



#### **Regulatory Program**

#### INTERIM APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in the Interim Approved Jurisdictional Determination Form User Manual.

#### **SECTION I: BACKGROUND INFORMATION**

A. COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (AJD): April 22, 2019

B. ORM NUMBER IN APPROPRIATE FORMAT (e.g., HQ-2015-00001-SMJ): SPL-2019-00262-ERS

B. OTHER TOTAL TOT	
C. PROJECT LOCATION AND BACKGROUND INFORMATION:	
State:CA County/parish/borough: Orange City: Seal Beach, Huntington Beach,	
Santa Ana, Garden Grove, and unincorporated Orange County, California	
Center coordinates of site (lat/long in degree decimal format): Lat. 33.730041, Long118.000158.	
Map(s)/diagram(s) of review area (including map identifying single point of entry (SPOE) watershed and/or potential	
jurisdictional areas where applicable) is/are: ⊠attached ⊠ in report/map titled "Review Areas for Westminster AJD"	
(Appendix A, Figure 1). As shown in this map, the Corps evaluated for the presence of jurisdictional aquatic resource	
within six total reviews areas: 1) Warner Avenue Bridge (WAB) Review Area, 2) PCH Floodwall Review Area, 3) C02	
Channel Review Area, 4) C04 Channel Review Area, 5) C05 Channel Review Area, and 6) C06 Channel Review	
Area.	
Other sites (e.g., offsite mitigation sites, disposal sites, etc.) are associated with this action and are recorded on	а
different jurisdictional determination (JD) form. List JD form ID numbers (e.g., HQ-2015-00001-SMJ-1):	
D. REVIEW PERFORMED FOR SITE EVALUATION:	
Office (Desk) Determination Only. Date:	
Office (Desk) and Field Determination. Office/Desk Dates: Field Date(s): February 21, 2019, March 27,	
2019, and April 16, 2019.	
SECTION II: DATA SOURCES	
Check all that were used to aid in the determination and attach data/maps to this AJD form and/or references/citation	าร
in the administrative record, as appropriate.	
Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant. Title/Date:	
Data sheets prepared/submitted by or on behalf of the applicant/consultant.	
Data sheets/delineation report are sufficient for purposes of AJD form. Title/Date:	
Data sheets/delineation report are not sufficient for purposes of AJD form. Summarize rationale and include	
information on revised data sheets/delineation report that this AJD form has relied upon:	
Revised Title/Date:	
Data sheets prepared by the Corps. Title/Date: Wetland data sheets prepared by the Corps to map wetlands	
within the Warner Avenue Bridge and PCH Floodwall Review Areas are included as Appendix D.	
Corps navigable waters study. Title/Date:	
CorpsMap ORM map layers. Title/Date:	
USGS Hydrologic Atlas. Title/Date:	
USGS, NHD, or WBD data/maps. Title/Date:	
USGS 8, 10 and/or 12 digit HUC maps. HUC number:	
USGS maps. Scale & quad name and date: .	
USDA NRCS Soil Survey. Citation:	
☐ USFWS National Wetlands Inventory maps. Citation: GIS data accessed from	
https://www.fws.gov/wetlands/data/data-download.html.	
State/Local wetland inventory maps. Citation:	

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」 FEMA/FIRM maps. Citation:
Photographs: 🛛 Aerial. Citation: Eagle Aerial Imagery (2018), accessed at https://data-
cpw.opendata.arcgis.com. or 🛛 Other. Citation: Photos taken of study areas during field visits on March 27, 2019
nd April 16, 2019 (see Appendix B).
LiDAR data/maps. Citation: See below.
Previous JDs. File no. and date of JD letter:
Applicable/supporting case law:
Applicable/supporting scientific literature:
Other information (please specify):

Data used to map High Tide Line (HTL) and Mean High Water (MHW) contour lines within the Warner Avenue Bridge and PCH Flood Wall Review Areas:

- USGS West Coast El-Nino Lidar Project (2016) LiDAR data were used to identify MHW and HTL contour lines within the Warner Avenue Bridge and PCH Flood Wall Review Areas. Contour lines were estimated for a few short incomplete segments within the Warner Avenue Bridge Review Area through extrapolation the surrounding contours and visual inspection of aerial imagery. This dataset was accessed using the National Oceanic and Atmospheric Administriction (NOAA) Data Access Viewer at https://coast.noaa.gov/dataviewer/#/.
- Contour lines were drawn based on NADV datum values of 4.5 feet for MHW and 6.82 for HTL. These values were derived based on NOAA tidal data obtained for the Newport Bay Entrance (NOAA tide station #9410580) at https://tidesandcurrents.noaa.gov/datums.html?id=9410580 and https://tidesandcurrents.noaa.gov/noaatideannual.html?id=9410580.

Data used to map the Ordinary High Water Mark (OHWM) within Westminster Channels C02, C04, C05, and C06:

- Hydrologic data modeling the spatial extent of the 10-year flood event was used to identify the OHWM within the Westminster Channels, as the 10-year event was determined to most accurately characterize flows that form "ordinary high" water conditions throughout the flood control channels. A 10-year flood inundation map shapefile showing this spatial extent was provided by the Corps Chicago District to support Regulatory's analysis.
- In limited portions of the 10-year inundation map where the 10-year event extended outside the channel boundaries, visual inspection of high resolution aerial imagery was used to identify channel boundaries as the top of the observed channel bank.
- For C02 Channel, National Wetland Inventory (NWI) data were used to identify the location within C02 at which the 10-year flood event indicator ceases to apply and is replaced by MHW and HTL indicators more appropriately suited for assessing jurisdiction within estuarine Bolsa Bay. This break was determined to be located approximately 800 feet downstream of the C02-C04 confluence where NWI distinguishes between "Estuarine and Marine Deepwater" to the west and "Riverine" to the the east.

Mapping the Section 10/Non-Section 10 boundaries (i.e., upstream tidal extent) within C02 and C05 was completed using 2009-2011 California Coastal Conservancy LiDAR data. This dataset was accessed using the National Oceanic and Atmospheric Administriction (NOAA) Data Access Viewer at https://coast.noaa.gov/dataviewer/#/.

The Corps mapped wetlands and mudflats within the Warner Avenue Bridge and PCH Flood Wall Review Areas using a Trimble Yuma sub-meter GPS unit during a field visit conducted on March 27, 2019. In addition, field validation of the inundation maps for the Westminster Channel Review Area was conducted using GPS on February 21, 2019. Note that in the PCH Floodwall Review Area, GPS measurements for the mudflats could not be obtained because these mudflats were not accessable by foot. For these mudflats, the lateral extent was instead estimated visually in the field and later verified using high resolution aerial imagery.

#### **SECTION III: SUMMARY OF FINDINGS**

Complete ORM "Aquatic Resource Upload Sheet" or Export and Print the Aquatic Resource Water Droplet Screen from ORM for All Waters and Features, Regardless of Jurisdictional Status – Required

A. RIVERS AND HARBORS ACT (RHA) SECTION 10 DETERMINATION OF JURISDICTION:

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	"navigable waters of the U.S." within RHA jurisdiction (as defined by 33 CFR part 329) in the review area.
~/~	• Complete Table 1 - Required
10	TE: If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Section navigable waters list, DO NOT USE THIS FORM TO MAKE THE DETERMINATION. The District must continue to bow the procedure outlined in 33 CFR part 329.14 to make a Section 10 RHA navigability determination.
_	OLEAN MATER ACT (OMA) OF OTION 404 DETERMINATION OF HIRIODICTION "
	CLEAN WATER ACT (CWA) SECTION 404 DETERMINATION OF JURISDICTION: "waters of the U.S." within
	A jurisdiction (as defined by 33 CFR part 328.3) in the review area. Check all that apply.  (a)(1): All waters which are currently used, 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. (Traditional Navigable Waters (TNWs))
	Complete Table 1 - Required
	☐ This AJD includes a case-specific (a)(1) TNW (Section 404 navigable-in-fact) determination on a water that has not previously been designated as such. Documentation required for this case-specific (a)(1) TNW
	determination is attached.
	(a)(2): All interstate waters, including interstate wetlands.
	Complete Table 2 - Required
	(a)(3): The territorial seas.
	• Complete Table 3 - Required
	(a)(4): All impoundments of waters otherwise identified as waters of the U.S. under 33 CFR part 328.3.
	• Complete Table 4 - Required (a)(5): All tributaries, as defined in 33 CFR part 328.3, of waters identified in paragraphs (a)(1)-(a)(3) of 33 CFR
	part 328.3.
	• Complete Table 5 - Required (a)(6): All waters adjacent to a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3, including
	wetlands, ponds, lakes, oxbows, impoundments, and similar waters.
	Complete Table 6 - Required
	Bordering/Contiguous.
	Neighboring:
	(c)(2)(i): All waters located within 100 feet of the ordinary high water mark (OHWM) of a water identified in
	paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3.
	(c)(2)(ii): All waters located within the 100-year floodplain of a water identified in paragraphs (a)(1)-(a)(5) of
	33 CFR part 328.3 and not more than 1,500 feet of the OHWM of such water.
	(c)(2)(iii): All waters located within 1,500 feet of the high tide line of a water identified in paragraphs (a)(1) or (a)(3) of 33 CFR part 328.3, and all waters within 1,500 feet of the OHWM of the Great Lakes.
	(a)(7): All waters identified in 33 CFR 328.3(a)(7)(i)-(v) where they are determined, on a case-specific basis, to
ш	have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.
	Complete Table 7 for the significant nexus determination. Attach a map delineating the SPOE watershed boundary with (a)(7) waters identified in the similarly situated analysis Required
	Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established
	normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent
	and require a case-specific significant nexus determination.
	(a)(8): All waters located within the 100-year floodplain of a water identified in paragraphs (a)(1)-(a)(3) of 33
	CFR part 328.3 not covered by (c)(2)(ii) above and all waters located within 4,000 feet of the high tide line or
	OHWM of a water identified in paragraphs (a)(1)-(a)(5) of 33 CFR part 328.3 where they are determined on a
	case-specific basis to have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part
	<ul> <li>328.3.</li> <li>Complete Table 8 for the significant nexus determination. Attach a map delineating the SPOE</li> </ul>
	watershed boundary with (a)(8) waters identified in the similarly situated analysis Required
	Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established
	normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent
	and require a case-specific significant nexus determination.
	NON-WATERS OF THE U.S. FINDINGS:
	eck all that apply.
	The review area is comprised entirely of dry land.
	Potential-(a)(7) Waters: Waters that DO NOT have a significant nexus to a water identified in paragraphs (a)(1)-(a)(3) of 33 CFR part 328.3.
	(a)(o) of 00 of 11 part 020.0.

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<ul> <li>Complete Table 9 and attach a map delineating the SPOE watershed boundary with potential</li> </ul>
(a)(7) waters identified in the similarly situated analysis Required
☐ Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established
normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent
and require a case-specific significant nexus determination.
Potential-(a)(8) Waters: Waters that DO NOT have a significant nexus to a water identified in paragraphs (a)(1)-
(a)(3) of 33 CFR part 328.3.
Complete Table 9 and attach a map delineating the SPOE watershed boundary with potential
(a)(8) waters identified in the similarly situated analysis Required
Includes water(s) that are geographically and physically adjacent per (a)(6), but are being used for established
normal farming, silviculture, and ranching activities (33 USC Section 1344(f)(1)) and therefore are not adjacent
and require a case-specific significant nexus determination.
Excluded Waters (Non-Waters of U.S.), even where they otherwise meet the terms of paragraphs (a)(4)-(a)(8):
Complete Table 10 - Required
$\square$ (b)(1): Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of
the CWA.
(b)(2): Prior converted cropland.
(b)(3)(i): Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
(b)(3)(ii): Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain
wetlands.
(b)(3)(iii): Ditches that do not flow, either directly or through another water, into a water identified in
paragraphs (a)(1)-(a)(3).
(b)(4)(i): Artificially irrigated areas that would revert to dry land should application of water to that area cease.
(b)(4)(ii): Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds,
irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds.
(b)(4)(iii): Artificial reflecting pools or swimming pools created in dry land. <sup>1</sup>
(b)(4)(iv): Small ornamental waters created in dry land. <sup>1</sup>
(b)(4)(v): Water-filled depressions created in dry land incidental to mining or construction activity, including
pits excavated for obtaining fill, sand, or gravel that fill with water.
(b)(4)(vi): Erosional features, including gullies, rills, and other ephemeral features that do not meet the
definition of tributary, non-wetland swales, and lawfully constructed grassed waterways. <sup>1</sup>
(b)(4)(vii): Puddles. <sup>1</sup>
⊠ (b)(5): Groundwater, including groundwater drained through subsurface drainage systems.¹
(b)(6): Stormwater control features constructed to convey, treat, or store stormwater that are created in dry
land. <sup>1</sup>
(b)(7): Wastewater recycling structures created in dry land; detention and retention basins built for wastewater
recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water
distributary structures built for wastewater recycling.
Other non-jurisdictional waters/features within review area that do not meet the definitions in 33 CFR 328.3 of
(a)(1)-(a)(8) waters and are not excluded waters identified in (b)(1)-(b)(7).
Complete Table 11 - Required.
D. ADDITIONAL COMMENTS TO SUPPORT AJD: A total of eight different aquatic resource types, summarized in
Table 1 below, were identified throughout the six review areas studied as part of this AJD. In order to distinguish
between the variety of environmental settings, Clean Water Rule (CWR) classifications, Special Aquatic Site
categories, and jurisdictional designations represented across these resources, a four-term nomenclature was used to
provide a full description of each resource. Each term used in this nomenclature is summarized below:
• Cowardin classification (first term): Each resource was characterized as "estuarine" or "riverine" based on the extent

• CWR designation (second term): Each resource was identified as "navigable" if classified as an (a)(1) TNW, "Tributary" if classified as an (a)(5) water, "bordering" if classified as an (a)(6) wetland/mudflat coinciding with the MHW line, or "neighboring" if classified as an (a)(6) wetland/mudflat located within 100 feet landward of the MHW line.

• Special Aquatic Site Status category (third term): Each resource was identified as "non-wetland" (not a special aquatic site), "wetland," or "mudflat" WOUS.

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to which it was most appropriate considered as part of Bolsa Bay (estuarine) versus the flood control channel system (riverine). Corps jurisdictional limits for estuarine resources were based on tidal elevations (MHW for the Section 404/10 limit and HTL for Section 404-only limit) while Corps jurisdictional limits for riverine resources was based on OHWM, represented in this study by the spatial extent of the 10-year flood event.

<sup>&</sup>lt;sup>1</sup> In many cases these excluded features will not be specifically identified on the AJD form, unless specifically requested. Corps Districts may, in case-by-case instances, choose to identify some or all of these features within the review area.

• Jurisdictional designation (fourth term): Each resource's status as jurisdictional under both Section 404 and Section 10 ("404/10") or jurisdictional under only Section 404 ("404-only") was indicated by this term. Note that mudflats did not receive a jurisdictional designation because the spatial analysis produced small fragments on mudflat possessing the "404-only" classification (i.e., above MHW), which is not consistent with the understanding that mudflats are generally located in the lower-intertidal zone. Nevertheless, despite omission of this term for mudflats, all mudflats identified in this AJD should be considered Section 404-jurisdictional.

Throughout C02, C04, C05, and C06 Channels, the 10-year event OHWM was always located substantially higher than the channel bottom. Any wetlands that may have potentially formed along the channel bottom would not be adjacent to the OHWM and were therefore instead classified as part of the channel and as non-wetland WOUS. Within the estuarine portion of C02 in which jurisdiction was identified by MHW and HTL, potential vegetated wetland areas that appeared contiguous with the MHW line were evaluated and determined to be non-jurisdicitonal (Appendix D) and were therefore classified as non-wetland WOUS. Furthermore, GPS data obtained for the estuarine portion of C02 during the Corps' site visit on April 16, 2019 showed mudflats within this area to be located well below the MHW line and therefore would not be considered adjacent aquatic resources. For this reason, these mudflat areas were also classified as non-wetland WOUS.

Reinforced Concrete Boxes (RCBs) are prevalent throughout the Westminster Channel system where channels pass below surface infrastructure, namely roadways. In most locations, the subsurface waterway formed by an RCB was considered jurisdictional because the RCB conveys flows over a very short distance (e.g., under a road or road intersection). In several locations, however, the subsurface path was determined to be of sufficient length so as to represent an non-jurisdictional underground ("groundwater") break in the channel's path per 33 CFR §328.3(b)(5). The specific locations of these excluded underground ("groundwater") features are identified in Table 11 below.

Per Corps Chicago District's instructions, Haster Basin as well as stormwater conveyance features within Miles Square Golf Course were excluded from the C05 and C06 Channel Review Areas, respectively, because no flood control work is planned within these facilities.

As of the date of issuance of this AJD, Corps Civil Works is currently completing channel improvements within the segment of C06 Channel located between the C05-C06 confluence and Beach Boulevard. This work will repair the eroded, largely earthen, embankement and construct a new 2,110-foot-long trapezoidal concrete channel for the purpose of better protecting adjacent property owners from potential property loss due to erosion of the embankment. The Corps notes that the delineation documented herein is based on the pre-construction conditions of this segment of C06, despite the fact that some alteration to channel geometry, and therefore OHWM, is expected to occur as a result of the ongoing improvements work.

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## Jurisdictional Waters of the U.S.

Jurisidcitional waters of the U.S. (WOUS) identified within each review area are shown in Appendix A. The total acreage of each identified jurisdicitonal resource type is summarized in the table below:

Table 1. Acres of each WOUS type within each Review Area

		Acres of WOUS within each Review Area	vithin ea	ch Revie	w Area	
WOUS type	WAB	PCH Floodwall	C02	C04	C05	900
Estuarine Bordering Mudflat WOUS	0.01	0.57	,	1	1	
Estuarine Bordering Wetland WOUS (404-only)	0.01	0.23		1	1	
Estuarine Bordering Wetland WOUS (404/10)	0.02	0.13		1	1	
Estuarine Navigable Non-Wetland WOUS (404-only)	0.19	0.13	4.83	1	ı	1
Estuarine Navigable Non-Wetland WOUS (404/10)	1.73	4.20	21.03	1	1	
Estuarine Neighboring Wetland WOUS (404-only)	0.11	-	-	1	ı	1
Riverine Navigable Non-Wetland WOUS (404/10)	1	-	3.31	10.09	46.29	1
Riverine Tributary Non-Wetland WOUS (404-only)	1	-	1	28.55	38.80	11.40

The following shapefiles, which are included with and incorporated by reference in this AJD, provide complete geographic information describing the geographic boundaries of all jurisdictional aquatic resources identified within each review area:

- WAB Review Area: WarnerAvenueBridge\_WOUS.shp
- PCH Floodwall Review Area: PCHFloodwall\_WOUS.shp
- C02, C04, C05, and C06 Channel Review Areas: WestminsterChannels\_WOUS.shp

Table 2. (a)(1) Traditional Navigable Waters

(a)(1) Waters Name	(a)(1) Criteria	Rationale to Support (a)(1) Designation Include High Tide Line or Ordinary High Water Mark indicators, when applicable.
WAB Estuarine Navigable	The waterbody is subject	These navigable WOUS are subject to the ebb and flow of the tide and are
Non-Wetland WOUS (404-	to Section 9 or 10 of the	used, or are susceptable for use, to transport interstate or foreign
only and 404/10)	Rivers and Harbors Act	commerce. The HTL was identified as 6.82 feet NADV, and MHW line
PCH Floodwall Estuarine	The waterbody is subject	identified as 4.5 feet, using USGS West Coast El-Nino Lidar Project (2016)
Navigable Non-Wetland	to Section 9 or 10 of the	LiDAR data (see Section II above). Aquatic resources within these review
WOUS (404-only and 404/10)	Rivers and Harbors Act	areas are located within Bolsa Bay, which has historically been considered
		by Los Angeles District to be Traditional Navigable Waters (Appendix C).
C02 Estuarine Navigable	The waterbody is subject	This (a)(1) waterway was classified as a TNW because it is subject to the
Non-Wetland WOUS (404-	to Section 9 or 10 of the	ebb and flow of the tide. This waterway includes an approximately 1.5-mile
only and 404/10)	Rivers and Harbors Act	stretch of C02 starting at C02's outlet to Bolsa Bay at Edinger Bridge and
		ending approximately 800 feet downstream of the C02-C04 confluence.
C02 Riverine Navigable Non-	The waterbody is subject	This (a)(1) waterway was classified as a TNW because it is subject to the
Wetland WOUS (404/10)	to Section 9 or 10 of the	ebb and flow of the tide, though upstream freshwater nuisance and
	Rivers and Harbors Act	stormwater flows are anticipated to contribute predominantly to hydrologic
		inputs. This waterway includes an approximately 800-foot stretch of C02

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(a)(1) Waters Name	(a)(1) Criteria	Rationale to Support (a)(1) Designation
		Include High Tide Line or Ordinary High Water Mark indicators, when
		applicable.
		located between the C02-C04 confluence and a point approximately 800
		feet downstream of the confluence.*
C04 Riverine Navigable Non-	The waterbody is subject	This (a)(1) waterway was classified as a TNW because it is subject to the
Wetland WOUS (404/10)	to Section 9 or 10 of the	ebb and flow of the tide, though upstream freshwater nuisance and
	Rivers and Harbors Act	stormwater flows are anticipated to contribute predominantly to hydrologic
		inputs. This waterway includes an approximately 1.1-mile stretch of C04
		starting at C04's confluence with C02 and ending upstream at C04's
		Section 10/non-Section 10 boundary.*
C05 Riverine Navigable Non-	The waterbody is subject	This (a)(1) waterway was classified as a TNW because it is subject to the
Wetland WOUS (404/10)	to Section 9 or 10 of the	ebb and flow of the tide, though upstream freshwater nuisance and
	Rivers and Harbors Act	stormwater flows are anticipated to contribute predominantly to hydrologic
		inputs. This waterway includes an approximately 3.5-mile stretch of C05
		starting at C05's outlet to Bolsa Bay and ending at C05's Section 10/non-
		* xaction 10 boundary *

<sup>\*</sup> The spatial extent of the 10-year flood event was selected for use as the OHWM for "riverine" (a)(1) waters above considering the dominant role of stormwater flows in producing "ordinary high" water levels within these flood control channels.

# Table 3. (a)(2) Interstate Waters

(a)(2) Waters Name	Rationale to Support (a)(2) Designation
N/A	N/A

### Table 4. (a)(3) Territorial Seas

(a)(3) Waters Name	Rationale to Support (a)(3) Designation
N/A	N/A

### Table 5. (a)(4) Impoundments

(a)(4) Waters Name	Rationale to Support (a)(4) Designation
N/A	N/A
A/N	N/A

### Table 6. (a)(5)Tributaries

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(a)(5) Waters Name	Flow Regime	(a)(1)-(a)(3) Water Name to which this (a)(5) Tributary Flows	Tributary Breaks	Rationale for (a)(5) Designation and Additional Discussion. Identify flowpath to (a)(1)-(a)(3) water or attach map identifying the flowpath; explain any breaks or flow through excluded/non-jurisdictional features, etc.
C04 Riverine Tributary Non- Wetland WOUS (404-only)	Perennial	C04 Riverine Navigable Non-Wetland WOUS (404/10)	ON	This (a)(5) waterway flows to C04 Riverine Navigable Non-Wetland WOUS (404/10), an (a)(1) WOUS.
C05 Riverine Tributary Non- Wetland WOUS (404-only)	Perennial	C05 Riverine Navigable Non-Wetland WOUS (404/10)	o N	This (a)(5) waterway flows to C05 Riverine Navigable Non-Wetland WOUS (404/10), an (a)(1) WOUS.
C06 Riverine Tributary Non- Wetland WOUS (404-only)	Perennial	C05 Riverine Navigable Non-Wetland WOUS (404/10)	°Z	This (a)(5) waterway flows to C05 Riverine Tributary Non-Wetland WOUS (404-only), which in turn flows to C05 Riverine Navigable Non-Wetland WOUS (404/10), an (a)(1) WOUS.

## Table 7. (a)(6) Adjacent Waters

(a)(6) Waters Name	(a)(1)-(a)(5) Water Name to which this Water is Adjacent	Rationale for (a)(6) Designation and Additional Discussion. Identify the type of water and how the limits of jurisdiction were established (e.g., wetland, 87 Manual/Regional Supplement); explain how the 100-year floodplain and/or the distance threshold was determined; whether this water extends beyond a threshold; explain if the water is part of a mosaic, etc.
WAB Mudflat WOUS WAB Estuarine Bordering Wetland WOUS (404-only) WAB Estuarine Bordering Wetland WOUS (404/10)	WAB Estuarine Navigable Non- Wetland WOUS (404/10)	These (a)(6) waters, which are located in the southwest corner of the review area, are considered adjacent (bordering) jurisdictional waters because they coincide with the MHW line.
WAB Estuarine Neighboring Wetland WOUS (404-only)	WAB Estuarine Navigable Non- Wetland WOUS (404/10)	These (a)(6) waters are considered adjacent jurisdictional waters because they are located within 100 feet of the MHW line. One neighboring wetland was identified in the northern portion of the review area. This muted tidal wetland is separated from Bolsa Bay by an approximately 10-foot-long culvert that conveys flows to the wetland only during the highest tides (i.e., when tide levels are above MHW).
PCH Floodwall Mudflat WOUS	PCH Floodwall Estuarine Navigable Non-Wetland WOUS (404/10)	These (a)(6) waters are considered adjacent (bordering and contiguous) jurisdictional waters because they directly abut jurisdictional wetlands that are in turn adjacent to the MHW line. These waters also coincide with the MHW line in some areas.
PCH Floodwall Estuarine Bordering Wetland WOUS (404-only)	PCH Floodwall Estuarine Navigable	These (a)(6) waters are considered adjacent (bordering and contiguous) jurisdictional waters because they coincide with the MHW line.

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NOUS		
Non-Wetland	(404/10)	,
Floodwall Estuarine	ng Wetland WOI	(10)
PCH	Borderii	(404/

### Table 8. (a)(7) Waters

SPOE	(a)(7) Waters Name	(a)(1)-(a)(3) Water Name to which this Water has a Significant Nexus	)(3) Water Significant Nexus Determination  which Identify SPOE watershed; discuss whether any similarly situated waters were ter has a present and aggregated for SND; discuss data, provide analysis, and summarize how the waters have more than speculative or insubstantial effect on the physical, chemical, or biological integrity of the (a)(1)-(a)(3) water, etc.
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

### Table 9. (a)(8) Waters

			Significant Nexus Determination
		(a)(1)-(a)(3) Water	Identify SPOE watershed; explain how 100-yr floodplain and/or the distance
מסט	01/0/ W/0/(0//0/	Name to which	threshold was determined; discuss whether waters were determined to be
No mon	(a)(o) waters	this Water has a	similarly situated to subject water and aggregated for SND; discuss data,
Name	Name	Significant	provide analysis, and then summarize how the waters have more than
		Nexus	speculative or insubstantial effect the on the physical, chemical, or biological
			integrity of the (a)(1)-(a)(3) water, etc.
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

### Non-Jurisdictional Waters

# Table 10. Non-Waters/No Significant Nexus

		(a)(1)-(a)(3)	Basis for Determination that the Functions DO NOT Contribute Significantly to the
		e to	Chemical, Physical, or Biological Integrity of the (a)(1)-(a)(3) Water.
מסט	(9)(c)/(2)(c) acin	which this	Identify SPOE watershed; explain how 100-yr floodplain and/or the distance threshold
	14011-(a)(1)/(a)(o)	Water DOES	was determined; discuss whether waters were determined to be similarly situated to
ש	Waters Name	NOT have a	the subject water; discuss data, provide analysis, and summarize how the waters did
		Significant	not have more than a speculative or insubstantial effect on the physical, chemical, or
		Nexus	biological integrity of the (a)(1)-(a)(3) water.
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

# Table 11. Non-Waters/Excluded Waters and Features

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Paragraph (b) Excluded Feature/Water Name	Rationale for Paragraph (b) Excluded Feature/Water and Additional Discussion.
Westminster Mall Underground Conveyance	This approximately 3,100-foot underground conveyance, which passes under Westminster Mall, was determined to be non-jurisdictional underground ("groundwater") flow per 33 CFR §328.3(b)(5). This non-jurisdictional feature represents two breaks in C04 Channel, one spanning from approximately 33.745979, -118.005944 to approximately 33.744789, -118.007247 and another spanning from approximately 33.744713, -118.007577 to approximately 33.744650, -118.015853.
Hazard Avenue and Beach Boulevard Underground Conveyance	This approximately 325-foot underground conveyance, which passes under the intersection of Hazard Avenue and Beach Boulevard, was determined to be non-jurisdictional underground ("groundwater") flow per 33 CFR §328.3(b)(5). This non-jurisdictional feature represents a break in C04 Channel spanning from approximately 33.752306, -117.989363 to approximately 33.751990, -117.990388.
Warner Avenue and Magnolia Street Underground Conveyance	This approximately 1,800-foot break, which passes under I-405 as well as a commercial area near the intersection of Warner Avenue and Magnolia Street, was determined to be non-jurisdictional underground ("groundwater") flow per 33 CFR §328.3(b)(5). This non-jurisdictional feature represents a break in C06 Channel spanning from approximately 33.717636, -117.968448 to approximately 33.716250, -117.974231.
Rosita Park Underground Conveyance	This approximately 1,080-foot underground conveyance, which passes under Rosita Park near the intersection of Hazard Avenue and Newhope Street, was determined to be non-jurisdictional underground ("groundwater") flow per 33 CFR §328.3(b)(5). This non-jurisdictional feature represents a break C05 Channel spanning from approximately 33.752614, -117.928698 to approximately 33.750509, -117.931268.
Orange County Transportation Facility Underground Conveyance	This approximatly 300-foot underground conveyance, which passes under the Orange County Transportation Facility at 11790 Cardinal Circle, was determined to be non-jurisdictional underground ("groundwater") flow per 33 CFR §328.3(b)(5). This non-jurisdictional feature represents a break C05 Channel spanning from approximately 33.763921, -117.923657 to approximately 33.763227, -117.924225.

### Table 12. Non-Waters/Other

Other Non-Waters of U.S. Feature/Water Name	Rationale for Non-Waters of U.S. Feature/Water and Additional Discussion.
N/A	N/A

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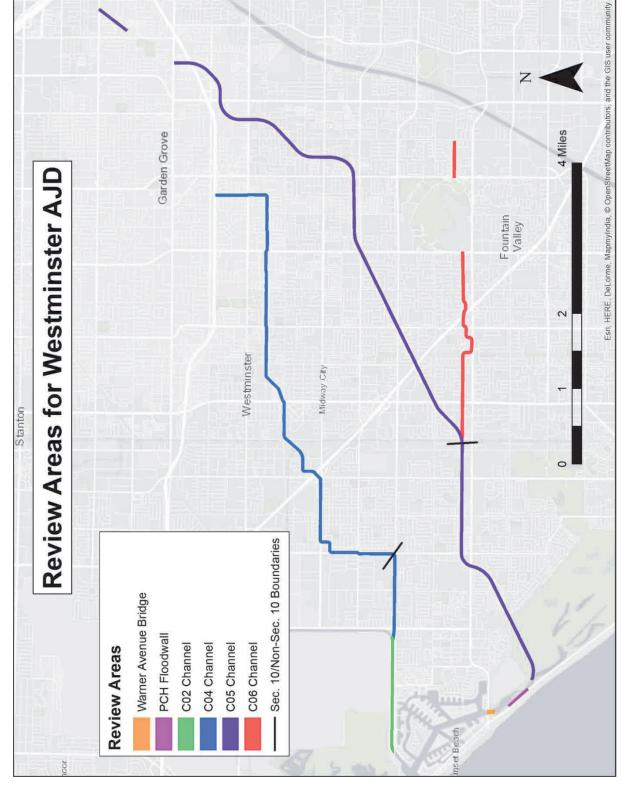


Figure 1 Review Areas evaluated for the Westminster Flood Risk Management Study AJD.

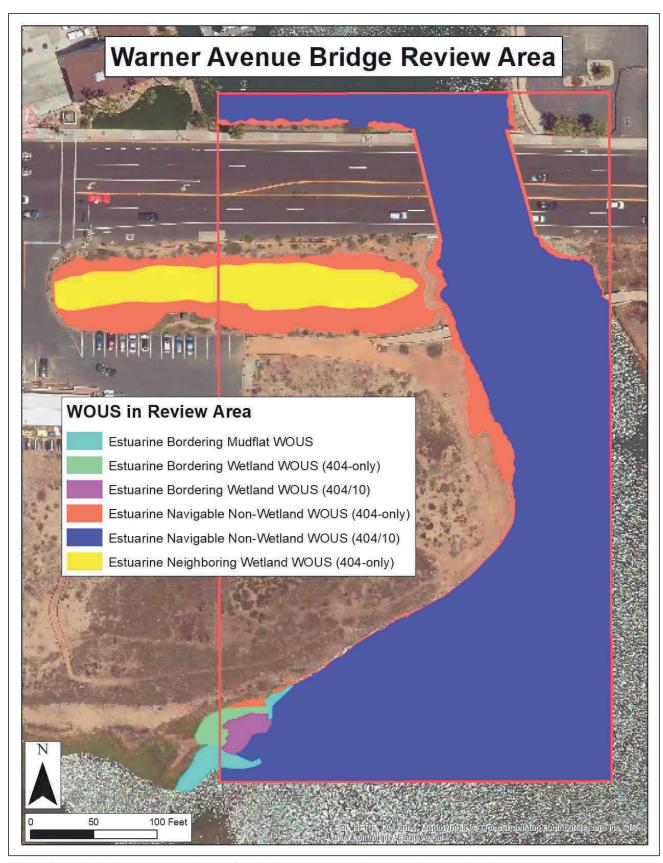


Figure 2 Jurisdictional waters of the U.S. within the Warner Avenue Bridge Review Area.

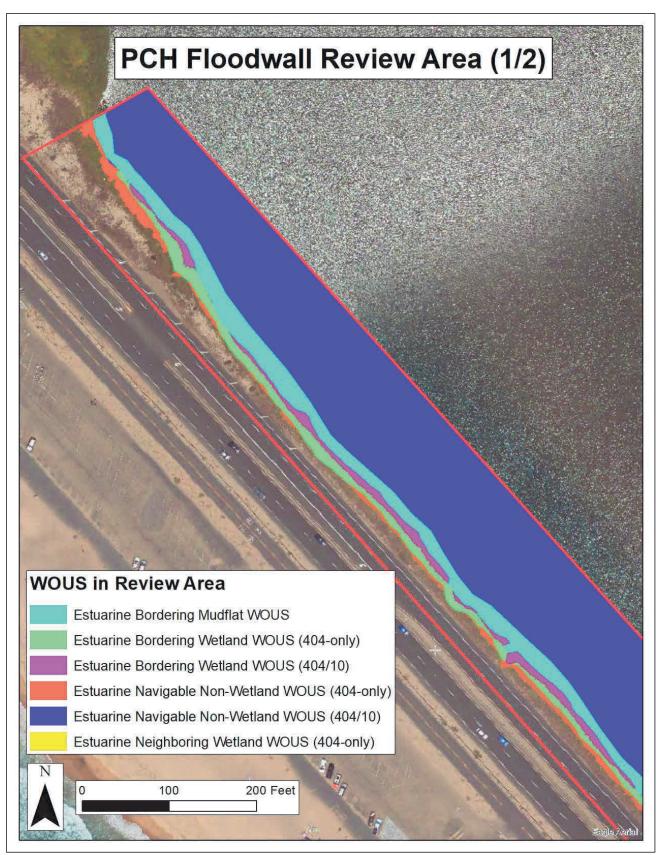


Figure 3 Jurisdictional waters of the U.S. within the PCH Floodwall Review Area (1 of 2).

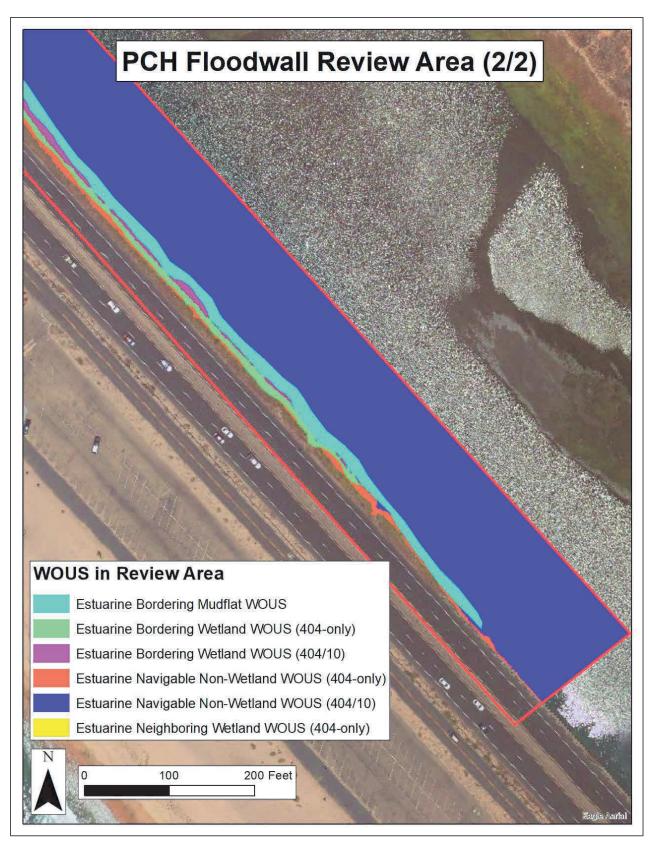


Figure 4 Jurisdictional waters of the U.S. within the PCH Floodwall Review Area (2 of 2).

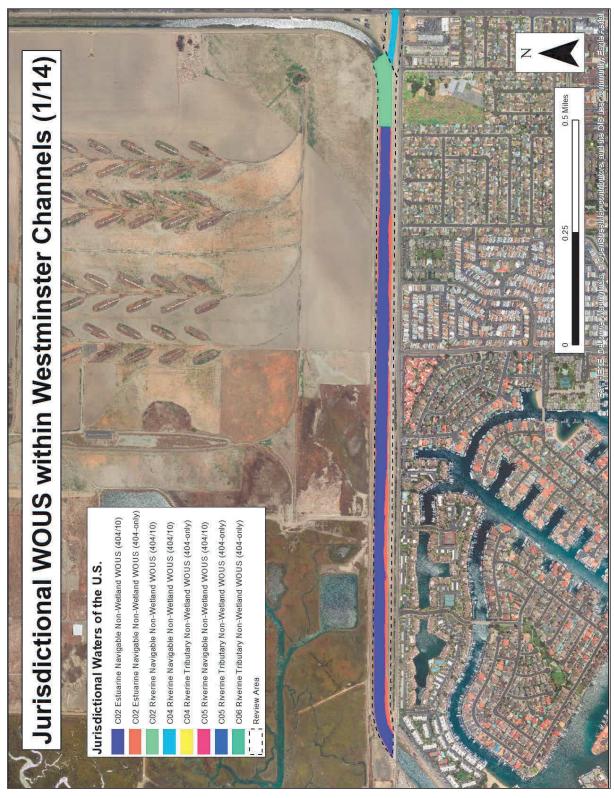


Figure 5 Jurisdictional waters of the U.S. identified within the Westminster Channels (1 of 14).



Figure 6 Jurisdictional waters of the U.S. identified within the Westminster Channels (2 of 14).



Figure 7 Jurisdictional waters of the U.S. identified within the Westminster Channels (3 of 14).

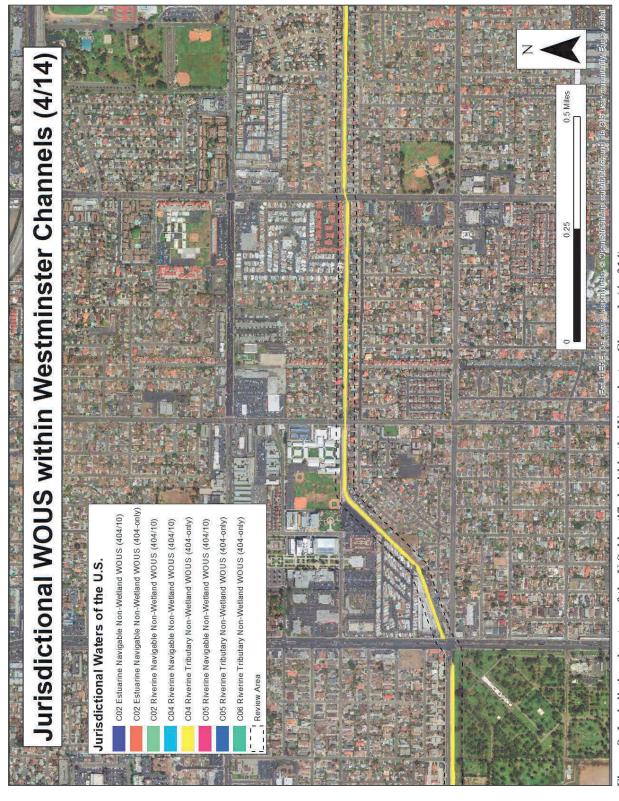


Figure 8 Jurisdictional waters of the U.S. identified within the Westminster Channels (4 of 14).

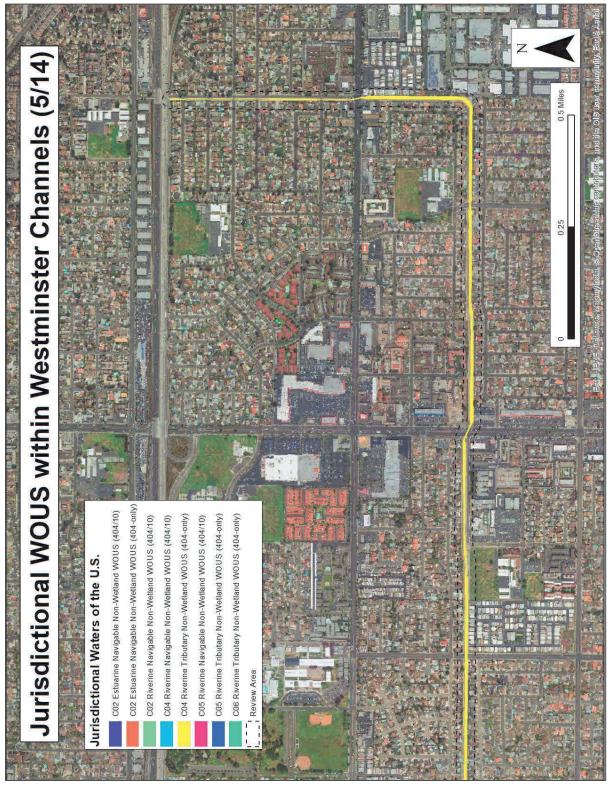


Figure 9 Jurisdictional waters of the U.S. identified within the Westminster Channels (5 of 14).



Figure 10 Jurisdictional waters of the U.S. identified within the Westminster Channels (6 of 14).

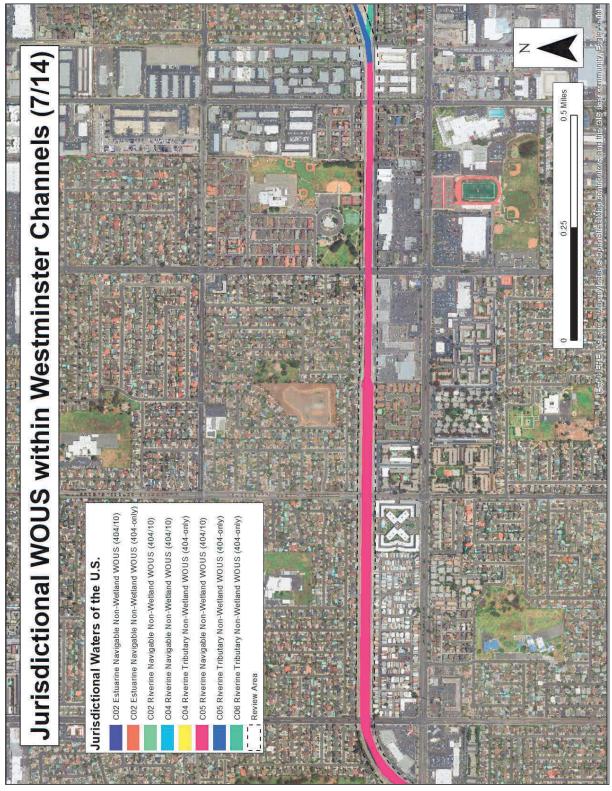


Figure 11 Jurisdictional waters of the U.S. identified within the Westminster Channels (7 of 14).

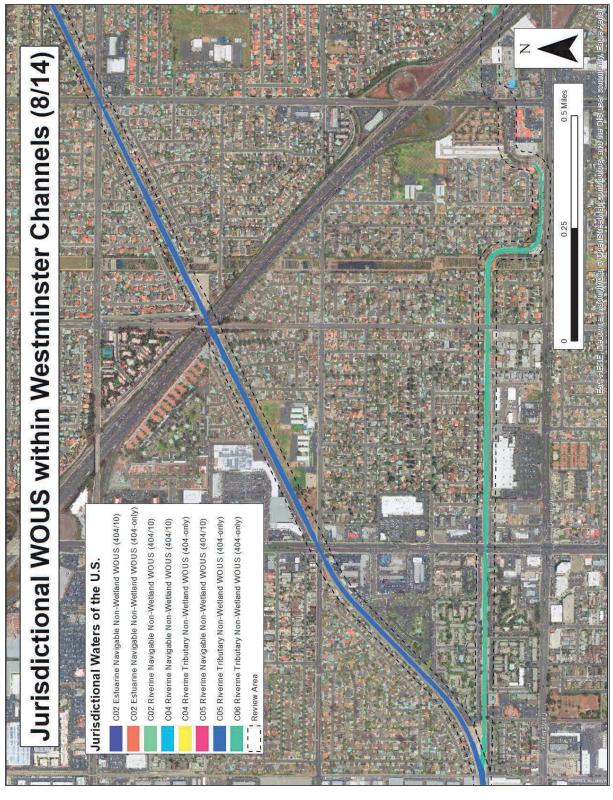


Figure 12 Jurisdictional waters of the U.S. identified within the Westminster Channels (8 of 14).

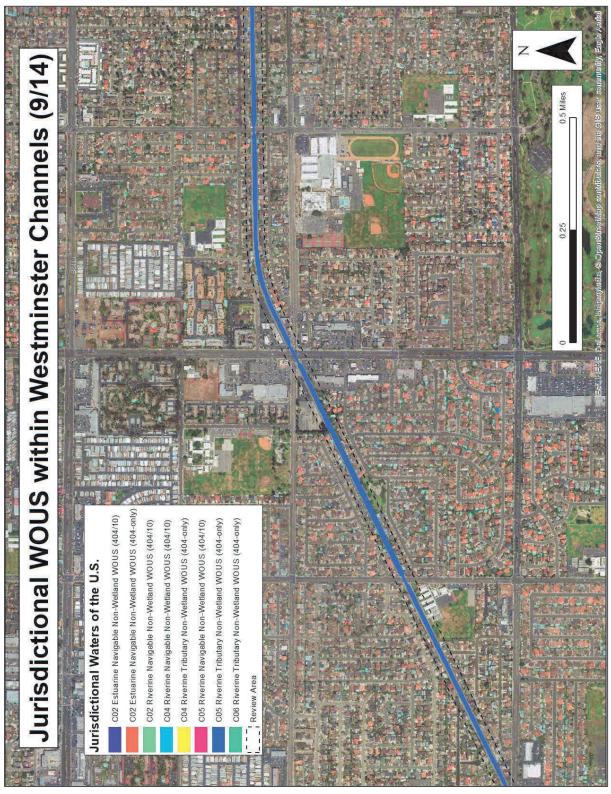


Figure 13 Jurisdictional waters of the U.S. identified within the Westminster Channels (9 of 14).



Figure 14 Jurisdictional waters of the U.S. identified within the Westminster Channels (10 of 14).

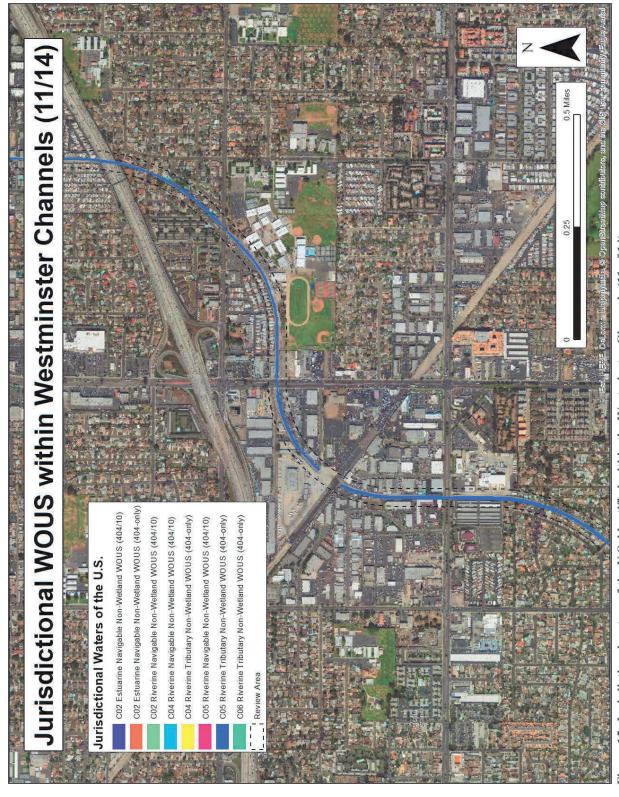


Figure 15 Jurisdictional waters of the U.S. identified within the Westminster Channels (11 of 14).

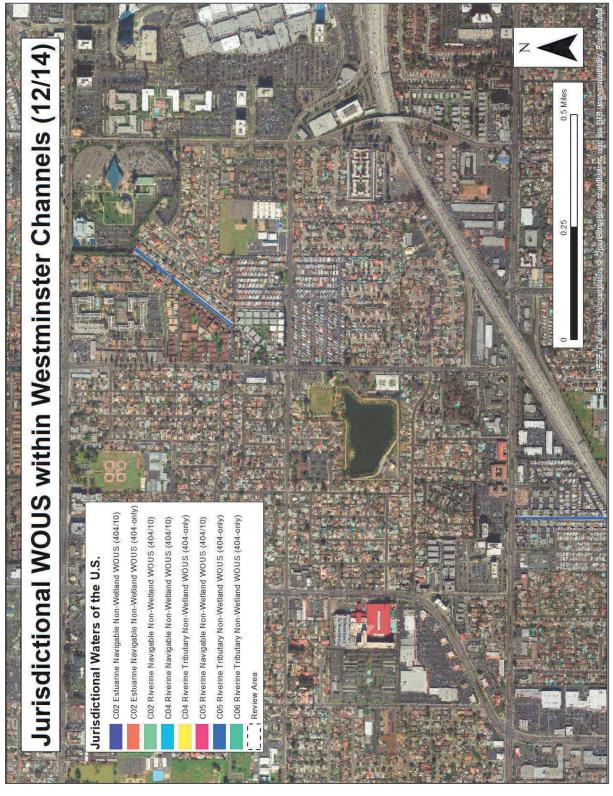


Figure 16 Jurisdictional waters of the U.S. identified within the Westminster Channels (12 of 14).



Figure 17 Jurisdictional waters of the U.S. identified within the Westminster Channels (13 of 14).

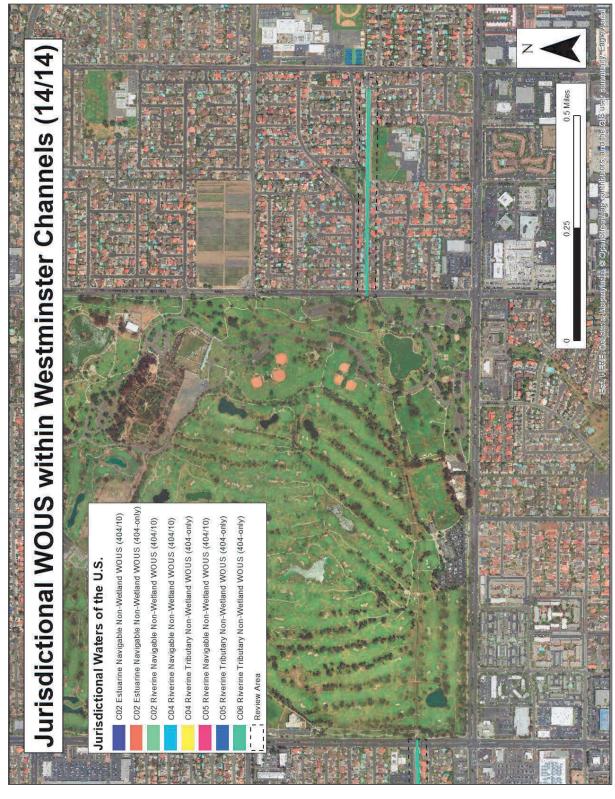


Figure 18 Jurisdictional waters of the U.S. identified within the Westminster Channels (14 of 14).

#### Appendix B



Figure 1 Muted tidal wetland identified within the Warner Avenue Bridge Review Area during a site visit completed on March 27, 2019. The wetland receives only the highest tidal flows through a culvert that inlets water from the adjacent Bolsa Bay. The view shown here is oriented toward the east, with Warner Avenue Bridge and Bolsa Bay located behind the wetland.



Figure 2 View of the muted tidal wetland within the Warner Avenue Bridge Review Area, oriented to the west.



Figure 3 View, oriented north, of tidal wetland and mudflat areas within the PCH Floodwall Review Area as observed during the March 27, 2019 site visit.



Figure 4 View, oriented south, of tidal wetland and mudflat areas within the PCH Floodwall Review area.



Figure 5 View of Bolsa Chica Channel (C02), oriented west, as observed during an April 16, 2019 site visit.



Figure 6 View of Bolsa Chica Channel (C02), oriented to the east.



Figure 7 Cattail (*Typha domingensis*) sprouts present along the C02 channel fringe, a potential indicator of disturbance and brackish conditions within C02 Channel.

#### Appendix C PUBLIC NOTICE

RELATIVE TO NAVIGABLE WATERS WITHIN
THE LOS ANGELES DISTRICT

\_are Receiver.

DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P. O. BOX 2711
LOS ANGELES, CALIFORNIA 90053

Act'n In'o F

1672

29 November 1972

Send copie to cccp12 (oun) + Compt (WBE).

TO WHOM IT MAY CONCERN:

This Public Notice is issued to inform all interested parties of the definition of navigable waters of the United States subject to the regulatory authorities of the Corps of Engineers, Los Angeles District, as established by the River and Harbor Act of 1899. As a general proposition, limits of jurisdiction over tidal waters of the Pacific Ocean from the Mexican-California border to Cape San Martin shall extend to the line on shore reached by the mean of the higher high waters. For the specific areas set forth below, waters of the Pacific Ocean currently regarded as navigable waters of the United States to the limits indicated are as follows:

San Simeon Bay - San Luis Obispo County 2.5 ft. m.s.l. Lower Morro Bay - San Luis Obispo County 2.4 ft. m.s.l. San Luis Obispo Creek - San Luis Obispo County 2.5 ft. m.s.1. Pismo & Arroyo Grande Creeks - San Luis Obispo County 2.5 ft. m.s.l. Santa Maria River - Santa Barbara County 2.5 ft. m.s.l. Santa Ynez River - Santa Barbara County 2.5 ft. m.s.1. Devareaux Ranch Lagoon - Santa Barbara County 2.5 ft. m.s.l. Goleta Slough - Santa Barbara County 2.5 ft. m.s.1. Carpinteria (El Estero) Marsh - Santa Barbara County 2.5 ft. m.s.1. Ventura River - Ventura County 2.6 ft. m.s.1. Mugu Lagoon - Ventura County 2.5 ft. m.s.1. Calleguas Creek - Ventura County 2.5 ft. m.s.1. Ballona Creek - Los Angeles County 2.6 ft. m.s.l. Los Angeles River - Los Angeles County 2.5 ft. m.s.1. San Gabriel River - Orange County 2.5 ft. m.s.l. Anaheim Bay - Orange County 2.5 ft. m.s.l. Bolsa Bay - Orange County 2.5 ft. m.s.1. Upper Newport Bay - Orange County 2.5 ft. m.s.1. San Juan Creek - Orange County 2.6 ft. m.s.1. San Mateo Creek - San Diego County 2.6 ft. m.s.l. Santa Margarita River - San Diego County 2.5 ft. m.s.l. San Luis Rey River - San Diego County 2.5 ft. m.s.l. Buena Vista Lagoon - San Diego County 2.5 ft. m.s.1. Agua Hedionda Lagoon - San Diego County 2.5 ft. m.s.l. Batiquitos Lagoon - San Diego County 2.5 ft. m.s.l. San Elijo Lagoon - San Diego County 2.5 ft. m.s.l.

PUBLIC NOTICE

29 November 1972

San Dieguito River - San Diego County 2.5 ft. m.s.l.
Los Penasquitos Lagoon - San Diego County 2.5 ft. m.s.l.
Upper Mission Bay - San Diego County 2.6 ft. m.s.l.
San Diego River - San Diego County 2.7 ft. m.s.l.
Lower San Diego Bay - San Diego County 3.0 ft. m.s.l.
Tijuana Estuary - San Diego County 2.5 ft. m.s.l.

Federal Laws prohibit work or construction in such waters unless recommended by the Chief of Engineers and authorized by the Secretary of the Army prior to commencement of the work. The authorization is ordinarily granted in the form of a permit. Applications for such permits in the navigable waters of the Pacific Ocean described herein should be forwarded to the District Engineer, Attn: SPLCO-O at the above address. This notice will be added to the listing of navigable waters within the Los Angeles District issued on 30 June 1965.

H. McK. ROPER, JR.

COL, CE

District Engineer



Project/Site: Warner Avenue Bridge Review Area	City/County: Hunting	ton Beach Sampling Date: 3/	27/19
Applicant/Owner: USACE Chicago District		State: <u>CA</u> Sampling Point:	1
Investigator(s): Eric Sweeney	Section, Township, Ra	ange: N/A	
Landform (hillslope, terrace, etc.): Slight depression	Local relief (concave,	convex, none): Convex Slope (%	):0
Subregion (LRR): C	Lat: 33.711447	Long: -118.060868 Datum: N	AD 1983
Soil Map Unit Name: Beaches		NWI classification: Emergent wetl	and
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes No _	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are	"Normal Circumstances" present? Yes	No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If no	eeded, explain any answers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing sampling point	ocations, transects, important featur	es, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes   ✓ N  Yes  ✓ N	No within a Wetla	,	
Wetland is a muted tidal wetland, since it	only receives water during	ng the highest tides.	
VEGETATION – Use scientific names of plar	nts.		
Tage Charture (Diet size)	Absolute Dominant Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:) 1		Number of Dominant Species That Are OBL, FACW, or FAC: 2	(Δ)
2.			_ (/ (/
3.		Total Number of Dominant Species Across All Strata:  2	(B)
4		Percent of Dominant Species	_ , ,
Capling/Charle Charles (Diet sing)	= Total Cover	That Are OBL, FACW, or FAC: 100	_ (A/B)
Sapling/Shrub Stratum (Plot size:)  1		Prevalence Index worksheet:	
2.		Total % Cover of: Multiply by:	
3.		OBL species x 1 =	
4		FACW species x 2 =	
5		FAC species x 3 =	
	= Total Cover	FACU species x 4 =	
Herb Stratum (Plot size: 5 meters )		UPL species x 5 =	
1. Batis maritima		Column Totals: (A)	(B)
2. <u>Salicornia pacifica</u>		Prevalence Index = B/A =	
3. Limonium californicum		Hydrophytic Vegetation Indicators:	
4. <u>Frankenia salina</u>		✓ Dominance Test is >50%	
5		Prevalence Index is ≤3.0¹	
6		Morphological Adaptations <sup>1</sup> (Provide suppo	ortina
7 8		data in Remarks or on a separate shee	t)
0.	= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Expl	ain)
Woody Vine Stratum (Plot size:) 1		<sup>1</sup> Indicators of hydric soil and wetland hydrology be present, unless disturbed or problematic.	must
2			
% Bare Ground in Herb Stratum % Cove	= Total Cover	Hydrophytic Vegetation Present?  Yes   ✓ No   ———	
Remarks:			

US Army Corps of Engineers Arid West – Version 2.0

SOIL Sampling Point: 1

Depth	Matrix			ox Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-15	10YR 4/1	95	10YR 4/6	5		PL	Clay/Loa +	
				_				
¹Type: C=C	concentration, D=De	pletion, RM	=Reduced Matrix, C	S=Covere	d or Coate	ed Sand G	rains. <sup>2</sup> Loca	ation: PL=Pore Lining, M=Matrix.
			LRRs, unless other					for Problematic Hydric Soils <sup>3</sup> :
Histoso	I (A1)		Sandy Red	dox (S5)			1 cm M	uck (A9) ( <b>LRR C</b> )
Histic E	pipedon (A2)		Stripped M					uck (A10) ( <b>LRR B</b> )
Black H	istic (A3)		Loamy Mu	cky Minera	ıl (F1)			ed Vertic (F18)
	en Sulfide (A4)		Loamy Gle	-	(F2)		Red Pa	rent Material (TF2)
	d Layers (A5) ( <b>LRR</b>	(C)	✓ Depleted N				Other (I	Explain in Remarks)
	uck (A9) ( <b>LRR D</b> )		Redox Dar		. ,			
	d Below Dark Surfa	ce (A11)	Depleted D		. ,		31	of building the standard and and
	ark Surface (A12) Mucky Mineral (S1)		Redox Dep Vernal Poo		F8)			of hydrophytic vegetation and hydrology must be present,
	Gleyed Matrix (S4)		vernai Foo	)IS (F9)				sturbed or problematic.
	Layer (if present):						unicss un	starbed of problematic.
	iches):						Hydric Soil I	Present? Yes √ No
Remarks:			<u> </u>				Tiyane 30ii i	riesent: Tes v No
Remarks.								
HVDBOLO	NCV							
HYDROLO								
	drology Indicators						0	
	•	one require	d; check all that app					dary Indicators (2 or more required)
	Water (A1)		Salt Crus	, ,				ater Marks (B1) ( <b>Riverine</b> )
	ater Table (A2)		Biotic Cru					ediment Deposits (B2) (Riverine)
Saturati	` '		✓ Aquatic Ir		. ,			rift Deposits (B3) (Riverine)
	Marks (B1) ( <b>Nonrive</b>		Hydroger					rainage Patterns (B10)
· <del></del>	nt Deposits (B2) (N	,			_	_		ry-Season Water Table (C2)
· <del></del>	posits (B3) (Nonriv	erine)	Presence					rayfish Burrows (C8)
	Soil Cracks (B6)			on Reducti		d Soils (C	· —	aturation Visible on Aerial Imagery (C9)
<del></del>	ion Visible on Aeria			k Surface (	. ,			nallow Aquitard (D3)
	Stained Leaves (B9)		Other (Ex	plain in Re	emarks)		<i>_</i> FA	AC-Neutral Test (D5)
Field Obser	rvations:							
Surface Wa			No Depth (ir			I		
Water Table	Present?	Yes	No Depth (in	nches):				
Saturation F		Yes	No Depth (ir	nches):		Wet	land Hydrology	Present? Yes No
	pillary fringe)	m dallac ==	onitoring well, aerial	nhotos na	ovious iss	anactions)	if available:	
Describe Re	ecorded Data (Streat	n gauge, m	oriitoring well, aerial	priotos, pr	evious iris	spections),	ii avallable.	
D 1								
Remarks:								

US Army Corps of Engineers Arid West – Version 2.0

Project/Site: Warner Avenue Bridge Review Area	City	County: Hunting	ton Beach	Sampling Date: _	3/27/19
Applicant/Owner: USACE Chicago District			State: CA	_ Sampling Point: _	2
Investigator(s): Eric Sweeney	Sec	tion, Township, Ra	inge: N/A		
Landform (hillslope, terrace, etc.): Slight depression	Loc	al relief (concave,	convex, none): Convex	Slop	e (%):0
Subregion (LRR): C					
			NWI classifi		•
Are climatic / hydrologic conditions on the site typical for		,			
Are Vegetation, Soil, or Hydrology	-		"Normal Circumstances"		, No
Are Vegetation, Soil, or Hydrology			eeded, explain any answ		
SUMMARY OF FINDINGS – Attach site ma					aturos oto
Sommarr of Findings - Attach site in	ip snowing sa		ocations, transect	s, important lec	itures, etc.
	No	Is the Sampled	d Area		
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No	within a Wetlan	nd? Yes	No	
Remarks:	110				
VEGETATION – Use scientific names of pl	ants.				
Tree Stratum (Plot size:)		ominant Indicator oecies? Status	Dominance Test wor		
1			Number of Dominant S That Are OBL, FACW,		(A)
2.					(/ //
3.			Total Number of Domi Species Across All Str		(B)
4.					(-/
	= 7		Percent of Dominant S That Are OBL, FACW,		0 (A/B)
Sapling/Shrub Stratum (Plot size:)			Prevalence Index wo		
1			Total % Cover of:		. bv:
2 3			OBL species		-
4			FACW species		
5			FAC species		
	=1		FACU species		
Herb Stratum (Plot size: 5 meters )			UPL species	x 5 =	
1. Batis maritima		Yes OBL	Column Totals:	(A)	(B)
2. <u>Salicornia pacifica</u>		Yes OBL	Prevalence Inde	x = B/A =	
Limonium californicum     Frankenia salina			Hydrophytic Vegetat		
5			✓ Dominance Test is		
6			Prevalence Index		
7			Morphological Ada	aptations <sup>1</sup> (Provide s	supporting
8.			data in Remark	s or on a separate	sheet)
	125 = 7		Problematic Hydro	ophytic Vegetation'	(Explain)
Woody Vine Stratum (Plot size:)			1 matter stand of boundary of	ill and confident broads	
1			<sup>1</sup> Indicators of hydric so be present, unless dis		
2			Hydrophytic	·	
	= 7		Vegetation		
% Bare Ground in Herb Stratum % Co	over of Biotic Crust		Present? Y	es No	
Remarks:					

Depth (inches)			Red	dox Feature	S			
	Color (moist)	%	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-6	10YR 3/2	100					Sand	
6-15	10YR 4/1	95	10YR 4/6	5	С	PL	Clay/Loa +	
				_				
¹Type: C=Co	ncentration, D=D	epletion, RN	//=Reduced Matrix, €	CS=Covere	d or Coat	ed Sand G		tion: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (App	licable to a	II LRRs, unless oth	erwise not	ed.)		Indicators for	or Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy Re	, ,				ıck (A9) ( <b>LRR C</b> )
	ipedon (A2)			Matrix (S6)				ıck (A10) ( <b>LRR B</b> )
Black His				ucky Minera				d Vertic (F18)
	n Sulfide (A4)	'		eyed Matrix	(F2)			ent Material (TF2)
	Layers (A5) (LR	K C)	Depleted	Matrix (F3) ark Surface	(E6)		Other (E	explain in Remarks)
	ck (A9) ( <b>LRR D</b> ) I Below Dark Surf	ace (A11)		Dark Surface				
	rk Surface (A12)	acc (A11)		epressions (			3Indicators of	f hydrophytic vegetation and
	lucky Mineral (S1)	)	Vernal Po		. 0)			/drology must be present,
	leyed Matrix (S4)			(. 0)				turbed or problematic.
Restrictive L	ayer (if present)	):						
Type:								
Depth (inc	ches):						Hydric Soil P	resent? Yes <u>√</u> No
Remarks:								
Wetland Hyd	Irology Indicator							
Wetland Hyd Primary Indic	drology Indicator ators (minimum c		ed; check all that ap					ary Indicators (2 or more required)
Wetland Hyd Primary Indication Surface \	drology Indicator ators (minimum o		Salt Cru	st (B11)			Wa	ter Marks (B1) (Riverine)
Wetland Hyd Primary Indica Surface \ High Wat	drology Indicator ators (minimum o Water (A1) ter Table (A2)		Salt Cru Biotic Cr	st (B11) rust (B12)			Wa Sec	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> )
Wetland Hyd Primary Indic Surface \ High Wat Saturatio	drology Indicator ators (minimum o Water (A1) ter Table (A2) on (A3)	of one require	Salt Cru Biotic Cr Aquatic	st (B11) rust (B12) Invertebrate	, ,		Wa Sec Drit	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> )
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma	drology Indicator ators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriv	of one require	Salt Cru Biotic Crown Aquatic Hydroge	st (B11) rust (B12) Invertebrate en Sulfide O	dor (C1)		Wa Sec Drit Dra	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10)
Wetland Hyd Primary Indic Surface \ High Wat Saturatio Water Ma Sedimen	Arology Indicators (minimum of water (A1) ter Table (A2) on (A3) arks (B1) (Nonrivat Deposits (B2) (No	of one require verine) Nonriverine	Salt Cru Biotic Ci Aquatic Hydroge ) Oxidized	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe	dor (C1) eres along		Wa Sec Drit Dra ots (C3) Dry	tter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) r-Season Water Table (C2)
Wetland Hyd Primary Indice Surface V High Wat Saturatio Water Ma Sedimen Drift Dep	Irology Indicator ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrivate Deposits (B2) (Nonrivate Deposits (B3) (Nonrivate Depos	of one require verine) Nonriverine	Salt Cru Biotic Cr Aquatic Hydroge ) Oxidized Presence	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce	dor (C1) res alonged Iron (C	4)	Wa Sec Drit Dra Drs Drs Cra	ter Marks (B1) (Riverine) diment Deposits (B2) (Riverine) ft Deposits (B3) (Riverine) ainage Patterns (B10) v-Season Water Table (C2) ayfish Burrows (C8)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S	drology Indicator ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrivat Deposits (B2) (Nonrivat Deposits (B3) (Nonri Soil Cracks (B6)	of one require verine) Nonriverine verine)	Salt Cru Biotic Cr Aquatic Hydroge ) Oxidized Presenc Recent I	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce Iron Reduct	dor (C1) eres along ed Iron (C ion in Tille	4)	Wa See Drit Dra Drs Cra Cra 6) Sat	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) r-Season Water Table (C2) ayfish Burrows (C8) curation Visible on Aerial Imagery (C9
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundation	drology Indicator ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrivat Deposits (B2) (Nonrivat Deposits (B3) (Nonrivatoris) Soil Cracks (B6) on Visible on Aericatoris	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce Iron Reduct ck Surface	dor (C1) eres along ed Iron (C ion in Tille (C7)	4)	Wa Sec Drit Dra Cra Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (C9 allow Aquitard (D3)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St	drology Indicator ators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) (Nonrivated to Deposits (B2) (Nonrivated to Deposits (B3) (Nonrivated to Deposits (B6) on Visible on Aericated to Deposits (B6) on Visible on Aericated to Deposits (B6)	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce Iron Reduct	dor (C1) eres along ed Iron (C ion in Tille (C7)	4)	Wa Sec Drit Dra Cra Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) r-Season Water Table (C2) ayfish Burrows (C8) curation 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	Arology Indicators (minimum of ators (minimum of	verine) Nonriverine verine) al Imagery (1	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduct iron Reduct ck Surface	dor (C1) eres along ed Iron (C ion in Tille (C7) emarks)	4) ed Soils (Ce	Wa Sec Drit Dra Cra Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (C9 allow Aquitard (D3)
Wetland Hyd  Primary Indice Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St  Field Observ Surface Water	Arology Indicators (minimum of ators (minimum of	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe ee of Reduce fron Reduct ck Surface explain in Re	dor (C1) eres along ed Iron (C fon in Tille (C7) emarks)	4) ed Soils (Ce	Wa Sec Drit Dra Cra Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (C9 allow Aquitard (D3)
Wetland Hyd Primary Indice Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water	Arology Indicators (minimum of ators (minimum of	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe ee of Reduce fron Reduct ck Surface explain in Re	dor (C1) eres along ed Iron (C fon in Tille (C7) emarks)	4) ed Soils (C6	Wa Sec Drit Dra ots (C3) Dry Cra 6) Sat Sha FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) curation Visible on Aerial Imagery (C9 sallow Aquitard (D3) C-Neutral Test (D5)
Wetland Hyd Primary Indic Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Table I Saturation Pr (includes cap	Arology Indicator ators (minimum of ators (minim	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce fron Reduct ck Surface explain in Re inches): inches):	dor (C1) eres along ed Iron (C ion in Tille (C7) emarks)	4) ed Soils (Ce	Wa  Sec Drif Dra  Ots (C3) Dry Cra Sat Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (C9 allow Aquitard (D3)
Wetland Hyd Primary Indice Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Table I Saturation Pr (includes cap	Arology Indicator ators (minimum of ators (minim	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presence Recent I Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce fron Reduct ck Surface explain in Re inches): inches):	dor (C1) eres along ed Iron (C ion in Tille (C7) emarks)	4) ed Soils (Ce	Wa  Sec Drif Dra  Ots (C3) Dry Cra Sat Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) curation Visible on Aerial Imagery (C9 sallow Aquitard (D3) C-Neutral Test (D5)
Primary Indice Surface Note High Water May Sedimen Drift Dep Surface Solution Water-St Field Observ Surface Water Water Table I Saturation Profincludes cap Describe Rec	Arology Indicator ators (minimum of ators (minim	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce fron Reduct ck Surface explain in Re inches): inches):	dor (C1) eres along ed Iron (C ion in Tille (C7) emarks)	4) ed Soils (Ce	Wa  Sec Drif Dra  Ots (C3) Dry Cra Sat Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) curation Visible on Aerial Imagery (C9 sallow Aquitard (D3) C-Neutral Test (D5)
Wetland Hyd Primary Indice Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Saturation Pr (includes cap	Arology Indicator ators (minimum of ators (minim	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce fron Reduct ck Surface explain in Re inches): inches):	dor (C1) eres along ed Iron (C ion in Tille (C7) emarks)	4) ed Soils (Ce	Wa  Sec Drif Dra  Ots (C3) Dry Cra Sat Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (C9 sallow Aquitard (D3) C-Neutral 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	Arology Indicator ators (minimum of ators (minim	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce fron Reduct ck Surface explain in Re inches): inches):	dor (C1) eres along ed Iron (C ion in Tille (C7) emarks)	4) ed Soils (Ce	Wa  Sec Drif Dra  Ots (C3) Dry Cra Sat Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (C9 sallow Aquitard (D3) C-Neutral 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	Arology Indicator ators (minimum of ators (minim	verine) Nonriverine verine) al Imagery (I	Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I B7) Thin Mu Other (E	st (B11) rust (B12) Invertebrate en Sulfide O d Rhizosphe e of Reduce fron Reduct ck Surface explain in Re inches): inches):	dor (C1) eres along ed Iron (C ion in Tille (C7) emarks)	4) ed Soils (Ce	Wa  Sec Drif Dra  Ots (C3) Dry Cra Sat Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10) r-Season Water Table (C2) syfish Burrows (C8) turation Visible on Aerial Imagery (C9 sallow Aquitard (D3) C-Neutral Test (D5)

Project/Site: Warner Avenue Bri	dge Review Area	C	city/County	y: <u>Huntingt</u>	on Beach	;	Sampling Date:	3/27/19
Applicant/Owner: USACE Chicago	District				State:	CA S	Sampling Point:	3
Investigator(s): Eric Sweeney		S	Section, To	ownship, Rar	nge: N/A			
Landform (hillslope, terrace, etc.):								
Subregion (LRR): C								
Soil Map Unit Name: Beaches								
Are climatic / hydrologic conditions				,				
Are Vegetation, Soil		-					esent? Yes	No
_		-						NO
Are Vegetation, Soil					eded, explain any			
SUMMARY OF FINDINGS -	<ul> <li>Attach site map</li> </ul>	showing	samplir	ng point lo	ocations, trar	nsects,	important fea	itures, etc.
Hydrophytic Vegetation Present?	Yes <u>√</u> N	lo.						
Hydric Soil Present?	Yes N			he Sampled			/	
Wetland Hydrology Present?			with	nin a Wetlan	id? Yo	es	No <u></u>	
Remarks:								
VEGETATION – Use scient	ific names of plar							
Tree Stratum (Plot size:	)	Absolute % Cover		t Indicator	Dominance Te			
1			-		Number of Don		ecies FAC: 2	(A)
2.					That Are OBL,	i ACVV, Oi	1 AC	(^)
3					Total Number of Species Across			(B)
4.								(D)
					Percent of Dom		ecies FAC:100	) (A/R)
Sapling/Shrub Stratum (Plot size	:)						-	<u> </u>
1					Prevalence Inc			
2							Multiply	-
3							x 1 =	
4							x 2 =	
5							x 3 =	
Herb Stratum (Plot size: 5 me	eters )	95	= Total Co	over	1		x 4 = x 5 =	
4 Datia was within		45	Yes	OBL			X 5	-
2. Salicornia pacifica					Column Totals.	-	(A)	(D)
3. Limonium californicum					Prevalend	e Index	= B/A =	
4. Frankenia salina		10		FACW	Hydrophytic V	egetatior	Indicators:	
5					✓ Dominance			
6					Prevalence			
7					Morphologi	ical Adapt	ations <sup>1</sup> (Provide s or on a separate s	supporting
8							nytic Vegetation <sup>1</sup> (	,
Manda Vina Charles (Diet sine)	,		= Total Co	over	i iobieinati	c i iyalopi	lytic vegetation (	LAPIAIII)
Woody Vine Stratum (Plot size: _					<sup>1</sup> Indicators of h	vdric soil :	and wetland hydro	ology must
1 2					be present, unle	ess distur	bed or problemati	C.
2.					Hydrophytic			
					Vegetation			
% Bare Ground in Herb Stratum _	% Cove	er of Biotic Cru	ust		Present?	Yes	No	
Remarks:								

Profile Desc	ription: (Descri	be to the dep	oth needed to document the indicator or	confirm the absence of indicators.)
Depth	Matri		Redox Features	
(inches)	Color (moist)			Loc <sup>2</sup> Texture Remarks
0-5	10YR 3/2	100		Sand
5-12	10YR 3/3	100		Sand
			=Reduced Matrix, CS=Covered or Coated S	
-		DIICADIE TO AII	LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol	oipedon (A2)		<pre> Sandy Redox (S5) Stripped Matrix (S6)</pre>	1 cm Muck (A9) ( <b>LRR C</b> ) 2 cm Muck (A10) ( <b>LRR B</b> )
Black Hi			Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
	Layers (A5) ( <b>LF</b>	RR C)	Depleted Matrix (F3)	Other (Explain in Remarks)
	ck (A9) ( <b>LRR D</b> )		Redox Dark Surface (F6)	
	Below Dark Sur		Depleted Dark Surface (F7)	3
	ark Surface (A12) lucky Mineral (S1		Redox Depressions (F8) Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,
	lleyed Matrix (S4	,	verriai Pools (1 9)	unless disturbed or problematic.
-	_ayer (if present			
Type:		-	<u></u>	
	ches):			Hydric Soil Present? Yes No✓_
Remarks:				
HYDROLO	CV			
_	drology Indicato		di abaak all that apply)	Cocondary Indicators (2 or more required)
	•	or one required	d; check all that apply)	Secondary Indicators (2 or more required)
Surface	ter Table (A2)		Salt Crust (B11) Biotic Crust (B12)	<ul><li>Water Marks (B1) (Riverine)</li><li>Sediment Deposits (B2) (Riverine)</li></ul>
Saturatio			✓ Aquatic Invertebrates (B13)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
	arks (B1) ( <b>Nonri</b>	verine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
	nt Deposits (B2) (			ring Roots (C3) Dry-Season Water Table (C2)
· <del></del>	oosits (B3) ( <b>Nonr</b>	,	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
	Soil Cracks (B6)	,	Recent Iron Reduction in Tilled S	
Inundation	on Visible on Aer	ial Imagery (B	7) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-S	tained Leaves (B	9)	Other (Explain in Remarks)	✓ FAC-Neutral Test (D5)
Field Obser	vations:			
Surface Water	er Present?	Yes	No Depth (inches):	
Water Table	Present?	Yes	No Depth (inches):	
Saturation Projection (includes car		Yes	No Depth (inches):	Wetland Hydrology Present? Yes No
		am gauge, mo	onitoring well, aerial photos, previous inspe	ctions), if available:
Remarks:				

Project/Site: Warner Avenue Bridge Review Area	(	City/County	y: <u>Huntingt</u>	on Beach	_ Sampling Date: _	3/27/19
Applicant/Owner: USACE Chicago District				State: CA	_ Sampling Point: _	4
Investigator(s): Eric Sweeney		Section, To	ownship, Rai	nge: N/A		
Landform (hillslope, terrace, etc.): Shoreline		Local relie	f (concave, o	convex, none): None	Slop	e (%):10_
Subregion (LRR): C						
Soil Map Unit Name: Marina loamy sand				-		
Are climatic / hydrologic conditions on the site typical fo			,			
Are Vegetation, Soil, or Hydrology	-			Normal Circumstances		, No
Are Vegetation, Soil, or Hydrology				eded, explain any answ		
SUMMARY OF FINDINGS – Attach site m						atures, etc.
Hydrophytic Vegetation Present? Yes   ✓	No			· · · · · · · · · · · · · · · · · · ·	<u> </u>	
	No		he Sampled		/	
	No	with	nin a Wetlar	nd? Yes	√ No	
Remarks:		I				
VEGETATION – Use scientific names of p	lante					
VEGETATION – Use scientific flames of p	Absolute	Dominan	t Indicator	Dominance Test wo	rkshoot	
Tree Stratum (Plot size:)	% Cover			Number of Dominant		
1				That Are OBL, FACW		(A)
2				Total Number of Dom	inant	
3				Species Across All St		(B)
4				Percent of Dominant	Species	
Sapling/Shrub Stratum (Plot size:)		= Total Co	over	That Are OBL, FACW	, or FAC: 10	0 (A/B)
1				Prevalence Index wo	orksheet:	
2.				Total % Cover of:	Multiply	by:
3				OBL species	x 1 =	
4				FACW species		
5				FAC species		
Herb Stratum (Plot size: 5 meters )		= Total Co	over	FACU species		
1. Jaumea carnosa	80	Yes	OBL	UPL species		
2. <u>Salicornia pacifica</u>				Column Totals:	(A)	(D)
3. Batis maritima				Prevalence Inde	ex = B/A =	
4. Suaeda esteroa	1		FACW	Hydrophytic Vegeta	tion Indicators:	
5				✓ Dominance Test		
6				Prevalence Index		
7				Morphological Ad	aptations (Provide s ks or on a separate	supporting sheet)
8				Problematic Hydr	•	,
Woody Vine Stratum (Plot size:)	181	= Total Co	over			
1				<sup>1</sup> Indicators of hydric s		
2				be present, unless dis	turbed or problemat	C.
				Hydrophytic		
% Bare Ground in Herb Stratum % C	over of Biotic Cr	ust		Vegetation Present? Y	es <u>√</u> No	
Remarks:			_ <del></del> _			<del>_</del>

Profile Descr Depth	ription: (Describ Matrix	e to the dep	oth needed to document the indicator  Redox Features	or confirm the absence of indicators.)
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks
0-12	10YR 5/1	100		Clay/Loa+
				· — · · · · · · · · · · · · · · · · · ·
				· ·
17				21 and Cond Oration 21 and the District M. Markets
			=Reduced Matrix, CS=Covered or Coate I LRRs, unless otherwise noted.)	ed Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.  Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (		icable to all	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
	pedon (A2)		Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black His			Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
✓ Hydroger	, ,		Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
	Layers (A5) (LRF	RC)	✓ Depleted Matrix (F3)	Other (Explain in Remarks)
	ck (A9) ( <b>LRR D</b> )	,	Redox Dark Surface (F6)	
Depleted	Below Dark Surfa	ace (A11)	Depleted Dark Surface (F7)	
	rk Surface (A12)		Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
	ucky Mineral (S1)		Vernal Pools (F9)	wetland hydrology must be present,
	eyed Matrix (S4)			unless disturbed or problematic.
	ayer (if present):			
Depth (incl	hes):			Hydric Soil Present? Yes No
IYDROLOG	GY			
Wetland Hyd	rology Indicator	s:		
Primary Indica	ators (minimum of	one require	ed; check all that apply)	Secondary Indicators (2 or more required)
✓ Surface V	Vater (A1)		Salt Crust (B11)	Water Marks (B1) (Riverine)
High Wat	er Table (A2)		✓ Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
✓ Saturation	n (A3)		✓ Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Ma	arks (B1) ( <b>Nonriv</b> e	erine)	✓ Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment	Deposits (B2) (N	onriverine)	Oxidized Rhizospheres along	Living Roots (C3) Dry-Season Water Table (C2)
Drift Depo	osits (B3) ( <b>Nonri</b> v	verine)	Presence of Reduced Iron (C	4) Crayfish Burrows (C8)
Surface S	Soil Cracks (B6)		Recent Iron Reduction in Tille	ed Soils (C6) Saturation Visible on Aerial Imagery (C
Inundatio	n Visible on Aeria	I Imagery (E	37) Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Sta	ained Leaves (B9	)	Other (Explain in Remarks)	✓ FAC-Neutral Test (D5)
Field Observ	ations:			
Surface Wate	r Present?	Yes	No Depth (inches):	
Water Table F	Present?	Yes	No Depth (inches):	
Saturation Pre			No Depth (inches):	
(includes capi Describe Rec		m gauge, m	onitoring well, aerial photos, previous ins	spections), if available:
Remarks:				

Project/Site: Warner Avenue Bridge Review Area		City/County	y: <u>Huntingt</u>	ton Beach	_ Sampling Date: _	3/27/19
Applicant/Owner: <u>USACE Chicago District</u>				State: CA	_ Sampling Point: _	5
Investigator(s): Eric Sweeney		Section, To	ownship, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Shoreline		Local relie	f (concave,	convex, none): None	Slop	oe (%):10
Subregion (LRR): C						
Soil Map Unit Name: Marina loamy sand				_		
Are climatic / hydrologic conditions on the site typical for th			,			
Are Vegetation, Soil, or Hydrology	-			"Normal Circumstances"		, No
Are Vegetation, Soil, or Hydrology				eded, explain any answ		
SUMMARY OF FINDINGS – Attach site map						atures, etc.
Hydrophytic Vegetation Present? Yes _ ✓ _ N	No					
Hydric Soil Present? Yes <u>✓</u> N	No		he Sampled nin a Wetlar		✓ No	
Wetland Hydrology Present? Yes ✓ N	No	WILI	iiii a vvetiai	iu: les	, NO	
Remarks:						
VEGETATION – Use scientific names of plan	nts.					
	Absolute	Dominan	t Indicator	Dominance Test wor	ksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant		
1				That Are OBL, FACW	, or FAC: 2	(A)
2				Total Number of Domi		
3				Species Across All Str	rata: <u>2</u>	(B)
4				Percent of Dominant S		0 (1.47)
Sapling/Shrub Stratum (Plot size:)		_ = 10tal Ct	ovei	That Are OBL, FACW	, or FAC: 100	0 (A/B)
1				Prevalence Index wo		
2				Total % Cover of:	Multiply	by:
3				OBL species		
4				FACW species		
5				FAC species		
Herb Stratum (Plot size: 5 meters )		_= Total Co	over	UPL species		
1. Jaumea carnosa	50	Yes	OBL	Column Totals:		
2. Salicornia pacifica	30	Yes	OBL			
3. Batis maritima					x = B/A =	
4. Frankenia salina				Hydrophytic Vegetat		
5				✓ Dominance Test i		
6				Prevalence Index Morphological Ad		aupporting
7				data in Remar	ks or on a separate s	sheet)
8		= Total Co		Problematic Hydr	ophytic Vegetation <sup>1</sup>	(Explain)
Woody Vine Stratum (Plot size:)		_= 10tal Ct	ovei			
1				<sup>1</sup> Indicators of hydric so		
2				be present, unless dis	turbed or problemati	.C.
		= Total Co	over	Hydrophytic		
% Bare Ground in Herb Stratum % Cove	er of Biotic C	rust		Vegetation Present? Y	es <u>√</u> No	
Remarks:				l .		

0-8 10YR 3/1 95 10YR 3/5 5 C PL Clav/Loam  8-15 10YR 3/1 100 Clav/Loam  1	Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
Type: C=Concentration. D=Depletion. RM=Reduced Matrix. CS=Covered or Costed Sand Grains.		•							
Type: C=Concentration. D=Depletion, RM=Reduced Matrix. CS=Covered or Coated Sand Grains.    **Location: PL=Pore Lining, M=Matrix. Ptyric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histocal (A1)									
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histocol (A1)	8-15 1	UYR 3/1	100					Clay/Loa +	
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)					_				
Histosol (A1)									
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)		contration D=Don	lotion DM	I=Doduced Metrix C	C=Covere	d or Coot	ad Cand C	Proinc 21 oc	etion: DI =Doro Lining M=Metrix
Histosol (A1) Sandy Redox (S5) 1 cm Muck (A9) (LRR C) Histo Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) 2 com Muck (A10) (LRR B) Black Histic (A3) 4 comy Muck (A10) (LRR B) Black Histic (A3) 4 comy Muck (A10) (LRR B) Hydrogen Sulfide (A4) 4 comy Cleyed Matrix (F2) 2 Red Parent Material (TF2) Stratified Layers (A5) (LRR C) 2 Depleted Matrix (F3) 3 completed Matrix (F3) 4 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A11) 5 Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) 5 Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) 6 Depleted Dark Surface (F6) 7 Sindicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.  Restrictive Layer (if present): Type:							eu Sanu C		
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3)	-					· · · · · ·			•
Black Histic (A3)		,							
Hydrogen Sulfide (A4)						l (F1)			
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) Other (Explain in Remarks)  1 cm Muck (A9) (LRR D)		` '							,
Depleted Below Dark Surface (A11)			C)	Depleted N	/latrix (F3)	,		Other (	Explain in Remarks)
Thick Dark Surface (A12) Redox Depressions (F8)	1 cm Muck	(A9) ( <b>LRR D</b> )				. ,			
Sandy Mucky Mineral (S1)			e (A11)					2	
Sandy Gleyed Matrix (S4)  Restrictive Layer (if present):  Type:						F8)			
Restrictive Layer (if present):  Type:  Depth (inches):  Hydric Soil Present? Yes No				Vernal Poo	ols (F9)				
Type:								uniess di	sturbed or problematic.
Popth (inches):									
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)  Surface Water (A1)  High Water Table (A2)  Water Marks (B1) (Riverine)  Water Marks (B1) (Riverine)  Water Marks (B1) (Nonriverine)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B3) (Nonriverine)  Sediment Deposits (B3) (Nonriverine)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Recent Iron Reduction in Tilled Soils (C6)  Water Marks (B9)  Water-Stained Leaves (B9)  Other (Explain in Remarks)  Feld Observations:  Surface Water Present?  Yes  No  Depth (inches):  Wetland Hydrology Present? Yes  No  Depth (inches):  Wetland Hydrology Present? Yes  No  Depth (inches):  Wetland Hydrology Present? Yes  No  Depth (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								Hydria Sail	Propent? Vec / No
YDROLOGY         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)         ✓ Saturation (A3)       Aquatic Invertebrates (B13)       Drift Deposits (B3) (Riverine)         ✓ Sediment Deposits (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)       Drianage 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 (C5)         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:       Water Table Present?       Yes       No       Depth (inches):       Wetland Hydrology Present? Yes       No         Mater Table Present?       Yes       No       Depth (inches):       Wetland Hydrology Present? Yes								Hydric 30ii	Flesent: lesv No
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Salt Crust (B12)  Aquatic Invertebrates (B13)  Water Marks (B1) (Nonriverine)  Hydrogen Sulfide Odor (C1)  Drift Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water Stained Leaves (B9)  Other (Explain in Remarks)  Wetland Hydrology 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) (Nonriverine)  Presence of Reduced Iron (C4)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Dept									
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)  Surface Water (A1)  High Water Table (A2)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Water Marks (B1) (Riverine)  Water Marks (B1) (Riverine)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B2) (Riverine)  Sediment Deposits (B2) (Riverine)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Recent Iron Reduction in Tilled Soils (C6)  Water-Stained Leaves (B9)  Other (Explain in Remarks)  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 (B2) (Riverine)  Drainage Patterns (B10)  Drainage Patterns (B10)									
Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine)  High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine)  Vaturation (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):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No No Depth (inches): Water Brecorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
High Water Table (A2)	Primary Indicate	ors (minimum of c	ne require	ed; check all that app	ly)			<u>Secon</u>	dary Indicators (2 or more required)
✓ 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:       Water Table Present?       Yes       No       Depth (inches):       Wetland Hydrology Present? Yes       ✓ No         Saturation Present?       Yes       No       Depth (inches):       Wetland Hydrology Present? Yes       ✓ No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		, ,							
Water Marks (B1) (Nonriverine)	High Water	Table (A2)							
Sediment Deposits (B2) (Nonriverine)	<del></del>	` '				, ,			. , , , , , ,
Drift Deposits (B3) (Nonriverine)									
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): Wetland Hydrology Present? Yes ✓ 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)  Field 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 Observations (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			rine)	<del></del>		•	•		
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):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		` ,					d Soils (C		
Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes 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 No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes✓ No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				Other (Ex	piain in Re	emarks)		_ <u>√</u> F/	AC-Neutral Test (D5)
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes ✓ No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			/	NIa Danth (in					
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes ✓ No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							l l		
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							l l		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		ent? Y ary fringe)	'es	No Depth (ir	nches):		We	lland Hydrology	/ Present? Yes <u>√</u> No
Remarks:			gauge, m	onitoring well, aerial	photos, pr	evious ins	spections)	, if available:	
Remarks:									
	Remarks:								

Project/Site: Warner Avenue Bridge Review Area	(	City/County	: Huntingt	ton Beach	_ Sampling Date:	3/27/19
Applicant/Owner: USACE Chicago District				State: CA	_ Sampling Point: _	6
Investigator(s): Eric Sweeney	;	Section, To	wnship, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Shoreline		Local relie	f (concave,	convex, none): None	Slop	e (%): <u>10</u>
Subregion (LRR): C	Lat: <u>33.7</u>	710551		Long: -118.060902	Datum	n: NAD 1983
Soil Map Unit Name: Marina loamy sand				-		
Are climatic / hydrologic conditions on the site typical for						
Are Vegetation, Soil, or Hydrology	-			"Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology				eded, explain any answ		
SUMMARY OF FINDINGS – Attach site ma						turos oto
SOMMAN OF THE HIGH ACTION OF THE HIGH	p snowing	Sampini	ig point i	ocations, transect	s, important lea	itures, etc.
Hydrophytic Vegetation Present? Yes✓		Is th	ne Sampled	Area		
Hydric Soil Present? Yes  Wetland Hydrology Present? Yes		with	nin a Wetlar	nd? Yes	No <u>√</u>	
Remarks:	NO					
Terraine.						
VEGETATION – Use scientific names of plants	ants.					
Tree Chreture (Diet eizer	Absolute		Indicator	Dominance Test wor	ksheet:	
Tree Stratum (Plot size:)	% Cover			Number of Dominant S That Are OBL, FACW,	Species	(A)
1 2				That Are OBL, I ACVV,	, 011AC	(A)
3				Total Number of Domi Species Across All Str		(B)
4						(D)
				Percent of Dominant S That Are OBL, FACW,		) (A/B)
Sapling/Shrub Stratum (Plot size:)						
1				Prevalence Index wo  Total % Cover of:		bv:
2				OBL species		-
3 4				FACW species		
5				FAC species		
				FACU species		
Herb Stratum (Plot size: 5 meters )				UPL species	x 5 =	
1. Batis maritima		Yes	OBL	Column Totals:	(A)	(B)
2. Salicornia pacifica		Vos	OBL	Prevalence Inde	x = B/A =	
3. <u>Frankenia Salina</u>			FACW	Hydrophytic Vegetat		
4				✓ Dominance Test is		
6				Prevalence Index		
7				Morphological Ada	aptations <sup>1</sup> (Provide s	
8.					ks or on a separate s	,
	70			Problematic Hydro	ophytic Vegetation (	(Explain)
Woody Vine Stratum (Plot size:)				<sup>1</sup> Indicators of hydric so	oil and watland hydro	alogy must
1				be present, unless dis		
2		= Total Co		Hydrophytic		
				Vegetation	,	
% Bare Ground in Herb Stratum % Co	ver of Biotic Cr	ust		Present? Y	es <u>√</u> No	
Remarks:						

Depth <u>N</u> (inches) Color (mo	oist) %	Color (r	noist)	%	Tyne	Loc <sup>2</sup>	Texture	Remarks
0-15 10YR 3/2	100						<u>Clay/Loa</u>	l
		_						_
		_						
		_						
Type: C=Concentration,	D=Depletion, F	M=Reduced I	Matrix, CS	=Covered	d or Coate	d Sand G	rains. <sup>2</sup> L	ocation: PL=Pore Lining, M=Matrix.
lydric Soil Indicators: (								s for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sa	ındy Redo	ox (S5)			1 cm	Muck (A9) (LRR C)
Histic Epipedon (A2)			ripped Ma					Muck (A10) (LRR B)
Black Histic (A3)		Lo	amy Mucl	ky Mineral	l (F1)		Redu	uced Vertic (F18)
Hydrogen Sulfide (A4	)			ed Matrix	(F2)		Red	Parent Material (TF2)
Stratified Layers (A5)	. ,		epleted Ma				Othe	r (Explain in Remarks)
1 cm Muck (A9) (LRR				Surface (				
Depleted Below Dark				ark Surfac			31!!4	an af la colona la dia con madadia a ana d
Thick Dark Surface (A				ressions (F	-8)			s of hydrophytic vegetation and
<ul><li>Sandy Mucky Mineral</li><li>Sandy Gleyed Matrix</li></ul>	. ,	ve	rnal Pool	S (F9)				d hydrology must be present, disturbed or problematic.
Restrictive Layer (if pres							Unicos	disturbed of problematic.
I Whe:								
Type:							Hydria Sa	il Present? Ves No /
Depth (inches):							Hydric So	il Present? Yes No _ ✓
Depth (inches):							Hydric So	il Present? Yes No _√
Depth (inches):Remarks:							Hydric So	il Present? Yes No _√_
Depth (inches):Remarks:  YDROLOGY Wetland Hydrology India	ators:						Hydric So	il Present? Yes No _ ✓
Depth (inches):Remarks:  YDROLOGY Wetland Hydrology India	ators:		that apply	y)				ondary Indicators (2 or more required)
Depth (inches):	ators:	ired; check all	alt Crust	(B11)			Sec	
Depth (inches):	ators: um of one requ	ired; check all		(B11)			Sec	ondary Indicators (2 or more required)
Depth (inches):	ators: um of one requ	ired; check all	Salt Crust Siotic Crus	(B11)	s (B13)		<u>Sec</u>	ondary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> )
Depth (inches):	ators: um of one requ	ired; check all	Salt Crust Siotic Crust	(B11) st (B12)	. ,		<u>Sec</u>	ondary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> ) Sediment Deposits (B2) ( <b>Riverine</b> )
Depth (inches):	ators: um of one requ ) enriverine)	ired; check allSEAF	Calt Crust Siotic Crust Aquatic Inv	(B11) st (B12) vertebrates Sulfide Oc	dor (C1)	Living Ro	Sec	water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches):	rators: um of one requ  nriverine) 2) (Nonriverin	ired; check all S / E / A / H e) C	Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R	(B11) st (B12) vertebrates Sulfide Oc	dor (C1) res along	_	Sec	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches):	ators: um of one requ  nriverine) 2) (Nonriverine) onriverine)	ired; check all S F C F	salt Crust siotic Crust equatic Inv lydrogen solvidized R Presence of	(B11) st (B12) vertebrates Sulfide Oc	dor (C1) res along d Iron (C4	1)	Sec	water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches):	ators: um of one requ  nriverine) 2) (Nonriverine) onriverine)	ired; check all S F C F	salt Crust siotic Crust squatic Inv lydrogen s exidized R Presence of Recent Iron	(B11) st (B12) vertebrates Sulfide Oc Rhizospher	dor (C1) res along ed Iron (C4 on in Tille	1)	Sec. ————————————————————————————————————	ondary 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)
Depth (inches):	ators: um of one requ  nriverine) 2) (Nonriverine) ponriverine) 36) Aerial Imagery	ired; check all  S F F (B7) T	calt Crust siotic Crust squatic Inv lydrogen s Dxidized R Presence of Recent Iron	(B11) st (B12) vertebrates Sulfide Oc Rhizospher of Reduce n Reduction	dor (C1) res along d Iron (C4 on in Tille C7)	1)	<u>Sec</u>	ondary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> ) Sediment Deposits (B2) ( <b>Riverine</b> ) Drift Deposits (B3) ( <b>Riverine</b> ) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Depth (inches):	ators: um of one requ  nriverine) 2) (Nonriverine) ponriverine) 36) Aerial Imagery	ired; check all  S F F (B7) T	calt Crust siotic Crust squatic Inv lydrogen s Dxidized R Presence of Recent Iron	(B11) st (B12) vertebrate: Sulfide Oc Rhizosphel of Reduce n Reductio Surface (	dor (C1) res along d Iron (C4 on in Tille C7)	1)	<u>Sec</u>	ondary 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)
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Primary Indicators (minimal of Marks:  YDROLOGY  Wetland Hydrology Indicators (minimal of Marks)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Notes the marks) (Notes the marks)  Surface Soil Cracks (Indicators) (Notes the marks) (Notes the marks) (Notes the marks)  Surface Soil Cracks (Indicators) (Notes the marks) (No	ators: um of one requ  ) enriverine) 2) (Nonriverine) 36) Aerial Imagery 5 (B9)  Yes Yes Yes	ired; check all  S F F (B7) T No No	calt Crust stotic Crust squatic Invaluatic Invaluation	(B11) st (B12) vertebrates Sulfide Oc Rhizospher of Reduce on Reductic Surface ( olain in Re ches): ches):	dor (C1) res along d Iron (C4 on in Tille (C7) marks)	d Soils (Co	Sec ————————————————————————————————————	ondary 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)
Primary Indicators (minimal of Marks:  YDROLOGY  Wetland Hydrology Indicators (minimal of Marks)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Notes the marks) (Notes the marks)  Surface Soil Cracks (Indicators) (Notes the marks) (Notes the marks) (Notes the marks)  Surface Soil Cracks (Indicators) (Notes the marks) (No	ators: um of one requ  ) enriverine) 2) (Nonriverine) 36) Aerial Imagery 5 (B9)  Yes Yes Yes	ired; check all  S F F (B7) T No No	calt Crust stotic Crust squatic Invaluatic Invaluation	(B11) st (B12) vertebrates Sulfide Oc Rhizospher of Reduce on Reductic Surface ( olain in Re ches): ches):	dor (C1) res along d Iron (C4 on in Tille (C7) marks)	d Soils (Co	Sec ————————————————————————————————————	ondary 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)
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Project/Site: Warner Avenue Bridge Review Area	(	City/County:	: Huntingt	on Beach	Sampling Date:	3/27/19
Applicant/Owner: <u>USACE Chicago District</u>				State: CA	Sampling Point:	7
Investigator(s): Eric Sweeney		Section, To	wnship, Rar	nge: N/A		
Landform (hillslope, terrace, etc.): Shoreline		Local relief	(concave, o	convex, none): None	Slope	e (%): <u>20</u>
Subregion (LRR): C						
				NWI classific		
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologys	-			Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology n				eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map			•		,	tures, etc.
Hydrophytic Vegetation Present? Yes   ✓ No Hydric Soil Present? Yes   ✓ No Hydric Soil Present?			e Sampled		,	
Wetland Hydrology Present? Yes   ✓ No.		with	in a Wetlan	ıd? Yes <u>√</u>	No	
Remarks:						
VECETATION Lies esignific names of plant	to.					
VEGETATION – Use scientific names of plant		Dominant	Indicator	Deminence Test worl	rahaati	
Tree Stratum (Plot size:)	% Cover			Dominance Test work  Number of Dominant S		
1				That Are OBL, FACW,		(A)
2				Total Number of Domir	nant	
3				Species Across All Stra		(B)
4				Percent of Dominant S	pecies	
Sapling/Shrub Stratum (Plot size:)		= Total Co	ver	That Are OBL, FACW,	or FAC:100	(A/B)
1				Prevalence Index wor	rksheet:	
2.				Total % Cover of:	Multiply I	by:
3				OBL species	x 1 =	
4				FACW species		
5				FAC species		
Herb Stratum (Plot size: 5 meters )		= Total Co	ver	FACU species		
1. Jaumea carnosa	40	Yes	OBL	UPL species		
2. Salicornia pacifica				Column Totals:	(A)	(D)
3. Batis maritima			OBL	Prevalence Index	c = B/A =	
4. Frankenia salina	25		FACW	Hydrophytic Vegetati	on Indicators:	
5. <u>Distichlis littoralis</u>	50	Yes	OBL	✓ Dominance Test is		
6				Prevalence Index i		
7				Morphological Ada data in Remark	iptations (Provide st is or on a separate sl	upporting heet)
8				Problematic Hydro	phytic Vegetation <sup>1</sup> (E	Explain)
Woody Vine Stratum (Plot size:)		= Total Co	ver			
1				<sup>1</sup> Indicators of hydric so		
2				be present, unless dist	urbed or problematio	<b>).</b>
		= Total Co	ver	Hydrophytic		
% Bare Ground in Herb Stratum % Cover	of Biotic Cr	ust		Vegetation Present? Ye	es No	
Remarks:				I		

Depth	Matrix			x Feature			the absence	,
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-10	10YR 4/1	<u>85</u> <u>1</u>	0YR 3/6	15	С	PL	Clay/Loa+	Adundant oxidized living roots
¹Type: C=C	oncentration, D=Dep	oletion, RM=R	educed Matrix, C	S=Covere	d or Coate	d Sand Gr		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	cable to all LF	RRs, unless othe	rwise not	ed.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol	` '		Sandy Red					Muck (A9) (LRR C)
	pipedon (A2)		Stripped M		=			Muck (A10) (LRR B)
Black Hi			Loamy Mud					ed Vertic (F18)
	en Sulfide (A4) d Layers (A5) ( <b>LRR</b>	<b>C</b> )	Loamy Gle	-	(F2)			arent Material (TF2) (Explain in Remarks)
	uck (A9) (LRR D)	<b>C</b> )	Redox Darl		F6)		Other	(Explain in Remarks)
	d Below Dark Surfac	re (A11)	Depleted D					
	ark Surface (A12)	) (/ (	Redox Dep				<sup>3</sup> Indicators	of hydrophytic vegetation and
	Aucky Mineral (S1)		Vernal Poo		-,			hydrology must be present,
	Gleyed Matrix (S4)		<u> </u>	` ,				isturbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (in	ches):						Hydric Soil	Present? Yes No
Remarks:								
UVDDOLO	·OV							
Wetland Hy	drology Indicators		check all that app	lv)			Seco	ndary Indicators (2 or more required)
Wetland Hy Primary India	drology Indicators							ndary Indicators (2 or more required)
Wetland Hy Primary India Surface	drology Indicators cators (minimum of o Water (A1)		Salt Crust	: (B11)			V	Vater Marks (B1) (Riverine)
Wetland Hy Primary India Surface High Wa	drology Indicators cators (minimum of o Water (A1) ater Table (A2)		Salt Crust	: (B11) st (B12)	e (R13)		V	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine)
Wetland Hy Primary India Surface High Wa Saturatio	drology Indicators. cators (minimum of of Water (A1) ater Table (A2) on (A3)	one required;	Salt Crust Biotic Cru Aquatic In	: (B11) st (B12) vertebrate			V S D	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine)
Wetland Hy Primary India  Surface High Wa ✓ Saturatia Water M	drology Indicators cators (minimum of of Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver	one required; o	Salt Crust Biotic Cru Aquatic In Hydrogen	st (B11) st (B12) evertebrate Sulfide O	dor (C1)	Living Roo	V S D	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedimen	drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) farks (B1) (Nonrive nt Deposits (B2) (No	one required; orine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I	st (B11) st (B12) evertebrate Sulfide O	dor (C1) res along	_	V S D ots (C3) D	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2)
Wetland Hy Primary India  Surface  High Wa  ✓ Saturati  Water M  Sedimen  ✓ Drift De	drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver int Deposits (B2) (No posits (B3) (Nonriver	one required; orine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence	st (B11) st (B12) evertebrate Sulfide O Rhizosphe of Reduce	dor (C1) res along d Iron (C4	1)	V S D D ots (C3) D	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rrainage Patterns (B10) rry-Season Water Table (C2) rrayfish Burrows (C8)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimen Drift Dep Surface	drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver int Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6)	one required; or rine) onriverine) erine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro	st (B11) st (B12) evertebrate Sulfide O Rhizosphe of Reduce on Reducti	dor (C1) res along d Iron (C4 on in Tille	1)	V S C C C C C C	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) rry-Season Water Table (C2) trayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimen J Drift Dep Surface Inundati	drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial	one required; or rine) onriverine) erine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc	st (B11) st (B12) evertebrate Sulfide O Rhizosphe of Reduce on Reducti & Surface (	dor (C1) res along d Iron (C4 on in Tille C7)	1)	V S C C C C S) S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3)
Wetland Hy Primary India  Surface High Wa ✓ Saturatia Water M Sedimen ✓ Drift Del Surface Inundatia Water-S	drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9)	one required; or rine) onriverine) erine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro	st (B11) st (B12) evertebrate Sulfide O Rhizosphe of Reduce on Reducti & Surface (	dor (C1) res along d Iron (C4 on in Tille C7)	1)	V S C C C C S) S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) rift Deposits (B3) (Riverine) rainage Patterns (B10) rry-Season Water Table (C2) trayfish Burrows (C8) aturation Visible on Aerial Imagery (C9)
Wetland Hy Primary India  Surface High Wa Saturati Water M Sedimen Drift Dep Surface Inundati Water-S Field Obser	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations:	rine) priverine) erine) Imagery (B7)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Thin Muck	st (B11) st (B12) evertebrate Sulfide Or Rhizosphe of Reduce on Reducti & Surface ( plain in Re	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C C C C S) S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3)
Wetland Hy Primary India  Surface  High Wa ✓ Saturatia  Water M Sedimen ✓ Drift Dep Surface Inundatia Water-S Field Obsert	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriver int Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present?	rine) priverine) prine) Imagery (B7)	Salt Crust Biotic Cru Aquatic In Hydrogen Voxidized I Presence Recent Irc Thin Muck Other (Ex	st (B11) st (B12) evertebrate Sulfide Or Rhizosphe of Reduce on Reducti c Surface ( plain in Re	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C C C C S) S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3)
Wetland Hy Primary India  Surface High Wa ✓ Saturatia Water M Sedimen ✓ Drift Del Surface Inundatia Water-S Field Obser Surface Water Table	drology Indicators: cators (minimum of of other (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver of the Deposits (B2) (Nonriver of the Deposits (B3) (Nonriver of the Deposits (B4) (Non	rine) priverine) Imagery (B7)  //es No	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Thin Muck Other (Ex	st (B11) st (B12) st (B12) svertebrate Sulfide O Rhizosphe of Reduce on Reducti c Surface ( plain in Re uches): aches):	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C C C S) S S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)
Primary India  Surface High Wa  Saturatio Water M Sedimer  Drift Der Surface Inundati Water-S Field Obser Surface Wat Water Table Saturation P (includes ca	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present? Present?	rine) prriverine) lmagery (B7)  /es No /es No	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Thin Muck Other (Ex Depth (in	st (B11) st (B12) st (B12) svertebrate Sulfide Or Rhizosphe of Reduce on Reducti c Surface ( plain in Re aches): aches):	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C ots (C3) C C S) S S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3)
Wetland Hy Primary India  Surface  High Wa ✓ Saturatia  Water M  Sedimen ✓ Drift Dep  Surface Inundatia Water-S Field Obser Surface Water Table Saturation P (includes cape	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present?	rine) prriverine) lmagery (B7)  /es No /es No	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Thin Muck Other (Ex Depth (in	st (B11) st (B12) st (B12) svertebrate Sulfide Or Rhizosphe of Reduce on Reducti c Surface ( plain in Re aches): aches):	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C ots (C3) C C S) S S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturati Water M Sedimen J Drift Dep Surface Inundati Water-S Field Obser Surface Water Table Saturation P (includes cap	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present? Present?	rine) prriverine) lmagery (B7)  /es No /es No	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Thin Muck Other (Ex Depth (in	st (B11) st (B12) st (B12) svertebrate Sulfide Or Rhizosphe of Reduce on Reducti c Surface ( plain in Re aches): aches):	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C ots (C3) C C S) S S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hy Primary India  Surface High Wa Saturatia Water M Sedimen Dirift Dep Surface Inundatia Water-S Field Obser Surface Wat Water Table Saturation P (includes cap Describe Re	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present? Present?	rine) prriverine) lmagery (B7)  /es No /es No	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Thin Muck Other (Ex Depth (in	st (B11) st (B12) st (B12) svertebrate Sulfide Or Rhizosphe of Reduce on Reducti c Surface ( plain in Re aches): aches):	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C ots (C3) C C S) S S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)
Wetland Hy Primary India Surface High Wa Saturatia Water M Sedimen Dirift Dep Surface Inundatia Water-S Field Obser Surface Wat Water Table Saturation P (includes cap Describe Re	drology Indicators: cators (minimum of or Water (A1) ater Table (A2) on (A3) flarks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present? Present?	rine) prriverine) lmagery (B7)  /es No /es No	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Irc Thin Muck Other (Ex Depth (in	st (B11) st (B12) st (B12) svertebrate Sulfide Or Rhizosphe of Reduce on Reducti c Surface ( plain in Re aches): aches):	dor (C1) res along d Iron (C4 on in Tille C7) marks)	t) d Soils (C6	V S C ots (C3) C C S) S S	Vater Marks (B1) (Riverine) ediment Deposits (B2) (Riverine) prift Deposits (B3) (Riverine) prainage Patterns (B10) pry-Season Water Table (C2) prayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) hallow Aquitard (D3) AC-Neutral Test (D5)

Project/Site: Warner Avenue Bridge Review Area		City/County	y: Huntingt	ton Beach	_ Sampling Date: _	3/27/19
Applicant/Owner: USACE Chicago District				State: CA	_ Sampling Point: _	8
Investigator(s): Eric Sweeney		Section, To	ownship, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): Shoreline		Local relie	ef (concave,	convex, none): None	Slop	oe (%): 20
Subregion (LRR): C	Lat: 33.	707418		Long: -118.058746	Datur	n: NAD 1983
				NWI classif		
Are climatic / hydrologic conditions on the site typical for th			,			
Are Vegetation, Soil, or Hydrology	-			"Normal Circumstances"		, No
Are Vegetation, Soil, or Hydrology				eded, explain any answ		
SUMMARY OF FINDINGS – Attach site map						atures, etc.
Hydrophytic Vegetation Present? Yes✓	No					
Hydric Soil Present? Yes			he Sampled		No.	
Wetland Hydrology Present? Yes   ✓		Witi	hin a Wetlar	1d? Yes	No <u>√</u>	
Remarks:		'				
VEGETATION – Use scientific names of pla	nte					
VEGETATION - Ose scientific flames of plan	Absolute	Dominan	t Indicator	Dominance Test wor	:kehoot:	
Tree Stratum (Plot size:)	% Cover			Number of Dominant		
1				That Are OBL, FACW		(A)
2				Total Number of Dom	inant	
3				Species Across All St		(B)
4				Percent of Dominant S	Species	
Sapling/Shrub Stratum (Plot size:)	-	_ = Total Co	over	That Are OBL, FACW	, or FAC: 100	0 (A/B)
1				Prevalence Index wo	orksheet:	
2.				Total % Cover of:	Multiply	by:
3				OBL species	x 1 =	
4				FACW species		
5				FAC species		
Herb Stratum (Plot size: 5 meters )		= Total Co	over	FACU species		
1. Jaumea carnosa	50	Yes	OBL	UPL species		
Salicornia pacifica		Yes		Column Totals:	(A)	(B)
3. Batis maritima	20		OBL	Prevalence Inde	ex = B/A =	
4. Frankenia salina	30		FACW	Hydrophytic Vegetat	ion Indicators:	
5. <u>Distichlis littoralis</u>	60	Yes	OBL	✓ Dominance Test i		
6				Prevalence Index		
7				Morphological Ad	aptations (Provide s ks or on a separate s	supporting sheet)
8				Problematic Hydr		,
Woody Vine Stratum (Plot size:)	210	_ = Total Co	over	,		(     -   )
1				<sup>1</sup> Indicators of hydric se		
2.				be present, unless dis	turbed or problemati	IC.
				Hydrophytic		
% Bare Ground in Herb Stratum % Cove	er of Biotic C	rust		Vegetation Present? Y	es√ No	
Remarks:						
I.						

0-4 10YR 4/1 100 Clay/Loa 4-12 10YR 3/1 100 Clay 4-12 10 Clay 4-12 1			Color (moist) % Type <sup>1</sup>	I nn²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, CS=Covered Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered or Coated Sand Grains.  Type: C=Concentration, D=Depletion Matrix, CS=Covered Grains.  Type: C=Concentr	10VR 4/1					
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      Cocation: PL=Pore Lining, M=Matrix, Pydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	· '					
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histos (A1)	4-12 <u>10YR 3/1</u>	100			Clay/Loa	
Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils*:    Histospiedon (A2)						
Indicators: (Applicable to all LRRs, unless otherwise noted.)   Indicators for Problematic Hydric Soils*:    Hilstos (A1)						
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)  Histos (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.)  Histos (A1)	Type: C=Concentration D		aduced Matrix CS=Covered or Cos	tod Sand Gra	ine <sup>2</sup> Location	o: DI -Doro Lining M-Matrix
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Hydrogen Sulfide (A4) Loamy Sulfide (A4) Camp Mucky Mineral (F2) Red Parent Material (F12) Stratified Layers (A5) (LRR C) Depleted Matrix (F2) Red Parent Material (F12) Thick Dark Surface (A11) Depleted 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: Depth (inches): Hydric Soil Present? Yes No ✓ Remarks:   YPROLOGY  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 Table (A2) Setting the Mydrology Indicators (B1) Print (Crust (B12) Sediment Deposits (B2) (Riverine) High Water Table (A2) Setting the Mydrology Setting Roots (C3) Dirit Deposits (B3) (Riverine) Water Marks (B1) (Monriverine) 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 (B8) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (Inin Mater Table (C2) Shallow Aquitard (D3) Water-Table Present? Yes No Depth (inches): Wetland Hydrology				ieu Sanu Gra		
Histic Epipedon (A2) Stripped Matrix (S6) 2 cm Muck (A10) (LRR B) Black Histic (A3) Loamy Mucky Mineral (F1) Reduced Vertic (F18) Redu	Histosol (A1)		Sandy Redox (S5)		1 cm Muck	(A9) ( <b>LRR C</b> )
Hydrogen Sulfide (A4)						
Stratified Layers (A5) (LRR C)	Black Histic (A3)		Loamy Mucky Mineral (F1)		Reduced V	ertic (F18)
1 cm Muck (A9) (LRR D)	Hydrogen Sulfide (A4)		Loamy Gleyed Matrix (F2)		Red Paren	t Material (TF2)
Depleted Below Dark Surface (A11)	Stratified Layers (A5) (L	.RR C)	Depleted Matrix (F3)		Other (Exp	lain in Remarks)
Thick Dark Surface (A12)	1 cm Muck (A9) (LRR D	))				
Sandy Mucky Mineral (S1)					2	
Sandy Gleyed Matrix (S4)  Restrictive Layer (if present): Type: Depth (inches): Remarks:    Hydric Soil Present? Yes No Yes						
Restrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No Remarks:    Primary Indicators (minimum of one required; check all that apply)		,	Vernal Pools (F9)			
Type:					uniess distur	bed or problematic.
Popth (inches):						
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Water Table (A2)  Salt Crust (B11)  Water Marks (B1) (Riverine)  Aquatic Invertebrates (B13)  Drift Deposits (B3) (Riverine)  Sediment Deposits (B3) (Riverine)  Drift Deposits (B3) (Riverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B3) (Nonriverine)  Sediment Deposits (B3) (Nonriverine)  Sediment Deposits (B3) (Nonriverine)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Recent Iron Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Other (Explain in Remarks)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Water Table Present?  Yes  No  Depth (inches):  Wetland Hydrology Present? Yes  No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					Hydric Soil Pre	sent? Yes No ✓
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Salt Crust (B11)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Riverine)  Primary Indicators (2 or more required)  Sediment Deposits (B2) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drift Deposits (B3) (Riverine)  Sediment Deposits (B3) (Riverine)  Drift Deposits (B3) (Riverine)  Sediment Deposits (B3) (Nonriverine)  Sediment Deposits (B3) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Sediment Deposits (B3) (Nonriverine)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Recent Iron Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (B7)  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):  Wetland Hydrology Present? Yes ✓ No Depth (inches):  Includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					Tiyane don't re	163 160 1
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check all that apply)  Surface Water (A1)  High Water Table (A2)  Aquatic Invertebrates (B13)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B3) (Riverine)  Sediment Deposits (B3) (Riverine)  Sediment Deposits (B3) (Riverine)  Water Marks (B1) (Nonriverine)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Recent Iron Reduction in Tilled Soils (C6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Other (Explain in Remarks)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Water Table Present?  Yes  No  Depth (inches):  Wetland Hydrology Present? Yes  No  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Primary Indicators (minimum of one required; check all that apply)  Secondary Indicators (2 or more required)  Surface Water (A1)  High Water Table (A2)  Salt Crust (B12)  Aquatic Invertebrates (B13)  Water Marks (B1) (Riverine)  Hydrogen Sulfide Odor (C1)  Sediment Deposits (B3) (Riverine)  Sediment Deposits (B3) (Riverine)  Sediment Deposits (B3) (Riverine)  Sediment Deposits (B3) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Presence of Reduced Iron (C4)  Surface Soil Cracks (B6)  Recent Iron Reduction in Tilled Soils (C6)  Saturation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Other (Explain in Remarks)  Field Observations:  Surface Water Present?  Yes  No  Depth (inches):  Saturation 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)  Sediment Deposits (B1)  Sediment Deposits (B2) (Riverine)  Sediment Deposits (B12)  Sediment Deposits (B2) (Riverine)  Sediment Deposits (B12)  Sediment Deposits (B12)  Sediment Deposits (B12)  Sediment Deposits (B12)  Sediment Deposits (B2)  Sediment Deposits (B3)  Sediment Deposits (B12)  Sediment Deposits (B12)  Sediment Deposits (B12)						
Surface Water (A1) Salt Crust (B11) Water Marks (B1) (Riverine)  High Water Table (A2) Biotic Crust (B12) Sediment Deposits (B2) (Riverine)  Vaturation (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 (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):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
High Water Table (A2)	Wetland Hydrology Indica					
✓ 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 (B7)         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):         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:	Wetland Hydrology Indica		, ,			
Water Marks (B1) (Nonriverine)	Wetland Hydrology Indicators (minimum Surface Water (A1)		Salt Crust (B11)		Water	Marks (B1) (Riverine)
Sediment Deposits (B2) (Nonriverine)	Wetland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2)		Salt Crust (B11) Biotic Crust (B12)		Water	Marks (B1) (Riverine) nent Deposits (B2) (Riverine)
✓ 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 (B7)   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):  Wetland Hydrology Present? Yes ✓ No   Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes ✓ No   Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C7)   Saturation Present? Yes No Depth (inches):   Cincludes capillary fringe) Wetland Hydrology Present? Yes ✓ No   Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2)		Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)		Water	Marks (B1) (Riverine) nent Deposits (B2) (Riverine)
Surface Soil Cracks (B6) Recent Iron Reduction in Tilled Soils (C6) Saturation Visible on Aerial Imagery (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): Wetland Hydrology Present? Yes ✓ No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	n of one required; o	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)		Water Sedim Drift D	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine)
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) Factorial Test (D5)	Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2)	n of one required; of o	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along		Water Sedin Drift E Draina s (C3) Dry-S	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B10) Deposits (B10) Deposits (B10) Deposits (B10) Deposits (B10)
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):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2)	n of one required; of o	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along		Water Sedin Drift E Draina s (C3) Dry-S	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B10) Deposits (B10) Deposits (B10) Deposits (B10) Deposits (B10)
Field Observations:  Surface Water Present? Yes No Depth (inches):  Water Table Present? Yes No Depth (inches):  Saturation Present? Yes No Depth (inches):  (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicators  Primary Indicators (minimum  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Non  Sediment Deposits (B2)  Drift Deposits (B3) (Nor  Surface Soil Cracks (B6)	riverine) (Nonriverine) nriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	24)	Water Sedim Drift C Draina S (C3) Crayfi	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sh Burrows (C8)
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 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) ✓ Drift Deposits (B3) (Nor Surface Soil Cracks (B6 Inundation Visible on A6	riverine) (Nonriverine) (riverine) (riverine) (riverine) (riverine) (riverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Till	24)	Water Sedim Drift E Draina S (C3) Crayfi Satura	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B1) Deposits (B10)
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes ✓ No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) ✓ Drift Deposits (B3) (Nor Surface Soil Cracks (B6 Inundation Visible on A6	riverine) (Nonriverine) (riverine) (riverine) (riverine) (riverine) (riverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C1) Recent Iron Reduction in Till Thin Muck Surface (C7)	24)	Water Sedim Drift E Draina s (C3) Crayfi Satura Shalla	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B1) Deposits (B2) Deposits (B2) (Riverine) Deposits (Riverine) Deposi
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes ✓ No (includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) ✓ Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on A6 Water-Stained Leaves (	riverine) (Nonriverine) (riverine) (riverine) (riverine) (riverine) (riverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C1) Recent Iron Reduction in Till Thin Muck Surface (C7)	24)	Water Sedim Drift E Draina s (C3) Crayfi Satura Shalla	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B1) Deposits (B2) Deposits (B2) (Riverine) Deposits (Riverine) Deposi
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicate Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ae Water-Stained Leaves ( Field Observations:	riverine) (Nonriverine) nriverine) si) erial Imagery (B7) B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Thin Muck Surface (C7) Other (Explain in Remarks)	c4) ed Soils (C6)	Water Sedim Drift E Draina s (C3) Crayfi Satura Shalla	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B1) Deposits (B2) Deposits (B2) (Riverine) Deposits (Riverine) Deposi
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) ✓ Drift Deposits (B3) (Nor Surface Soil Cracks (B6 Inundation Visible on A6 Water-Stained Leaves ( Field Observations: Surface Water Present?	riverine) (Nonriverine) (riverine) (nonriverine) (riverine) (river	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches):  Depth (inches):	ed Soils (C6)	Water Sedim Drift □ Draina S (C3) Dry-S Crayfi Satura Shalla	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B2) (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine)
Remarks:	Wetland Hydrology Indicators Primary Indicators (minimum Surface Water (A1) High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) ✓ Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on A6 Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Saturation Present?	riverine) (Nonriverine) (riverine) (nonriverine) (riverine) (river	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Till Thin Muck Surface (C7) Other (Explain in Remarks)  Depth (inches):  Depth (inches):	ed Soils (C6)	Water Sedim Drift □ Draina S (C3) Dry-S Crayfi Satura Shalla	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B2) (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine)
Remarks:	Wetland Hydrology Indicator Primary Indicators (minimum Surface Water (A1) High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) ✓ Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on A6 Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	riverine) (Nonriverine) (riverine) (nonriverine) (riverine) (river	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Till Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	ed Soils (C6)  Wetlan	Water Sedim Drift □ Draina S (C3) Dry-S Crayfi Satura Shalla FAC-I	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B2) (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine)
	Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6) Inundation Visible on Ac Water-Stained Leaves ( Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (sti	riverine) (Nonriverine) (riverine) (nonriverine) (riverine) (river	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Till Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	ed Soils (C6)  Wetlan	Water Sedim Drift □ Draina S (C3) Dry-S Crayfi Satura Shalla FAC-I	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B2) (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine)
	Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Non Sediment Deposits (B2) Drift Deposits (B3) (Nor Surface Soil Cracks (B6 Inundation Visible on A6 Water-Stained Leaves (Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	riverine) (Nonriverine) (riverine) (nonriverine) (riverine) (river	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C) Recent Iron Reduction in Till Thin Muck Surface (C7) Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	ed Soils (C6)  Wetlan	Water Sedim Drift □ Draina S (C3) Dry-S Crayfi Satura Shalla FAC-I	Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) Deposits (B3) (Riverine) Deposits (B1) (Riverine) Deposits (B1) (Riverine) Deposits (B2) (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine) Deposits (Riverine)

Project/Site: Warner Avenue Bridge Rev	view Area		City/County	: Huntingt	on Beach	Sam	pling Date: _	3/27/19
Applicant/Owner: USACE Chicago Distric	t				State:	CA Sam	pling Point: _	9
Investigator(s): Eric Sweeney			Section, To	wnship, Rar	nge: <u>N/A</u>			
Landform (hillslope, terrace, etc.): Shorelin	ne		Local relief	(concave, c	convex, none): No	one	Slop	e (%): <u>20</u>
Subregion (LRR): C		Lat: 33.7	710498		Long: -118.060	0857	Datum	n: NAD 1983
Soil Map Unit Name: Beaches								
Are climatic / hydrologic conditions on the si				,				
Are Vegetation, Soil, or Hyd		-			Normal Circumsta			No
Are Vegetation, Soil, or Hyd					eded, explain any	•		
SUMMARY OF FINDINGS – Attac				,			•	ituras atc
				g point it	Joanons, tran	30013, 1111	portant rec	
	Yes <u>√</u> No		Is th	e Sampled	Area			
	Yes No Yes ✓ No		with	in a Wetlan	id? Ye	s	No <u>√</u>	
Remarks:	163 140							
VEGETATION – Use scientific na	mes of plants	s.						
		Absolute	Dominant	Indicator	Dominance Tes	st workshee	t:	
Tree Stratum (Plot size:	) .	% Cover	Species?	Status	Number of Dom	inant Specie	S	
1					That Are OBL, F	ACW, or FA	C: <u>3</u>	(A)
2					Total Number of	Dominant		
3					Species Across	All Strata:	3	(B)
4					Percent of Domi	inant Species	S	
Sapling/Shrub Stratum (Plot size:	)		= Total Co	ver	That Are OBL, F	ACW, or FA	C: <u>100</u>	(A/B)
1					Prevalence Ind	ex workshe	et:	
2.					Total % Co	ver of:	Multiply	by:
3					OBL species		x 1 =	
4					FACW species		x 2 =	
5					FAC species			
Llaub Chrahium (Diot size)			= Total Co	ver	FACU species			
Herb Stratum (Plot size:		40	Yes	OBL	UPL species			
Jaumea carnosa     Salicornia pacifica			Yes	OBL	Column Totals:		(A)	(B)
3. Batis maritima		20			Prevalence	e Index = B/	A =	
4. Frankenia salina				FACW	Hydrophytic Ve			
5 Distinblic litteralis		C O	Yes		✓ Dominance	Test is >50%	6	
6.					Prevalence			
7					Morphologic	cal Adaptatio	ns <sup>1</sup> (Provide s	supporting
8							n a separate s	,
		195	= Total Co	ver	Problemation	Hydropnytic	vegetation (	Explain)
Woody Vine Stratum (Plot size:					<sup>1</sup> Indicators of hy	dric soil and	wetland hydro	alogy must
1					be present, unle			
2					Hydrophytic			
					Vegetation			
% Bare Ground in Herb Stratum	% Cover	of Biotic Cr	ust		Present?	Yesv	No	
Remarks:								

Profile Desc	ription: (Describe	to the depti	n needed to docur	nent the i	ndicator	or confirm	the absence of inc	dicators.)
Depth	Matrix			x Feature:				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-12	10YR 3/2	100						
			Reduced Matrix, CS			d Sand Gr		PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Appli	cable to all L	RRs, unless other	wise note	ed.)		Indicators for P	roblematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Red	ox (S5)			1 cm Muck (	A9) ( <b>LRR C</b> )
	pedon (A2)		Stripped Ma	, ,				A10) ( <b>LRR B</b> )
Black His			Loamy Muc	-			Reduced Ve	
	Sulfide (A4)		Loamy Gley		(F2)			Material (TF2)
	Layers (A5) (LRR	C)	Depleted M	. ,			Other (Expla	iin in Remarks)
	ck (A9) ( <b>LRR D</b> )		Redox Dark					
	Below Dark Surfa	ce (A11)	Depleted Da				3	
	rk Surface (A12)		Redox Dep	•	-8)		•	drophytic vegetation and
	ucky Mineral (S1)		Vernal Pool	s (F9)				logy must be present,
	eyed Matrix (S4)  ayer (if present):						uniess disturb	ed or problematic.
Type:			<del></del>					
Depth (inc	hes):						Hydric Soil Pres	ent? Yes No <u>√</u>
Remarks:								
HYDROLOG	2V							
_	rology Indicators							
		one required;	check all that appl	y)			<u>Secondary</u>	Indicators (2 or more required)
Surface \	Vater (A1)		Salt Crust	(B11)			Water I	Marks (B1) (Riverine)
High Wat	er Table (A2)		Biotic Crus	st (B12)			Sedime	ent Deposits (B2) (Riverine)
Saturatio	n (A3)		Aquatic In	vertebrate	s (B13)		Drift De	eposits (B3) (Riverine)
Water Ma	arks (B1) ( <b>Nonrive</b>	rine)	Hydrogen	Sulfide Od	dor (C1)		Drainag	ge Patterns (B10)
Sedimen	t Deposits (B2) (No	onriverine)	Oxidized F	Rhizosphe	res along	Living Roo	ts (C3) Dry-Se	ason Water Table (C2)
✓ Drift Dep	osits (B3) ( <b>Nonriv</b>	erine)	Presence	of Reduce	d Iron (C4	1)	Crayfis	h Burrows (C8)
Surface S	Soil Cracks (B6)		Recent Iro	n Reducti	on in Tille	d Soils (C6	) Saturat	ion Visible on Aerial Imagery (C9)
Inundatio	n Visible on Aerial	Imagery (B7)	Thin Muck	Surface (	C7)		Shallov	v Aquitard (D3)
Water-St	ained Leaves (B9)		Other (Exp	olain in Re	marks)		✓ FAC-N	eutral Test (D5)
Field Observ							<del></del>	. , ,
Surface Water		Yes N	o Depth (in	ches).				
Water Table I			o Depth (in				and Harden Laure Barr	
Saturation Pro (includes cap		Yes N	o Depth (in	cnes):		vvetia	and Hydrology Pres	sent? Yes ✓ No
		m gauge, mor	nitoring well, aerial ı	ohotos, pr	evious ins	pections),	if available:	
	•	=				, .		
Remarks:								

Project/Site: C02 Channel Review	v Area	Cir	ty/County: Hur	ntington Beach		Sampling Date:	4/16/19
Applicant/Owner: USACE Chicago	District			Stat	te: <u>CA</u>	Sampling Point: _	10
Investigator(s): Eric Sweeney		Se	ection, Townshi	ip, Range: N/A			
Landform (hillslope, terrace, etc.): <u>t</u>							
Subregion (LRR): C							
Soil Map Unit Name: Beaches							
Are climatic / hydrologic conditions							
Are Vegetation, Soil		_				oresent? Yes <u>√</u>	No
Are Vegetation, Soil		-		(If needed, expl			110
-					-		
SUMMARY OF FINDINGS -	Attach site map	showing s	ampling po	oint locations	, transects	, important fea	itures, etc.
Hydrophytic Vegetation Present?	Yes <u>√</u> 1	No	lo the Ser	mpled Area			
Hydric Soil Present?	Yes 1			-	Voc	No <u></u> ✓	
Wetland Hydrology Present?	Yes <u>√</u> 1	No	withina	vetianu:	163	NO	
Remarks:							
<b>VEGETATION – Use scient</b>	ific names of plai	nts.					
		Absolute [	Dominant Indic	cator Dominar	nce Test work	sheet:	
Tree Stratum (Plot size:			Species? Sta	Nullibel	of Dominant S	pecies	
1				That Are	OBL, FACW,	or FAC: 2	(A)
2				Total Nul	mber of Domin		
3				Species	Across All Stra	ta: <u>2</u>	(B)
4					of Dominant Sp		
Sapling/Shrub Stratum (Plot size	: )	=	: Total Cover	That Are	OBL, FACW,	or FAC: 100	(A/B)
1				Prevaler	ce Index wor	ksheet:	
2.					I % Cover of:	Multiply	by:
3					cies	x 1 =	
4				FACW s	oecies	x 2 =	
5				FAC spe	cies	x 3 =	
LL L OL L (District)	204 )	=	: Total Cover	FACU sp	ecies	x 4 =	
	eet)	35	Voc EA	CVA/		x 5 =	
				BL Column	Totals:	(A)	(B)
3. Salicornia pacifica					valence Index	= B/A =	
4				— h		on Indicators:	
5.				<del></del>	inance Test is		
6.					alence Index i	s ≤3.0 <sup>1</sup>	
7				Morp	ohological Ada	ptations <sup>1</sup> (Provide s	supporting
8.				d	ata in Remark	s or on a separate s	sheet)
			: Total Cover	Prob	lematic Hydro	phytic Vegetation <sup>1</sup> (	(Explain)
Woody Vine Stratum (Plot size: _	)			1			
1						I and wetland hydro urbed or problemati	
2							
		=	: Total Cover	Hydroph Vegetati			
% Bare Ground in Herb Stratum _	% Cove	er of Biotic Cru	st		? Ye	s <u>√</u> No	
Remarks:							

Depth Ma (inches) Color (moi	st) %	Color (m	oist)	%	Tyne'	Loc <sup>2</sup>	Texture	Remarks
0-9 10YR 3/2	100							I
		_						
9-14 10YR 2/1	100						Clay/Loa +	
		_						
		_						
		_						
		_						
		_						
Type: C=Concentration, D  Hydric Soil Indicators: (A						d Sand G		s for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	ppiicable to t		ndy Redo		5u.)			Muck (A9) (LRR C)
Histic Epipedon (A2)			-	trix (S6)				Muck (A10) (LRR B)
Black Histic (A3)				ky Minera	l (F1)			iced Vertic (F18)
Hydrogen Sulfide (A4)			-	ed Matrix				Parent Material (TF2)
Stratified Layers (A5) (	LRR C)			atrix (F3)	, ,			r (Explain in Remarks)
1 cm Muck (A9) (LRR I	<b>O</b> )	Red	dox Dark	Surface (	(F6)			
Depleted Below Dark S	surface (A11)			ark Surfac				
Thick Dark Surface (A1				essions (F	F8)			s of hydrophytic vegetation and
Sandy Mucky Mineral (	,	Ver	nal Pools	s (F9)				d hydrology must be present,
Sandy Gleyed Matrix (\$ Restrictive Layer (if prese							unless	disturbed or problematic.
Tyne:								
Type:							Hydric So	il Procent? Voc No /
Depth (inches):							Hydric So	il Present? Yes No _✓
Depth (inches):							Hydric So	il Present? Yes No _✓
Depth (inches):Remarks:							Hydric So	il Present? Yes No _✓
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indica	itors:							
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators (minimum	itors:	red; check all t					Seco	ondary Indicators (2 or more required)
Depth (inches):	itors:	red; check all t	alt Crust	(B11)			Seco	ondary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> )
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators (minimum of the content of the conten	itors:	red; check all t Sa /_ Bi	alt Crust otic Crus	(B11) st (B12)			Second	ondary Indicators (2 or more required) Water Marks (B1) ( <b>Riverine</b> ) Sediment Deposits (B2) ( <b>Riverine</b> )
Depth (inches):	i <b>tors:</b> n of one requi	red; check all t Sa _∕_ Bi Ao	alt Crust otic Crus quatic Inv	(B11) st (B12) vertebrate	,		Second —	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (inches):	ntors: m of one requi	red; check all t Sa Bi Ac Hy	alt Crust otic Crusquatic Involved	(B11) st (B12) vertebrate Sulfide Od	dor (C1)		Seco	Ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches):	ntors: m of one requi	red; check all t Sa Ao Hy a) O:	alt Crust otic Crus quatic Inv drogen s	(B11) st (B12) vertebrate Sulfide Oc	dor (C1) res along	_	Second	Ondary 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)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimus  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nor  Sediment Deposits (B2)  ✓ Drift Deposits (B3) (No	ntors: m of one requi	red; check all t Sa Ao Hy a) Or Pr	alt Crust of Crust of Crust of Crustic Inverse of C	(B11) st (B12) vertebrate Sulfide Oc Rhizosphe	dor (C1) res along ed Iron (C4	1)	Second ————————————————————————————————————	ondary 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)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimum  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nor  Sediment Deposits (B2)  ✓ Drift Deposits (B3) (No  Surface Soil Cracks (B	ntors: m of one requi	red; check all t Sa Ao Hy a) O: Pr Re	alt Crust potic Crust quatic Involved Ridized Resence cecent Iron	(B11) st (B12) vertebrate Sulfide Oc Rhizospher of Reduce n Reduction	dor (C1) res along ed Iron (C4 on in Tille	_	Second Se	ondary 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 (CS
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators (minimurally indicators (minimurally indicators)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Norent Sediment Deposits (B2)  V Drift Deposits (B3) (Norent Surface Soil Cracks (Base)  Inundation Visible on A	ntors: m of one requi	red; check all t Sa Bi Ac Hy a) Pr Re (B7) Tr	alt Crust of	(B11) st (B12) vertebrate Sulfide Oc Rhizosphel of Reduce n Reductio Surface (	dor (C1) res along d Iron (C4 on in Tille C7)	1)	Second Se	ondary 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 (CS) Shallow Aquitard (D3)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimul  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nor  Sediment Deposits (B2)  ✓ Drift Deposits (B3) (No  Surface Soil Cracks (B  Inundation Visible on A  Water-Stained Leaves	ntors: m of one requi	red; check all t Sa Bi Ac Hy a) Pr Re (B7) Tr	alt Crust of	(B11) st (B12) vertebrate Sulfide Oc Rhizospher of Reduce n Reduction	dor (C1) res along d Iron (C4 on in Tille C7)	1)	Second Se	ondary 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 (CS
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimus  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nor  Sediment Deposits (B2)  Orift Deposits (B3) (No  Surface Soil Cracks (B  Inundation Visible on A  Water-Stained Leaves  Field Observations:	ntors: n of one requi	red; check all t Sa Ac Hy a) Cr Pr Re (B7) Tr Of	alt Crust otic Crust putic Involved Inv	(B11) st (B12) vertebrate Sulfide Oc Rhizospher of Reduce n Reductic Surface ( olain in Re	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (C	Second Se	ondary 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 (CS) Shallow Aquitard (D3)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimus  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nor  Sediment Deposits (B2)  Drift Deposits (B3) (No  Surface Soil Cracks (B  Inundation Visible on A  Water-Stained Leaves  Field Observations:  Surface Water Present?	ntors: m of one requi nriverine) ) (Nonriverine) nriverine) 6) erial Imagery (B9) Yes	red; check all t Sa Ao Hy Or Pr Re (B7) Tr Or	alt Crust of the C	(B11)  of (B12)  vertebrate Sulfide Oc Rhizosphel of Reduce n Reductic Surface ( olain in Re	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (C	Second Se	ondary 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 (CS) Shallow Aquitard (D3)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimumon of the composition of the compo	ntors: n of one requi	red; check all t Sa Bi Ac Hy =) Ci Re (B7) Tr Oi No C	alt Crust obtic Crust puatic Involved Resence of the control of th	(B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce on Reductic Surface ( olain in Re ches): ches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Co	ots (C3)	ondary 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 (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators (minimumon of the content of t	ntors: n of one requi	red; check all t Sa Ao Hy Or Pr Re (B7) Tr Or	alt Crust obtic Crust puatic Involved Resence of the control of th	(B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce on Reductic Surface ( olain in Re ches): ches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Co	ots (C3)	ondary 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 (CS) Shallow Aquitard (D3)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators (minimurally indicators (minimurally indicators)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Norent Sediment Deposits (B2)  V Drift Deposits (B3) (Norent Surface Soil Cracks (Base)  Inundation Visible on A	ntors: n of one requi	red; check all t	alt Crust obtic Crust puatic Involved Researce of the continuous Mark the Continuous M	(B11) st (B12) vertebrate Sulfide Oc Rhizospher of Reduce on Reductic Surface ( olain in Re ches): ches): ches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Co	ots (C3) 6)/	ondary 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 (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimulates)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Norest Sediment Deposits (B2)  Drift Deposits (B3) (Norest Surface Soil Cracks (Baster Surface Soil Cracks (Baster Surface S	ntors: n of one requi	red; check all t	alt Crust obtic Crust puatic Involved Researce of the continuous Mark the Continuous M	(B11) st (B12) vertebrate Sulfide Oc Rhizospher of Reduce on Reductic Surface ( olain in Re ches): ches): ches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Co	ots (C3) 6)/	ondary 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 (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicators (minimuration (Master Table (Master Marks (B1) (Norwald Master Marks (B1) (Norwald Master Marks (B3) (Nowald Master Marks (B3) (Nowald Master Mast	ntors: n of one requi	red; check all t	alt Crust obtic Crust puatic Involved Researce of the continuous Mark the Continuous M	(B11) st (B12) vertebrate Sulfide Oc Rhizospher of Reduce on Reductic Surface ( olain in Re ches): ches): ches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Co	ots (C3) 6)/	ondary 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 (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches):  Remarks:  YDROLOGY  Wetland Hydrology Indicates  Primary Indicators (minimulates)  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Norest Sediment Deposits (B2)  Drift Deposits (B3) (Norest Surface Soil Cracks (Baster Surface Soil Cracks (Baster Surface S	ntors: n of one requi	red; check all t	alt Crust obtic Crust puatic Involved Researce of the continuous Mark the Continuous M	(B11) st (B12) vertebrate Sulfide Oc Rhizospher of Reduce on Reductic Surface ( olain in Re ches): ches): ches):	dor (C1) res along d Iron (C4 on in Tille C7) emarks)	t) d Soils (Co	ots (C3) 6)/	ondary 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 (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: C02 Channel Review Area	City/Cour	City/County: Huntington Beach Sampling Date: 4/1						
Applicant/Owner: USACE Chicago District			State: CA	_ Sampling Point: _	11			
Investigator(s): Eric Sweeney	Section, <sup>-</sup>	Township, Ra	nge: N/A					
Landform (hillslope, terrace, etc.): terrace	Local rel	ief (concave,	convex, none): None	Slop	oe (%):0			
Subregion (LRR): C								
			_					
Are climatic / hydrologic conditions on the site typical for		,						
Are Vegetation, Soil, or Hydrology			'Normal Circumstances"		′ No			
Are Vegetation, Soil, or Hydrology			eeded, explain any answ					
SUMMARY OF FINDINGS – Attach site ma					atures, etc.			
		g p		o,portani				
Hydrophytic Vegetation Present? Yes   Hydric Soil Present? Yes   Yes	No Is	the Sampled		,				
Wetland Hydrology Present? Yes ✓		ithin a Wetlar	nd? Yes	No <u>√</u>				
Remarks:								
VEGETATION – Use scientific names of pl			_					
Tree Stratum (Plot size:)	Absolute Domina <a href="https://www.wise.com/">% Cover Species</a>	nt Indicator	Dominance Test wor					
1			Number of Dominant : That Are OBL, FACW		(A)			
2.					(/ (/			
3.			Total Number of Dom Species Across All St		(B)			
4.					(5)			
	= Total (		Percent of Dominant S That Are OBL, FACW		0 (A/B)			
Sapling/Shrub Stratum (Plot size:)								
1			Prevalence Index wo					
2			Total % Cover of:		-			
3			OBL species					
4			FAC species					
5	= Total (		FACU species					
Herb Stratum (Plot size: 5 feet )		30401	UPL species					
1. Frankenia salina	4		Column Totals:					
2. <u>Salicornia pacifica</u>	1							
3. <u>Batis maritima</u>				x = B/A =				
4. <u>Typha domingensis</u>			Hydrophytic Vegetat					
5			✓ Dominance Test					
6			Prevalence Index Morphological Ad		aunnortina			
7			data in Remar	ks or on a separate	sheet)			
8			Problematic Hydr	ophytic Vegetation <sup>1</sup>	(Explain)			
Woody Vine Stratum (Plot size:)	<u>56</u> = Total (	Jover						
1			<sup>1</sup> Indicators of hydric se					
2			be present, unless dis	turbed or problemati	iC.			
	= Total (		Hydrophytic					
% Bare Ground in Herb Stratum % Co	over of Biotic Crust		Vegetation Present? Y	es <u>√</u> No				
Remarks:								

							n the absence o	,
Depth (in shoot)	Matrix	%		ox Feature		_Loc <sup>2</sup>	Tarduna	Damanda
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>		<u>Texture</u>	
0-2	10YR 3/1		10YR 3/6	_ 5		IVI		
2-9	10YR 3/1	_ <u>100</u>						
9-12	10YR 4/1	100					Clay/loam	
1- 0.0			D 1 114411 0				. 21	
	Concentration, D=Dep Indicators: (Applic					ed Sand Gi		tion: PL=Pore Lining, M=Matrix.  or Problematic Hydric Soils <sup>3</sup> :
Histoso		able to all i	Sandy Red		eu.)			ick (A9) (LRR C)
	pipedon (A2)		Stripped M					ick (A10) ( <b>LRR B</b> )
	listic (A3)		Loamy Mu	. ,	l (F1)			d Vertic (F18)
Hydroge	en Sulfide (A4)		Loamy Gle	yed Matrix	(F2)			ent Material (TF2)
	ed Layers (A5) (LRR	C)	Depleted N				Other (E	xplain in Remarks)
	uck (A9) (LRR D)	o (A11)	Redox Dar		. ,			
	ed Below Dark Surfac Park Surface (A12)	æ (ATT)	Depleted D Redox Dep				<sup>3</sup> Indicators of	f hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Poo		. 0)			/drology must be present,
	Gleyed Matrix (S4)		<del></del>	,			-	turbed or problematic.
Restrictive	Layer (if present):							
Type:								
Depth (in	nches):						Hydric Soil P	resent? Yes No
Remarks:								
HYDROLO	OGY							
Wetland Hy	drology Indicators:		: check all that app	ulv)			Second	ary Indicators (2 or more required)
Wetland Hy Primary Indi	drology Indicators:							ary Indicators (2 or more required)ter Marks (B1) ( <b>Riverine</b> )
Wetland Hy Primary Indi Surface	drology Indicators: icators (minimum of c water (A1)		Salt Crus	t (B11)			Wa	ter Marks (B1) (Riverine)
Wetland Hy Primary Indi Surface High Wa	rdrology Indicators: icators (minimum of o water (A1) ater Table (A2)		Salt Crus	t (B11) st (B12)	es (B13)		Wa	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> )
Wetland Hy Primary Indi Surface High Wa	rdrology Indicators: icators (minimum of o water (A1) ater Table (A2)	one required	Salt Crus	t (B11) ist (B12) nvertebrate			Wa Sec Drif	ter Marks (B1) (Riverine)
Wetland Hy Primary Indi  — Surface — High Wa ✓ Saturati — Water M	rdrology Indicators: icators (minimum of of water (A1) ater Table (A2) ion (A3)	one required	Salt Crusi  ✓ Biotic Cru  ✓ Aquatic Ir  — Hydrogen	t (B11) ist (B12) invertebrate i Sulfide O	dor (C1)	Living Roc	Wa Sec Drif Dra	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> )
Wetland Hy Primary Indi  Surface  High Wa  ✓ Saturati  Water N  Sedime	rdrology Indicators: icators (minimum of o water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver	one required rine) onriverine)	Salt Crusi  ✓ Biotic Cru  ✓ Aquatic Ir  — Hydrogen	t (B11) ust (B12) nvertebrate u Sulfide O	dor (C1) res along	_	Wa Sec Drit Dra ots (C3) Dry	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) sinage Patterns (B10)
Wetland Hy Primary Indi  Surface  High Wa ✓ Saturati  Water N  Sedime  Drift De  Surface	rdrology Indicators: icators (minimum of of et Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6))	one required rine) onriverine) erine)	Salt Crusi Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ire	t (B11) ust (B12) nvertebrate u Sulfide O Rhizosphe	dor (C1) res along ed Iron (C	4)	Wa Sec Drit Dra Drs Crs Crs S) Sat	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ninage Patterns (B10) n-Season Water Table (C2) nyfish Burrows (C8) uration Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi  Surface  High Wa ✓ Saturati  Water N Sedime Drift De Surface Inundati	rdrology Indicators: icators (minimum of of each of ea	one required rine) onriverine) erine)	Salt Crusi Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ire	t (B11) ust (B12) uvertebrate u Sulfide Or Rhizosphe u of Reduce on Reducti	dor (C1) res along ed Iron (C4 on in Tille	4)	Wa Sec Drit Dra Dra Cra S) Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3)
Wetland Hy Primary Indi  Surface High Wa ✓ Saturati Water Mater Surface Inundat Water-S	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver tent Deposits (B2) (No tent Deposits (B3) (Nonriver tent Stained Leaves (B9)	one required rine) onriverine) erine)	Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ire	t (B11) ust (B12) nvertebrate u Sulfide O Rhizosphe of Reduce on Reducti k Surface (	dor (C1) res along ed Iron (Co on in Tille (C7)	4)	Wa Sec Drit Dra Dra Cra S) Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ninage Patterns (B10) n-Season Water Table (C2) nyfish Burrows (C8) uration Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi  Surface  High Way Saturati  Water Management Sedime Drift De Surface Inundat Water-S Field Obser	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriverset Deposits (B2) (Nonriverset Deposits (B3) (Nonriverset Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) rvations:	rine) enriverine) erine) Imagery (B7	Salt Crus  ✓ Biotic Cru  ✓ Aquatic Ir  — Hydrogen  — Oxidized  — Presence  — Recent Ir  Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide O Rhizosphe u of Reduce on Reducti k Surface ( cplain in Re	dor (C1) res along ed Iron (C4 on in Tille (C7) emarks)	4) d Soils (C6	Wa Sec Drit Dra Dra Cra S) Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3)
Wetland Hy Primary Indi  Surface  High Wa ✓ Saturati  Water N Sedime Drift De Surface Inundat Water-S Field Obser	rdrology Indicators: icators (minimum of of etwater (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriverent Deposits (B2) (Nonriverent Deposits (B3) (Nonriverent Deposits (B6) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present?	rine) priverine) prine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muci Other (Ex	t (B11) ust (B12) nvertebrate s Sulfide Or Rhizosphe of Reduce on Reducti k Surface ( splain in Re	dor (C1) res along ed Iron (C- on in Tille (C7) emarks)	4) d Soils (C6	Wa Sec Drit Dra Dra Cra S) Sat Sha	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3)
Wetland Hy Primary Indi  Surface  High Wa ✓ Saturati  Water Ma Sedime Drift De Surface Inundat Water-S Field Obser Surface Water Table	rdrology Indicators: icators (minimum of of or	rine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide O Rhizosphe u of Reduce on Reducti k Surface ( cplain in Re nches):	dor (C1) res along ed Iron (Coon in Tille (C7) emarks)	4) d Soils (C6	Wa Sec Drit Dra Cra Cra Sat Sha FAG	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ayfish Burrows (C8) auration Visible on Aerial Imagery (C9) allow Aquitard (D3) C-Neutral Test (D5)
Wetland Hy Primary Indi  Surface High Wa ✓ Saturati Water Ma Sedime Drift De Surface Inundat Water-S Field Obser Surface Water Saturation F	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriverset (B2) (Nonriverset (B3) (Nonriv	rine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muci Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide O Rhizosphe u of Reduce on Reducti k Surface ( cplain in Re nches):	dor (C1) res along ed Iron (Coon in Tille (C7) emarks)	4) d Soils (C6	Wa Sec Drit Dra Cra Cra Sat Sha FAG	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C2) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3) ft-Season Water Table (C3)
Wetland Hy Primary Indi  Surface High Wa ✓ Saturati Water Ma Sedime Drift De Surface Inundat Water-S Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicators: icators (minimum of of or	rine) priverine) priverine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide Or Rhizosphe u of Reduce on Reducti k Surface ( eplain in Re nches): nches):	dor (C1) res along ed Iron (C- on in Tille (C7) emarks)	4) d Soils (C6	— Wa — Sec — Drif — Dra ots (C3) — Dry — Cra S) — Sat — Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ayfish Burrows (C8) auration Visible on Aerial Imagery (C9) allow Aquitard (D3) C-Neutral Test (D5)
Wetland Hy Primary Indi  Surface High Wa ✓ Saturati Water Ma Sedime Drift De Surface Inundat Water-S Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver) int Deposits (B2) (Nonriver) int Deposits (B3) (Nonriver) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present?	rine) priverine) priverine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide Or Rhizosphe u of Reduce on Reducti k Surface ( eplain in Re nches): nches):	dor (C1) res along ed Iron (C- on in Tille (C7) emarks)	4) d Soils (C6	— Wa — Sec — Drif — Dra ots (C3) — Dry — Cra S) — Sat — Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ayfish Burrows (C8) auration Visible on Aerial Imagery (C9) allow Aquitard (D3) C-Neutral Test (D5)
Wetland Hy Primary Indi  Surface High Wa ✓ Saturati Water Ma Sedime Drift De Surface Inundat Water-S Field Obser Surface Water Table Saturation F (includes ca	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver) int Deposits (B2) (Nonriver) int Deposits (B3) (Nonriver) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present?	rine) priverine) priverine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide Or Rhizosphe u of Reduce on Reducti k Surface ( eplain in Re nches): nches):	dor (C1) res along ed Iron (C- on in Tille (C7) emarks)	4) d Soils (C6	— Wa — Sec — Drif — Dra ots (C3) — Dry — Cra S) — Sat — Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ayfish Burrows (C8) auration Visible on Aerial Imagery (C9) allow Aquitard (D3) C-Neutral Test (D5)
Wetland Hy Primary Indi  Surface  High Water Now Sedime  Drift De  Surface  Inundate  Water-S  Field Obsert  Surface Water Tablet  Saturation Foundled Search	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver) int Deposits (B2) (Nonriver) int Deposits (B3) (Nonriver) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present?	rine) priverine) priverine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide Or Rhizosphe u of Reduce on Reducti k Surface ( eplain in Re nches): nches):	dor (C1) res along ed Iron (C- on in Tille (C7) emarks)	4) d Soils (C6	— Wa — Sec — Drif — Dra ots (C3) — Dry — Cra S) — Sat — Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ayfish Burrows (C8) auration Visible on Aerial Imagery (C9) allow Aquitard (D3) C-Neutral Test (D5)
Wetland Hy Primary Indi  Surface  High Water Now Sedime  Drift De  Surface  Inundate  Water-S  Field Obsert  Surface Water Tablet  Saturation Foundled Search	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver) int Deposits (B2) (Nonriver) int Deposits (B3) (Nonriver) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present?	rine) priverine) priverine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide Or Rhizosphe u of Reduce on Reducti k Surface ( eplain in Re nches): nches):	dor (C1) res along ed Iron (C- on in Tille (C7) emarks)	4) d Soils (C6	— Wa — Sec — Drif — Dra ots (C3) — Dry — Cra S) — Sat — Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ayfish Burrows (C8) auration Visible on Aerial Imagery (C9) allow Aquitard (D3) C-Neutral Test (D5)
Wetland Hy Primary Indi  Surface  High Water Now Sedime  Drift De  Surface  Inundate  Water-S  Field Obsert  Surface Water Tablet  Saturation Foundled Search	rdrology Indicators: icators (minimum of of the Water (A1) ater Table (A2) ion (A3) Marks (B1) (Nonriver) int Deposits (B2) (Nonriver) int Deposits (B3) (Nonriver) ion Visible on Aerial Stained Leaves (B9) rvations: ter Present? Present?	rine) priverine) priverine) Imagery (B7	Salt Crusi  Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir Thin Muc Other (Ex	t (B11) ust (B12) nvertebrate u Sulfide Or Rhizosphe u of Reduce on Reducti k Surface ( eplain in Re nches): nches):	dor (C1) res along ed Iron (C- on in Tille (C7) emarks)	4) d Soils (C6	— Wa — Sec — Drif — Dra ots (C3) — Dry — Cra S) — Sat — Sha ✓ FAc	ter Marks (B1) ( <b>Riverine</b> ) diment Deposits (B2) ( <b>Riverine</b> ) ft Deposits (B3) ( <b>Riverine</b> ) ainage Patterns (B10) ft-Season Water Table (C2) ayfish Burrows (C8) auration Visible on Aerial Imagery (C9) allow Aquitard (D3) C-Neutral Test (D5)

Project/Site: C02 Channel Review Area	City	County: Hunting	ton Beach	Sampling Date:4/16	5/19
Applicant/Owner: USACE Chicago District			State: CA	Sampling Point:1	2
Investigator(s): Eric Sweeney	Sec	tion, Township, Ra	nge: N/A		
Landform (hillslope, terrace, etc.): terrace					
Subregion (LRR): C					
Soil Map Unit Name: Beaches					
Are climatic / hydrologic conditions on the site typica		,			<u> </u>
Are Vegetation, Soil, or Hydrology _				" present? Yes✓_ No	
Are Vegetation, Soil, or Hydrology _	naturally probler	natic? (If ne	eeded, explain any ansv	wers in Remarks.)	
SUMMARY OF FINDINGS - Attach site	map showing sa	mpling point l	ocations, transec	ts, important features	, etc
Lludraphytic Vegetation Present?					-
	No	Is the Sampled		,	
		within a Wetlar	nd? Yes	No <u>√</u>	
Remarks:					
VEGETATION – Use scientific names o	f plants.				
		minant Indicator	Dominance Test wo	orksheet:	
Tree Stratum (Plot size:)		ecies? Status	Number of Dominant		
1			That Are OBL, FACV	V, or FAC:1	(A)
2			Total Number of Don		
3			Species Across All S	trata: <u>1</u>	(B)
4	= 1		Percent of Dominant		
Sapling/Shrub Stratum (Plot size:	=	otal Cover	That Are OBL, FACV	V, or FAC:100	(A/B)
1			Prevalence Index w	orksheet:	
2			Total % Cover or	f: Multiply by:	_
3			OBL species	x 1 =	_
4			FACW species	x 2 =	_
5			FAC species	x 3 =	_
(Division of Franch )	= 7	otal Cover	FACU species	x 4 =	-
Herb Stratum (Plot size: 5 feet )	-			x 5 =	_
1. Frankenia salina			Column Totals:	(A)	_ (B)
2. Batis maritima			Prevalence Ind	ex = B/A =	
Salicornia pacifica     Typha domingensis			Hydrophytic Vegeta		
			✓ Dominance Test		
5			Prevalence Inde		
6				daptations <sup>1</sup> (Provide supporti	ina
8			data in Rema	rks or on a separate sheet)	9
0	= 7		Problematic Hyd	rophytic Vegetation <sup>1</sup> (Explain	า)
Woody Vine Stratum (Plot size:)		otal Covel			
1				soil and wetland hydrology m	ıust
2			be present, unless di	sturbed or problematic.	
	= 7		Hydrophytic		
% Bare Ground in Herb Stratum %	% Cover of Biotic Crust		Vegetation Present?	Yes √ No	
Remarks:			1		

Profile Desc	ription: (Describe	to the de	oth needed to docu	ment the	indicator	or confirm	the absence of indicators.	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Feature %	Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
0-3	10YR 4/1	95	10YR 3/6				Clay/loam	
	•							
3-12	10YR 4/1	100					Clay/loam	
					-			
				_				
1Type: C=Cc	ncentration D=De	nletion RM		S=Covere	d or Coate	ed Sand Gr	ains <sup>2</sup> l ocation: PI =Por	e Lining, M=Matrix.
			I LRRs, unless othe			ca cana ci	Indicators for Problemat	
Histosol			Sandy Red		,		1 cm Muck (A9) (LRF	-
	pipedon (A2)		Stripped M	. ,			2 cm Muck (A10) (LR	•
Black His	, ,		Loamy Mu	-	. ,		Reduced Vertic (F18)	
	n Sulfide (A4)		Loamy Gle	-	(F2)		Red Parent Material (	,
	Layers (A5) (LRR	C)	Depleted N		(FO)		Other (Explain in Ren	narks)
	ck (A9) ( <b>LRR D</b> ) I Below Dark Surfa	co (A11)	Redox Dar Depleted D		. ,			
	rk Surface (A12)	CE (ATT)	Redox Dep				<sup>3</sup> Indicators of hydrophytic	vegetation and
	lucky Mineral (S1)		Vernal Poo		. 0)		wetland hydrology mus	_
-	leyed Matrix (S4)		<del></del>	, ,			unless disturbed or pro	blematic.
Restrictive L	ayer (if present):							
Type:								
Depth (inc	ches):						Hydric Soil Present? Y	es No
Remarks:								
HYDROLO	GY							
Wetland Hyd	drology Indicators	s:						
_			ed; check all that app	oly)			Secondary Indicators	s (2 or more required)
Surface	Water (A1)		Salt Crus	t (B11)			Water Marks (B	
	ter Table (A2)		✓ Biotic Cru	. ,			Sediment Depos	
✓ Saturatio			Aquatic Ir		es (B13)		Drift Deposits (B	
Water M	arks (B1) ( <b>Nonrive</b>	rine)	Hydroger	Sulfide O	dor (C1)		Drainage Patteri	
Sedimen	it Deposits (B2) (Ne	onriverine)	Oxidized	Rhizosphe	eres along	Living Roo	ts (C3) Dry-Season Wat	ter Table (C2)
Drift Dep	osits (B3) (Nonriv	erine)	Presence	of Reduce	ed Iron (C	4)	Crayfish Burrow	s (C8)
Surface	Soil Cracks (B6)					ed Soils (C6	· —	e on Aerial Imagery (C9)
<del></del>	on Visible on Aerial	0 , (		k Surface			Shallow Aquitare	
	tained Leaves (B9)		Other (Ex	plain in Re	emarks)		✓ FAC-Neutral Tes	st (D5)
Field Observ								
Surface Water			No Depth (ir			I		
Water Table			No Depth (in					
Saturation Pr (includes cap		Yes	No Depth (in	nches):		Wetla	and Hydrology Present? \	'es ✓ No
		m gauge, m	onitoring well, aerial	photos, pr	revious in	spections),	f available:	
Remarks:								