing procedures for carrying out the provisions of the Executive Order (EO) 11990. The EO's purpose is to "minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands." Each agency must avoid undertaking, or providing assistance, for any destructive or degrading activity located in wetlands unless the head of the agency finds that there is no "practical alternative" to such activity to the extent permitted by law. Additionally, public review of any plans or proposals for new construction in wetlands must be provided.

3.4 Description of State Regulations

3.4.1 California Coastal Act (CCA)

The California Coastal Commission regulates for coastal resources within the Coastal Zone under jurisdiction of the California Coastal Act of 1976 (CCA), pursuant to Section 30000 et seq. of the CPRC. Of important note for Jurisdictional Delineations of California projects, the CCC retains authorization, permitting, and policy compliance jurisdiction over any portion of a project that is in state waters, on land up to the mean high tide line (MHTL), lands subject to the public trust, or at the discretion of CCC.

3.4.2 Lake and Streambed Alteration Program

The California Department of Fish and Wildlife is authorized to regulate activity that would alter the flow, bed, channel, or bank of streams and lakes, pursuant to Section 1600 et seq. of the CDFW. The channel, bed, or bank of a lake, river, or stream comprises the jurisdictional waters of the state. The CDFW extends its jurisdictional limit to the top of the bank of a stream or lake, or to the continuous outer edge of its riparian extent, whichever is wider.

3.4.3 Porter-Cologne Water Quality Control Act

In addition to the federal CWA regulatory jurisdiction of the RWQCB mentioned above, the RWQCB is authorized to regulate activity that would result in discharge of waste and fill material to waters of California (including saline waters), "isolated" waters and/or wetlands (e.g., vernal pools and seeps), and groundwater within the boundaries of the state (CWC § 13050[e]), pursuant to Section 13000 et seq. of the CWC (the 1969 Porter-Cologne Water Quality Control Act [Porter-Cologne]). RWQCB also adopts and implements water quality control plans that are designed to maintain each region within the state's



"unique characteristics" with regard to natural water quality, actual and potential beneficial uses, maintaining water quality, and addressing the water quality problems of that region. Beneficial uses of state waters are identified within the Porter-Cologne Act that may be protected against degradation and include preservation and enhancement of fish, wildlife, designated biological habitats of special significance, and other aquatic resources or preserves.

3.5 Definition of Wetlands

The jurisdictional regulations of the various federal and state agencies are further utilized to establish the appropriate definition of "wetlands" of a particular study site. The project area is subject to the wetland definitions identified by various characteristics as outlined by the United States Army Corps of Engineers, United States Fish and Wildlife Service, the California Coastal Commission and the California Department of Fish and Wildlife. Each agency, working in accordance to their legislative authority, defines "wetlands" differently and each definition is referenced to identify jurisdictional authority.

3.5.1 Federal Wetlands Definitions

The term "waters of the United States" most often encompasses all federal wetlands and is defined in Corps regulations at 33 CFR Part 328.3(a) as:

- "(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect foreign commerce including any such waters:
 - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (iii) Which are used or could be used for industrial purpose by industries in interstate commerce...
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) Tributaries of waters identified in paragraphs (a) (1)-(4) of this section;
- (6) The territorial seas;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1)-(6) of this section."



In the absence of wetlands, the limits of Corps jurisdiction in non-tidal waters, such as intermittent streams, extend to the OHWM which is defined at 33 CFR 328.3(e) as:

"...that line on the shore established by the fluctuation of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Federal definitions of what constitutes "wetlands" are primarily derived from two Federal Agencies: the United States Army Corps of Engineers and the United States Fish and Wildlife Service. The USFWS wetland definition and classification system is based on Classification of Wetland and Deepwater Habitats of the United States (Cowardin et al. 1979); however, the ACOE definition is used for regulatory purposes. Wetland delineations for Section 404 purposes as regulated by the ACOE must be conducted according to the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Regional Supplement ACOE 2006) and the Corps of Engineers 1987 Wetland Delineation Manual. Where there are differences between the two documents, the Regional Supplement takes precedence over the 1987 Manual.

The ACOE defines wetlands as:

"Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions."

A federal jurisdictional wetland delineation states that an area must possess three wetland characteristics:

1) hydrophytic vegetation, 2) hydric soils, and 3) wetland hydrology. The wetland characteristics have mandatory criteria that must be satisfied for that particular characteristic to be met. The indicators may be analyzed to determine whether the criteria are satisfied and are listed below.

Hydrophytic Vegetation

Hydrophytic vegetation is plant life that is adapted for life in permanently or periodically saturated soil identified according to a wetland indictor category as included on the Army Corps of Engineers' National Wetland Plant List (Lichvar et al., 2016). The different indicator categories are based on the probability of occurrence in wetlands: Obligate Wetlands (OBL), Facultative Wetlands (FACW), Facultative (FAC), Facultative Upland (FACU), and Obligate Upland (UPL). The Obligate Wetlands, Facultative Wetlands and Facultative categories are considered hydrophytic and the delineation of the hydrophytic vegetation is based on more than 50 percent of the plant species identified in these three categories.

If the plant community passes the dominance test or prevalence index, the vegetation is considered hydrophytic. The dominance test uses the "50/20" rule from the Regional Supplement for determining dominant species. The most abundant species that exceed 50 percent of the total sample survey, plus



additional species that comprise 20 percent of the total dominance measure, indicate dominance. The prevalence index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and weighting is by abundance (percent cover). It is a more comprehensive analysis of the hydrophytic status of the community than one based on just a few dominant species

Vegetation alliances identified on the site follows *A Manual of California Vegetation*, *Second Edition* (MCV II; Sawyer et al., 2009). The MCV II was also used for the Biological Resources Report prepared for the Project and its use in this report ensures consistency.

Hydric Soils

Soils defined as hydric soils form under conditions of "saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part." Hydric soils are defined when one or more of the following criteria are met: all histels except folistels and histosels except folists; or soils that frequently ponded for long duration or very long duration during the growing season; or soils that are frequently flooded for long duration or very long duration during the growing season. Hydric soils are developed when microbial activity causes oxygen depletion with conditions of saturation and hydrologic inundation. Microbial activity is limited to the growing season and when the soil temperature is above biological zero. The Regional Supplement is used to identify hydric soils under a variety of field indicators that include: hydrogen sulfide generation; accumulation of organic matter; and reduction, translocation, and/or accumulation of iron and other reducible elements.

Wetland Hydrology

Wetland hydrology can be a challenging criterion to measure in the field due to variations in water availability seasonally and annually. Visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels are some of the indicators used to identify wetland hydrology. Wetland hydrology is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season.

3.5.2 State of California Definition of Wetlands

The State of California applies a broader definition of what constitutes a "wetland" than the Federal government. Two primary State agencies are responsible for defining "wetlands", the California Coastal Commission and the California Department of Fish and Wildlife. The CDFW essentially relies on the USFWS wetland definition and classification system based on Classification of Wetland and Deepwater Habitats of the United States (Cowardin et al. 1979). The CDFW acts as a primary consultant to the CCC and the CCC regulates wetland delineation within what is identified as the Coastal Zone along the coast of California. Through provisions of the California Coastal Act, jurisdictional wetland delineations within the Coastal Zone are conducted based on the "one-parameter method" to define the presence and jurisdictional extent of state wetlands. Under the CCA, wetlands are defined as follows:



"land within the Coastal Zone [that] may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens".

Additionally, wetlands are further defined as:

"land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats (14 CCR Section 13577)."

Both the Federal and State definitions focus on the three fundamental wetland characteristics: hydrology, soils, and vegetation. While the ACOE definition requires the existence of all three wetland characteristics for an area to be considered a wetland, the CCC's definition of wetlands is based on the existence of only two characteristics: wetland hydrology sufficient to either support a prevalence of hydrophytic vegetation or promote the formation of hydric soils.

It is noted that, under circumstances, reliable indicators of all required characteristics are not necessarily apparent, and areas may be delineated as wetlands by the ACOE on the basis of indicators of only two of the three characteristics. The CCC routinely makes jurisdictional wetlands determinations based on the presence of one characteristic indicator (i.e., wetland soils or vegetation) under the assumption that wetland hydrology must be present in order for the indicator to be present. Nevertheless, the presence of wetland hydrology during some portion of most years is fundamental to the existence of any wetland, and the CCC will sometimes disregard vegetation or soil indicators when there is sufficient evidence to conclusively refute the presence of wetland hydrology.



4.0 Results

Potential jurisdictional waters (including wetlands) occurring within the project area were delineated and mapped based on federal and state delineation guidance, methodology, and regulatory framework and code, as described above. For the purposes of this site, the jurisdictions for ACOE and CCC were determined for the federal and state jurisdictions, respectively. CDFW jurisdictions were also determined for this site due to its proximity and connection to the San Gabriel River. Jurisdiction areas can be seen graphically on the attached aerial maps (Exhibits E, F, G, H, I).

All federal waters and wetlands (including final acreages and types) delineated within this survey area are considered potential waters of the U.S. prior to a formal jurisdictional determination performed by ACOE. The final determination issued by ACOE may remove or include portions of delineated waters documented in this JDR.

The total area of potential waters of the U.S. and State (including wetlands) within the survey area and a general discussion of the policy governing these regulated areas is provided below. Per ACOE mapping guidelines, the results were mapped on a current color aerial photograph at a scale of 1 inch = 200 feet (Exhibit E), however, an overview map of the entire survey area is shown in Exhibit B. Refer to the attached Wetlands Determination Data Forms (Appendix A) for a full description of sample point results.

4.1 Vegetation

A list of hydrophytic plant species identified within the project area is provided in Table 1. A total of 15 vegetation alliances or communities equaling 92.83 acres were identified within the project area that have potential to be defined as containing hydrophytic plant species that when prevalent could potentially meet the criterion for ACOE or CCC jurisdictional wetlands (Table 2, Exhibit J).

Table 1. Hydrophytic plant species identified with the project boundary.

Scientific Name	Common Name	Wetland Indicator Status	Non- Native	Cal-IPC rating
Tree Species Growth Habit				
Eucalyptus globulus	Tasmanian Bluegum	FACU*	Х	limited
Myoporum laetum	Ngaio Tree	FACU	Х	moderate
Nicotiana glauca	Tree Tobacco	FAC	Х	moderate
Phoenix canariensis	Canary Island Palm	FACU*	Х	limited
Schinus terebinthifolius	Brazilian Pepper Tree	FAC	Х	moderate
Washingtonia robusta	Mexican Fan Palm	FACW	Х	moderate
Shrub Species Growth Habit				
Artemisia californica	California Sagebrush	FACU*		
Atriplex lentiformis	Big Saltbush	FAC		
Baccharis pilularis	Coyote Brush	FAC		



Scientific Name	Common Name	Wetland Indicator Status	Non- Native	Cal-IPC rating
Baccharis salicifolia	Mulefat	FAC		
Isocoma menziesii	Menzies' Goldenbush	FAC		
Peritoma arborea	Bladderpod	FACU*		
Ricinus communis	Castor Bean	FACU	Х	limited
Herbaceous Species Growth Habi	it			
Ambrosia psilostachya	Western Ragweed	FACU		
Anemopsis californica	Yerba Mansa	OBL		
Arthrocnemum subterminale	Parish's Glasswort	OBL		
Atriplex semibaccata	Australian Saltbush	FAC	Х	moderate
Bassia hyssopifolia	Five Horn Bassia	FACU	Х	limited
Batis maritima	Saltwort	OBL		
Brassica nigra	Black Mustard	FACU*	Х	
Bromus diandrus	Ripgut Brome	UPL*	Х	moderate
Bromus madritensis	Foxtail Brome	FACU*	Х	
Camissoniopsis lewisii	Lewis' Evening Primrose	FACU*		
Carpobrotus edulis	Hottentot-fig	FACU*	Х	high
Centaurea melitensis	Tocalote	UPL	Х	moderate
Centromadia parryi australis	Southern Tarplant	FACW		
Cirsium vulgare	Bull Thistle	FACU	Х	moderate
Conium maculatum	Poison Hemlock	FACW	Х	moderate
Cressa truxillensis	Alkali Weed	FACW		
Cuscuta salina	Saltmarsh Dodder	FACW		
Distichilis littoralis	Shoregrass	OBL		
Distichlis spicata	Salt Grass	FAC		
Dittrichia graveolens	Stinkwort	UPL	Х	moderate
Eleocharis macrostachya	Common Spikerush	FACW		
Erodium cicutarium	Coastal Heron's Bill	FACU*	Х	limited
Frankenia salina	Alkali Heath	FACW		
Foeniculum vulgare	Sweet Fennel	UPL*	Х	moderate
Galium angustifolium	Narrowleaf Bedstraw	FACU*		
Glebionis coronaria	Crown Daisy	UPL*	Х	limited
Heliotropium curassavicum	Seaside Heliotrope	FACU		
Heterotheca grandiflora	Telegraph Weed	FACU*		
Hirschfeldia incana	Short Podded Mustard	UPL*	Х	moderate
Lactuca serriola	Prickly Lettuce	FACU	Х	
Laennecia coulteri	Coulter's Horseweed	FAC		
Limonium californicum	California Sealavender	FACW		
Lysimachia arvensis	Scarlet Pimpernel	FAC	Х	



Scientific Name	Common Name	Wetland Indicator Status	Non- Native	Cal-IPC rating	
Herbaceous Species Growth Habit					
Lycium californicum	California Boxthorn	FAC*			
Marrubium vulgare	White horehound	FACU	Х	limited	
Malephora crocea	Coppery Mesembryanthemum	FACU	Х	watch	
Malva parviflora	Cheeseweed Mallow	FACU*	Х		
Melilotus albus	White Sweetclover	FACU*	Х		
Melilotus indicus	Annual Yellow Sweetclover	FACU	Х		
Mesembryanthemum crystallinum	Crystalline Iceplant	FACU	Х	moderate	
Mesembryanthemum nodiflorum	Slender Leaved Ice Plant	FACU	Х	limited	
Oxalis pes-caprae	Bermuda Buttercup	FACU*	Х	moderate	
Polypogon monspeliensis	Rabbit's Foot	FACW	Х	limited	
Pseudognaphalium luteoalbum	Jersey Cudweed	FACW	Х		
Pulicaria paludosa	Spanish False Fleabane	FAC	Х		
Raphanus sativus	Wild Radish	FACU*	Х	limited	
Rumex crispus	Curly Dock	FAC	Х	limited	
Salicornia bigelovii	Bigelow's Pickleweed	OBL			
Salicornia pacifica	Common Pickleweed	OBL			
Salsola tragus	Russian Thistle	FACU	Х	limited	
Sonchus oleraceus	Common Sowthistle	UPL	Х		
Spergularia marina	Salt Marsh Sand Spurry	OBL			
Symphyotrichum subulatum	Saltmarsh Aster	OBL			
Triglochin concinna	Slender Arrow-Grass	OBL			
Urtica dioica	Stinging nettle	FAC			
Xanthium strumarium	Cocklebur	FAC			

Wetland Indicator Status Abbreviations and Meanings:

OBL – Obligate Wetlands Species. Occur almost always in wetlands.

FACW – Facultative Wetland Species. Usually occur in wetlands, but occasionally found in non-wetlands.

FAC – Facultative Species. Equally likely to occur in wetlands and non-wetlands.

FACU – Facultative Upland Species. Usually occur in non-wetlands but occasionally found in wetlands.

UPL – Obligate Upland Species. Almost always occur under natural conditions in non-wetlands.

* Not listed on National Wetlands List



Table 2. Total acreages of vegetation alliances and land cover types observed within the project boundary.

Vegetation Alliance	Acres
Cressa truxillensis - Distichlis spicata Herbaceous Alliance	1.43
Distichlis spicata Herbaceous Alliance	0.44
Salicornia pacifica Herbaceous Alliance	20.62
Frankenia salina Herbaceous Alliance	2.77
Ulva lactuca Algal Mat	1.54
Arthrocnemum subterminale Herbaceous Alliance	0.31
Heterotheca grandiflora Herbaceous Stand	5.48
Isomeris arborea (Peritoma arborea) Shrub Stand	0.04
Isocoma menziesii Shrubland Alliance	1.52
Baccharis salicifolia Shrubland Alliance	0.58
Bassia hyssopifolia Semi-Natural Herbaceous Stand	0.96
Brassica nigra and other mustards Herbaceous Semi-Natural Alliance	45.34
Bromus diandrus – Bromus rubens Semi-Natural Herbaceous Stand	4.67
Conium maculatum – Foeniculum vulgare Herbaceous Semi-Natural Alliance	2.91
Mesembryanthemum spp. – Carpobrotus spp. Herbaceous Semi-Natural Alliance	4.49
Ornamental	0.35
Disturbed – mowed/disked fire break	0.06
Unvegetated Salt Flat	2.93
Unvegetated Tidal Flat	3.40
Developed	3.70
TOTAL	103.54

Vegetation Alliance and Land Cover Type Descriptions

<u>Cressa truxillensis - Distichlis spicata</u> Herbaceous Alliance: A total of 1.43 acres of this alliance was identified within the project boundary (Table 2). Alkali weed (*Cressa truxillensis*, FACW) and salt grass (*Distichlis spicata*, FACW) are characteristically present in this alliance with a variety of species that include alkali heath (*Frankenia Salina*, FACW) and species similar to alkali mallow (*Malvella leprosa*, FACU) which can be found within the Los Cerritos Wetlands however is not present in this portion of the wetlands. This alliance is found on the edges of *Salicornia pacifica* stands within the property but above the high tide line and was observed in areas where hydric soils and wetland hydrology indicators were not present on site. Therefore, areas where this alliance are present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Distichlis spicata</u> Herbaceous Alliance (Salt grass flats): A total of 0.44 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by salt grass (*Distichlis spicata*, FAC) with a co-dominance of alkali heath (*Frankenia salina*, FACW), saltwort (*Batis maritima*, OBL), common pickleweed (*Salicornia pacifica*, OBL), alkali weed (*Cressa truxillensis*, FACW), and may also support nonnative upland grasses and forbs. This species often forms monotypic stands when it is found above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, in some



instances locations where this alliance is present will not meet the ACOE's three criteria threshold for wetland waters of the U.S.

Salicornia pacifica Herbaceous Alliance (Pickleweed mats): A total of 20.62 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by Common Pickleweed (Salicornia pacifica, OBL) that mixes with other co-dominant species including salt grass (Distichlis spicata, FAC), fleshy jaumea (Jaumea carnosa, FACW), alkali heath (Frankenia salina, FACW), saltwort (Batis maritima, OBL) and sea lavender (Limonium californicum, FACW). Intermixing with the co-dominant species commonly occurs within the tidal reaches of the site, meanwhile, this species often forms monotypic stands when it is found above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, in some instances locations where this alliance is present will not meet the ACOE's three criteria threshold for wetland waters of the U.S.

<u>Frankenia salina</u> Herbaceous Alliance: A total of 2.77 acres of this alliance was identified within the project boundary (Table 2). While alkali heath (*Frankenia salina*, FACW) is common in a variety of alliances, there are numerous locations throughout site where it is found in predominantly monotypic stands. Co-dominant plant species for this alliance commonly include salt grass (*Distichlis spicata*, FAC), alkali heath (*Frankenia salina*, FACW), saltwort (*Batis maritima*, OBL), common pickleweed (*Salicornia pacifica*, OBL), and alkali weed (*Cressa truxillensis*, FACW). This alliance is found above the tidal reaches of the site where hydric soil and wetland hydrology indicators are not present, typically adjacent to pickleweed mats and in upland areas. Therefore, areas where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Ulva lactuca</u> Algal Mat: A total of 1.54 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by the non-vascular algae species sea lettuce (*Ulva lactuca*) and is found exclusively within the tidal channel that allows for tidal flow through the culvert connection. This alliance is found below the high tide line where hydric soil and wetland hydrology indicators are present. Therefore, where this alliance is present will meet the ACOE's criteria threshold for waters of the U.S.

Arthrocnemum subterminale Herbaceous Alliance: A total of 0.31 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by Parish's glasswort (Arthrocnemum subterminale, FACW) or co-dominant in the herbaceous and subshrub layers with alkali weed (Cressa truxillensis, FACW), salt grass (Distichlis spicata, FAC), alkali heath (Frankenia salina, FACW) and Common Pickleweed (Salicornia pacifica, OBL). While Arthrocnemum subterminale can be found in numerous locations throughout the site the largest and most dominant population occurs near an access road toward the northern end of the project site. This alliance is often found outside of the tidal reaches of the site so its presence does not always meet the minimum threshold as waters of the U.S.

<u>Heterotheca grandiflora</u> Herbaceous Stand: A total of 5.48 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by telegraph weed (*Heterotheca grandiflora*, UPL) or co-dominate in the shrub canopy with California sagebrush (*Artemisia californica*, FACU) and coyote brush (*Baccharis pilularis*, FACU). This alliance is found above the tidal reaches of the site in areas where sandy fill material is present and hydric soil and wetland hydrology indicators are typically not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.



<u>Isomeris arborea (Peritoma arborea) Shrub Stand</u>: A total of 0.04 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by bladderpod (*Peritoma arborea*, UPL). This alliance is only found in a single patch on the property outside of the tidal reach where hydric soil and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Isocoma menziesii</u> Shrubland Alliance: A total of 1.52 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by Menzies's golden bush (*Isocoma menziesii*, FAC) or commonly co-dominated in the shrub canopy by California sagebrush (Artemisia californica, FACU), coyote brush (*Baccharis pilularis*, FACU), and Virginia glasswort (*Salicornia depressa*, FACW). This alliance is found in areas above the high tide line where hydric soil and wetland hydrology indicators are typically not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Baccharis salicifolia</u> Shrubland Alliance: A total of 0.58 acres of this alliance was identified within the project boundary (Table 2). In this alliance mulefat (*Baccharis salicifolia, FAC*) is dominant or codominant in the shrub canopy with California sagebrush (*Artemisia californica, FACU*), coyote brush (*Baccharis pilularis, FACU*), and arroyo willow (*Salix lasiolepis, FACW*). This alliance is found in a few patches on the property above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Bassia hyssopifolia</u> Semi-Natural Herbaceous Stand: A total of 0.96 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by five horn bassia (*Bassia hyssopifolia*, FACU) with other California non-native herbaceous species. On the property these stands occur above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Brassica nigra</u> and other mustards Herbaceous Semi-Natural Alliance: A total of 45.34 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by black mustard (*Brassica nigra*, FACU) occurring with other ruderal forbs such as maltese star thistle (*Centaurea melitensis*, FACU) and short podded mustard (*Hirschfeldia incana*, FACU). This alliance occurs above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Bromus diandrus – Bromus rubens Semi-Natural Herbaceous Stand</u>: A total of 4.67 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by ripgut brome (*Bromus diandrus*, FACU) occurring with other non-natives in the herbaceous layer. There is a large single occurrence of this alliance on site that is above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Conium maculatum – Foeniculum vulgare Herbaceous Semi-Natural Alliance</u>: A total of 2.91 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominated by poison hemlock (*Conium maculatum*, FACW) and occurs with other non-native plant species in the herbaceous layer. This alliance occurs above the high tide line where hydric soil and wetland hydrology indicators



are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

Mesembryanthemum spp. – Carpobrotus spp. Herbaceous Semi-Natural Alliance: A total of 4.49 acres of this alliance was identified within the project boundary (Table 2). This alliance is dominant in the herbaceous layer and can contain iceplant (Carpobrotus edulis, FACU), crystalline iceplant (Mesembryanthemum crystallinum, FACU), or other ice plant taxa. Emergent trees and shrubs may also be present at low cover within this alliance. This alliance occurs above the high tide line where hydric soils and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

Ornamental: A total of 0.35 acres of this land cover type was identified within the project boundary (Table 2). This land cover type includes non-native species such as Mexican fan palm (*Washingtonia robusta*, FACW), Brazilian pepper tree (*Schinus terebinthifolia*, FACU), and other various non-native plant species in the shrub and tree stratum. This land cover type occurs primarily around developed areas on the property that are above the high tide line where hydric soils and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Disturbed – mowed/disked fire break</u>: A total of 0.06 acres of this alliance was identified within the project boundary (Table 2). This land cover type consists of a small area adjacent to a perimeter fence line in the upland areas that was disked to reduce the fire risk in the area. This land cover type is above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Unvegetated Salt Flat</u>: A total of 2.93 acres of this land cover type was identified within the project boundary (Table 2). This land cover type consists of areas absent of any vegetation and is above the high tide line but may contain hydric soil indicates such as a salty crust on the soil surface. Given that unvegetated salt flats lack the vegetative cover required to be considered wetland waters, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.

<u>Unvegetated Tidal Flat</u>: A total of 3.40 acres of this land cover type was identified within the project boundary (Table 2). This land cover type is absent of vegetation but occurs below the high tide line. These areas can show hydric soil and wetland hydrology indicators. Therefore, due a lack of vegetation, where this alliance is present will likely not meet the ACOE's criteria threshold for wetland waters of the U.S. but could qualify as waters of the U.S.

<u>Developed</u>: A total of 3.70 acres of this land cover type was identified within the project boundary (Table 2). This land cover type consists of asphalt roads, concrete pads, established dirt roads and other areas developed prior to acquisition by the LCWA. This land cover type occurs above the high tide line where hydric soil and wetland hydrology indicators are not present. Therefore, where this alliance is present will not meet the ACOE's criteria threshold for wetland waters of the U.S.



4.2 Soils

The project site is composed of five types of soils that include: Balcom clay loam, Bolsa silty clay loam, Bolsa drained-Typic Xerorthents, Myford loamy sand, and Urban land of dredged fill substratum (USDA, 2021; Appendix B). Most of the project site is covered by Bolsa drained-Typic Xerorthents and Bolsa silty clay loam. These determinations are also consistent with previous investigation that have taken place on site.

Bolsa drained-Typic Xerorthent soils consist typically of dredge spoils and are somewhat poorly draining, typically occur in filled marshland and tidal marshes and consist of coarse to loamy grain sizes. The average slope in areas with Bolsa drained-Typic Xerorthent soils range from 0 to 2 percent. Bolsa silty clay loam soils consist of fine to silty grain sizes, are somewhat poorly drained and occur in coastal plain areas. Balcom clay loam soils typically exist along hill slopes and drain well. The average slope in areas with Balcom clay loam soils range from 15 to 30 percent. Myford loamy sand soils have moderately well-draining soils, occur in areas with slopes of 2 to 9 percent, and occur along terraces and backslopes. Urban land of dredged fill substratum soils consist of dredged fill and occur in areas with 0 to 2 percent slopes. (USDA, 2021)

The locations of the 18 soil pits used to investigate the presence of hydric soil are depicted in Exhibit D and photographs are displayed in Appendix C. The soil pit locations were chosen to determine if jurisdictional wetlands extended above the Ordinary High Water Mark (OHWM) where indicators of hydrophytic vegetation appeared to be present. Indicators for hydric soils were found in pits 2, 3, 5, 6, 9, 16, and 18. All soil pits were done in Bolsa-type soils, with soil pits 1 and 7 through 18 collected in Bolsa drained-Typic Xerorthents and soil pits 2 through 6 taken in Bolsa silty clay loam. The leading hydric soil indicators were the presence of Redox Dark Surface (F6) and Sandy Redox (S5). Furthermore, no instances of naturally problematic soils were identified, however all 18 locations (sample points 1 through 18) exhibited soils that were identified to be significantly disturbed. This disturbance was indicated by the presence of debris in the form of glass, gravel, debris, and asphalt.

4.3 Hydrology

The presence of wetland hydrology indicators is evident around the entire perimeter of the project area's tidal reaches and is most notably observed by the presence of high tide line water marks and tidal drainages. Of the 18 locations surveyed for the presence of wetlands hydrology, sample points 2, 3, 5, 6, 9, 11, 12, 13, 14, 16, and 18 contained indicators. Of these points, none were within the reach of the highest high tide. The mean high tide line was not delineated in the field due to the fact that this boundary is encompassed by the limits of Section 404 jurisdiction that extends to the highest high-water line.



A total of 3 land cover types were found to contain wetlands hydrology indicators:

Unvegetated Flats: A total of 6.33 acres of this land cover type is found on the site separated into three distinct locations throughout the project area, some of which is tidally influenced, and the remaining is above high tide lines. This land cover type is predominantly fill consisting of a very high salt content that has resulted in the lack of vegetation establishment with some of it being intertidal and some being non-tidal. Wetland hydrology indicators most common on this land cover type was surface soil cracks and salt crust. Most of this unvegetated land cover type is found above the high-tide line and therefore is seasonally flooded by rainfall or other non-tidal inputs and qualifies as non-wetland waters of the U.S.

Southern Coastal Salt Marsh: A total of 25.57 acres of this land cover type is found on the site adjacent to the tidal channel that flows through the project area. A majority of this land cover type is under both federal and state jurisdiction. Most of this vegetated land cover type is found below the high-tide line and therefore is inundated regularly and qualifies as wetland waters of the U.S.

Subtidal Marine: A total of 1.42 acres of this land cover type is found in the form of a tidal channel that nearly bisects the entire project area. All of this land cover type is found below the high tide line and qualifies as waters of the U.S.



5.0 Jurisdictional Determinations

5.1 Jurisdictional Waters of the U.S. and State

The extent of the potential jurisdictional waters of the United States within the project area is 10.69 acres. Within the jurisdictional waters of the United States, 2.44 acres are potentially wetland waters of the United States. The potential jurisdictional wetlands of the State based on the California Coastal Commission's jurisdiction extends beyond the federal jurisdictional and total 27.19 acres within the project area. California Department of Fish and Wildlife potential jurisdictional wetlands covers 1.42 acres within the CCC jurisdictional boundary. A summary of the jurisdictional waters and wetlands of the U.S. and State, with the corresponding regulatory authority, occurring within the survey area, is provided in Table 3 and mapped in Exhibit E.

Table 3. Summary of potential jurisdictional waters of the U.S. & State (*= 0.05 acres extend outside of the project area; **= 0,02 acres extend outside of the project area).

Type of Potential Jurisdictional Waters of the U.S. and State	Regulatory Authority	Acres		
Potential Jurisdictional Waters of the U.S.				
Wetland Waters Section 404	ACOE, USFWS, and RWQCB	2.44*		
Waters of the U.S. Section 10	ACOE, USFWS, and RWQCB	8.25**		
	Subtotal Potential Jurisdictional Waters of the U.S.	10.69		
Potential Jurisdictional Wetlands of the State				
Wetland Waters	ссс	27.19		
	CDFW	1.42		

5.2 ACOE Jurisdiction

5.2.1 ACOE Section 10 Jurisdiction

The project area has a direct connection to the San Gabriel River which is a navigable water of the U.S. that is an extension of the Pacific Ocean (a navigable water of the U.S.). Thus, the marine water within the project area is considered as waters of the U.S. and is subject to ACOE jurisdiction to the mean highwater line under Section 10 of the Rivers and Harbors Act (Exhibit F). This amounts to 8.25 acres of waters of the U.S. on site under the Section 10 definition (Table 3). This amount is lower than previous investigation including the 1995 Chambers Jurisdiction Wetlands Determination which is likely due to habitats shifting overtime due to tidal muting as well as changes in the definitions and determination process of what is considered waters of the U.S.



5.2.2 ACOE Section 404 Jurisdiction

Due to the direct connection with the San Gabriel River, the marine water in the project area is considered as waters of the U.S. and is subject to ACOE jurisdiction at least to the high tide line under Section 404 of the Clean Water Act. There are locations on site where both wetland vegetation and soils are present above the OHWM, so ACOE jurisdiction extends beyond the observed OHWM and are considered as Wetland Waters (Exhibit G). These Wetland Waters account for 2.44 acres on site. This is a decrease compared to previous investigations of the site, but this again is due to habitats shifting over time due to drought conditions as well as changes in the definitions and determination process of what is considered Wetland Waters of the U.S.

Pursuant to the Clean Water Act, ACOE will assert jurisdiction over traditional navigable waters and their adjacent wetlands. This site has a well-documented direct connection to a designated navigable water of the United States. Due to this connection, ACOE will likely verify that a "significant nexus determination" is not required to determine the jurisdictional status of this site. There is a total of 10.69 acres of waters potentially subject to ACOE jurisdiction, of which 8.25 acres is OHWM/Waters of the US and 2.44 acres are wetland waters of the United States. A map of potential ACOE jurisdictional areas is provided in Exhibit E and summarized in Table 3.

5.3 CDFW Jurisdiction

CDFW asserts jurisdiction only over wetland areas that are a part of a river, stream, or lake as defined by CDFW. There is potential that CDFW could determine that this association is present within the survey area due to the connection of the site with the San Gabriel River as well as the overall San Gabriel River Watershed A map showing the potential areas that could be under CDFW jurisdiction is attached as Exhibit H.

5.4 CCC Jurisdiction

Pursuant to the California Coastal Act the CCC will assert jurisdiction over all of the areas satisfying the ACOE jurisdictional criteria for waters and wetlands of the United States. This jurisdictional area usually tends to be more inclusive and extensive than that of ACOE due to the CCC employment of a "one-parameter" approach to delineating jurisdictional wetlands. As described previously CCC wetlands need only contain wetlands hydrology and, hydrophytic vegetation, or hydric soils. Within the project area a total of 27.19 acres are potentially subject to CCC wetland jurisdiction, equaling 16.50 acres more than that of ACOE. This difference is due to areas existing where salt marsh (wetland) vegetation or salt flat habitat extended beyond the limit of the highest high-water line. A map of potential CCC jurisdictional areas is provided in Exhibit I and summarized in Table 3. The 1996 delineation found at total of 23.2 acres of CCC jurisdiction and therefore a larger CCC jurisdiction was identified by this investigation.



6.0 Literature Cited

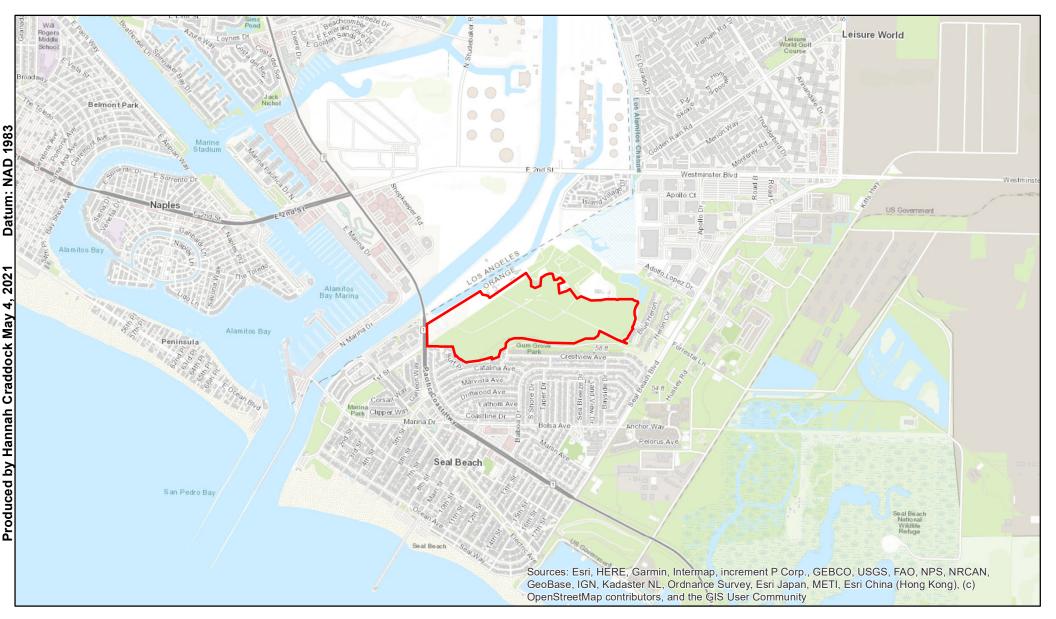
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Exhibit A

Project Vicinity Map



Project Vicinity Southern Los Cerritos Wetlands Area - Seal Beach, CA



1 inch = 2,000 feet

0 900 1,800 3,600 5,400 7,200

Feet





Exhibit B

Project Site Map



Project Site Southern Los Cerritos Wetlands Area - Seal Beach, CA



1 inch = 458 feet

210 420 840 1,260 1,680
Feet





Exhibit C

NWI Potential Wetlands Map

PISHA WILDLIPE SERVICE

U.S. Fish and Wildlife Service

National Wetlands Inventory

LCWA South Area



May 14, 2021

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

011---

Riverine

Other

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Exhibit D

Soil Sample Locations Map



Soil Sample Locations Southern Los Cerritos Wetlands Area - Seal Beach, CA

0 180 360 720 1,080 1,440 Fee

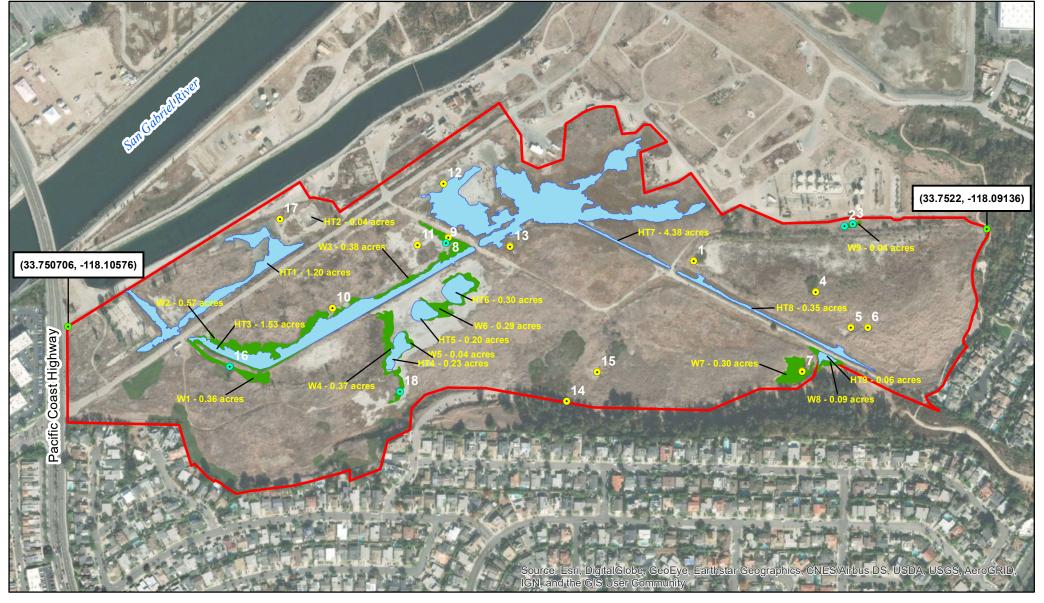






Exhibit E

Jurisdictional Wetland Delineation Map



Jurisdictional Wetland Delineation Southern Los Cerritos Wetlands Area - Seal Beach, CA

180 360 720 1,080 1,440 Fe





Jurisdictional Waters of the U.S. (8.29 acres)

Jurisdictional Wetland Waters of the U.S. (2.44 acres)

- Control Points
- Wetland Sampling Point
- Upland Sampling Point



Coordinate System: NAD 1983 2011 StatePlane California VI FIPS 0406 ft US Projection: Lambert Conformal Conic Datum: NAD 1983 2011 Produced by Hannah Craddock

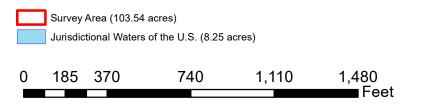
oduced by Hannah Craddock June 17, 2021 1 inch = 458 feet

Exhibit F

Jurisdictional Waters of the U.S. Map



Jurisdictional Waters of the U.S. Southern Los Cerritos Wetlands Area - Seal Beach, CA







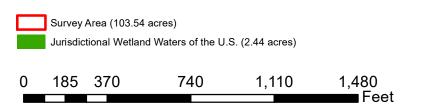
Coordinate System: NAD 1983 2011 StatePlane California VI FIPS 0406 ft US Projection: Lambert Conformal Conic Datum: NAD 1983 2011 Produced by Hannah Craddock June 17, 2021 1 inch = 458 feet

Exhibit G

Jurisdictional Wetland Waters of the U.S. Map



Jurisdictional Wetland Waters of the U.S. Southern Los Cerritos Wetlands Area - Seal Beach, CA







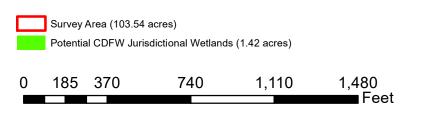
Coordinate System: NAD 1983 2011 StatePlane California VI FIPS 0406 ft US Projection: Lambert Conformal Conic Datum: NAD 1983 2011 Produced by Hannah Craddock June 17, 2021 1 inch = 458 feet

Exhibit H

Potential CDFW Jurisdictional Wetlands Map



Potential California Department of Fish and Wildlife Jurisdictional Wetlands Southern Los Cerritos Wetlands Area - Seal Beach, CA







Coordinate System: NAD 1983 2011 StatePlane California VI FIPS 0406 ft US Projection: Lambert Conformal Conic Datum: NAD 1983 2011 Produced by Hannah Craddock June 17, 2021 1 inch = 458 feet

Exhibit I

CCC Jurisdictional Wetlands Map



California Coastal Commission Jurisdictional Wetlands Southern Los Cerritos Wetlands Area - Seal Beach, CA



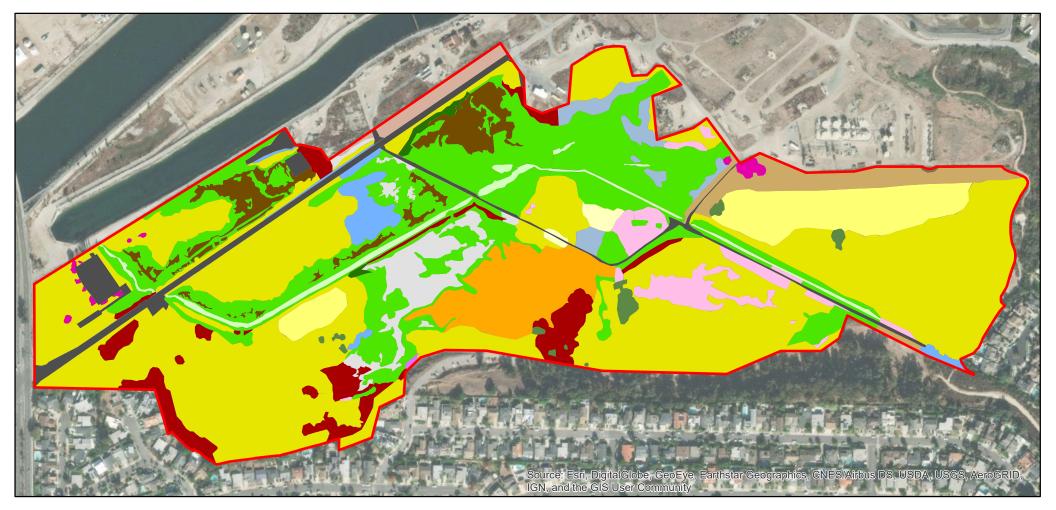




Coordinate System: NAD 1983 2011 StatePlane California VI FIPS 0406 ft US Projection: Lambert Conformal Conic Datum: NAD 1983 2011 Produced by Hannah Craddock June 17, 2021 1 inch = 458 feet

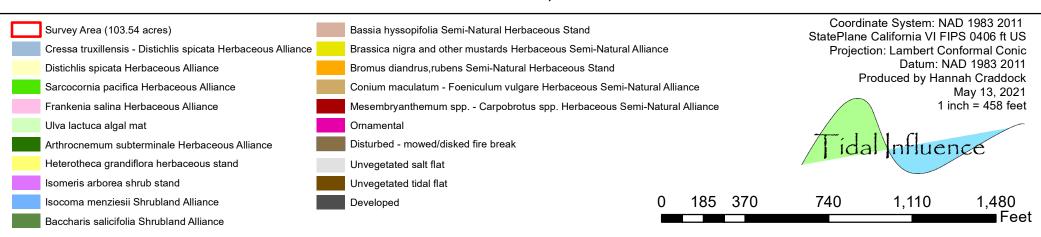
Exhibit J

Vegetation Alliances Map



Vegetation Alliances Southern Los Cerritos Wetlands Area - Seal Beach, CA





Appendix A

Wetland Determination Forms

Project/Site: LCWA South Area	(City/Count	y: <u>Seal Bea</u>	ch/Orange Co	unty	Sampling Date: _	2/19/21
Applicant/Owner: Los Cerritos Wetlands Authority				State:	CA	Sampling Point: _	1
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hannah	Craddocl S	Section, To	ownship, Ra	nge: <u>T5S, R12</u>	W		
Landform (hillslope, terrace, etc.): Terrace		Local relie	f (concave,	convex, none): <u>(</u>	concave	Slop	oe (%): <u>10</u>
Subregion (LRR): LRRC	Lat: <u>33.7</u>	51714 N		Long: <u>-118.0</u>	95969 W	Datur	n: WGS84
Soil Map Unit Name: Bolsa, drained-Typic Xerothents	dredged sp	oil-Typic	Fluvaquer	nts comple NW	/I classifica	ation: PEM1Cx	
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ır? Yes	✓ No_	(If no, ex	plain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology s	significantly o	disturbed?	Are "	Normal Circums	stances" p	resent? Yes	′ No
Are Vegetation, Soil, or Hydrology r							
SUMMARY OF FINDINGS – Attach site map							atures, etc.
Hydrophytic Vegetation Present? Yes N	lo						
Hydric Soil Present? Yes N			he Sampled hin a Wetlar		Vac	No	
Wetland Hydrology Present? Yes N	lo <u> </u>	With	iiii a vvetiai	iu:	165		
Remarks:							
VEGETATION – Use scientific names of plan	ıts.						
,	Absolute	Dominan	t Indicator	Dominance T	est works	sheet:	
Tree Stratum (Plot size:)	% Cover			Number of Do			
1				That Are OBL	, FACW, o	or FAC:1	(A)
2				Total Number			(5)
3				Species Acros	ss All Stra	ta: <u>1</u>	(B)
4				Percent of Do		ecies or FAC: <u> </u>	(A/D)
Sapling/Shrub Stratum (Plot size: 2m)				That Are Obl	, FACVV, C	orfac:i	(A/b)
1. <u>Baccharis salicifolia</u>				Prevalence li			
2						Multiply	-
3						x 1 = x 2 =	
4				FAC species		x2 = x3 =	
5		= Total Co	over	· ·		x 4 =	
Herb Stratum (Plot size: 2m)		Total O		-		x 5 =	
1. Melilotus indicus				Column Total	s: <u>10</u>	<u>0</u> (A)2	270 (B)
2. Conium maculatum				Description		- D/A - 2	7
3						= B/A = 2. n Indicators:	<u>/</u>
4				✓ Dominan			
5 6				✓ Prevalence			
7.				Morpholo	gical Adap	otations¹ (Provide :	supporting
8.						or on a separate	•
		= Total Co	over	Problema	itic Hydrop	hytic Vegetation ¹	(Explain)
Woody Vine Stratum (Plot size:)				1Indicators of	budria aail	and wetland hydro	alagu muat
1			-			rbed or problemat	
2			over	Hydrophytic			
			_	Vegetation		4	
% Bare Ground in Herb Stratum	r of Biotic Cr	ust	0	Present?	Yes	s_ <u> </u>	
Remarks:							

(inches) Color (moist) 0-22 2.5Y, 3/2	%	Color (moist	:) %	Type ¹	Loc ²	Texture	Remarks
	100	N/A	·			Sandy	clay balls
		14/71				Sarray	ciay bans
	 -	-					
		-					
							
Type: C=Concentration, D=D	•				d Sand G		cation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (App	licable to al	•		ed.)			s for Problematic Hydric Soils ³ :
Histosol (A1)			Redox (S5)			·	Muck (A9) (LRR C)
Histic Epipedon (A2) Black Histic (A3)			d Matrix (S6) Mucky Minera	I (E1)			Muck (A10) (LRR B) ced Vertic (F18)
Hydrogen Sulfide (A4)			Gleyed Matrix				Parent Material (TF2)
Stratified Layers (A5) (LR	RC)		ed Matrix (F3)	(1 2)		·	(Explain in Remarks)
1 cm Muck (A9) (LRR D)	,		Dark Surface ((F6)			(=p.a in reconance)
Depleted Below Dark Sur	face (A11)		ed Dark Surfac				
Thick Dark Surface (A12)		Redox	Depressions (I	F8)		³ Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal	Pools (F9)			wetland	hydrology must be present,
Sandy Gleyed Matrix (S4)						unless	disturbed or problematic.
Restrictive Layer (if present):						
Type:							
Depth (inches):						Hydric Soi	l Present? Yes No <u>✓</u>
Remarks:							
YDROLOGY							
YDROLOGY Wetland Hydrology Indicato							
		ed; check all that	apply)			Seco	ndary Indicators (2 or more required)
Wetland Hydrology Indicato		Salt C	crust (B11)			v	Vater Marks (B1) (Riverine)
Wetland Hydrology Indicato Primary Indicators (minimum o		Salt C				v	
Wetland Hydrology Indicato Primary Indicators (minimum o Surface Water (A1)		Salt C Biotic	crust (B11)	s (B13)		v	Vater Marks (B1) (Riverine)
Wetland Hydrology Indicato Primary Indicators (minimum of the control of the cont	of one require	Salt C Biotic Aquat Hydro	Crust (B11) Crust (B12) ic Invertebrate ogen Sulfide Od	dor (C1)		V S C	Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10)
Wetland Hydrology Indicato Primary Indicators (minimum of the control of the cont	of one require verine) Nonriverine	Salt C Biotic Aquai Hydro) Oxidia	Crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe	dor (C1) res along l	-	\ [[ots (C3) [Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) (Nonrir Deposits (B3))	of one require verine) Nonriverine	Salt C Biotic Aquai Hydrc) Oxidiz Prese	Crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe nce of Reduce	dor (C1) res along l ed Iron (C4)	\ E E ots (C3) E	Vater Marks (B1) (Riverine) Gediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hydrology Indicato Primary Indicators (minimum of the surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrive Sediment Deposits (B2) (Indicators) (Nonrive Surface Soil Cracks (B6)	of one require verine) Nonriverine (verine)	Salt C Biotic Aquat Hydrc Oxidi: Prese Recel	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reduction	dor (C1) res along l ed Iron (C4 on in Tilled)	\ C C C C C	Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS
Wetland Hydrology Indicato Primary Indicators (minimum of the control of the cont	of one require verine) Nonriverine (verine) al Imagery (l	Salt C Biotic Aquat Hydro Oxidia Prese Recer B7) Thin N	Crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ince of Reduce nt Iron Reducti Muck Surface (dor (C1) res along led Iron (C4 on in Tilled C7))		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) (In Drift Deposits (B3) (Nonrin Surface Soil Cracks (B6) Inundation Visible on Aeric Water-Stained Leaves (B8)	of one require verine) Nonriverine (verine) al Imagery (l	Salt C Biotic Aquat Hydro Oxidia Prese Recer B7) Thin N	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reduction	dor (C1) res along led Iron (C4 on in Tilled C7))		Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS
Wetland Hydrology Indicato Primary Indicators (minimum of the control of the cont	verine) Nonriverine verine) al Imagery (8	Salt C Biotic Aquat Hydro Oxidiz Prese Recei 37) Thin I	Crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reduction Muck Surface ((Explain in Re	dor (C1) res along I ed Iron (C4 on in Tilled C7) emarks)) I Soils (C6		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriv Sediment Deposits (B2) (In Drift Deposits (B3) (Nonrin Surface Soil Cracks (B6) Inundation Visible on Aeric Water-Stained Leaves (B8)	verine) Nonriverine (verine) al Imagery (I	Salt C Biotic Aquat Hydro Oxidiz Prese Recei Thin I Other	Crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reducti Muck Surface ((Explain in Re	dor (C1) res along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrive Sediment Deposits (B2) (Nonrive Surface Soil Cracks (B6) Inundation Visible on Aerice Water-Stained Leaves (B5) Field Observations:	verine) Nonriverine (verine) al Imagery (I	Salt C Biotic Aquat Hydro Oxidiz Prese Recei 37) Thin I	Crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reducti Muck Surface ((Explain in Re	dor (C1) res along l d Iron (C4 on in Tilled C7) marks)) I Soils (C6		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonring Sediment Deposits (B2) (Indicated Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (B5) Field Observations: Surface Water Present? Water Table Present? Saturation Present?	verine) Nonriverine verine) al Imagery (19) Yes	Salt C Biotic Aquat Hydro Oxidiz Prese Recei Thin I Other	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ince of Reduce nt Iron Reducti Muck Surface ((Explain in Re h (inches): h (inches):	dor (C1) res along l ed Iron (C4 on in Tilled C7) emarks)) I Soils (C6	\ C C ots (C3) C S S F	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrive Sediment Deposits (B2) (Indicated Soil Cracks (B6) Inundation Visible on Aerice Water-Stained Leaves (B1) Water Water Present? Water Table Present?	verine) Nonriverine verine) al Imagery (E9) Yes Yes	Salt C Biotic Aquat Hydro Oxidiz Prese Recel Thin I Other No V Dept No Dept No Dept	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reducti Muck Surface ((Explain in Re h (inches): h (inches):	dor (C1) res along I ed Iron (C4 on in Tilled C7) emarks)) Soils (C6	\ [[ots (C3) [[] 6) 5 F	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicato Primary Indicators (minimum of the Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonring the Surface Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (B5) Water Table Present? Saturation Present? (includes capillary fringe)	verine) Nonriverine verine) al Imagery (E9) Yes Yes	Salt C Biotic Aquat Hydro Oxidiz Prese Recel Thin I Other No V Dept No Dept No Dept	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reducti Muck Surface ((Explain in Re h (inches): h (inches):	dor (C1) res along I ed Iron (C4 on in Tilled C7) emarks)) Soils (C6	\ [[ots (C3) [[] 6) 5 F	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicato Primary Indicators (minimum of the Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonring the Surface Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (B5) Water Table Present? Saturation Present? (includes capillary fringe)	verine) Nonriverine verine) al Imagery (E9) Yes Yes	Salt C Biotic Aquat Hydro Oxidiz Prese Recel Thin I Other No V Dept No Dept No Dept	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reducti Muck Surface ((Explain in Re h (inches): h (inches):	dor (C1) res along I ed Iron (C4 on in Tilled C7) emarks)) Soils (C6	\ [[ots (C3) [[] 6) 5 F	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrive Sediment Deposits (B2) (Nonrive Surface Soil Cracks (B6) Inundation Visible on Aerice Water-Stained Leaves (B5) Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stre	verine) Nonriverine verine) al Imagery (E9) Yes Yes	Salt C Biotic Aquat Hydro Oxidiz Prese Recel Thin I Other No V Dept No Dept No Dept	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reducti Muck Surface ((Explain in Re h (inches): h (inches):	dor (C1) res along I ed Iron (C4 on in Tilled C7) emarks)) Soils (C6	\ [[ots (C3) [[] 6) 5 F	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicato Primary Indicators (minimum of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrive Sediment Deposits (B2) (Indicate Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (B3) Water Table Present? Water Table Present? Water Table Present? (includes capillary fringe) Describe Recorded Data (strees)	verine) Nonriverine verine) al Imagery (E9) Yes Yes	Salt C Biotic Aquat Hydro Oxidiz Prese Recel Thin I Other No V Dept No Dept No Dept	crust (B11) Crust (B12) cic Invertebrate gen Sulfide Oc zed Rhizosphe ence of Reduce nt Iron Reducti Muck Surface ((Explain in Re h (inches): h (inches):	dor (C1) res along I ed Iron (C4 on in Tilled C7) emarks)) Soils (C6	\ [[ots (C3) [[] 6) 5 F	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: LCWA South Area	Cit	y/County: Seal E	Beach/Orange Cou	nty S	ampling Date: _	2/19/21
Applicant/Owner: Los Cerritos Wetlands Authroity			State:	CA S	ampling Point: _	2
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hanna	ah Craddocl Se	ection, Township	, Range: <u>T5S, R12W</u>			
Landform (hillslope, terrace, etc.): Ditch	Lo	ocal relief (conca	ve, convex, none): <u>Co</u>	oncave	Slop	oe (%): <u>5</u>
Subregion (LRR): LRRC	Lat: <u>33.75</u>	2207 N	Long: <u>-118.09</u>	361 W	Datui	m: WGS84
Soil Map Unit Name: Bolsa silty clay loam, drained			NWI	classificat	ion: PEM1Cx	
Are climatic / hydrologic conditions on the site typical for	this time of year'	? Yes <u> </u>	lo (If no, exp	lain in Ren	narks.)	
Are Vegetation, Soil, or Hydrology	_ significantly dis	sturbed? A	Are "Normal Circumsta	ances" pre	sent? Yes	No
Are Vegetation, Soil, or Hydrology			If needed, explain any	y answers	in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma			nt locations, trar	nsects, i	mportant fe	atures, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u>	No	Is the Sam	olod Aroo			
Hydric Soil Present? Yes		within a We		es 🗸	No	
Wetland Hydrology Present? Yes	No					•
Remarks:						
VEGETATION – Use scientific names of pla	ants.					
		Dominant Indica		st worksh	neet:	
Tree Stratum (Plot size:)		Species? Statu	— Nulliber of Doll			(4)
1			That Are OBL,	FACW, or	FAC:1	(A)
2			Total Number of Species Across			(B)
4						(D)
		Total Cover	Percent of Dom		cies FAC: <u> 1</u>	(A/B)
Sapling/Shrub Stratum (Plot size:)						(702)
1			Prevalence Inc			
2			OBL species		Multiply	· -
3			FACW species			
5			FAC species			
		Total Cover	FACU species			
Herb Stratum (Plot size: 2m			UPL species		x 5 =	
1. Conium maculatum			<u>M</u>	75	(A)	<u>150</u> (B)
2			— Prevalenc	e Index -	B/A =	2
3			Hydrophytic V			<u>-</u>
4. 5.			Dominance	_		
6.			Prevalence			
7.					ations¹ (Provide	
8.					or on a separate	•
		Total Cover	Problemati	c Hydropn	ytic Vegetation ¹	(Explain)
Woody Vine Stratum (Plot size:)			¹ Indicators of by	udric soil a	nd wetland hydr	ology must
1					ed or problemat	
2		Total Cover	Hydrophytic			
0/ Barro One word in Hards Otseshams 25 0/ Oa			Vegetation	V	A No	
% Bare Ground in Herb Stratum 25 % Co	ver of Blotic Crus	st <u>0</u>	Present?	Yes_	<u> </u>	
Remarks:						

Depth	Matrix	%		ox Feature	s Type ¹	Loc ²	Tout	Domestic
(inches)	Color (moist)		Color (moist)				<u>Texture</u>	Remarks
20	7.5YR, 3/1	98	7.5YR, 5/8	_ 2	<u>D</u>	PL	<u>Clay</u>	
			·					
					-	-		
1			4-Dadusad Matrix O				21	tion. DI - Done Lining Manager
			1=Reduced Matrix, C I LRRs, unless othe			ed Sand G		tion: PL=Pore Lining, M=Matrix. or Problematic Hydric Soils ³ :
Histoso	,		Sandy Rec		,			uck (A9) (LRR C)
	pipedon (A2)		Stripped M					uck (A10) (LRR B)
	listic (A3)		Loamy Mu		al (F1)			d Vertic (F18)
Hydrog	en Sulfide (A4)		Loamy Gle	yed Matrix	(F2)		Red Par	rent Material (TF2)
Stratifie	d Layers (A5) (LRR	C)	Depleted N	/latrix (F3)			Other (E	xplain in Remarks)
	uck (A9) (LRR D)		Redox Dar					
-	d Below Dark Surfa	ce (A11)	Depleted D				3	
	ark Surface (A12)		Redox Dep		(F8)			f hydrophytic vegetation and
-	Mucky Mineral (S1) Gleyed Matrix (S4)		Vernal Poo	ols (F9)				ydrology must be present, turbed or problematic.
	Layer (if present):						uniess dis	turbed of problematic.
	,							
	nches):						Hvdric Soil F	Present? Yes <u></u> No
Remarks:	,							
YDROLC								
-	drology Indicators							
		one require	ed; check all that app					lary Indicators (2 or more required)
	· Water (A1)		Salt Crus	,				iter Marks (B1) (Riverine)
	ater Table (A2)		Biotic Cru				·	diment Deposits (B2) (Riverine)
Saturati	, ,		Aquatic Ir					ft Deposits (B3) (Riverine)
	Marks (B1) (Nonrive		Hydroger					ainage Patterns (B10)
	nt Deposits (B2) (No				_			y-Season Water Table (C2)
	posits (B3) (Nonriv	erine)	Presence		`	•		ayfish Burrows (C8)
	Soil Cracks (B6)		Recent In			d Soils (C		turation Visible on Aerial Imagery (C9)
	ion Visible on Aerial	• • • •	<i>'</i> —	k Surface				allow Aquitard (D3)
	Stained Leaves (B9)		Other (Ex	plain in Re	emarks)	-	FA	C-Neutral Test (D5)
Field Obser		.,	N 4 5 4 6					
			No Depth (ir					
Water Table			No Depth (ir					
Saturation F (includes ca	Present? pillary fringe)	Yes <u> </u>	No Depth (in	nches):		Wet	land Hydrology	Present? Yes No
		m gauge, m	nonitoring well, aerial	photos, pi	revious in:	spections)	, if available:	
Remarks:								

Project/Site: LCWA South Area	City/County: Seal Bea	ach/Orange County	Sampling Date:	2/19/21
Applicant/Owner: Los Cerritos Wetlands Authority		State: CA	Sampling Point:	3
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hanna	ah Craddocl Section, Township, Ra	ange: <u>T5S, R12W</u>		
Landform (hillslope, terrace, etc.): <u>Ditch</u>	Local relief (concave,	convex, none): concave	Slope	e (%): <u>3</u>
Subregion (LRR): LRRC	Lat: <u>33.752238 N</u>	_ Long: -118.093484 W	Datum	: <u>WGS84</u>
Soil Map Unit Name: Bolsa silty clay loam, drained				
Are climatic / hydrologic conditions on the site typical for				
Are Vegetation, Soil, or Hydrology		"Normal Circumstances" p		No
Are Vegetation, Soil, or Hydrology		eeded, explain any answe		
		•	,	4
SUMMARY OF FINDINGS – Attach site ma	ip snowing sampling point i	iocations, transects	, important rea	tures, etc.
Hydrophytic Vegetation Present? Yes		d Area		
Hydric Soil Present? Yes	No within a Wetla		No	
Wetland Hydrology Present? Yes	No			
Remarks:				
VEGETATION – Use scientific names of pl	ants.			
[Absolute Dominant Indicator	Dominance Test work	sheet:	
Tree Stratum (Plot size:)	% Cover Species? Status	Number of Dominant Sp		
1		That Are OBL, FACW,	or FAC: 2	(A)
2		Total Number of Domin		
3		Species Across All Stra	ta: <u>2</u>	(B)
4		Percent of Dominant Sp		
Sapling/Shrub Stratum (Plot size:)	= Total Cover	That Are OBL, FACW,	or FAC:1_	(A/B)
1		Prevalence Index wor	ksheet:	
2.		Total % Cover of:	Multiply	by:
3		OBL species	x 1 =	
4		FACW species 50		
5		FAC species		
Herb Stratum (Plot size: 2m)	= Total Cover	FACU species 50		
1. Frankenia salina	50 x FACW_		x 5 =	
2. <u>Bassia hyssopifolia</u>		Column Totals:10	<u>U</u> (A)3	<u>00</u> (B)
3		Prevalence Index	= B/A =3	
4.		Hydrophytic Vegetation	n Indicators:	
5.		<u>✓</u> Dominance Test is	>50%	
6.		<u>✓</u> Prevalence Index is		
7		Morphological Ada		
8		Problematic Hydro	s or on a separate s	•
Washing Charles (District	= Total Cover	1 Toblematic Hydrol	onytic vegetation (i	
Woody Vine Stratum (Plot size:) 1)		¹ Indicators of hydric soi	and wetland hydro	loav must
2		be present, unless distu		
2.	= Total Cover	Hydrophytic		
0/ Bara Crayand in Harb Stratura 0 0/ Co		Vegetation	a 4/ Na	
	over of Biotic Crust0	Present? Yes	s No	
Remarks:				

'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gra Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	Loamy Clay Loamy Clay
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Gra Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	Grains. 2Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
All Land Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Depleted Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Lestrictive Layer (if present): Type: Depth (inches): Temarks: TOROLOGY Vetland Hydrology Indicators: rmary Indicators (minimum of one required; check all that apply)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) estrictive Layer (if present): Type: Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) estrictive Layer (if present): Type: Depth (inches): emarks: //DROLOGY //etland Hydrology Indicators: rimary Indicators (minimum of one required; check all that apply)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Depleted Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Depth (inches)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
All Land Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Depleted Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
All Land Cool Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Depleted Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply)	Indicators for Problematic Hydric Soils³: 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Histic Epipedon (A2) Stripped Matrix (S6) Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Depth (inches): Pemarks:	2 cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Pedox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Depth (inches): Depth (inches): Perimary Indicators (minimum of one required; check all that apply)	Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply)	Red Parent Material (TF2) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes V No
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply)	Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes V No
1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: Primary Indicators (minimum of one required; check all that apply)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes ✓ No
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No
Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	unless disturbed or problematic. Hydric Soil Present? Yes No
Restrictive Layer (if present): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Hydric Soil Present? Yes <u>✓</u> No
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Netland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
	Secondary indicators (2 or more required)
Surface Water (A1) Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2) Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3) Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots	Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
<u>∨</u> Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6)	(C6) Saturation Visible on Aerial Imagery (C
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9) Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No ✓ Depth (inches):	
(includes capillary fringe)	etland Hydrology Present? Yes <u>✓</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	etland Hydrology Present? Yes <u>✓</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	etland Hydrology Present? Yes <u>✓</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	etland Hydrology Present? Yes <u>✓</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if	etland Hydrology Present? Yes <u>✓</u> No
	etland Hydrology Present? Yes <u>✓</u> No

Project/Site: LCWA South Area		City/County: <u>So</u>	eal Bea	ch/Orange Cou	nty :	Sampling Date:	2/19/21
Applicant/Owner: Los Cerritos Wetlands Authority				State:	<u>CA</u> :	Sampling Point:	:4
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hanna	ah Craddocl	Section, Town	ship, Ra	nge: <u>T5S, R12W</u>			
Landform (hillslope, terrace, etc.): Terrace		Local relief (co	oncave,	convex, none): <u>cc</u>	ncave	SI	ope (%):5_
Subregion (LRR): LRRC	Lat: <u>33.7</u>	751339 N		Long: <u>-118.09</u>	4047 W	Dat	um: WGS84
Soil Map Unit Name: Bolsa silty clay loam, drained							
Are climatic / hydrologic conditions on the site typical for	this time of yea	ar? Yes 🗸	No	(If no, exp	lain in Re	marks.)	
Are Vegetation, Soil, or Hydrology	_ significantly	disturbed?	Are "	Normal Circumsta	ances" pr	esent? Yes	✓ No
Are Vegetation, Soil, or Hydrology			(If ne	eded, explain any	y answers	s in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma			point l	ocations, trar	nsects,	important f	eatures, etc.
Hydrophytic Vegetation Present? Yes	No 🗸						
Hydric Soil Present? Yes			Sampled a Wetlar		26	No	
Wetland Hydrology Present? Yes	No	Within	a vvetiai	id: it		140	-
Remarks:							
VEGETATION – Use scientific names of pla	ante						
VEGETATION – Use scientific fiames of pro-	Absolute	Dominant In	dicator	Dominance Te	et worke	hoot:	
Tree Stratum (Plot size:)		Species? S		Number of Dom			
1				That Are OBL,			<u>0</u> (A)
2				Total Number o	f Domina	nt	
3				Species Across	All Strata	a:	<u>0</u> (B)
4				Percent of Dom			
Sapling/Shrub Stratum (Plot size: 2m)		= Total Cover	•	That Are OBL,	FACW, o	r FAC:	<u>0</u> (A/B)
1. Baccharis salicifolia	35		FAC	Prevalence Inc	lex work	sheet:	
2				Total % Co	ver of:	Multip	oly by:
3				OBL species			
4				FACW species			
5				FAC species FACU species			
Herb Stratum (Plot size:)		= Total Cover		UPL species			
1. Brassica nigra	25		UPL	Column Totals:			350 (B)
2. Ambrosia psilostachya	5		FACU_				、 ,
3. Melilotus indicus	25		FACU_			= B/A =3	3.89
4				Hydrophytic V	_		
5				Dominance Prevalence			
6						≟3.⊍ tations¹ (Provid	e supporting
7 8						or on a separat	
0		= Total Cover		Problemati	c Hydropl	hytic Vegetatior	າ ¹ (Explain)
Woody Vine Stratum (Plot size:)		, , , , , , , , , , , , , , , , , , , ,					
1				¹ Indicators of hybe present, unle			
2							
		= Total Cover	•	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 10 % Co	ver of Biotic C	rust <u>0</u>		Present?	Yes	No _	
Remarks:							

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

Depth	Matrix			K Features	3			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>	Remarks
24	2.5Y/3-2	100					sandy	
	-							
		 -						
¹ Type: C=C	oncentration, D=De	oletion, RM=	Reduced Matrix, CS	=Covered	l or Coate	d Sand G	rains. ² Loca	ation: PL=Pore Lining, M=Matrix.
			RRs, unless other					for Problematic Hydric Soils ³ :
Histoso	I (A1)		Sandy Redo	x (S5)			1 cm M	uck (A9) (LRR C)
	pipedon (A2)		Stripped Ma	trix (S6)				uck (A10) (LRR B)
Black H	istic (A3)		Loamy Mucl	ky Mineral	(F1)		Reduce	ed Vertic (F18)
Hydroge	en Sulfide (A4)		Loamy Gley				Red Pa	rent Material (TF2)
Stratifie	d Layers (A5) (LRR	C)	Depleted Ma	atrix (F3)			Other (I	Explain in Remarks)
1 cm Mi	uck (A9) (LRR D)		Redox Dark		•			
	d Below Dark Surfac	ce (A11)	Depleted Da		. ,			
· 	ark Surface (A12)		Redox Depr	•	- 8)			of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Pools	s (F9)				nydrology must be present,
	Gleyed Matrix (S4)						unless di	sturbed or problematic.
	Layer (if present):							
Type:								
Depth (in	ches):						Hydric Soil I	Present? Yes No <u> </u>
Remarks:								
HYDROLO)GY							
Wetland Hy	drology Indicators	:						
Primary Indi	cators (minimum of	one required	; check all that apply	/)			Secon	dary Indicators (2 or more required)
Surface	Water (A1)		Salt Crust	(B11)			W	ater Marks (B1) (Riverine)
High Wa	ater Table (A2)		Biotic Crus	t (B12)			Se	ediment Deposits (B2) (Riverine)
Saturati	on (A3)		Aquatic Inv	ertebrates	s (B13)			ift Deposits (B3) (Riverine)
Water N	Marks (B1) (Nonrive	rine)	Hydrogen					rainage Patterns (B10)
Sedime	nt Deposits (B2) (No	nriverine)	Oxidized R	hizospher	es along	Living Roo	ots (C3) Dr	ry-Season Water Table (C2)
	posits (B3) (Nonrive		Presence of	of Reduce	d Iron (C4	ļ)	Cr	ayfish Burrows (C8)
	Soil Cracks (B6)	,	Recent Iro	n Reductio	on in Tilled	d Soils (C6		aturation Visible on Aerial Imagery (C9)
	ion Visible on Aerial	Imagery (B7				•	,	nallow Aguitard (D3)
Water-S	Stained Leaves (B9)	• • • • • • • • • • • • • • • • • • • •	Other (Exp	lain in Rei	marks)		FA	AC-Neutral Test (D5)
Field Obser					· · ·		<u> </u>	,
Surface Wat	ter Present?	Yes N	No <u> </u>	ches):				
Water Table			No Depth (inc					
Saturation P			No Depth (inc				land Hydrology	Present? Yes No
	pillary fringe)		to Bopan (inte			_ '''	ana nyarology	11000IK: 100 <u> </u>
		n gauge, mo	nitoring well, aerial p	hotos, pre	evious ins	pections),	if available:	
Remarks:								

Project/Site: LCWA South Area	Cit	y/County: Seal Bea	ch/Orange County	_ Sampling Date:	2/19/21
Applicant/Owner: Los Cerritos Wetlands Authority			State: CA	_ Sampling Point:	5
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hanna	ah Craddocl Se	ection, Township, Ra	ange: <u>T5S, R12W</u>		
Landform (hillslope, terrace, etc.): terrace	Lo	ocal relief (concave,	convex, none): none	Slope	e (%): <u>1</u>
Subregion (LRR): LRRC	Lat: 33.75	0882 N	Long: -118.093482 \	N Datum	: WGS84
Soil Map Unit Name: Bolsa silty clay loam, drained					
Are climatic / hydrologic conditions on the site typical for		4			
Are Vegetation, Soil, or Hydrology	-	<u> </u>	"Normal Circumstances"	•	No
Are Vegetation, Soil, or Hydrology			eeded, explain any answ		
			•	,	4
SUMMARY OF FINDINGS – Attach site ma	p snowing s		ocations, transect	s, important lea	tures, etc.
Hydrophytic Vegetation Present? Yes		Is the Sample	d Area		
Hydric Soil Present? Yes		within a Wetla		No <u></u> ✓	
Wetland Hydrology Present? Yes	No				
Remarks:					
VEGETATION – Use scientific names of pla	ants.				
T 01.1. (D1.1.)		Dominant Indicator	Dominance Test wor	ksheet:	
Tree Stratum (Plot size:)		Species? Status	Number of Dominant S		(4)
1 2			That Are OBL, FACW	, 01 FAC	(A)
3			Total Number of Domi Species Across All Str		(B)
4					(b)
	=		Percent of Dominant S That Are OBL, FACW		(A/B)
Sapling/Shrub Stratum (Plot size:)					(/,12/
1			Prevalence Index wo		
2			Total % Cover of:		-
3			OBL species		
5			FAC species 35		
·		Total Cover	FACU species 63		
Herb Stratum (Plot size:)			UPL species 2		
1. Mesembryanthemum nodiflorum		x FACU	Column Totals:1	.00 (A) <u>30</u>	<u>67</u> (B)
2. <u>Laennecia coulteri</u>		FAC	Dravalance Indo	x = B/A =3.6	7
3. <u>Brassica nigra</u>			Hydrophytic Vegetat		<u>/</u>
4			Dominance Test i		
5 6			Prevalence Index		
7				aptations¹ (Provide s	upporting
8.			data in Remar	ks or on a separate s	heet)
		Total Cover	Problematic Hydro	ophytic Vegetation¹ (E	Explain)
Woody Vine Stratum (Plot size:)			1		
1			¹ Indicators of hydric so be present, unless dis		
2			Hydrophytic	·	
	<u> </u>	Total Cover	Vegetation		
% Bare Ground in Herb Stratum 0 % Co	ver of Biotic Crus	st	Present? Y	es No <u> </u>	<u></u>
Remarks:					

Deptite Mark Sector Features Teacher Remarks	Profile Desc	ription: (Describe	to the de	pth needed to docu	ment the	indicator	or confirm	n the absence of indicato	rs.)
16 SY, 4/2 90 SYR, 3/4 10 C PL Sandy/Clas	•					es	. 2		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location: Pt=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils*: Histosoi (A1)	(inches)								Remarks
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)	<u>16</u>	5Y, 4/2	90	5YR, 3/4	_ <u>10</u>	<u>C</u>		Sandy/Cla _\	
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)						-			
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)				-		-	 		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									_
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)				-					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1)									
Histosol (A1)							ed Sand G		
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Depleted Below Dark Surface (A12) Redox Depressions (F8) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Vernal Pools (F9) wetland hydrology must be present, unless disturbed or problematic. Primary Indicators (F7) Primary	•	,	able to al			ed.)			-
Black Histic (A3)		` '			. ,				
Loarny Gleyed Matrix (F2) Red Parent Material (TF2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) Other (Explain in Remarks)								, , ,	·
Startilifed Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type:		• •							
1 cm Muck (A9) Redox Dark Surface (F6)			^ \			(F2)			
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8) and Wukey Mineral (S1) Vernal Pools (F9) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes V No Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Sail Crust (B11) Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Saturation (A3) Aquatic Invertebrates (B13) Dirit Deposits (B3) (Riverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Adjusted Present (B2) (Morriverine) Presence of Reduced Iron (C4) Drainage Patterns (B10) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Other (Explain in Remarks) Previous inspections), if available:			()			(E6)		Other (Explain in F	Remarks)
Thick Dark Surface (A12)			ο (Λ11)						
Sandy Mucky Mineral (S1)	-		e (ATT)	·				³ Indicators of hydronhy	tic vegetation and
Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes _ V No						(10)		• • •	~
Restrictive Layer (if present): Type:	-			vernari oc	,io (i o)				•
Type:								1	
Remarks: Hydric Soil Present? Yes _ v No									
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) High Water Table (A2) Sutartation (A3) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Sediment Deposits (B3) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Sediment Deposits (B3) (Riverine) Sediment Deposits (B1) Sediment Deposits (B								Hydric Soil Present?	Vos V No
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Surface Water (A1) High Water Table (A2) Satt Crust (B12) Aquatic Invertebrates (B13) Water Marks (B1) (Riverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Sediment Deposits (B3) (Riverine) Dirift Deposits (B3) (Riverine) Sediment Deposits (B10) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B2) (Riverine) Drift Deposits (B2) (Riverine) Drift Deposits (B2)	. ,	Siles).						Tryunc oon r resent:	163
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine)	Nemarks.								
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine)									
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine)									
Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine) High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine)									
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10) FROCHOLA Water Table Present? Yes No Depth (inches): No Depth (inches): No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	HYDROLO	GY							
Primary Indicators (minimum of one required; check all that apply) Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Biotic Crust (B12) Sediment Deposits (B2) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B10) FROCHOLA Water Table Present? Yes No Depth (inches): No Depth (inches): No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hy	drology Indicators:							
Surface Water (A1)				ed: check all that app	lv)			Secondary Indica	tors (2 or more required)
High Water Table (A2) Saturation (A3) Aquatic Invertebrates (B13) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) (Nonriverine) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No Depth (inches): Saturation Present? Yes No No Depth (inches): Saturation Present? Yes No No Depth (inches): Saturation Present? Yes No No No No Depth (inches): Saturation Present? Yes No									
✓ Saturation (A3) Aquatic Invertebrates (B13) Drift Deposits (B3) (Riverine) Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living Roots (C3) Dry-Season Water Table (C2) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Crayfish Burrows (C8) Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	· 	` ,			,				
Water Marks (B1) (Nonriverine)						ne (B13)			
Sediment Deposits (B2) (Nonriverine)	· 	` '	ino\						
Drift Deposits (B3) (Nonriverine)							Living Do		
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (C9) Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Pepth (inches): Water Table Present? Yes No Poepth (inches): Saturation Present? Yes No Depth (inches): O-16 Wetland Hydrology Present? Yes No No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						-	_		
Inundation Visible on Aerial Imagery (B7) Thin Muck Surface (C7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Other (Explain in Remarks) FAC-Neutral Test (D5) Feld Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			rine)						
		` '	. /5				ea Solis (Ce	•	, ,
Surface Water Present? Yes Nov_ Depth (inches): Water Table Present? Yes Nov_ Depth (inches): Saturation Present? Yes _v No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			ımagery (E						
Surface Water Present? Yes Nov _ Depth (inches): Water Table Present? Yes Nov _ Depth (inches): Saturation Present? Yesv _ No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		` ,		Other (Ex	plain in Re	emarks)	1	FAC-Neutral	Test (D5)
Water Table Present? Yes Nov _ Depth (inches): Saturation Present? Yes _v _v No Depth (inches): Wetland Hydrology Present? Yes _v _v No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Obser								
Saturation Present? Yes V No Depth (inches): 0-16 Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Surface Wat								
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Water Table	Present? Y	'es	No Depth (ir	nches):				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			′es <u> / </u>	No Depth (ir	nches): <u>0-</u>	16	Wetl	and Hydrology Present?	Yes <u>/</u> No
				onitoring well assist	photo:	rovicus !=	opostio:==\	if available:	
Remarks:	Describe Re	corded Data (stream	ı gauge, m	ionitoring well, aerial	pnotos, pi	evious in	spections),	ıı avalladie:	
Remarks:									
	Remarks:								

Project/Site: LCWA South Area	C	ity/County: Se	eal Bead	ch/Orange Cou	nty Sa	mpling Date: _	2/19/21
Applicant/Owner: Los Cerritos Wetlands Authority				State:	CA Sa	mpling Point:	6
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hann	ah Craddocl S	Section, Towns	ship, Rar	nge: <u>T5S, R12W</u>			
Landform (hillslope, terrace, etc.): Terrace	ι	ocal relief (co	ncave, o	convex, none): <u>no</u>	one	Slo	pe (%):2_
Subregion (LRR): LRRC	Lat: <u>33.7</u>	50888 N		Long: -118.09	3218 W	Datu	m: <u>WGS84</u>
Soil Map Unit Name: Bolsa silty clay loam, drained							
Are climatic / hydrologic conditions on the site typical for	this time of yea	r? Yes 🗸	No	(If no, exp	lain in Rema	arks.)	
Are Vegetation, Soil, or Hydrology	_ significantly d	isturbed?	Are "	Normal Circumst	ances" pres	ent? Yes	No
Are Vegetation, Soil, or Hydrology			(If ne	eded, explain an	y answers ir	n Remarks.)	
SUMMARY OF FINDINGS – Attach site ma			ooint le	ocations, trar	nsects, in	nportant fe	atures, etc.
Hydrophytic Vegetation Present? Yes	No 🗸			_			
Hydric Soil Present? Yes			ampled a Wetlan		ae .	No 🗸	
Wetland Hydrology Present? Yes		Within	a vveilai	iu: ii	#S	NO <u>'</u>	-
Remarks:							
VEGETATION – Use scientific names of pl	ants.						
		Dominant Inc	dicator	Dominance Te	st workshe	et:	
Tree Stratum (Plot size:)		Species? S		Number of Don			
1				That Are OBL,	FACW, or F	AC: <u>0</u>) (A)
2				Total Number of			
3				Species Across	All Strata:	C) (B)
4		= Total Cover		Percent of Dom) (A/D)
Sapling/Shrub Stratum (Plot size:)		- Total Gover		That Are OBL,	FACVV, or F	AC:	<u>/</u> (A/B)
1				Prevalence Inc			
2				Total % Co		-	
3				OBL species			
4				FACW species FAC species			
5		= Total Cover		FACU species			
Herb Stratum (Plot size: 2m)		- Total Cover		UPL species			
1. Mesembryanthemum nodiflorum	5	<u>_</u>	ACU_	Column Totals:			30 (B)
2. Brassica nigra							
3						B/A =4.	.29
4				Hydrophytic V Dominance	_		
5				Prevalence			
6 7						ions¹ (Provide	supporting
8				data in	Remarks or	on a separate	sheet)
<u> </u>		= Total Cover		Problemati	c Hydrophyt	tic Vegetation ¹	(Explain)
Woody Vine Stratum (Plot size:)				1			
1				¹ Indicators of his be present, unli			
2				•		- по респения	
		= Total Cover		Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 93 % Co	ver of Biotic Cru	ust <u>0</u>		Present?	Yes _	No	<u>~</u>
Remarks:							

(inches) 0-10	Color (moist)	%	Color (moist)	ox Feature: %	_Type ¹	Loc ²	Texture	Remarks
0 10	5Y, 3/2	80	7.5YR, 4/6	20	<u> </u>	PL	Sandy Clay	Romanio
	51, 5/2		7.5111, 470				Sandy Clay	
			-Dadward Matrix C				21	-tion DI -Dona Linius Manadain
			=Reduced Matrix, C LRRs, unless othe			a Sana G		ation: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol	,	ouble to un	<u>✓</u> Sandy Red		cu.,			uck (A9) (LRR C)
	ipedon (A2)		Stripped M	, ,				uck (A10) (LRR B)
Black His			Loamy Mu		l (F1)			ed Vertic (F18)
	n Sulfide (A4)			yed Matrix	. ,			rent Material (TF2)
	Layers (A5) (LRR	C)	Depleted N		. •			Explain in Remarks)
	ck (A9) (LRR D)		Redox Dai					
	l Below Dark Surfa	ce (A11)	Depleted [2	
	rk Surface (A12)		Redox Dep		F8)			of hydrophytic vegetation and
-	ucky Mineral (S1)		Vernal Poo	ols (F9)				nydrology must be present,
	leyed Matrix (S4) ayer (if present):						uniess ais	sturbed or problematic.
Type:	ayer (ii present).							
Depth (inc							Hydric Soil I	Present? Yes ✔ No
Remarks:							Tiyunc 30ii i	rieseiit: Tes <u> </u>
VDDOL O	CV							
YDROLO(GT							
	Irology Indicators							
Wetland Hyd	Irology Indicators		di abasik all that appro-	di A			Cocon	dam Indicators (2 or more required)
Wetland Hyd Primary Indic	ators (minimum of		d; check all that app					dary Indicators (2 or more required)
Wetland Hyd Primary Indic Surface \	ators (minimum of Water (A1)		<u></u> ✓ Salt Crus	t (B11)			W	ater Marks (B1) (Riverine)
Wetland Hyd Primary Indic Surface \ High Wa	ators (minimum of Water (A1) ter Table (A2)		✓ Salt Crus Biotic Cru	t (B11) ıst (B12)	o (P12)		W. Se	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
Wetland Hyd Primary Indic Surface \ High Wat Saturatio	ators (minimum of Water (A1) ter Table (A2) on (A3)	one require	Salt Crus Biotic Cru Aquatic I	t (B11) ust (B12) nvertebrate			W. Se Dr	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ift Deposits (B3) (Riverine)
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive	one require	Salt Crus Biotic Cru Aquatic II Hydroger	t (B11) ust (B12) nvertebrate n Sulfide Oo	dor (C1)	Living Poo	W. Se Dr Dr	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ift Deposits (B3) (Riverine) rainage Patterns (B10)
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (No	one require rine) onriverine)	Salt Crus Biotic Cru Aquatic Iu Hydroger Oxidized	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe	dor (C1) res along	_	W. Se Dr Dr ots (C3) Dr	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2)
Wetland Hyd Primary Indic Surface \ High War Saturatio Water Ma Sedimen Drift Dep	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive	one require rine) onriverine)	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce	dor (C1) res along ed Iron (C4	!)	W. Se Dr Dr Dr Cr	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ift Deposits (B3) (Riverine) rainage Patterns (B10) ry-Season Water Table (C2) rayfish Burrows (C8)
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen Drift Dep Surface S	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (No osits (B3) (Nonrive Soil Cracks (B6)	one require rine) porriverine) erine)	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti	dor (C1) res along ed Iron (C4 on in Tille	!)	W Se Dr Dr Dr Cr Cr Se	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) eift Deposits (B3) (Riverine) eainage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) aturation Visible on Aerial Imagery (C9
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (No osits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial	one require rine) porriverine) erine) Imagery (B	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (dor (C1) res along ed Iron (C ² on in Tille C7)	!)	W Se Dr Dr ots (C3) Dr Cr Cr Se Sr	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (CS) eatllow Aquitard (D3)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Water-St	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial tained Leaves (B9)	one require rine) porriverine) erine) Imagery (B	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti	dor (C1) res along ed Iron (C ² on in Tille C7)	!)	W Se Dr Dr ots (C3) Dr Cr Cr Se Sr	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) eift Deposits (B3) (Riverine) eainage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) aturation Visible on Aerial Imagery (C9
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Water-St Field Observ	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive soils (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations:	one require rine) onriverine) erine) Imagery (B	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce on Reducti k Surface (dor (C1) res along d Iron (C4 on in Tille C7) emarks)	l) d Soils (C6	W Se Dr Dr ots (C3) Dr Cr Se	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (CS) eatllow Aquitard (D3)
Wetland Hyd Primary Indic Surface \(\) High Wat Saturatio Water Ma Sedimen Drift Dep Surface \(\) Inundatio Water-St Field Observ Surface Water	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Norive soits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present?	one require rine) porriverine) erine) Imagery (B	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	l) d Soils (C6	W Se Dr Dr ots (C3) Dr Cr Se	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (CS) eatllow Aquitard (D3)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present?	rine) Donriverine) erine) Imagery (B Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Ce	W Se Dr Dr ots (C3) Dr Cr 6) Se Sh FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B10) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (C9) eaturation Visible on Aerial Imagery (C9) eaturation Aquitard (D3) eatural Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Water-St Field Observ Surface Water Saturation Pr	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive soil Cracks (B6) on Visible on Aerial cained Leaves (B9) vations: er Present? Present?	rine) Donriverine) erine) Imagery (B Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Ce	W Se Dr Dr ots (C3) Dr Cr 6) Se Sh FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (CS) eatllow Aquitard (D3)
Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pri(includes cap	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present? Present? esent? esent?	rine) ponriverine) erine) Imagery (B Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	d Soils (Ce	W Se Dr Dr ots (C3) Dr Cr Si Se FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B10) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (C9) eaturation Visible on Aerial Imagery (C9) eaturation Aquitard (D3) eatural Test (D5)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pr (includes cap Describe Rec	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present? Present? esent? esent?	rine) ponriverine) erine) Imagery (B Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir 7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	d Soils (Ce	W Se Dr Dr ots (C3) Dr Cr Si Se FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B10) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (C9) eaturation Visible on Aerial Imagery (C9) eaturation Aquitard (D3) eatural Test (D5)
Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pri(includes cap	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present? Present? esent? esent?	rine) ponriverine) erine) Imagery (B Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir 7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	d Soils (Ce	W Se Dr Dr ots (C3) Dr Cr Si Se FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B10) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (C9) eaturation Visible on Aerial Imagery (C9) eaturation Aquitard (D3) eatural Test (D5)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatic Water-St Field Observ Surface Water Water Table I Saturation Pr (includes cap Describe Rec	ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrive t Deposits (B2) (Nonrive soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present? Present? esent? esent?	rine) ponriverine) erine) Imagery (B Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir 7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	d Soils (Ce	W Se Dr Dr ots (C3) Dr Cr Si Se FA	ater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B3) (Riverine) ediment Deposits (B10) (Riverine) edimage Patterns (B10) ey-Season Water Table (C2) eayfish Burrows (C8) eaturation Visible on Aerial Imagery (C9) eaturation Visible on Aerial Imagery (C9) eaturation Aquitard (D3) eatural Test (D5)

Project/Site: LCWA South Area	(City/Cour	nty: <u>Seal Bea</u>	ch/Orange Cou	nty s	ampling Date: _	2/19/21
Applicant/Owner: Los Cerritos Wetlands Authority				State:	CA s	ampling Point:	7
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hannah C	raddocl :	Section, ⁻	Township, Ra	nge: <u>T5S, R12W</u>			
Landform (hillslope, terrace, etc.): Hillslope		Local reli	ief (concave,	convex, none): <u>cc</u>	nvex	Slo	pe (%): <u>10</u>
Subregion (LRR): LRRC							
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents,							
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrology sig				Normal Circumst			/ No
Are Vegetation, Soil, or Hydrology na							
SUMMARY OF FINDINGS – Attach site map s							atures, etc.
Hydrophytic Vegetation Present? Yes No	~						
Hydric Soil Present? Yes No	~		the Sampled				
Wetland Hydrology Present? Yes No		WI	thin a Wetlar	nd? Yo	es	_ No	-
Remarks:		Į.					
VEGETATION – Use scientific names of plants	•						
<u> </u>	Absolute	Domina	nt Indicator	Dominance Te	et workeh	oot:	
			Status	Number of Don			
1				That Are OBL,			(A)
2		-		Total Number of	f Dominan	t	
3				Species Across			(B)
4				Percent of Dom			
Sapling/Shrub Stratum (Plot size:)		= Total (Cover	That Are OBL,	FACW, or	FAC:3	(A/B)
1				Prevalence Inc	lex works	heet:	
2.				Total % Co	ver of:	Multipl	y by:
3				OBL species	5	x 1 =	5
4		-		FACW species			
5				FAC species			
Horb Stratum (Plot size: 2m)		= Total (Cover	FACU species			100
1. Brassica nigra	25		UPL	UPL species Column Totals:			
2. Hirschfeldia incana				Column Totals.	100	(^)	320 (B)
3. Frankenia salina				Prevalend	e Index =	B/A =3	.2
4. Salicornia pacifica			OBL	Hydrophytic V	_		
5. Polypogon monspeliensis	40	X	<u>FACW</u>	Dominance			
6				Prevalence			
7						ations ¹ (Provide r on a separate	
8				Problemati	c Hydroph	ytic Vegetation ¹	(Explain)
Woody Vine Stratum (Plot size:)	100	= Total (_over				
1				¹ Indicators of h			
2				be present, unle	ess disturb	ed or problema	tic.
		= Total (Cover	Hydrophytic			
% Bare Ground in Herb Stratum 0	of Biotic Cr	rust	0	Vegetation Present?	Yes_	No	<u> </u>
Remarks:			-	l	_	<u> </u>	

Profile Desci	ription: (Describe	to the dep	oth needed to doc	ument the	indicator	or confirm	n the absence of i	ndicators.)
Depth	Matrix			dox Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	<u>Loc²</u>	<u>Texture</u>	Remarks
0-18	2.5Y, 3/2	97.5	7.5YR, 5/8	2.5	С	PL	Silt/Clay	
						· ——		
¹Type: C=Co	ncentration, D=Dep	letion. RM	=Reduced Matrix.	CS=Covere	ed or Coat	ed Sand G	rains. ² Locatio	n: PL=Pore Lining, M=Matrix.
	ndicators: (Applic					<u> </u>		Problematic Hydric Soils ³ :
Histosol (Sandy Re		,			(A9) (LRR C)
	ipedon (A2)			Matrix (S6)				(A10) (LRR B)
Black His				ucky Minera	al (F1)		Reduced V	, , ,
	n Sulfide (A4)			eyed Matrix				t Material (TF2)
	Layers (A5) (LRR	C)		Matrix (F3)				lain in Remarks)
	ck (A9) (LRR D)	,		rk Surface				,
Depleted	Below Dark Surfac	e (A11)	Depleted	Dark Surfa	ce (F7)			
Thick Da	rk Surface (A12)	, ,	·	pressions			³ Indicators of h	ydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Vernal Po	ols (F9)			wetland hydr	ology must be present,
Sandy G	eyed Matrix (S4)						unless distur	bed or problematic.
Restrictive L	ayer (if present):							
Туре:								
Depth (inc	hes):						Hydric Soil Pre	sent? Yes No ✔
Remarks:	,							
HYDROLOG	3 Y							
Wetland Hyd	rology Indicators:							
Primary Indica	ators (minimum of o	ne require	d; check all that ap	ply)			Secondar	y Indicators (2 or more required)
Surface \			Salt Cru				<u> </u>	r Marks (B1) (Riverine)
	er Table (A2)			ust (B12)				nent Deposits (B2) (Riverine)
Saturatio				Invertebrate	es (B13)			Deposits (B3) (Riverine)
	arks (B1) (Nonriver	ine)		n Sulfide C				age Patterns (B10)
	t Deposits (B2) (No					Living Roo		eason Water Table (C2)
	osits (B3) (Nonrive			e of Reduc	-	-	· · — ·	ish Burrows (C8)
	Soil Cracks (B6)	ille)		ron Reduct				ation Visible on Aerial Imagery (C9)
	n Visible on Aerial	lmagony (E		ck Surface		a cons (co		ow Aquitard (D3)
		iiiiageiy (L	<i>'</i> —					
	ained Leaves (B9)		Other (E	xplain in R	emarks)		FAC-	Neutral Test (D5)
Field Observ								
Surface Wate			No Depth (
Water Table I			No Depth (
Saturation Pro (includes cap		'es	No V Depth (inches):		Wetl	land Hydrology Pr	esent? Yes No
	orded Data (stream	gauge, m	onitoring well, aeria	al photos, p	revious in	spections),	if available:	
Remarks:								

Project/Site: LCWA South Area	(City/Co	unty: <u>Seal Bea</u>	ch/Orange C	ounty	Sampling Date	e: <u>2/26</u>	5/21
Applicant/Owner: Los Cerritos Wetlands Authority				State:	CA	Sampling Poir	nt: <u>8</u>	3
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hannah	Craddocl :	Section	ı, Township, Ra	nge: <u>T5S, R12</u>	2W			
Landform (hillslope, terrace, etc.): Terrace/flatform		Local r	elief (concave,	convex, none)	concave		Slope (%): _	2
Subregion (LRR): LRRC	Lat: 33.7	751968	3 N	Long: -118.	09983 W	Da	atum: WGS	384
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents								
Are climatic / hydrologic conditions on the site typical for thi								
Are Vegetation, Soil, or Hydrology s						oresent? Yes_	✓ No.	1
Are Vegetation, Soil, or Hydrology r								
SUMMARY OF FINDINGS – Attach site map								: etc
		Janny	Jiiig point i	- Cations, ti		, important		·, cto.
Hydrophytic Vegetation Present? Yes N		1	ls the Sampled	d Area				
Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N		,	within a Wetla	nd?	Yes	No		
Remarks:	<u> </u>							
Tromano								
VEGETATION – Use scientific names of plan	its.							
Tree Strature (Diet sine)	Absolute		nant Indicator	Dominance	Test work	sheet:		
Tree Stratum (Plot size:)			es? Status	Number of E That Are OB			0	(\\)
1				That Are Ob	DL, FACVV,	OI FAC		(A)
3.				Total Number			0	(B)
4				1				(D)
				Percent of D		pecies or FAC:	0	(Δ/R)
Sapling/Shrub Stratum (Plot size:)		_						(740)
1				Prevalence				
2						Mul		_
3						x 1 =		-
4						x 2 = x 3 =		-
5			- Cover					=
Herb Stratum (Plot size:)		_ = 10ta	ii Covei			x =		-
1. Arthrocnemum subterminale	20		FACW	Column Tota			100	- (B)
2. Salicornia pacifica	10		OBL					_ , ,
3. Mesembryanthemum nodiflorum						= B/A =		_
4. <u>Cressa truxillensis</u>	15		<u>FACW</u>	1	_	on Indicators:		
5				Domina				
6				<u>✓</u> Prevale				
7						ptations ¹ (Provi s or on a separa		ing
8						phytic Vegetation	•	า)
Woody Vine Stratum (Plot size:)	50	_ = Tota	l Cover					
1						il and wetland h		ıust
2.				be present,	unless dist	urbed or proble	matic.	
			l Cover	Hydrophyti	С			
% Bare Ground in Herb Stratum50	r of Biotic Cı	rust	0	Vegetation Present?	Ye	s 🔽 No		
Remarks:								

Profile Desc	cription: (Describe	to the depth				or confirr	n the absence	e of indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo Color (moist)	x Feature: %	S Type ¹	Loc²	Texture	Remarks
0-14	2.5Y, 3/2	100	Color (moloc)				Clay	Silty clay
0-14	2.51, 5/2	_ 100 _					Clay	Sitty clay
-					-			
						-		
				-				
1								
	oncentration, D=Dep Indicators: (Applic					d Sand G		cation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :
-	,	able to all L			eu.)			•
Histosol	oipedon (A2)		Sandy Red Stripped Ma	. ,				Muck (A9) (LRR C) Muck (A10) (LRR B)
	istic (A3)		Suipped Ma		l (F1)			ced Vertic (F18)
	en Sulfide (A4)		Loamy Gle					Parent Material (TF2)
	d Layers (A5) (LRR	C)	Depleted M		()			(Explain in Remarks)
1 cm Mu	ıck (A9) (LRR D)		Redox Darl	s Surface ((F6)			
-	d Below Dark Surfac	e (A11)	Depleted D				2	
	ark Surface (A12)		Redox Dep	•	F8)			of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Poo	ls (F9)				hydrology must be present,
	Bleyed Matrix (S4) Layer (if present):						uniess c	disturbed or problematic.
	Layer (ii present).							
Depth (in							Hydric Soil	I Present? Yes No _ ✓
	Ciles).						Tiyane 301	Triesent: TesNo
Remarks:								
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of o	one required;	check all that app	y)			<u>Seco</u>	ndary Indicators (2 or more required)
Surface	Water (A1)		Salt Crust	(B11)			v	Vater Marks (B1) (Riverine)
High Wa	ater Table (A2)		Biotic Cru	st (B12)			s	Sediment Deposits (B2) (Riverine)
Saturation	on (A3)		Aquatic In	vertebrate	s (B13)		[Orift Deposits (B3) (Riverine)
Water M	larks (B1) (Nonrive i	rine)	Hydrogen	Sulfide Od	dor (C1)		<u>~</u> [Orainage Patterns (B10)
Sedimer	nt Deposits (B2) (No	nriverine)	Oxidized I	Rhizosphe	res along	Living Ro	ots (C3) [Ory-Season Water Table (C2)
Drift Dep	posits (B3) (Nonrive	rine)	Presence	of Reduce	ed Iron (C4	!)	0	Crayfish Burrows (C8)
Surface	Soil Cracks (B6)		Recent Iro	n Reducti	on in Tille	d Soils (C	6) 8	Saturation Visible on Aerial Imagery (C9)
Inundati	on Visible on Aerial	Imagery (B7)	Thin Muck	Surface (C7)		s	Shallow Aquitard (D3)
Water-S	tained Leaves (B9)		Other (Ex	olain in Re	marks)		F	FAC-Neutral Test (D5)
Field Obser	vations:							
Surface Wat	er Present?	/es N	o 🔽 Depth (in	ches):		_		
Water Table	Present?	/es N	o 🔽 Depth (in	ches):		_		
Saturation P	resent?	/es N	o 🔽 Depth (in	ches):		Wet	land Hydrolog	y Present? Yes No <u>✔</u>
(includes cap	oillary fringe) corded Data (strean						if available:	
Describe Ne	corded Data (Stream	r gauge, mon	illoring well, aeriai	priotos, pr	evious iris	pections),	ii avallable.	
Domarka								
Remarks:								

Project/Site: LCWA South Area	City/County: Seal Bead	ch/Orange County	Sampling Date:	2/26/21
Applicant/Owner: Los Cerritos Wetlands Authority		State: <u>CA</u>	Sampling Point:	9
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hannah Crado	locl Section, Township, Ra	nge: <u>T5S, R12W</u>		
Landform (hillslope, terrace, etc.): Flat land	Local relief (concave,	convex, none): none	Slope	e (%): <u>2</u>
Subregion (LRR): LRRC Lat:	33.751895 N	Long: <u>-118.099862 W</u>	Datum	: WGS84
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents, dred	ged spoil- Typic Fluvaqu	ents com; NWI classific	ation: R2UBHx	
Are climatic / hydrologic conditions on the site typical for this time			·	
Are Vegetation, Soil, or Hydrology significa	· — — —		*	No
Are Vegetation, Soil, or Hydrology naturall		eeded, explain any answer		
		•	,	4
SUMMARY OF FINDINGS – Attach site map show	ing sampling point i	ocations, transects	, important rea	tures, etc.
Hydrophytic Vegetation Present? Yes No		l Area		
Hydric Soil Present? Yes No	within a Wotlar		No	
Wetland Hydrology Present? Yes No				
Remarks:				
VEGETATION – Use scientific names of plants.				
	lute Dominant Indicator	Dominance Test works	sheet:	
Tree Stratum (Plot size:)	over Species? Status	Number of Dominant Sp		
1		That Are OBL, FACW, o	or FAC: 1	(A)
2		Total Number of Domina		
3		Species Across All Strat	ta: <u>1</u>	(B)
4		Percent of Dominant Sp		
Sapling/Shrub Stratum (Plot size:)	= Total Cover	That Are OBL, FACW, o	or FAC:1_	(A/B)
1		Prevalence Index work	ksheet:	
2		Total % Cover of:	Multiply	by:
3		OBL species		
4		FACW species 40		
5		FAC species		
Herb Stratum (Plot size: 2m)	= Total Cover	FACU species 5		
	0 x FACW	UPL species Column Totals: 45		
2. Mesembryanthemum nodiflorum		Column rotals. 45	<u> </u>	<u>00 (</u> B)
3.		Prevalence Index	= B/A = <u>2.2</u>	2
4		Hydrophytic Vegetatio	n Indicators:	
5		<u> ✓</u> Dominance Test is		
6		Prevalence Index is		
7		Morphological Adap	otations¹ (Provide s s or on a separate s	
8		Problematic Hydrop	•	•
Woody Vine Stratum (Plot size:)	<u>5 </u>		on year of the control of the contro	_/\p/\all./
1		¹ Indicators of hydric soil	and wetland hydro	logy must
2		be present, unless distu	rbed or problemation	o.
	= Total Cover	Hydrophytic		
% Bare Ground in Herb Stratum55 % Cover of Bio	tic Crust 0	Vegetation Present? Yes	s 🗸 No	
Remarks:		Tesent: Tes		<u> </u>
Tromans.				

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

Depth	<u>Matrix</u>	0/		ox Feature		. 2		D !
(inches)	Color (moist)		Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks
0-10	2.5Y, 3/2	90	7.5YR, 4/6	10	_ <u>C</u>	_ <u>M</u>	<u>Sandy</u>	
10-16	5Y, 3/2	<u>98</u>	10YR, 5/8	2	<u>C</u>	M	Clay	Sandy clay
						_		
						_	<u> </u>	
				_			·	
			· -					- <u></u>
			M=Reduced Matrix, C			ted Sand G		cation: PL=Pore Lining, M=Matrix.
-	,	icable to a	II LRRs, unless othe		ted.)			s for Problematic Hydric Soils ³ :
Histosol			<u>✓</u> Sandy Red					Muck (A9) (LRR C)
	pipedon (A2)		Stripped M		al (E4)			Muck (A10) (LRR B)
· 	istic (A3) en Sulfide (A4)		Loamy Mu Loamy Gle					ced Vertic (F18) Parent Material (TF2)
	d Layers (A5) (LRF	R C)	Depleted N					(Explain in Remarks)
	uck (A9) (LRR D)	/	Redox Da					(,,,
	d Below Dark Surfa	ace (A11)	Depleted [Dark Surfa	ce (F7)			
	ark Surface (A12)		Redox De		(F8)			of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Poo	ols (F9)				hydrology must be present,
	Gleyed Matrix (S4) Layer (if present):	,					uniess o	disturbed or problematic.
	Layer (ii present)	•						
Type: Depth (in	ohos):						Hydria Sai	I Present? Yes <u>✓</u> No
Remarks:	Cites)						Hydric 30i	I Present? Yes No
HYDROLO								
Wetland Hy	drology Indicator							
Wetland Hye	drology Indicator cators (minimum o		ed; check all that app					ndary Indicators (2 or more required)
Wetland Hyder Primary India	drology Indicator cators (minimum o Water (A1)		<u></u> ✓ Salt Crus	t (B11)				Vater Marks (B1) (Riverine)
Wetland Hyden Primary India Surface High Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2)		✓ Salt Crus Biotic Cru	t (B11) ust (B12)	oo (P12)		\	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Primary India Surface High Wa	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3)	f one requir	✓ Salt Crus — Biotic Cru — Aquatic I	t (B11) ust (B12) nvertebrat			\	Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Wetland Hyd Primary India Surface High Wa ✓ Saturatia Water M	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriv	f one requir erine)	✓ Salt Crus — Biotic Cru — Aquatic II — Hydroger	t (B11) ust (B12) nvertebrat n Sulfide C	dor (C1)	a Livina Ro	\ : :	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Wetland Hyd Primary India Surface High Wa V Saturatio Water M Sedimen	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) darks (B1) (Nonrivent Deposits (B2) (N	f one requir erine) lonriverine	Salt Crus Biotic Cru Aquatic Iu Hydroger Oxidized	t (B11) ust (B12) nvertebrat n Sulfide C Rhizospho	dor (C1) eres alon	_	\ [oots (C3) [Water Marks (B1) (Riverine) Gediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hyder Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep	drology Indicator cators (minimum or Water (A1) ater Table (A2) on (A3) farks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent De	f one requir erine) lonriverine	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence	t (B11) ust (B12) nvertebrat n Sulfide C Rhizospho e of Reduc	odor (C1) eres alonç ed Iron (C	C4)	\ [[oots (C3) [Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hyder Primary India Surface High War Saturatio Water M Sedimer Drift Dep	drology Indicator cators (minimum o Water (A1) ater Table (A2) on (A3) darks (B1) (Nonrivent Deposits (B2) (N	f one requir erine) lonriverine verine)	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe of Reduct on Reduct	odor (C1) eres alonq ed Iron (C ion in Till	_	\ [[oots (C3) [(6) [Water Marks (B1) (Riverine) Gediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hyder Primary India Surface High Water Mater	drology Indicator cators (minimum or Water (A1) ater Table (A2) on (A3) darks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Deposits (B6))	erine) lonriverine verine)	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc	t (B11) ust (B12) nvertebrat n Sulfide C Rhizospho e of Reduc	odor (C1) eres along ed Iron (C ion in Till (C7)	C4)	\ [[[[[[[]	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Orayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Wetland Hyder Primary India Surface High Water Mater	drology Indicator cators (minimum or Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B2) (Nonrivent Catological Cracks (B6) on Visible on Aerial	erine) lonriverine verine)	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide C Rhizospho of Reduct k Surface	odor (C1) eres along ed Iron (C ion in Till (C7)	C4)	\ [[[[[[[]	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hyderimary India Surface High Wa ✓ Saturatio Water M Sedimer Drift Dep ✓ Surface Inundatio Water-S	drology Indicator cators (minimum or Water (A1) ater Table (A2) on (A3) darks (B1) (Nonrivent Deposits (B2) (Norise Soil Cracks (B6) on Visible on Aeria stained Leaves (B9) vations:	f one requir erine) lonriverine verine) Il Imagery (Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface kplain in R	edor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[[]	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hyderimary India Surface High Wa Saturation Water M Sedimer Drift Dep Surface Inundation Water-S Field Obser	drology Indicator cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations:	erine) lonriverine verine) Il Imagery (Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide C Rhizospho e of Reduct on Reduct k Surface xplain in R	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[[]	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hyderimary India Surface High Water Management Sedimer Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap	drology Indicator cators (minimum or cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? present? present?	erine) lonriverine verine) Il Imagery () Yes Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface k plain in R nches): nches): nches):	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[] []	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hyderimary India Surface High Water Management Sedimer Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap	drology Indicator cators (minimum or cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? present? present?	erine) lonriverine verine) Il Imagery () Yes Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface k plain in R nches): nches): nches):	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[] []	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap Describe Re	drology Indicator cators (minimum or cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? present? present?	erine) lonriverine verine) Il Imagery () Yes Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface k plain in R nches): nches): nches):	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[] []	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hyderimary India Surface High Water Management Sedimer Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap	drology Indicator cators (minimum or cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? present? present?	erine) lonriverine verine) Il Imagery () Yes Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface k plain in R nches): nches): nches):	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[] []	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap Describe Re	drology Indicator cators (minimum or cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? present? present?	erine) lonriverine verine) Il Imagery () Yes Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface k plain in R nches): nches): nches):	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[] []	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap Describe Re	drology Indicator cators (minimum or cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? present? present?	erine) lonriverine verine) Il Imagery () Yes Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface k plain in R nches): nches): nches):	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[] []	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Primary India Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap Describe Re	drology Indicator cators (minimum or cators (minimum or water (A1) ater Table (A2) on (A3) flarks (B1) (Nonrivent Deposits (B2) (Nonrivent Deposits (B3) (Nonrivent Cacks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? present? present?	erine) lonriverine verine) Il Imagery () Yes Yes Yes	Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir B7) Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct on Reduct k Surface k plain in R nches): nches): nches):	odor (C1) eres along ed Iron (C ion in Till (C7) emarks)	C4) ed Soils (C	\ [[[[[[] []	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: LCWA South Area	City	/County: Seal B	each/Orange Cou	nty Sar	mpling Date:	2/26/21
Applicant/Owner: Los Cerritos Wetlands Authority			State:	<u>CA</u> Sar	mpling Point: _	10
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hannah Cr	raddocl Sec	tion, Township,	Range: <u>T5S, R12W</u>	<u> </u>		
Landform (hillslope, terrace, etc.): Terrace	Loc	cal relief (concav	e, convex, none): <u>c</u>	onvex	Slop	e (%):2
Subregion (LRR): LRRC	Lat: <u>33.751</u>	.016 N	Long: -118.10	1627 W	Datum	ո։ <u>WGS84</u>
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents, c	dredged spo	oil- Typic Fluva	quents comp NW	classification	ı: R2UBHx	
Are climatic / hydrologic conditions on the site typical for this ti	ime of year?	Yes No	o (If no, exp	olain in Rema	rks.)	
Are Vegetation, Soil, or Hydrology sign	nificantly dist	urbed? A	re "Normal Circums	tances" prese	ent? Yes <u></u>	No
Are Vegetation, Soil, or Hydrology nat			needed, explain an	y answers in	Remarks.)	
SUMMARY OF FINDINGS – Attach site map sh						ıtures, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No						
Hydric Soil Present? Yes No		Is the Samp		oe.	No	
Wetland Hydrology Present? Yes No _	<u> </u>	within a vvei	nanur r	es	NO <u>*</u>	
Remarks:						
VEGETATION – Use scientific names of plants	.					
·		ominant Indicate	or Dominance To	est worksher	et:	
Tree Stratum (Plot size:)	% Cover S	oecies? Status	— Number of Dor			
1			That Are OBL,	FACW, or FA	AC:1	(A)
2			Total Number			
3			Species Acros	s All Strata:	1	(B)
4	=		Percent of Dor			(A (D)
Sapling/Shrub Stratum (Plot size:)		Total Gover	That Are OBL,	FACVV, or FA	AC:1	(A/B)
1			Prevalence In			
2			Total % Co			=
3			OBL species			
4			FACW species			
5	=		FACU species			
Herb Stratum (Plot size: 2m)		I Olai Covei	UPL species			
1. Salicornia pacifica	40	x OBL				80 (B)
2. <u>Cressa truxillensis</u>						
3			_		/A = <u>1.3</u>	<u>.3 </u>
4			Hydrophytic \ ✓ Dominanc	_		
5			_ V Dominanc			
6			_		ons¹ (Provide s	supporting
8			data in	Remarks or o	on a separate s	sheet)
		Fotal Cover	Problemat	ic Hydrophyti	c Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)			1			
1			Indicators of home be present, un			
2					'	
-	=	Total Cover	Hydrophytic Vegetation			
% Bare Ground in Herb Stratum 40 % Cover o	f Biotic Crust	0	Present?	Yes	<u>/</u> No	
Remarks:						

Depth (inches)	Matrix Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
	2.5Y, 3/2	99	2.5YR, 2.5/4	1		М	Sandy	Clumps of clay within core
_	-			_				
		_		_				
			-					
			=Reduced Matrix, C			ed Sand G		cation: PL=Pore Lining, M=Matrix.
-	,	able to all	LRRs, unless other		ed.)			s for Problematic Hydric Soils ³ :
Histosol (Sandy Red					Muck (A9) (LRR C)
	ipedon (A2)		Stripped M		I (E4)			Muck (A10) (LRR B)
Black His	รแต (A3) า Sulfide (A4)		Loamy Mu Loamy Gle				_	ced Vertic (F18) Parent Material (TF2)
	Layers (A5) (LRR	C)	Depleted N		(1 2)			(Explain in Remarks)
	ck (A9) (LRR D)	•,	Redox Dar		(F6)			(Explain in Nomanie)
	Below Dark Surface	ce (A11)	Depleted D		. ,			
Thick Da	rk Surface (A12)		Redox Dep	oressions (F8)		³ Indicators	of hydrophytic vegetation and
-	ucky Mineral (S1)		Vernal Poo	ols (F9)				hydrology must be present,
	leyed Matrix (S4)						unless o	disturbed or problematic.
₹estrictive I	ayer (if present):							
Туре:								
Type: Depth (inc			<u> </u>				Hydric Soi	I Present? Yes No
Type: Depth (inc Remarks:	hes):						Hydric Soi	I Present? Yes No
Type: Depth (inc Remarks: YDROLO(hes):						Hydric Soi	I Present? Yes No
Type: Depth (inc Remarks: YDROLOG Wetland Hyd	hes):			oly)				
Type:	GY Irology Indicators		d; check all that app				Seco	ndary Indicators (2 or more required)
Type: Depth (inc Remarks: YDROLOG Wetland Hyd Primary Indicate Surface \	GY Irology Indicators ators (minimum of o		d; check all that app	t (B11)			<u>Seco</u> V	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine)
Type: Depth (inc Remarks: YDROLOG Wetland Hyd Primary Indic Surface \ High Wat	GY Irology Indicators ators (minimum of o		d; check all that app Salt Crus Biotic Cru	t (B11) ıst (B12)	ss (B13)		Seco \ S	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Type: Depth (inc Remarks: YDROLOG Wetland Hyd Primary Indic Surface \ High Wat Saturatio	GY Irology Indicators ators (minimum of of Water (A1) ter Table (A2) n (A3)	: one require	d; check all that app Salt Crus Biotic Cru Aquatic Ir	t (B11) ust (B12) nvertebrate			<u>Seco</u> V S	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Type:	GY Irology Indicators ators (minimum of of Water (A1) ter Table (A2) n (A3) arks (B1) (Nonrivel	: one require	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger	t (B11) ust (B12) nvertebrate n Sulfide O	dor (C1)	Livina Ro	<u>Seco</u> V S [ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Orainage Patterns (B10)
Type:	GY Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No	: one require rine) onriverine)	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe	dor (C1) res along		Seco \ \ \ \ \ \ \	ndary 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)
Type:	GY Irology Indicators ators (minimum of o Water (A1) ter Table (A2) n (A3) arks (B1) (Nonrivel	: one require rine) onriverine)	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence	t (B11) ust (B12) nvertebrate n Sulfide O	dor (C1) res along ed Iron (C	4)	Seco \ \ \ \ \ \	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Orainage Patterns (B10)
Type:	GY Irology Indicators ators (minimum of of Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonrivel) t Deposits (B2) (No	rine)	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe e of Reduce	dor (C1) res along ed Iron (Co on in Tille	4)	Seco V S [Cots (C3) C C3) C4	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Gediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8)
Type:	GY Irology Indicators ators (minimum of o Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonrive t Deposits (B2) (No osits (B3) (Nonrive	rine)	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti	dor (C1) res along ed Iron (Co on in Tille	4)	Seco \(\bigvery \) \(\sigma \)	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8)
Type:	GY Irology Indicators ators (minimum of or	rine)	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (dor (C1) res along ed Iron (Co on in Tille	4)	Seco \(\bigvery \) \(\sigma \)	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Type:	GY Irology Indicators ators (minimum of	: one require rine) onriverine) erine)	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide Or Rhizosphe of Reduce on Reducti k Surface (dor (C1) res along d Iron (Con in Tille (C7) emarks)	4) d Soils (Co	Seco \(\bigvery \) \(\sigma \)	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Type:	Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver to Deposits (B2) (Noriver (B3)) (Nonriver (B3)) (rine) erine) Imagery (E	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re	dor (C1) res along ed Iron (Ci on in Tille (C7) emarks)	4) d Soils (Co	Seco \(\bigvery \) \(\sigma \)	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Type:	Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (Noriver to Deposits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial ained Leaves (B9) rations: er Present?	rine) Imagery (E	d; check all that app Salt Crus Salt Crus Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches):	dor (C1) res along d Iron (Coon in Tille (C7) emarks)	4) d Soils (Co	Seco	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3)
Type:	Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (Noriver to Deposits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial ained Leaves (B9) rations: ar Present?	rine) Imagery (B	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along ed Iron (Coon in Tille (C7) emarks)	4) d Soils (Co	Seco \	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (Noriver to Deposits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial ained Leaves (B9) rations: ar Present?	rine) Imagery (B	d; check all that app Salt Crus Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along ed Iron (Coon in Tille (C7) emarks)	4) d Soils (Co	Seco \	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (Noriver to Deposits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial ained Leaves (B9) rations: ar Present?	rine) Imagery (B	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along ed Iron (Coon in Tille (C7) emarks)	4) d Soils (Co	Seco \	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (Noriver to Deposits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial ained Leaves (B9) rations: ar Present?	rine) Imagery (B	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along ed Iron (Coon in Tille (C7) emarks)	4) d Soils (Co	Seco \	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	Irology Indicators ators (minimum of or Nater (A1) ter Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (Noriver to Deposits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial ained Leaves (B9) rations: ar Present?	rine) Imagery (B	d; check all that app Salt Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate n Sulfide Oo Rhizosphe of Reduce on Reducti k Surface (xplain in Re nches): nches):	dor (C1) res along ed Iron (Coon in Tille (C7) emarks)	4) d Soils (Co	Seco \	ndary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: LCWA South Area	_ City/County: Seal Bead	ch/Orange County	Sampling Date:	3/5/21
Applicant/Owner: Los Cerritos Wetlands Authority		State: <u>CA</u>	Sampling Point:	11
Investigator(s): Hannah Craddock, Marcelo Ceballos, Wanisa Ja	ii Section, Township, Rar	nge: <u>T5S, R12W</u>		
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, o	convex, none): concave	Slope	(%):3
Subregion (LRR): LRRC Lat: 3	3.751859 N	Long: -118.10031 W	Datum:	WGS84
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents, dredge				·
Are climatic / hydrologic conditions on the site typical for this time of			·	
Are Vegetation, Soil, or Hydrology significant	·	,	•	No
Are Vegetation, Soil, or Hydrology naturally p				
SUMMARY OF FINDINGS – Attach site map showin		ocalions, transects	, important leat	ures, etc.
Hydrophytic Vegetation Present? Yes No	- Is the Sampled	Area		
Hydric Soil Present? Yes No	within a Wetlan		No <u> </u>	
Wetland Hydrology Present? Yes No	_			
Remarks:				
VEGETATION – Use scientific names of plants.				
	te Dominant Indicator	Dominance Test work		
Tree Stratum (Plot size:) % Coverage 1	er Species? Status	Number of Dominant Sp That Are OBL, FACW, o		(A)
2				(^)
3		Total Number of Domina Species Across All Stra	_	(B)
4		·		(5)
	= Total Cover	Percent of Dominant Sp That Are OBL, FACW, o		(A/B)
Sapling/Shrub Stratum (Plot size:)			-	
1		Prevalence Index worl Total % Cover of:		N.C.
2		OBL species		-
3		FACW species		
5		FAC species		
	= Total Cover	FACU species 5		
Herb Stratum (Plot size: 2m)		UPL species	x 5 =	
1. Mesembryanthemum nodiflorum 5		Column Totals:5	(A)2(<u>0</u> (B)
2		Prevalence Index	= B/A =4	
3		Hydrophytic Vegetation		
4		Dominance Test is		
6		Prevalence Index is		
7.		Morphological Adap	otations¹ (Provide su	
8			s or on a separate sh	•
5	= Total Cover	Problematic Hydror	onytic Vegetation (E	:xplain)
Woody Vine Stratum (Plot size:)		¹ Indicators of hydric soil	and wetland hydrole	oay muet
1		be present, unless distu		
2	= Total Cover	Hydrophytic		
		Vegetation		
% Bare Ground in Herb Stratum95	: Crust0	Present? Yes	s No <u> </u>	
Remarks:				

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the i	ndicator	or confirm	the absence of i	indicators.)	
Depth	Matrix			x Feature:					
(inches)	Color (moist)	<u> </u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks	
0-12	2.5Y, 3/2	100							
1									
	oncentration, D=Dep					ed Sand Gra		on: PL=Pore Lining, M=Ma	_
•	Indicators: (Applic	able to all L	•		ed.)			Problematic Hydric Soils	· :
Histosol	` '		Sandy Red	. ,				k (A9) (LRR C)	
	pipedon (A2)		Stripped Ma		L /E4\			k (A10) (LRR B)	
Black His			Loamy Muc	-				Vertic (F18)	
	n Sulfide (A4) I Layers (A5) (LRR (C/	Loamy Gley Depleted M		(FZ)			nt Material (TF2)	
	ick (A9) (LRR D)	C)	Redox Dark		E6)		Other (EX	plain in Remarks)	
	d Below Dark Surfac	·	Depleted D		. ,				
	ark Surface (A12)	.5 (, (, 1, 1,	Redox Dep				³ Indicators of h	nydrophytic vegetation and	
	lucky Mineral (S1)		Vernal Pool	•	· • /			rology must be present,	
	Bleyed Matrix (S4)			- ()			-	rbed or problematic.	
	_ayer (if present):							·	
Type: Ro	ck								
Depth (inc							Hydric Soil Pre	esent? Yes No	, <i>v</i>
Remarks:							1.,		
The area i	is likely salty fi	ll materia	I						
HYDROLO	GY								
Wetland Hyd	drology Indicators:								
Primary Indic	cators (minimum of c	one required;	check all that appl	y)			Secondar	ry Indicators (2 or more req	uired)
Surface	Water (A1)		✓ Salt Crust	(B11)			Wate	er Marks (B1) (Riverine)	
High Wa	ter Table (A2)		Biotic Crus	st (B12)			Sedir	ment Deposits (B2) (Riveri	ne)
<u>✓</u> Saturatio	on (A3)		Aquatic In	vertebrate	s (B13)			Deposits (B3) (Riverine)	
Water M	arks (B1) (Nonrive r	ine)	Hydrogen				<u></u> ✓ Drain	nage Patterns (B10)	
Sedimen	nt Deposits (B2) (No	nriverine)	Oxidized F	Rhizosphe	res along	Living Root	ts (C3) Dry-S	Season Water Table (C2)	
Drift Dep	oosits (B3) (Nonrive	rine)	Presence	of Reduce	d Iron (C	4)	Cray	fish Burrows (C8)	
	Soil Cracks (B6)		Recent Iro					ration Visible on Aerial Imag	gery (C9)
	on Visible on Aerial	Imagery (B7)				•		ow Aquitard (D3)	,
	tained Leaves (B9)	0 , ()	Other (Exp					-Neutral Test (D5)	
Field Observ	. ,								
Surface Wate	er Present?	es No	o <u> </u>	ches):					
Water Table			Depth (in						
							and Hudralagu D	recent? Vec 1/ N	_
Saturation Pr (includes cap		es V No	Depth (in	cnes): <u>12</u>		wetia	and Hydrology Pi	resent? Yes <u> / </u>	·
	corded Data (stream	gauge, mon	itoring well, aerial	photos, pr	evious ins	spections), i	if available:		
Remarks:									
	nottorna likali	duo +=	noff						
שוווage	patterns likely	uue to ru	11011						

Project/Site: LCWA South Area	C	ity/County: Seal Be	ach/Orange County	Sampling Date:	3/5/21
Applicant/Owner: Los Cerritos Wetlands Authority			State: CA	_ Sampling Point:	12
Investigator(s): Hannah Craddock, Marcelo Ceballos,	Wanisa Jai S	Section, Township, R	tange: <u>T5S, R12W</u>		
Landform (hillslope, terrace, etc.): Basin	I	_ocal relief (concave	e, convex, none): none	Slope	e (%): <u>1</u>
Subregion (LRR): LRRC					
Soil Map Unit Name: Bolsa silty clay loam, drained					
Are climatic / hydrologic conditions on the site typical for t					
Are Vegetation, Soil, or Hydrology	-	·	"Normal Circumstances"	,	No
Are Vegetation, Soil, or Hydrology			needed, explain any answ		
			,	,	
SUMMARY OF FINDINGS – Attach site ma	p snowing :	sampling point	locations, transect	s, important rea	tures, etc.
Hydrophytic Vegetation Present? Yes	No	Is the Sample	ad Area		
Hydric Soil Present? Yes		within a Wetl		No <u> </u>	
Wetland Hydrology Present? Yes	No	Within a Wood			
Remarks:					
VEGETATION – Use scientific names of pla	ants.				
		Dominant Indicator		rksheet:	
Tree Stratum (Plot size:)		Species? Status	- Number of Dominant		
1.			_ That Are OBL, FACW	', or FAC:1	(A)
2			Total Number of Dom		
3			_ Species Across All St	rata: <u> 1 </u>	(B)
4		= Total Cover	Percent of Dominant		(A (D)
Sapling/Shrub Stratum (Plot size:)		- Total Gover	That Are OBL, FACW	, or FAC:1_	(A/B)
1			Prevalence Index wo		
2			Total % Cover of:		=
3			OBL species 10		
4			FACW species 25		
5			_ FAC species		
Herb Stratum (Plot size:)		= Total Cover	FACU species 5 UPL species		
1. Arthrocnemum subterminale		x FACW			80 (B)
2. Mesembryanthemum nodiflorum		FACU	Coldinii Totalo.	<u>+0</u> (A)8	<u>o</u> (b)
3. Salicornia pacifica		OBL	Prevalence Inde	ex = B/A =2	
4. Symphyotrichum subulatum		OBL	Hydrophytic Vegetat	ion Indicators:	
5			_ Dominance Test		
6			Prevalence Index		
7				laptations ¹ (Provide รเ หร or on a separate sl	
8			Problematic Hydr	· · · · · · · · · · · · · · · · · · ·	•
Woody Vine Stratum (Plot size:)	40	= Total Cover			. ,
1			¹ Indicators of hydric s		
2.			be present, unless dis	turbed or problematio	; .
		= Total Cover	Hydrophytic		
% Bare Ground in Herb Stratum60	ver of Biotic Cr	ust 0	Vegetation Present? Y	′es <u> </u>	
Remarks:					<u> </u>
I and the second					

Profile Desc	ription: (Describe	to the depti	needed to docur	nent the i	ndicator	or confirm	n the absence of indicator	s.)
Depth	Matrix			x Feature:				
<u>(inches)</u>	Color (moist)	%	Color (moist)		Type ¹	Loc ²	<u>Texture</u>	Remarks
<u>0-2</u>	2.5Y, 3/1	<u> 100</u> _					<u>clay</u>	
2-9	2.5Y, 3/2	100					sandy	
				·				
	-							
				. '				_
1Type: C=Cc	oncentration, D=De	nletion RM=F	Reduced Matrix CS	S=Covered	d or Coate	ad Sand Gr	rains ² l ocation: Pl =P	ore Lining, M=Matrix.
	ndicators: (Appli					d Sand Gi	Indicators for Problem	
Histosol	,	Jubio 10 uii 2	Sandy Red		ou.,		1 cm Muck (A9) (Li	•
	oipedon (A2)		Stripped Ma	. ,			2 cm Muck (A10) (L	
Black His			Loamy Muc		I (F1)		Reduced Vertic (F1	•
	n Sulfide (A4)		Loamy Gley				Red Parent Materia	
	Layers (A5) (LRR	C)	Depleted M		(/		Other (Explain in R	
	ck (A9) (LRR D)	,	Redox Dark		(F6)			,
	l Below Dark Surfa	ce (A11)	Depleted D					
Thick Da	rk Surface (A12)		Redox Dep	ressions (I	F8)		³ Indicators of hydrophyt	ic vegetation and
Sandy M	lucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydrology m	ust be present,
Sandy G	leyed Matrix (S4)						unless disturbed or p	roblematic.
Restrictive L	ayer (if present):							
Туре:			<u>—</u>					
Depth (inc	ches):						Hydric Soil Present?	Yes No
Remarks:								
	CV							
HYDROLO								
	drology Indicators							
	ators (minimum of	one required;					· · · · · · · · · · · · · · · · · · ·	ors (2 or more required)
Surface	Water (A1)		✓ Salt Crust	` '			Water Marks (
High Wa	ter Table (A2)		Biotic Crus	st (B12)			Sediment Dep	osits (B2) (Riverine)
✓ Saturation	on (A3)		Aquatic In	vertebrate	s (B13)		Drift Deposits	(B3) (Riverine)
Water M	arks (B1) (Nonrive	rine)	Hydrogen	Sulfide O	dor (C1)		<u></u> Drainage Patte	erns (B10)
Sedimen	nt Deposits (B2) (N o	onriverine)	Oxidized F	Rhizosphe	res along	Living Roc	ots (C3) Dry-Season W	/ater Table (C2)
Drift Dep	osits (B3) (Nonrive	erine)	Presence	of Reduce	ed Iron (C	4)	Crayfish Burro	ows (C8)
Surface	Soil Cracks (B6)		Recent Iro	n Reducti	on in Tille	d Soils (C6	S) Saturation Vis	ible on Aerial Imagery (C9)
Inundatio	on Visible on Aerial	Imagery (B7)	Thin Muck	Surface (C7)		Shallow Aquita	ard (D3)
Water-St	tained Leaves (B9)		Other (Exp	olain in Re	marks)		FAC-Neutral T	est (D5)
Field Observ	vations:							
Surface Wate	er Present?	Yes N	o <u> < </u>	ches):				
Water Table			o <u> </u>					
Saturation Pr			o Depth (in				and Hydrology Present?	Yes V No
(includes cap		1031	o Bcpai (iii	51103). <u>3</u>		_ '''	und riyarology r resent.	103 <u> </u>
	corded Data (strear	n gauge, mor	itoring well, aerial	ohotos, pr	evious ins	spections),	if available:	
Remarks:								

Project/Site: LCWA South Area	Cit	y/County:	Seal Beac	h/Orange Cou	nty S	ampling Date:	3/5/21
Applicant/Owner: Los Cerritos Wetlands Authority	<u>CA</u> S	ampling Point:	13				
Investigator(s): Hannah Craddock, Marcelo Ceballos, Wa	<u>nisa Jai</u> Se	ction, Tow	nship, Ran	ge: <u>T5S, R12W</u>	<u> </u>		
Landform (hillslope, terrace, etc.): Terrace	Lo	cal relief ((concave, c	onvex, none): <u>C</u>	oncave	Slo	ope (%):0
Subregion (LRR): LRRC	Lat: <u>33.75</u>	1863 N		Long: -118.09	8854 W	Datu	_{um:} <u>WGS84</u>
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents,	dredged sp	oil- Typic	Fluvaque	nts comr NWI	classificati	on: PEM1Cx	
Are climatic / hydrologic conditions on the site typical for this	time of year?	Yes_	No	(If no, exp	olain in Ren	narks.)	
Are Vegetation, Soil, or Hydrology sig	gnificantly dis	sturbed?	Are "N	Normal Circums	tances" pre	sent? Yes	✓ No
Are Vegetation, Soil, or Hydrology na			(If nee	eded, explain an	y answers	in Remarks.)	
SUMMARY OF FINDINGS – Attach site map s							eatures, etc
Hydrophytic Vegetation Present? Yes No				_			
Hydric Soil Present? Yes No			Sampled .		·00	_ No <u></u> ✓	
Wetland Hydrology Present? Yes No		Within	n a Wetlan	ur 1	es	_ NO	_
Remarks:							
VEGETATION – Use scientific names of plants	S.						
	Absolute D	Dominant	Indicator	Dominance Te	est worksh	eet:	
,	% Cover S			Number of Dor			
1				That Are OBL,	FACW, or	FAC:	1 (A)
2				Total Number			1 (D)
3 4				Species Acros	s All Strata	<u> </u>	<u>1</u> (B)
	=			Percent of Don That Are OBL,			1 (Δ/R)
Sapling/Shrub Stratum (Plot size:)							<u>1</u> (A/D)
1				Prevalence In			
2				Total % Co		•	
3				OBL species FACW species			
4.				FAC species			
	=		er	FACU species			
Herb Stratum (Plot size: 2m				UPL species			
1. Arthrocnemum subterminale		X		Column Totals	:62	(A)	128 (B)
2. Mesembryanthemum nodiflorum			,	Drovolon	oo Indov. =	B/A =2	06
3				Hydrophytic \			.00
4				✓ Dominano	_		
5 6				✓ Prevalence			
7.				Morpholog	jical Adapta	ations¹ (Provide	supporting
8.						r on a separate	•
		Total Cov	er	Problemat	ic Hydroph	ytic Vegetation	ˈ(Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of h	udria aail a	nd watland by	drology much
1				be present, un			
2	=		er -	Hydrophytic			
				Vegetation			
	of Biotic Crus	st		Present?	Yes _	No _	
Remarks:							

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

(inches)	Color (moist)	%	Color (moist) % Type ¹	Loc ² Text	<u>ure</u> <u>Remarks</u>
0-12	10YR, 3/2	100			
<u> </u>	10111, 372				
		 ·			
			Reduced Matrix, CS=Covered or Coated		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all I	_RRs, unless otherwise noted.)	Indic	cators for Problematic Hydric Soils ³ :
Histoso	, ,		Sandy Redox (S5)		1 cm Muck (A9) (LRR C)
	pipedon (A2)		Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)
	listic (A3)		Loamy Mucky Mineral (F1)		Reduced Vertic (F18)
	en Sulfide (A4)	C \	Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
	ed Layers (A5) (LRR uck (A9) (LRR D)	C)	Depleted Matrix (F3) Redox Dark Surface (F6)	`	Other (Explain in Remarks)
	ed Below Dark Surfa	ce (Δ11)	Nedox Bark Surface (F7)		
-	ark Surface (A12)	00 (/1/1)	Redox Depressions (F8)	³ India	cators of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Pools (F9)		etland hydrology must be present,
-	Gleyed Matrix (S4)				lless disturbed or problematic.
Restrictive	Layer (if present):				
Туре:					
D (1 /)	1 \			Hydri	c Soil Present? Yes No 🗸
Depth (ir	nches):				
Remarks:	(ot hydric due to these observa	itions	
Remarks: No redox No indica	ators present, s			itions	
Remarks: No redox No indica	ators present, s	o likely n		itions	
Remarks: No redox No indica IYDROLO Wetland Hy	ators present, so DGY rdrology Indicators	o likely n			Secondary Indicators (2 or more required)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind	ators present, s OGY Identificators (minimum of	o likely n	ot hydric due to these observa		
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface	of tors present, sometimes of the second sec	o likely n	ot hydric due to these observa		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface	odors present, sometimes of the second secon	o likely n	ot hydric due to these observa ; check all that apply) <u>~</u> Salt Crust (B11)		Secondary Indicators (2 or more required)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W Saturat	oder (A1) ater Table (A2) intors present, s oder (A1) ater Table (A2) ion (A3)	o likely n : one required	ot hydric due to these observa ; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I	oders present, so oder	o likely n : one required	ot hydric due to these observa ; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W V Saturat Water I Sedime	oder (A1) ater Table (A2) intors present, s oder (A1) ater Table (A2) ion (A3)	o likely n : one required rine) porriverine)	ot hydric due to these observa ; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W V Saturat Water I Sedime Drift De	oder present, so present present, so present present present, so present present, so present present, so present present, so p	o likely n : one required rine) porriverine)	ct hydric due to these observations; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Live	ving Roots (C3)	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)
No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W V Saturat Water I Sedime Drift De Surface	oder of the control o	o likely n : one required rine) puriverine) erine)	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liven Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled St	ving Roots (C3)	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) Crayfish Burrows (C8)
No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W V Saturat Water I Sedime Drift De V Surface Inundat	oder present, so present (A1) (Marks (B1) (Monrive and Deposits (B2) (Monrive and Deposits (B3) (Monrive and De	co likely n : one required rine) prine) erine) Imagery (B7	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Line Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	ving Roots (C3)	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De V Surface Inundat Water-1	oder present, so present p	co likely n : one required rine) prine) erine) Imagery (B7	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liter Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Strong Liter Prince (C7)	ving Roots (C3)	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Remarks: No redox No indicate IYDROLO Wetland Hy Primary Ind Surface High W V Saturat Water I Sedime Drift De V Surface Inundat Water-S Field Obse	ators present, so of the present of	co likely n : one required rine) porriverine) erine)	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liter Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Strong Liter Prince (C7)	ving Roots (C3) Soils (C6)	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Remarks: No redox No indicate IYDROLO Wetland Hy Primary Ind Surface High W V Saturat Water I Sedime Drift De V Surface Inundat Water-5 Field Obse Surface Wa	ators present, so of the posits (B3) (Nonrive exposits (B3) (Nonrive	co likely n : one required prine) prine) erine) Imagery (B7	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liven Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Strong Control (C4) Recent Iron Reduction in Tilled Strong Control (C4) Control (Explain in Remarks) Source Depth (inches):	ving Roots (C3) Soils (C6)	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De V Surface Inundat Water-S Field Obse Surface Water Table	oder present, so present (A1) present (A2) present (A2) present (A3) (Nonrive (A3) (co likely n : cone required prine) prine) lmagery (B7	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liperature (C4) Recent Iron Reduction in Tilled Structure (C7) Thin Muck Surface (C7) Other (Explain in Remarks)	ving Roots (C3) Soils (C6)	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: No redox No indicate IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Vater-S Field Obse Surface Water Table Saturation F (includes cater)	oddy	co likely n : cone required rine) prine) Imagery (B7 Yes N Yes N	ct hydric due to these observations; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Literary Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Structure (C7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hyd	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: No redox No indicate IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Vater-S Field Obse Surface Water Table Saturation F (includes cater)	oddy	co likely n : cone required rine) prine) Imagery (B7 Yes N Yes N	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liperature (C4) Recent Iron Reduction in Tilled Structure (C7) Thin Muck Surface (C7) Other (Explain in Remarks)	ving Roots (C3) Soils (C6) Wetland Hyd	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: No redox No indicate IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De Water-S Field Obse Surface Water Table Saturation F (includes can Describe Re	oddy	co likely n : cone required rine) prine) Imagery (B7 Yes N Yes N	ct hydric due to these observations; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Literary Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Structure (C7) Other (Explain in Remarks) No Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hyd	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W V Saturat Sedime Drift De V Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	ators present, so of the posits (B3) (Nonrive extra Deposits (B3) (Nonrive	co likely n : one required rine) onriverine) erine) Imagery (B7 Yes N Yes N	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lir Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled St. Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hyd	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re Remarks: Salt crust	ators present, so of	co likely n cone required rine) conriverine) lmagery (B7 Yes N Yes N T gauge, mo ate surro	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Line Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Strong Company Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hyd	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W Saturat Sedime Drift De Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re Remarks: Salt crust	ators present, so of the posits (B3) (Nonrive extra Deposits (B3) (Nonrive	co likely n cone required rine) conriverine) lmagery (B7 Yes N Yes N T gauge, mo ate surro	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Line Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Strong Company Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hyd	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: No redox No indica IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water I Sedime Drift De V Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re Remarks: Salt crust	ators present, so of	co likely n cone required rine) conriverine) lmagery (B7 Yes N Yes N T gauge, mo ate surro	check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Line Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Strong Company Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Depth (inches): Depth (inches):	ving Roots (C3) Soils (C6) Wetland Hyd	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) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: LCWA South Area	(City/Coun	ty: <u>Seal Bea</u>	ch/Orange Co	unty	Sampling Date: _	3/5/21
Applicant/Owner: Los Cerritos Wetlands Authority		State:	CA	Sampling Point:	14		
Investigator(s): <u>Hannah Craddock, Marcelo Ceballos, Warcelo Cebal</u>	anisa Jai	Section, T	ownship, Ra	nge: <u>T5S, R12V</u>	٧		
Landform (hillslope, terrace, etc.): Ditch		Local reli	ef (concave,	convex, none): <u>(</u>	oncave	Slo	pe (%): <u>5</u>
Subregion (LRR): LRRC	_ Lat: <u>33.7</u>	749846 N	N	_ Long: <u>-118.0</u>	97925 W	<u>/</u> Datu	m: <u>WGS84</u>
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents,	dredged	spoil- Ty	pic Fluvaqu	ents comr NW	/I classific	ation: PEM1Cx	
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes_	✓ No_	(If no, ex	plain in R	emarks.)	
Are Vegetation, Soil, or Hydrology si	gnificantly	disturbed'	? Are "	'Normal Circums	stances" p	resent? Yes	No
Are Vegetation, Soil, or Hydrology na				eded, explain a	ny answe	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map s							atures, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u> No)		4b - Cll	I A			
Hydric Soil Present? Yes No			the Sampled thin a Wetlar		Vac	No 🗸	
Wetland Hydrology Present? Yes V		Wil	uiiii a vvetiai	iu:		NO	•
Remarks:							
VEGETATION – Use scientific names of plant	s.						
			nt Indicator	Dominance T	est work	sheet:	
			? Status	Number of Do			(4)
1				That Are OBL	, FACW, o	or FAC:1	(A)
2				Total Number Species Acros			(B)
4				·			(D)
				Percent of Do		pecies or FAC:1	(A/B)
Sapling/Shrub Stratum (Plot size:)							(/////
1				Prevalence In			
2						Multiply	
3						x1= x2=	
5						x 3 =	
			Cover			x 4 =	
Herb Stratum (Plot size: 2m				UPL species	20	x 5 =	100
1. Rumex crispus		-		Column Totals	s: <u>10</u>	<u>(</u> (A)	<u>190</u> (B)
2. <u>Carpobrotus edulis</u>				Provolo	aco Indov	= B/A = <u>1</u>	۵
3. Eleocharis macrostachya		X				on Indicators:	<u></u>
4. 5.				✓ Dominan	_		
6.				<u>✓</u> Prevalend			
7.						ptations¹ (Provide	
8.						s or on a separate	•
		= Total C	Cover	Problema	tic Hydrop	ohytic Vegetation ¹	(Explain)
Woody Vine Stratum (Plot size:)				¹ Indicators of	hydric soi	l and wetland hydi	rology must
1						irbed or problema	
2				Hydrophytic			
			_	Vegetation	.,		
% Bare Ground in Herb Stratum 0 % Cover	of Blotic Ci	rust	0	Present?	Yes	s <u>/</u> No_	
Remarks:							

	ription: (Describe	to the depti				or confir	m the absence	e of indicators.)		
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features %		Loc ²	<u>Texture</u>	Remarks		
0-14	2.5Y, 3/2	100					-	very saturated		
0 11	2.31, 3/2						Sifty Suriu	very saturated		
	-						· - 			
	_	 -				-	-	-		
							<u> </u>			
							<u> </u>			
		- <u> </u>								
							· -			
1 _{Type:} C=Ce	noontration D=Don	lotion DM-I	Paduaad Matrix C			d Sand C	Proinc 21 o	cation: DI = Dara Lining M=Matrix		
	ncentration, D=Dep					ed Sand C		cation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :		
Histosol		ubio to un E	Sandy Red		<i>.</i>			Muck (A9) (LRR C)		
	ipedon (A2)		Stripped M					Muck (A10) (LRR B)		
Black His			Loamy Mud	. ,	I (F1)			ced Vertic (F18)		
	n Sulfide (A4)		Loamy Gle	-				Parent Material (TF2)		
Stratified Layers (A5) (LRR C)			Depleted M		. ,		Other	(Explain in Remarks)		
· 	ck (A9) (LRR D)		Redox Dar							
	l Below Dark Surfac	e (A11)	Depleted D				0			
· 	rk Surface (A12)	Redox Dep	•	- 8)			s of hydrophytic vegetation and			
-	lucky Mineral (S1)	Vernal Poo	ls (F9)				hydrology must be present,			
	leyed Matrix (S4) -ayer (if present):						uniess	disturbed or problematic.		
	ayer (ii present).									
• • •							Usalvia Cai	I Present? Yes No ✔		
• •	ches):						Hydric Soi	I Present? Yes No <u>✓</u>		
Remarks:										
90% silt, 1	.0% clay									
HYDROLO(GY									
Wetland Hyd	rology Indicators:									
Primary Indic	ators (minimum of c	ne required;	check all that app	ly)			Seco	ndary Indicators (2 or more required)		
<u>✓</u> Surface	Water (A1)		Salt Crust	(B11)			\	Water Marks (B1) (Riverine)		
High Wa	ter Table (A2)		Biotic Cru	st (B12)			Sediment Deposits (B2) (Riverine)			
✓ Saturation	on (A3)		Aquatic In	vertebrate	s (B13)		[Orift Deposits (B3) (Riverine)		
<u>✓</u> Water M	arks (B1) (Nonriver	ine)	Hydrogen	Sulfide Oc	dor (C1)		[Orainage Patterns (B10)		
Sedimen	it Deposits (B2) (No	nriverine)	Oxidized	Rhizosphei	res along	Living Ro	ots (C3) [Dry-Season Water Table (C2)		
Drift Dep	osits (B3) (Nonrive	rine)	Presence	of Reduce	d Iron (C	4)	(Crayfish Burrows (C8)		
Surface	Soil Cracks (B6)		Recent Iro	n Reduction	on in Tille	d Soils (C	(6) 5	Saturation Visible on Aerial Imagery (C9		
Inundatio	on Visible on Aerial I	magery (B7)) Thin Mucl	Surface (C7)		\$	Shallow Aquitard (D3)		
Water-St	tained Leaves (B9)		Other (Ex	plain in Re	marks)		F	FAC-Neutral Test (D5)		
Field Observ	/ations:									
Surface Water	er Present? Y	es 🔽 N	o Depth (ir	iches): <u>6</u>						
Water Table	Present? Y	es N	o <u> < </u>	iches):						
Saturation Pr	esent? Y	es 🗸 N	o Depth (in	ches): 14		Wet	land Hydrolog	gy Present? Yes <u></u> No		
(includes cap	illary fringe)						-			
Describe Red	corded Data (stream	gauge, mor	nitoring well, aerial	photos, pre	evious ins	pections)	, if available:			
Remarks:										

Project/Site: LCWA South Area	City/County: Seal Beac	ch/Orange County	Sampling Date:	3/5/21
Applicant/Owner: Los Cerritos Wetlands Authority		State: <u>CA</u>	_ Sampling Point:	15
Investigator(s): Marcelo Ceballos Jr, Hannah Craddock, Wanisa	Section, Township, Rar	nge: <u>T5S, R12W</u>		
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, c	convex, none): none	Slope (%): <u> </u>
Subregion (LRR): LRRC Lat: 33	.750239 N	Long: -118.097454 \	N Datum: \	WGS84
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents, dredged				
Are climatic / hydrologic conditions on the site typical for this time of y			·	
Are Vegetation, Soil, or Hydrology significantly	<u> </u>		· ·	No
Are Vegetation, Soil, or Hydrology naturally pr				<u> </u>
SUMMARY OF FINDINGS – Attach site map showing	g sampling point it		s, important leatu	res, etc.
Hydrophytic Vegetation Present? Yes No		Area		
Hydric Soil Present? Yes No	within a Wetlan		No <u> </u>	
Wetland Hydrology Present? Yes No				
Remarks:				
VEGETATION – Use scientific names of plants.				
	Dominant Indicator	Dominance Test wor	ksheet:	
,	r <u>Species?</u> <u>Status</u>	Number of Dominant S		(4)
1		That Are OBL, FACW,	, or FAC:1	(A)
3		Total Number of Domi		(B)
4		·		(b)
	_ = Total Cover	Percent of Dominant S That Are OBL FACW	Species , or FAC: <u> </u>	(A/B)
Sapling/Shrub Stratum (Plot size:)				(,,,,)
1		Prevalence Index wo		
2			<u>Multiply by</u> x 1 = 40	
3			x 2 =	
4. 5.			x 3 =	
	= Total Cover		x 4 =	
Herb Stratum (Plot size: 2m)			x 5 =	
	x OBL	Column Totals:	40 (A) <u>40</u>	(B)
2		Duranda a a la da	D/A - 1	
3		Hydrophytic Vegetati	x = B/A = 1	
4		✓ Dominance Test is		
5		✓ Prevalence Index		
6		l 	aptations¹ (Provide sup	porting
8		data in Remark	ks or on a separate she	eet)
	= Total Cover	Problematic Hydro	ophytic Vegetation ¹ (Ex	(plain)
Woody Vine Stratum (Plot size:)	_			
1		Indicators of hydric so be present, unless dist	oil and wetland hydrolog turbed or problematic.	gy must
2				
	_ = Total Cover	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 60 % Cover of Biotic	Crust0	Present? Ye	es <u> </u>	_
Remarks:				

Profile Description: (Describe to the depth needed to document the indicator or confirm							n the absence	of indicators.)
Depth	Matrix		Redo	x Feature:				
(inches)	Color (moist)	<u> </u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	<u>Remarks</u>
0-12	2.5Y, 3/2	100					Sandy	Sandy fill, chunks of clay
<u>12</u>	5Y, 3/2	100					Clay	Chunks of clay
		·						
		- — —						
	-			. ——				
		· — — —						
								
	oncentration, D=Dep					d Sand Gi		cation: PL=Pore Lining, M=Matrix.
_	Indicators: (Applic	able to all LR			ed.)			s for Problematic Hydric Soils ³ :
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6)								Muck (A9) (LRR C) Muck (A10) (LRR B)
Black Hi			Loamy Muc		L(F1)			ced Vertic (F18)
	n Sulfide (A4)		Loamy Gley					Parent Material (TF2)
	d Layers (A5) (LRR (C)	Depleted M		` ,		Other	(Explain in Remarks)
	ıck (A9) (LRR D)		Redox Dark					
	d Below Dark Surfac	e (A11)	Depleted D				3	
	ark Surface (A12)		Redox Dep		F8)			of hydrophytic vegetation and hydrology must be present,
Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4)								disturbed or problematic.
	_ayer (if present):							and the proposition of the propo
Type:			_					
Depth (inc	ches):						Hydric Soi	l Present? Yes No <u>✓</u>
Remarks:								
Mainly sa	nd hut there a	re chunks	of clay This	clav is l	ikely im	norted	from whe	n fill material from the
_	ng area was di		•	•	-	•		
Juliouliui	iig ai ca was ut	imped one	o the site. H	ic arca	1103 011	Old IIISt	ory or dur	iipiiig.
HYDROLO	GY							
	drology Indicators:							
_	cators (minimum of c		heck all that appl	v)			Seco	ndary Indicators (2 or more required)
	Water (A1)		✓ Salt Crust					Vater Marks (B1) (Riverine)
	iter Table (A2)		Biotic Crus	` '			' <u></u> '	Sediment Deposits (B2) (Riverine)
Saturation			Aquatic In		s (B13)			Orift Deposits (B3) (Riverine)
	arks (B1) (Nonriver	ine)	Hydrogen					Drainage Patterns (B10)
Sedimer	nt Deposits (B2) (No	nriverine)	Oxidized F	Rhizosphe	res along	Living Roc	ots (C3) [Ory-Season Water Table (C2)
Drift Dep	oosits (B3) (Nonrive	rine)	Presence	of Reduce	ed Iron (C4	!)	_ (Crayfish Burrows (C8)
Surface	Soil Cracks (B6)		Recent Iro	n Reducti	on in Tilled	d Soils (C6	6) 8	Saturation Visible on Aerial Imagery (C9)
	on Visible on Aerial	lmagery (B7)	Thin Muck					Shallow Aquitard (D3)
	tained Leaves (B9)		Other (Exp	olain in Re	marks)		F	FAC-Neutral Test (D5)
Field Obser								
Surface Water Present? Yes No Depth (inches):								
Water Table Present? Yes No Depth (inches):								,
Saturation Present? Yes No Depth (inches): We (includes capillary fringe)							and Hydrolog	y Present? Yes No
	corded Data (stream	gauge, monit	oring well, aerial	photos, pr	evious ins	pections),	if available:	
Remarks:								
Salt crust	due to sand fil	l. No tidal (connection.					

Project/Site: LCWA South Area	City/County: Seal Bea	ch/Orange County	Sampling Date:	3/5/21
Applicant/Owner: Los Cerritos Wetlands Authority		State: CA	Sampling Point: _	16
Investigator(s): Marcelo Ceballos Jr, Hannah Craddock, War	iisa Section, Township, Ra	inge: <u>T5S, R12W</u>		
Landform (hillslope, terrace, etc.): Ditch	Local relief (concave,	convex, none): concave	Slop	e (%): <u>0</u>
Subregion (LRR): LRRC Lat:	33.750224 N	_ Long: <u>-118.103226 V</u>	V Datum	ո։ <u>WGS84</u>
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents, dred	ged spoil- Typic Fluvaqu	ients comr NWI classifi	cation: R2UBHx	
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes No _	(If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology signification	antly disturbed? Are	"Normal Circumstances"	present? Yes	No
Are Vegetation, Soil, or Hydrology naturall		eeded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map show				ıtures, etc.
Hydrophytic Vegetation Present? Yes No				
Hydric Soil Present? Yes V No			No	
Wetland Hydrology Present? Yes No	— within a wettai	na? Yes <u> </u>	NO	
Remarks:				
VEGETATION – Use scientific names of plants.				
	lute Dominant Indicator	Dominance Test worl	ksheet:	
	over Species? Status	Number of Dominant S		
1		That Are OBL, FACW,	or FAC:1_	(A)
2		Total Number of Domin	and the second s	
3		Species Across All Stra	ata: <u>1</u>	(B)
4	= Total Cover	Percent of Dominant S		(A /D)
Sapling/Shrub Stratum (Plot size:)		That Are OBL, FACW,	or FAC:1	(A/B)
1		Prevalence Index wo		
2		Total % Cover of:	· ·	=
3		OBL species 80		
4		FACW species		
5	= Total Cover	FACU species		
Herb Stratum (Plot size: 2m)	= 10tal Covel	UPL species		
1. Salicornia pacifica 8	0 x OBL	Column Totals: 8		80 (B)
2				
3			x = B/A =1	
4		Hydrophytic Vegetati ✓ Dominance Test is		
5		✓ Prevalence Index		
6			aptations¹ (Provide s	supporting
7		data in Remark	s or on a separate s	sheet)
	= Total Cover	Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)		1		
1		¹ Indicators of hydric so be present, unless dist		
2		, ,		
	= Total Cover	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 20 % Cover of Bio	tic Crust		es <u>/</u> No	<u> </u>
Remarks:				

Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	es Type ¹	Loc ²	Texture	Remarks		
0-12	2.5Y, 3/2	95	5YR, 3/4			M	Clay	Spotted redox throughout		
		_		_				-		
			-		-					
								·		
	-									
1- 0.0							. 21			
			I=Reduced Matrix, C I LRRs, unless othe			ed Sand G		ocation: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :		
Histosol			Sandy Red		,		1 cm Muck (A9) (LRR C)			
	oipedon (A2)		Stripped M					Muck (A10) (LRR B)		
Black Hi	stic (A3)		Loamy Mu				Redu	ced Vertic (F18)		
	en Sulfide (A4)		Loamy Gle	-				Parent Material (TF2)		
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)							Other	(Explain in Remarks)		
		oo (A11)								
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Redox Depressions (F8)							3Indicators	s of hydrophytic vegetation and		
Inick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9)								I hydrology must be present,		
Sandy Gleyed Matrix (S4)							unless disturbed or problematic.			
Restrictive I	Layer (if present):									
Type:										
Depth (in	ches):						Hydric Soi	il Present? Yes <u></u> No		
Remarks:										
YDROLO										
_	drology Indicators			1. ()			C	d		
,	•	one require	ed; check all that app					ondary Indicators (2 or more required)		
	Water (A1)		<u>✓</u> Salt Crust	` '			Water Marks (B1) (Riverine)			
	ater Table (A2)		Biotic Cru Aquatic Ir		oc (P13)			Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)		
<u>✓</u> Saturation Water M	larks (B1) (Nonrive	rine)	Aquatic II Hydrogen					Drainage Patterns (B10)		
	nt Deposits (B2) (N o	•				Living Ro		Dry-Season Water Table (C2)		
	posits (B3) (Nonriv e		Presence		-			Crayfish Burrows (C8)		
	Soil Cracks (B6)	,,,,,			`	ed Soils (C		Saturation Visible on Aerial Imagery (C9		
	on Visible on Aerial	Imagery (E					<i>'</i>	Shallow Aguitard (D3)		
 Water-S	tained Leaves (B9)	0 , (plain in R			<u> </u>	FAC-Neutral Test (D5)		
Field Obser			•		· · · · · ·					
Surface Wat	er Present?	Yes	No V Depth (ir	nches):						
Water Table	Present?	Yes	No Depth (in	nches):						
Saturation P	resent?	Yes <u></u> ✓	No Depth (ir	nches): <u>12</u>	2	Wet	and Hydrolog	gy Present? Yes <u> </u>		
(includes car	oillary fringe)									
Describe Re	corded Data (strear	n gauge, m	nonitoring well, aerial	photos, p	revious in	spections),	if available:			
Domorko:										
Remarks:										

Project/Site: LCWA South Area	(City/Cou	nty: <u>Seal Bea</u>	ch/Orange County	Sampling Date:3/12/21
Applicant/Owner: Los Cerritos Wetlands Authority				State: CA	Sampling Point:17
Investigator(s): Eric Zahn, Marcelo Ceballos Jr, Hannah Cr					
Landform (hillslope, terrace, etc.): depression in terrace			•	_	Nye Slone (%): 1
					7 W Datum: WGS84
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents, d					
•					
Are climatic / hydrologic conditions on the site typical for this til					
Are Vegetation, Soil, or Hydrology sign					es" present? Yes No
Are Vegetation, Soil, or Hydrology natu	ırally prol	blematic	:? (If ne	eeded, explain any ans	swers in Remarks.)
SUMMARY OF FINDINGS - Attach site map sh	owing	samp	ling point l	ocations, transe	cts, important features, etc
Hydrophytic Vegetation Present? Yes No _	<u> </u>				
Hydric Soil Present? Yes No _	<u> </u>		the Sampled		
Wetland Hydrology Present? Yes No _	<u> </u>	W	rithin a Wetla	nd? Yes _	No <u> </u>
Remarks:		l l			
VEGETATION – Use scientific names of plants					
			ant Indicator s? Status	Dominance Test w	
1				Number of Dominar That Are OBL, FAC	
2					
3.				Total Number of Do Species Across All S	_
4					, ,
				Percent of Dominan	it Species W, or FAC:0(A/B)
Sapling/Shrub Stratum (Plot size:)					
1				Prevalence Index v	
2					of: Multiply by:
3					x 1 =
4					x 2 = <u>2</u> x 3 = <u>45</u>
5					x 4 = 72
Herb Stratum (Plot size:)		_= rotar	Cover	· ·	x 5 = 330
1. Bassia hyssopifolia	5		FACU_	Column Totals:	
2. Brassica nigra	20		UPL	Column Fotalo.	(1)
3. Atriplex semibaccata	15		FAC	Prevalence Inc	dex = B/A =4.49
4. <u>Ditrichia graveleons</u>	5		UPL	Hydrophytic Veget	
5. Mesembryanthemum nodiflorum	5		<u>FACU</u>	Dominance Tes	
6. Bromus diandrus		X		Prevalence Inde	
7. Galium angustifolium			FACU_	Morphological A	Adaptations ¹ (Provide supporting arks or on a separate sheet)
8. Cressa truxillensis	1		FACW_		drophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:	100	= Total	Cover	rroblematorry	diophytic vegetation (Explain)
1				¹ Indicators of hydric	soil and wetland hydrology must
2					disturbed or problematic.
		= Total	Cover	Hydrophytic	
_		•		Vegetation	v
% Bare Ground in Herb Stratum 0	Biotic Cr	rust	<u> </u>	Present?	Yes No
Remarks:					
Additional Herb Stratum Species: Melilotus i	ndicus,	, 3%, F	ACU. Sono	chus oleraceus, 1	L%, UPL.

SOIL Sampling Point: ____17

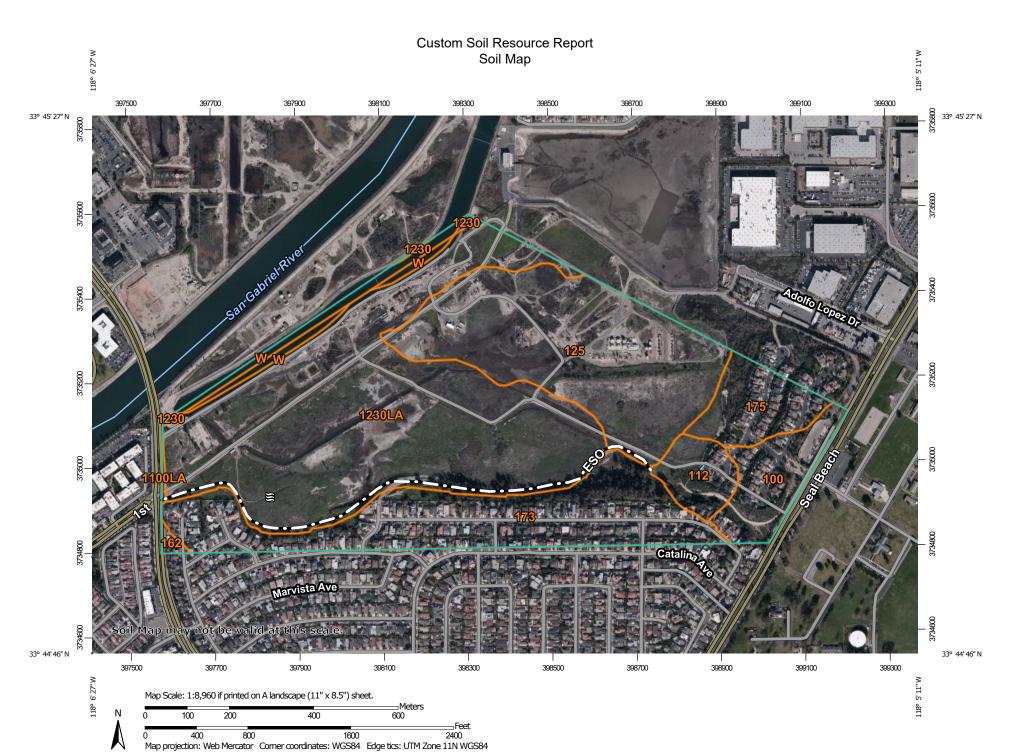
Profile Desc	ription: (Describe	to the depth	needed to docur	ment the i	ndicator	or confirm	the absence o	of indicators.)		
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo	x Feature:	S Type ¹	Loc ²	Texture	Remarks		
0-18		100	Solot (Illoiot)		1,00		TORUTO	Normanio		
0-18	5YR, 2.5/2	100								
	-									
¹ Type: C=Co	oncentration, D=Dep	letion RM=F	Reduced Matrix CS	S=Covered	d or Coate	ed Sand Gr	rains ² Loca	ation: PL=Pore Lining, M=Matrix.		
	Indicators: (Applic					a cana or		or Problematic Hydric Soils ³ :		
Histosol	,		Sandy Red		,			uck (A9) (LRR C)		
	pipedon (A2)		Stripped Ma					uck (A10) (LRR B)		
Black Hi			Loamy Muc	. ,	I (F1)			d Vertic (F18)		
Hydroge	n Sulfide (A4)		Loamy Gley				Red Par	rent Material (TF2)		
Stratified	Layers (A5) (LRR	Depleted M	atrix (F3)			Other (E	Explain in Remarks)			
1 cm Mu	ck (A9) (LRR D)		Redox Dark	Surface ((F6)					
-	d Below Dark Surfac	e (A11)	Depleted D		. ,					
	ark Surface (A12)		Redox Dep	-	F8)			f hydrophytic vegetation and		
-	lucky Mineral (S1)	Vernal Pool	ls (F9)				ydrology must be present,			
	Sleyed Matrix (S4)						unless dis	turbed or problematic.		
	_ayer (if present):									
•• —			<u> </u>				1			
Depth (inc	ches):						Hydric Soil F	Present? Yes No		
Remarks:										
Rocky fill	on top layer, lo	amy bott	om laver							
•	, , ,	•	,							
HYDROLO	GY									
	drology Indicators:									
_	cators (minimum of o		check all that anni	v)			Second	lary Indicators (2 or more required)		
	Water (A1)	nio roquirou,	Salt Crust							
	iter Table (A2)		Sait Crust	` '			Water Marks (B1) (Riverine)			
			' 		o (D12)		Sediment Deposits (B2) (Riverine)			
Saturation	, ,	:\	Aquatic In		, ,			ft Deposits (B3) (Riverine)		
	arks (B1) (Nonriver		Hydrogen			Listan Dan	· <u></u>	ainage Patterns (B10)		
	nt Deposits (B2) (No			· ·	_	-	· · · — ·	y-Season Water Table (C2)		
	oosits (B3) (Nonrive	rine)	Presence					ayfish Burrows (C8)		
	Soil Cracks (B6)	l (D.7)	Recent Iro			a Solis (Co	· —	turation Visible on Aerial Imagery (C9)		
	on Visible on Aerial	imagery (B7)						allow Aquitard (D3)		
	tained Leaves (B9)		Other (Exp	olain in Re	marks)		FA	C-Neutral Test (D5)		
Field Obser										
Surface Water			Depth (in							
Water Table		o 🔽 Depth (in								
Saturation P		'es No	o 🔽 Depth (in	ches):		Wetla	and Hydrology	Present? Yes No		
(includes cap	oillary fringe) corded Data (stream	aguas mon	itoring well periol	nhotos pr	ovious ins	nootions)	if available:			
Describe Re	corded Data (stream	i gauge, mon	itoring well, aerial	priotos, pr	evious iris	pections),	ii avaliable.			
_										
Remarks:										
Recent ra	ins may accou	nt for satu	ıration							
	•									

Project/Site: LCWA South Area	City/County: Seal Beac	ch/Orange County	Sampling Date: 3/12/21				
Applicant/Owner: Los Cerritos Wetlands Authority		State: CA	Sampling Point:18				
Investigator(s): Marcelo Ceballos Jr., Hannah Craddock	Section, Township, Rar	nge: <u>T5S, R12W</u>					
Landform (hillslope, terrace, etc.): base of slope	Local relief (concave, convex, none): concave Slope (%): 2						
Subregion (LRR): LRRC Lat: 33							
Soil Map Unit Name: Bolsa, drained-Typic Xerorthents, dredged							
Are climatic / hydrologic conditions on the site typical for this time of ye			·				
Are Vegetation, Soil, or Hydrology significantly	<u> </u>		•				
Are Vegetation, Soil, or Hydrology naturally pr							
SUMMARY OF FINDINGS – Attach site map showing	g sampling point it		inportant leatures, etc.				
Hydrophytic Vegetation Present? Yes <u>✓</u> No		Area					
Hydric Soil Present? Yes No	within a Wetlan		<u>′</u> No				
Wetland Hydrology Present? Yes No							
Remarks:							
VEGETATION – Use scientific names of plants.							
	Dominant Indicator	Dominance Test work	(sheet:				
Tree Stratum (Plot size:) % Cover 1	r Species? Status	Number of Dominant S That Are OBL, FACW,					
2							
3		Total Number of Domir Species Across All Stra					
4.			, ,				
	_ = Total Cover	Percent of Dominant S That Are OBL, FACW,	or FAC:1 (A/B)				
Sapling/Shrub Stratum (Plot size:)		Prevalence Index wor					
1			rksneet:Multiply by:				
2			x 1 = <u>95</u>				
3			x 2 =				
5			x 3 =				
	_ = Total Cover		x 4 =				
Herb Stratum (Plot size: 2m)		UPL species	x 5 =				
1. Salicornia pacifica 95		Column Totals: 9	<u>95</u> (A) <u>95</u> (B)				
2		Prevalence Index	c = B/A =				
3		Hydrophytic Vegetation					
4		✓ Dominance Test is					
6.		<u>✓</u> Prevalence Index i	is ≤3.0 ¹				
7			aptations ¹ (Provide supporting				
8			s or on a separate sheet)				
_ 95	_ = Total Cover	Problematic Hydro	ophytic Vegetation ¹ (Explain)				
Woody Vine Stratum (Plot size:)		¹ Indicators of hydric so	il and wetland hydrology must				
1		be present, unless dist					
2	= Total Cover	Hydrophytic					
		Vegetation					
% Bare Ground in Herb Stratum	Crust0	Present? Ye	es <u>/</u> No				
Remarks:							

Profile Desc	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confire	m the absence of indicators.)	
Depth	Matrix			x Feature	s		<u>-</u>	
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture Remarks	_
0-4	10YR, 4/2	100	-				Sandy clay	_
<u>4-7</u>	2.5Y, 4/2	95	7.5YR, 4/4	5	D	M	Clay	_
7-16	Gley 1 410Y	100						
								_
							•	-
					-		<u> </u>	-
			-				<u> </u>	_
				_				_
				_				_
¹ Type: C=C	oncentration, D=De	pletion, RM	=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	Grains. ² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless othe	rwise not	ed.)		Indicators for Problematic Hydric Soils ³ :	
Histosol	l (A1)		Sandy Red		1 cm Muck (A9) (LRR C)			
	pipedon (A2)		Stripped Ma				2 cm Muck (A10) (LRR B)	
	istic (A3)		Loamy Mud				Reduced Vertic (F18)	
	en Sulfide (A4)		<u>✓</u> Loamy Gle		(F2)		Red Parent Material (TF2)	
	d Layers (A5) (LRR	C)	Depleted M		(E0)		Other (Explain in Remarks)	
	uck (A9) (LRR D)	(0.44)	Redox Darl					
-	d Below Dark Surfa ark Surface (A12)	ce (ATT)	Depleted D Redox Dep				³ Indicators of hydrophytic vegetation and	
·	Mucky Mineral (S1)		Vernal Poo		(FO)		wetland hydrology must be present,	
-	Gleyed Matrix (S4)		veman oo	13 (1 3)			unless disturbed or problematic.	
	Layer (if present):							_
Type:								
Depth (in	ches):						Hydric Soil Present? Yes ✓ No	
Remarks:								
	was sandy cla	-						
One layer	r clearly presei	nt due to	saturation, ha	rd to d	iscern.			
HYDROLO	GY							
_	drology Indicators							
Primary Indi	cators (minimum of	one require	d; check all that app	y)			Secondary Indicators (2 or more required)	
Surface	Water (A1)		Salt Crust	(B11)			Water Marks (B1) (Riverine)	
High Wa	ater Table (A2)		Biotic Cru	st (B12)			Sediment Deposits (B2) (Riverine)	
<u>✓</u> Saturati	on (A3)		Aquatic In	vertebrate	es (B13)		Drift Deposits (B3) (Riverine)	
Water M	Marks (B1) (Nonrive	rine)	Hydrogen	Sulfide O	dor (C1)		Drainage Patterns (B10)	
Sedime	nt Deposits (B2) (N o	onriverine)	Oxidized I	Rhizosphe	res along	Living Ro	oots (C3) Dry-Season Water Table (C2)	
Drift De	posits (B3) (Nonriv e	erine)	Presence	of Reduce	ed Iron (C	4)	Crayfish Burrows (C8)	
Surface	Soil Cracks (B6)		Recent Iro	n Reduct	ion in Tille	d Soils (C	C6) Saturation Visible on Aerial Imagery (C9)	,
Inundati	ion Visible on Aerial	Imagery (B	7) Thin Muck	Surface	(C7)		Shallow Aquitard (D3)	
Water-S	Stained Leaves (B9)		Other (Ex	olain in Re	emarks)		FAC-Neutral Test (D5)	
Field Obser	vations:							
Surface Wat	ter Present?	Yes <u> </u>	No Depth (in	ches):				
Water Table	Present?	Yes	No Depth (in	ches):				
Saturation P		Yes	No Depth (in	ches): <u>6</u>		Wet	tland Hydrology Present? Yes No	
(includes cap		n dallae m	onitoring well, aerial	nhotos n	evious inc	enections)) if available:	
Describe Re	corded Data (Stied)	ıı yauye, III	ormorning well, aerial	ριτυίυδ, βι	evious ills	ppecuons),	n, ii avaliabie.	
Domerke								
Remarks:								
	• •		illed with wate	r.				
Normal to	o see rain in th	is area e	ach winter.					
Saturated	d soils may be	due to re	ecent rain storr	n.				
i								

Appendix B

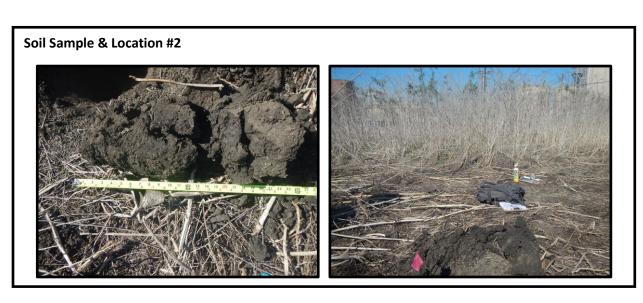
Soil Resource Report



Appendix C

Soil Sample Photos













Soil Sample & Location #7





Soil Sample & Location #8

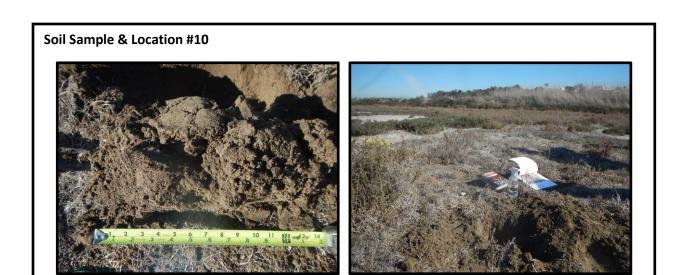




Soil Sample & Location #9











Soil Sample & Location #13





Soil Sample & Location #14





Soil Sample & Location #15











Soil Sample & Location #17





Soil Sample & Location #18



