



## **Delineation Report**

Raymondville Drain Project  
Hidalgo and Willacy Counties, Texas

December 11, 2024

Prepared for:

RRP Consulting Engineers, L.L.C.  
5408 North 10<sup>th</sup> Street, McAllen, Texas  
78504, USA

and

Hidalgo County Drainage District No. 1  
902 N. Doolittle Rd. Edinburg, Texas  
78542, USA

Prepared by:

Stantec Consulting Services Inc.  
1904 Aldrich St, Austin, TX 78723

## DELINEATION REPORT: RAYMONDVILLE DRAIN PROJECT

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Prepared by Kyle Compton  
(signature)  
**Kyle Compton, PWS, Ecologist**

Reviewed by Clint Wardlow  
(signature)  
**Clint Wardlow, Ecologist**

Approved by Walt Meitzen  
(signature)  
**Walt Meitzen, Project Manager**



8401 Shoal Creek Blvd, Suite 100  
Austin, TX 78757  
Phone: (469) 647-4866



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### Abbreviations

APT	Antecedent Precipitation Tool
CWA	Clean Water Act
DEM	Digital Elevation Model
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GNSS	Global Navigation Satellite System
HCDD1	Hidalgo County Drainage District No. 1
HoT	Head of Tide
HUC	Hydraulic Unit Code
LRR	Land Resource Region
Lidar	Light Detection and Ranging
MSL	Mean Sea Level
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
MHW	Mean High Water
MLRA	Major Land Resource Area
MSL	Mean Sea Level
NOAA	National Oceanic and Atmospheric Administration
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory

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NWP	Nationwide Permit
OHWM	Ordinary High-Water Mark
OW	Open Water
PEM	Palustrine Emergent Wetland
PSS	Palustrine Shrub-Scrub Wetland
PCN	Pre-Construction Notification
ROE	Right-of-Entry
T	Tributary
TxDOT	Texas Department of Transportation
TCEQ	Texas Commission of Environmental Quality
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

### 1.0 INTRODUCTION AND PROJECT DESCRIPTION

Hidalgo County Drainage District No. 1 (HCDD1/District) is proposing expansion of an existing drainage system (the Raymondville Drain) that begins in their system boundaries and extends east into Willacy County. The project is known as the Raymondville Drain Project (RDP). RRP Consulting Engineers (RRP) is designing the expansion. Stantec Consulting Services Inc. (Stantec) is providing support for environmental investigations.

The RDP consists of the construction of approximately 13.8 miles of new diversion drains in Hidalgo County, approximately 43 miles of drain improvements in Hidalgo and Willacy Counties, a 272-acre detention pond near the South Texas International Airport in Edinburg, and five control structures located at the junction of the RD with other existing drains and at the detention pond. Approximately 50 miles of the proposed RDP would be constructed within a right-of-way that varies from 350 to 450 feet. Design is expected to include 10-foot vegetated buffers and 20-foot access roads on both sides, in-channel maintenance benches, and a pilot channel 60 feet wide and 5 feet deep. West of the El Sauz Ranch property, a 100-foot-wide spoil bank would be sited on the right bank of the drain; the spoil bank would be comprised of soil excavated during the expansion of the existing Raymondville Drain or the construction of the new drain channel. Regular gaps in the spoil bank would allow overland sheet flow to flow into the drain. The remaining 6.8 miles of the proposed RDP, from the western boundary of the El Sauz Ranch property to the eastern project terminus, would be constructed within a 350-foot-wide right-of-way as the spoil bank would not be constructed in this location. The RDP includes a proposed 272-acre detention pond that would be constructed approximately 1.3 miles east of Interstate Highway 69C/US Highway 281, east of and adjacent to the Lopez State Jail-Segovia Unit. An outlet structure would allow water to flow from the basin of the detention pond into a diversion channel.

For investigations related to aquatic features, the project delineation area consists of an approximate 600-foot-wide study area, which extends from near Faysville, Hidalgo County, Texas, spans 57 miles eastward, and terminates approximately 5.1 miles southwest of Port Mansfield, Willacy County, Texas. While the project delineation area consists of an approximate 600-foot-wide study area (totaling approximately 4,768 acres), the proposed construction limits are confined to approximately 350-feet of width (totaling 2,414 acres). The additional width of the study area is intended to facilitate the avoidance and minimization of impacts to environmentally sensitive areas, including delineated aquatic features. The project area, known as the Raymondville Drain Project, is depicted on **Figure 1** in **Appendix A**.

Project area figures are included in **Appendix A**. **Figure 1** depicts an aerial image of the project area, **Figure 2** depicts a topographic map of the project area, **Figure 3** depicts a Light Detection and Ranging (lidar) Digital Elevation Model (DEM) of the project area, **Figure 4** depicts project area geology, **Figure 5** depicts project area soils, **Figure 6** depicts a desktop review of water resources within the project area, **Figure 7** depicts aquatic features delineated within the project area. **Figure 8** depicts tidal data relative to the project area. Photographs of the project area are included in **Appendix B**. Wetland Determination Data Forms completed as part of the on-site delineation are included in **Appendix C**. Climatic data is presented in **Appendix D**.

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This Delineation Report presents the results of an aquatic features delineation and evaluates the potential for impacts to potentially regulated waters of the U.S., including wetlands, associated with the proposed project.

## 2.0 METHODS OF AQUATIC FEATURES DELINEATION

### 2.1 INTRODUCTION

Stantec ecologists reviewed a variety of published data resources prior to the April, May, July, and August 2024 field investigations to identify aquatic features that may be located within the project area. Sources consulted included USFWS National Wetlands Inventory (NWI) maps, the National Hydrography Dataset (NHD), the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey for Hidalgo and Willacy Counties, the United States Geological Survey (USGS) 7.5-minute quadrangle sheets (*Faysville, Hargill, Lasara, Raymondville, Yturria, San Perlita North, El Jardin, and Willamar, Texas*), Geologic Atlas of Texas maps (McAllen-Brownsville sheet), Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) (FEMA 2024), recent and historical aerial photography, and lidar data.

The purpose of the field investigations was to identify, delineate, and describe all aquatic features, including wetlands, located within the project area to assist in the avoidance of impacts and to determine whether U.S. Army Corps of Engineers (USACE) permit authorization would be required. Conclusions contained in this report are the opinions of the professionals who conducted the study and are subject to confirmation by the USACE-Galveston District.

The USACE regulates the discharge of dredged and fill material into wetlands and other waters of the U.S. under Section 404, subsection 330.5(a)(21) of the Clean Water Act. Section 10 of the Rivers and Harbors Act of 1899 authorizes the USACE to regulate any work in or affecting navigable waters of the U.S. Authorization is required from the USACE for any activity that would result in the discharge of dredged or fill material into waters of the U.S. Regulated activities may be permitted through the USACE via Standard Individual Permits, Regional General Permits, Nationwide Permits (NWP), or Letters of Permission.

### 2.2 FIELD DELINEATION

Stantec ecologists conducted field investigations within the project area April 29 - May 3, 2024, May 13 - 17, 2024, July 22 - 26, 2024, and August 19 - 21, 2024. The routine method of wetland delineation outlined in the *Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual* (Wetland Training Institute [WTI] 1991) and updated in the Atlantic and Gulf Coastal Plain and the Great Plain Regional Supplement (USACE 2010a, USACE 2010b) was used for wetland determinations within the project area. Field activities focused on delineation and documentation of all aquatic features identified within the project area.

The *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) defines wetlands based on three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. In general, all three criteria must be present for an area to qualify as a wetland. Some exceptions can occur in disturbed areas

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or in newly formed wetlands, where one indicator (such as hydric soils) might be lacking. These areas would be dealt with on an individual basis as outlined in the *Field Guide for Wetland Delineation* (WTI 1991) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region, Version 2.0* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plain Region, Version 2.0* (USACE 2010a, 2010b).

For non-tidal linear waters, the Ordinary High Water Mark (OHWM) is determined by assessing a combination of factors at each site. In accordance with Section 328.3(e) of the Clean Water Act and Regulatory Guidance Letter 05-05 (USACE, December 7, 2005), the following factors were considered in determining the jurisdictional boundary:

- Natural line impressed on the bank
- Shelving
- Changes in the character of soil
- Destruction of terrestrial vegetation
- Presence of litter and debris
- Wracking (organic material which has washed ashore)
- Vegetation matted down, bent, or absent
- Sediment sorting
- Leaf litter disturbed or washed away
- Scour
- Deposition
- Multiple observed flow events
- Bed and banks
- Water staining
- Change in plant community
- Other appropriate means that consider the characteristics of the surrounding areas

Delineation of any tidal waterbodies located within the project area followed the methodology outlined in *Tools and Technical Guidelines for Delineating the Extent of Tidal Waters* (USACE 2024a).

Following the completion of preliminary data gathering and synthesis, the routine method of wetland determination was used to identify potential wetland areas within the proposed project area. Potential wetland sites were evaluated in the field, and localized hydrologic characteristics and the dominant vegetative species observed at the site were documented. Photographs of the evaluated wetland determination data points are provided in **Appendix B** of this report. Boundaries of aquatic features, including wetlands, were recorded using sub-meter accurate Eos Positioning Systems, Inc. Arrow 100 global navigation satellite system (GNSS) receivers and iPads with ArcGIS Field Maps.

### 2.3 JURISDICTIONAL DETERMINATION

On January 18, 2024, the U.S. Environmental Protection Agency (EPA) and the USACE published the final version of the new Waters of the U.S. Rule. The effective date of this new rule is March 20, 2024. However, on March 19, 2024, Judge Jeffrey Vincent Brown of the Federal Southern District of Texas (State of Texas V. U.S. EPA, No. 3:23-cv-17) granted the States of Texas a Preliminary Injunction preventing the nationwide application of the 2024 Waters of the U.S. Rule.

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In response to these court decisions, the USACE is returning to interpretation of “waters of the United States” consistent with the pre-2015 regulatory regime within the State of Texas. Furthermore, On May 25, 2023, the Supreme Court issued its decision in *Sackett v. EPA*. Justice Samuel A. Alito, writing for the majority justices, implemented the “continuous surface connection” test. The decision further defines “waters” as only those relatively permanent, standing or continuously flowing bodies of water. For a water to be protected under the Clean Water Act, the Court has declared that the water must have a continuous surface connection with a “water of the United States”—an ocean, river, stream, or lake—such that it is difficult to determine where the “water” ends, and the “wetland” begins. The decision further defines “waters” as only those relatively permanent, standing or continuously flowing bodies of water.

The EPA and USACE are in receipt of the U.S. Supreme Court’s May 25, 2023, decision in the case of *Sackett v. EPA*. In light of this decision, the agencies will interpret waters of the U.S. consistent with the Supreme Court’s decision in *Sackett*. Therefore, all jurisdictional determinations presented within this report are in accordance with the “pre-2015 regulatory regime consistent with *Sackett*”.

The following list summarizes the categories of jurisdictional waters and general exclusions used by Stantec to develop an opinion regarding the jurisdictional status of delineated aquatic features.

- (a)(1) Traditional Navigable Waters  
Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- (a)(2) Interstate Waters  
These are waters that cross or act as State boundaries. Under the pre-2015 regulatory regime consistent with *Sackett*, the agencies will not assert jurisdiction over interstate wetlands solely because they are interstate.
- (a)(3) Other Waters  
All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, soughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
  - I. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - II. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - III. Which are used or could be used for industrial purpose by industries in interstate commerce.Under the pre-2015 regulatory regime consistent with *Sackett*, the agencies will limit the scope of the (a)3) provision to assessing only relatively permanent lakes and ponds that do not meet one of the other jurisdictional categories.



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- (a)(4) Impoundments

“Waters of the United States” include impoundments of waters otherwise identified as “waters of the United States”.
- (a)(5) Tributaries

The regulatory text of this category includes tributaries of waters identified in paragraphs (a)(1) through (a)(4). A tributary includes natural, man-altered, or man-made waters bodies that flow directly or indirectly into a traditional navigable water. Tributaries also include such water bodies that flow directly or indirectly into an interstate water, even when there is no connection to a traditional navigable water. Tributaries can include rivers, streams, lakes, ponds, and impoundments. Tributaries can also include ditches and canals. Jurisdictional tributaries must be relatively permanent. Relatively permanent waters include tributaries that typically have flowing or standing water year-round or continuously at least seasonally (e.g., typically three months). Non-relatively permanent tributaries are those that have flowing or standing water only in response to precipitation or that do not have continuously flowing or standing water at least seasonally.
- (a)(6) The Territorial Seas

Defined in section 502(8) of the Clean Water Act as “the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.”
- (a)(7) Adjacent Wetlands

Under the pre-2015 regulatory regime consistent with *Sackett*, adjacent will be interpreted to mean “having a continuous surface connection.” Jurisdictional adjacent wetlands include wetlands that have a continuous surface connection to a traditional navigable water, interstate water, the territorial seas, or a relatively permanent tributary or impoundment. Wetlands have a continuous surface connection when they physically abut or touch a jurisdictional water. Wetlands also have a continuous surface connection when they are connected to a jurisdictional water by a discrete feature like a non-jurisdictional ditch, swale, pipe, or culvert.
- Regulatory exclusions include waste treatment and prior converted cropland. Additionally, features that are generally considered non-jurisdictional per the 1986 preamble language and the 2008 *Rapanos* guidance include:
  - Artificially irrigated areas which would revert to upland if the irrigation cease.
  - Artificial lakes or ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins or rice growing.
  - Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons.
  - Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless

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- and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States.
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.
- Swales or erosional features (e.g. gullies, small washes characterized by low volume, infrequent, or short duration flow).

It should be noted that Stantec has no authority over the timing, implementation, or enforcement of regulatory Rules or any future injunctions or court cases that invalidate the regulatory Rules. The project proponent acknowledges that regulatory authority over waters of the U.S. lies with the appropriate federal agency. If new regulations are released by any agency with jurisdiction over the proposed project, it may be necessary to amend this report and the opinions contained within to account for updated regulations. Stantec reserves the right to amend any previous opinions and determination pending any regulatory change affecting this report.

### 3.0 DESCRIPTION OF THE PROJECT AREA

#### 3.1 LAND USES

The project area includes diverse landscapes such as South Texas hardwood scrubland, natural grassland prairie, agricultural row crop fields, citrus orchards, improved pasture, and existing drainageways. (**Figure 1** and **Figure 2**).

#### 3.2 TOPOGRAPHY

The USGS topographic map (**Figure 2**) depicts multiple waterbodies within the project area including wetlands, open waters, and drainageways. The most prominent waterbodies depicted include the existing drain that the project is centered around and is labeled “West Main Drain” upgradient of Interstate Highway (IH)-69, and “East Main Drain” downgradient of IH-69, and “Salt Lake Drain”. Topography across the project site ranges from nearly level to gently sloping. The project area generally slopes from west to east towards Laguna Madre. Elevations range from approximately 87 feet above mean sea level (MSL) near the western terminus to approximately 2 feet above MSL near the eastern terminus. The aquatic features depicted on the topographic map generally correlated with features delineated within the project area during field investigations.

Microtopography across the project area was reviewed by referencing a DEM generated from 70cm lidar data collected in 2018 (**Figure 3**). The lidar DEM review was consistent with what is depicted on the USGS topographic map and provided an additional level of detail when reviewing specific areas containing aquatic features.

### 3.3 GEOLOGY AND SOILS

According to the Geological Database of Texas (USGS 2007), the project area is underlain by five geologic map units, Windblown deposits (Qs), Beaumont Formation (Qb), Lissie Formation undivided (Ql), Windblown deposits (Qds), and Goliad Formation (Pg) (**Figure 4**).

Windblown sand sheet deposits (Qs) consist of fine and unconsolidated sand. Beaumont Formation (Qb) is comprised of clayey sand, silt of low to moderate permeability, and caliche gravel substrates. Lissie Formation (Ql) is comprised of clay silt, sand, gravel mainly siliceous, and caliche. The surface is characterized by numerous undrained circular to irregularly shaped depressions and is derived from relict clay dune and stabilized longitudinal dunes. Windblown deposits (Qds) is composed of stabilized sand dune, strong relict eolian grain, moderate to high permeability, and low to moderate water-holding capacity. Goliad Formation (Pg) is composed of a mixture of clay, medium to coarse grains sand, and sandstone, marl, caliche, limestone, and conglomerated clays that are light shades of pink and green (USGS 2007).

The most eastern portion of the project area is located within the Atlantic and Gulf Coast Lowland Forest and Crop Region (LRR T) and is more specifically located in Major Land Resource Area (MLRA) 150B (Gulf Coast Saline Prairies). Barrier islands and coastal beaches are encompassing within this MLRA. MLRA 150B mostly consists of the coastal area approximately 50 to 80 miles (80 to 130 kilometer) wide that runs along the Gulf of Mexico. The major sedimentary deposits are deltaic and lagoonal clays, as well as loams derived from the older weathered rocks to the west. The dominant soil orders are Alfisols, Mollisols, and Vertisols. Soils in this area have a hyperthermic soil temperature regime in the southwestern portion and a thermic soil temperature regime in the northeastern portion of the area. The original plant community in the area was predominantly natural grass prairie with riparian hardwood forest. Plant species are little bluestem (*Schizachyrium scoparium*), Indiangrass (*Sorghastrum nutans*), switchgrass (*Panicum virgatum*), and big bluestem (*Andropogon gerardi*), with scattered live oak (*Quercus fusiformis*) motte on the landscape (NRCS 2022).

The remaining western portions of the project area are located within the Southwest Plateaus and Plains Range and Cotton Region (LRR I) and more specifically located within MLRA 83D (Lower Rio Grande Plain) and MLRA 83C (Central Rio Grande Plain). MLRA 83D is located entirely in the broad landscape of Texas, encompassing approximately 2,871 square miles (7,435 square kilometers) of nearly level alluvial plain within the delta of the Rio Grande. The dominant vegetation type is prairie grassland and cropland. The majority of MLRA 83D is on the coastal plain, where the fine textured sediment became shale layers as it deposited in lagoons, while the coarser textured sediment became sandstone layers. The alluvial sediment of the Goliad Formation and the Beaumont Formation make up the rock at the surface. The dominant soil orders are Alfisols, Mollisols, Vertisols, and Inceptisols. Soils in this area have a hyperthermic temperature regime, and are generally very deep, well or moderately well drained, and loamy or clayey. This area supports a mosaic of mid prairie grasses, perennial forbs, legumes, and scattered woody plants. Dominant grass species are fourflower trichloris (*Trichloris pluriflora*), plains bristlegrass (*Setaria vulpiseta*), lovegrass (*Eragrostis* sp.), switch grass, big sandbur (*Cenchrus longispinus*), and little bluestem. The woody species are desert yaupon (*Schaefferia cuneifolia*), thorny hackberry (*Celtis ehrenbergiana*), blackbrush acacia (*Vachellia rigidula*), and mesquite (*Prosopis glandulosa*) (NRS 2022). MLRA 83C is characterized by prairie grasslands interspersed with shrubs and a few scattered trees on a nearly level to gently undulating plain

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that is weakly dissected by intermittent drainageways. Most of the area is used as rangeland. Boundaries with neighboring MLRAs are gradual, based on subtle differences in vegetation, climate, and geology (NRCS 2022).

The following soil mapping units are depicted to occur within the project area (**Figure 5** and **Table 1**) (USDA NRCS 2024a and 2024b). “Hydric” means that all major and minor components listed for a given map unit are rated as hydric (100%). “Predominately Hydric” means that all major components listed for a given map unit are rated as hydric, and at least one contrasting minor component is not rated hydric (66-99%). “Partially Hydric” means that at least one major component listed for a given map unit is rated as hydric, and at least one other major component is not rated hydric (33-65%). “Predominately Non-Hydric” means that no major component listed for a given map unit is rated as hydric, and at least one contrasting minor component is rated hydric (1-32%). “Non-Hydric” means no major or minor components for the map unit are rated hydric (0%).

**Table 1: Project Area Soils**

Soil Map Symbol	Soil Mapping Unit Name	Hydric Rating
<b>Hidalgo County</b>		
3	Brennan fine sandy loam, 0 to 1 percent slopes	Non-Hydric
4	Brennan fine sandy loam, 0 to 3 percent slopes	Non-Hydric
8	Comitas loamy fine sand, 0 to 3 percent slopes	Non-Hydric
9	Delfina loamy fine sand, warm, 0 to 2 percent slopes	Non-Hydric
10	Delfina fine sandy loam, warm, 0 to 2 percent slopes	Non-Hydric
11	Delfina fine sandy loam, warm, 1 to 3 percent slopes	Non-Hydric
16	Hargill fine sandy loam, 0 to 1 percent slopes	Non-Hydric
17	Hargill fine sandy loam, 1 to 3 percent slopes	Non-Hydric
22	Hebbronville sandy loam, 0 to 1 percent slopes	Non-Hydric
23	Hebbronville fine sandy loam, 1 to 3 percent slopes	Non-Hydric
25	Hidalgo fine sandy loam, 0 to 1 percent slopes	Non-Hydric
26	Hidalgo fine sandy loam, 1 to 3 percent slopes	Non-Hydric
28	Hidalgo sandy clay loam, 0 to 1 percent slopes	Non-Hydric
42	Nueces fine sand, 0 to 3 percent slopes	Non-Hydric
45	Pits, borrow	Non-Hydric
48	Racombes sandy clay loam, 0 to 1 percent slopes	Predominately Non-Hydric (1%)
49	Racombes sandy clay loam, saline, 0 to 1 percent slopes	Predominately Non-Hydric (1%)
59	Rio fine sandy loam, saline, ponded	Predominately Hydric (85%)
60	Rio clay loam, ponded	Predominately Hydric (95%)
61	Rio clay loam, saline, ponded	Predominately Hydric (90%)
67	Tiicano clay, 0 to 1 percent slopes, occasionally ponded	Predominately Non-Hydric (10%)
70	Willacy fine sandy loam, 0 to 1 percent slopes	Non-Hydric
71	Willacy fine sandy loam, 1 to 3 percent slopes	Non-Hydric

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Soil Map Symbol	Soil Mapping Unit Name	Hydric Rating
<b>Willacy County</b>		
An	Arents, loamy	Non-Hydric
Ar	Arrada sandy clay loam, 0 to 1 percent slopes, very frequently flooded, frequently ponded	Predominately Hydric (95%)
DfA	Delfina fine sandy loam, warm, 0 to 2 percent slopes	Non-Hydric
DfB	Delfina fine sandy loam, warm, 1 to 3 percent slopes	Non-Hydric
HaA	Hargill fine sandy loam, 0 to 1 percent slopes	Non-Hydric
HaB	Hargill fine sandy loam, 1 to 3 percent slopes	Non-Hydric
HoA	Hidalgo sandy clay loam, 0 to 1 percent slopes	Non-Hydric
Ic	Incell clay, 0 to 1 percent slopes, occasionally ponded	Hydric
Ja	Jarron sandy clay loam	Predominately Hydric (95%)
Le	Latina sandy clay loam, 0 to 1 percent slopes, occasionally ponded, rarely flooded	Predominately Hydric (95%)
Lm	Lomalta clay, 0 to 1 percent slopes, occasionally ponded	Predominately Hydric (95%)
Ln	Lozano fine sandy loam	Non-Hydric
Ly	Lyford sandy clay loam	Non-Hydric
Me	Mercedes clay	Predominately Non-Hydric (5%)
Mp	Mercedes clay, ponded	Hydric
Nu	Nueces fine sand, 0 to 3 percent slopes	Non-Hydric
Ra	Racombe sandy clay loam, 0 to 1 percent slopes	Non-Hydric
Rc	Racombe sandy clay loam, saline, 0 to 1 percent slopes	Non-Hydric
Rd	Raymondville clay loam	Non-Hydric
Rg	Rio sandy clay loam, ponded	Predominately Hydric (85%)
Rs	Rio sandy clay loam, saline, ponded	Predominately Hydric (90%)
Tc	Tiicano clay, 0 to 1 percent slopes, occasionally ponded	Predominately Non-Hydric (10%)
Uf	Ustorthents, loamy	Non-Hydric
W	Water	N/A
WaA	Willacy fine sandy loam, 0 to 1 percent slopes	Non-Hydric
WaB	Willacy fine sandy loam, 1 to 3 percent slopes	Non-Hydric
Wf	Willamar fine sandy loam, 0 to 1 percent slopes	Non-Hydric
Ws	Willamar fine sandy loam, strongly saline, 0 to 1 percent slopes, occasionally ponded	Predominately Hydric (80%)

Source: USDA NRCS 2024a and 2024b

### 3.4 HYDROLOGY

The project area is located within the Edinburg North Main Canal Watershed (Hydrologic Unit Code [HUC] 10: 1211020802), La Sal Vieja Watershed (HUC 10: 1211020804), and East Main Drain-Frontal Laguna Madre Watershed (HUC 10: 1211020805). The following aquatic resources were photo-interpreted by

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USFWS using 1:58,000 scale, color infrared imagery from 1983 for the portions of the project area located within Hidalgo County, and 1:65,000 scale, color infrared imagery from 1994 for the portions of the project area located within Willacy County (**Table 2** and **Figure 6**). The NWI depiction of wetlands within the project area is generally more expansive than wetlands observed during field investigations and is likely due to the limitations of the aerials used by USFWS when photo-interpreting the NWI data. The NWI depiction of tributaries within the project area is generally consistent with observations made during field investigations.

**Table 2: Project Area NWI**

NWI Code	Code Description	Area (Acres)
PEM1/SS1A	Palustrine, Emergent, Hyperhaline / Hypersaline / Scrub-Shrub Hyperhaline / Hypersaline Temporarily Flooded	4.67
PEM1A	Palustrine, Emergent, Hyperhaline / Hypersaline, Temporarily Flooded	54.63
PEM1Ad	Palustrine, Emergent, Hyperhaline / Hypersaline, Temporarily Flooded, Partly Drained/Ditched	1.97
PEM1C	Palustrine, Emergent, Hyperhaline / Hypersaline, Seasonally Flooded	21.68
PEM1Cx	Palustrine, Emergent, Hyperhaline / Hypersaline, Seasonally Flooded, Excavated	1.35
PSS1/3A	Palustrine, Scrub-Shrub, Hyperhaline / Hypersaline, Mixohaline / Mixosaline (Brackish), Temporarily Flooded	0.53
PSS1A	Palustrine, Scrub-Shrub, Hyperhaline / Hypersaline, Temporarily Flooded	11.52
PSS1J	Palustrine, Scrub-Shrub, Hyperhaline / Hypersaline, Intermittently Flooded	1.06
PSSA	Palustrine, Scrub-Shrub, Temporarily Flooded	0.12
PUBFh	Palustrine, Unconsolidated Bottom, Semipermanently Flooded, Dike/Impounded	0.23
PUBHx	Palustrine, Unconsolidated Bottom, Permanently Flooded, Excavated	2.76
PUSCcx	Palustrine, Unconsolidated Bottom, Seasonally Flooded, Excavated	0.39
PUSJ	Palustrine, Unconsolidated Shore, Intermittently Flooded	2.46
PUSJx	Palustrine, Unconsolidated Shore, Intermittently Flooded, Excavated	2.19
R2UBHx	Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated	125.22
R2USCcx	Riverine, Lower Perennial, Unconsolidated Shore, Seasonally Flooded, Excavated	0.50
R5UBFx	Riverine, Unknown Perennial, Unconsolidated Bottom, Semipermanently Flooded, Excavated	10.88
R5UBH	Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded	0.24

According to the USACE-based Antecedent Precipitation Tool (APT) (USACE 2024b), wetter than normal conditions were present on August 20, 2024. Normal climatic conditions were present for the remaining field investigation days (**Appendix D**).

FEMA has not mapped designated 100-year flood zones for the majority of the project area. However, the most eastern portion of the project area has been mapped by FEMA and is located within the 100-year flood zone (**Figure 6**) (FEMA 2024).

### 3.5 VEGETATION

During field investigations, four major plant communities were observed within the project area. Identification of the plant communities was based on species composition, canopy cover, structural morphology, and land management. The observed major plant communities are listed and described below.

#### 3.5.1 South Texas Scrubland/Forest

The observed south Texas scrubland/forest plant community is located in patches throughout the project area. This plant community is characterized by a mixture of trees and saplings composed of honey mesquite, Mexican palo-verde (*Parkinsonia aculeata*), Texas persimmon (*Diospyros texana*), and thorny hackberry.

#### 3.5.2 Native Prairie

The observed native prairie plant community is predominately located within the most eastern portions of the project area. This plant community is generally dominated by a monotypic stand of gulf cordgrass (*Spartina spartinae*), but also includes smaller amounts of switchgrass and gulf muhly (*Muhlenbergia capillaris*).

#### 3.5.3 Agricultural Crop

The observed agricultural row crop plant community dominates the majority of the project area. This plant community includes agricultural row crops including milo (*Sorghum* sp.), sesame (*Sesamum* sp.), corn (*Zea* sp.), and cotton (*Gossypium* sp.). This plant community also includes citrus orchards.

#### 3.5.4 Improved Pasture

The observed improved pasture plant community is located in patches throughout the central and western portions of the project area. This plant community includes areas mowed and managed to produce forages including bermudagrass (*Cynodon dactylon*), and yellow bluestem (*Bothriochloa ischaemum*).

## 4.0 RESULTS OF THE AQUATIC FEATURES DELINEATION

### 4.1 DESCRIPTIONS OF DELINEATED WATER FEATURES

Each plant community and aquatic feature encountered within the project area was examined in accordance with the *Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual* (WTI 1991). Based upon limited right-of-entry (ROE), field investigations were limited to 2,318 acres or 48.6% of the project area. Where ROE was not available, delineations of aquatic features were conducted using observations from adjacent parcels / public right-of-way and a combination of aerial imagery, lidar, and desktop resources such as NWI, NHD, and USGS topographic maps. Aquatic features delineated within the project area include five categories: wetland, tributary, open water, stormwater management structure, and irrigation canal / artificial conduit. A cartographic representation of delineated aquatic features, location of

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determination data from sampling points, and status of parcel ROE can be found in **Appendix A – Figure 7**. Photographs of delineated aquatic features can be found in **Appendix B**. In total, 85 wetland determination data forms were completed throughout the project area and are included in **Appendix C**. A table detailing and quantifying each delineated aquatic feature is included below (**Table 3**).

**Table 3: Delineated Aquatic Features Within the Project Area**

Name	Classification	Average OHWM Width (Feet)	Linear Feet (LF)	Area (Acres)	Jurisdictional Opinion (Section 404)
<b>Emergent Wetland (24 Count)</b>					
W001	Emergent Wetland	N/A	N/A	10.34	Yes
W002	Emergent Wetland	N/A	N/A	0.23	No
W003	Emergent Wetland	N/A	N/A	0.45	No
W005	Emergent Wetland	N/A	N/A	1.33	No
W006	Emergent Wetland	N/A	N/A	0.62	No
W008	Emergent Wetland	N/A	N/A	1.69	Yes
W010	Emergent Wetland	N/A	N/A	2.26	No
W011	Emergent Wetland	N/A	N/A	1.25	No
W012	Emergent Wetland	N/A	N/A	4.53	Yes
W013	Emergent Wetland	N/A	N/A	2.91	No
W014	Emergent Wetland	N/A	N/A	1.39	Yes
W015	Emergent Wetland	N/A	N/A	1.36	No
W016	Emergent Wetland	N/A	N/A	4.79	Yes
W017	Emergent Wetland	N/A	N/A	2.23	Yes
W018	Emergent Wetland	N/A	N/A	1.83	No
W019	Emergent Wetland	N/A	N/A	0.19	No
W020	Emergent Wetland	N/A	N/A	9.75	Yes
W021	Emergent Wetland	N/A	N/A	7.38	Yes
W022	Emergent Wetland	N/A	N/A	17.23	Yes
W024	Emergent Wetland	N/A	N/A	3.50	No
W026	Emergent Wetland	N/A	N/A	0.18	No



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Name	Classification	Average OHWM Width (Feet)	Linear Feet (LF)	Area (Acres)	Jurisdictional Opinion (Section 404)
W027	Emergent Wetland	N/A	N/A	1.66	No
W028	Emergent Wetland	N/A	N/A	0.53	No
W029	Emergent Wetland	N/A	N/A	2.32	No
Emergent Wetland TOTAL				79.95	
Emergent Wetland Potentially Jurisdictional TOTAL				59.33	
Emergent Wetland Potentially Non-Jurisdictional TOTAL				20.62	
Scrub-Shrub Wetland (7 Count)					
W004	Scrub-Shrub Wetland	N/A	N/A	1.88	No
W007	Scrub-Shrub Wetland	N/A	N/A	0.08	No
W009	Scrub-Shrub Wetland	N/A	N/A	1.25	No
W023	Scrub-Shrub Wetland	N/A	N/A	0.97	Yes
W025	Scrub-Shrub Wetland	N/A	N/A	4.86	No
W030	Scrub-Shrub Wetland	N/A	N/A	2.69	No
W031	Scrub-Shrub Wetland	N/A	N/A	1.08	No
Scrub-Shrub Wetland TOTAL				12.81	
Scrub-Shrub Wetland Potentially Jurisdictional TOTAL				0.97	
Scrub-Shrub Wetland Potentially Non-Jurisdictional TOTAL				11.84	
Open Water (10 Count)					
OW001	Open Water	N/A	N/A	0.36	No
OW002	Open Water	N/A	N/A	0.07	No
OW003	Open Water	N/A	N/A	0.95	No
OW004	Open Water	N/A	N/A	1.31	No
OW005	Open Water	N/A	N/A	0.38	No
OW006	Open Water	N/A	N/A	0.23	No
OW007	Open Water	N/A	N/A	1.32	No
OW008	Open Water	N/A	N/A	0.25	No

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Name	Classification	Average OHWM Width (Feet)	Linear Feet (LF)	Area (Acres)	Jurisdictional Opinion (Section 404)
OW009	Open Water	N/A	N/A	0.64	No
OW010	Open Water	N/A	N/A	0.65	No
Open Water TOTAL				6.16	
Open Water Potentially Jurisdictional TOTAL				0.00	
Open Water Potentially Non-Jurisdictional TOTAL				6.16	
Tributary (31 Count)					
T001A	Perennial Drainage Ditch (West Main Drain)	63.5	60,885	88.80	Yes
T001B	Perennial Drainage Ditch (East Main Drain)	65.4	103,515	155.46	Yes
T002A	Upland Drainage Ditch	37.4	5,146	4.42	No
T002B	Perennial Drainage Ditch	39.3	57,935	52.31	Yes
T003	Perennial Drainage Ditch	29.3	713	0.48	Yes
T004	Upland Drainage Ditch	14.9	204	0.07	No
T005	Upland Drainage Ditch	26.7	163	0.10	No
T006	Upland Drainage Ditch	19.4	157	0.07	No
T007	Upland Drainage Ditch	32.0	204	0.15	No
T008	Perennial Drainage Ditch	35.9	194	0.16	Yes
T009	Upland Drainage Ditch	17.9	122	0.05	No
T010	Perennial Drainage Ditch	21.5	182	0.09	Yes
T011	Perennial Drainage Ditch	16.8	156	0.06	Yes
T012	Upland Drainage Ditch	13.8	728	0.23	No
T013	Upland Drainage Ditch	14.3	183	0.06	No
T014	Upland Drainage Ditch	10.1	172	0.04	No
T015	Perennial Drainage Ditch	16.0	163	0.06	Yes
T016	Upland Drainage Ditch	15.2	343	0.12	No
T017	Upland Drainage Ditch	24.9	35	0.02	No
T018	Perennial Drainage Ditch	12.8	443	0.13	Yes

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Name	Classification	Average OHWM Width (Feet)	Linear Feet (LF)	Area (Acres)	Jurisdictional Opinion (Section 404)
T019	Upland Drainage Ditch	14.9	88	0.03	No
T020	Perennial Drainage Ditch (Salt Lake Drain)	42.2	496	0.48	Yes
T021	Upland Drainage Ditch	10.6	862	0.21	No
T022	Upland Drainage Ditch	22.2	294	0.15	No
T023	Perennial Drainage Ditch	26.2	233	0.14	Yes
T024	Upland Drainage Ditch	8.1	269	0.05	No
T025	Perennial Drainage Ditch	47.2	277	0.30	Yes
T026	Perennial Drainage Ditch	18.4	355	0.15	Yes
T027	Upland Drainage Ditch	42.4	811	0.79	No
T028	Upland Drainage Ditch	9.6	2,303	0.51	No
T029	Upland Drainage Ditch	14.1	432	0.14	No
Tributary TOTAL			238,063	305.83	
Potentially Jurisdictional TOTAL (Perennial Drainage Ditches)			225,547	298.62	
Potentially Non-Jurisdictional TOTAL (Upland Drainage Ditches)			12,516	7.21	
Stormwater Management Structure (5 Count)					
SWMS001	Stormwater Management Structure	N/A	N/A	2.20	No
SWMS002	Stormwater Management Structure	N/A	N/A	14.06	No
SWMS003	Stormwater Management Structure	N/A	N/A	4.18	No
SWMS004	Stormwater Management Structure	N/A	N/A	14.81	No
SWMS005	Stormwater Management Structure	N/A	N/A	8.78	No
Stormwater Management Structure TOTAL			N/A	44.03	
Stormwater Management Structure Potentially Jurisdictional TOTAL			N/A	0.00	
Stormwater Management Structure Potentially Non-Jurisdictional TOTAL			N/A	44.03	
Irrigation Canal / Artificial Conduit (1 Network)					

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Name	Classification	Average OHWM Width (Feet)	Linear Feet (LF)	Area (Acres)	Jurisdictional Opinion (Section 404)
Irrigation Canals / Artificial Conduits	Irrigation Canal / Artificial Conduit	N/A	15,784	8.03	No
<b>Irrigation Canal / Artificial Conduit TOTAL</b>			<b>16,363</b>	<b>8.26</b>	
<b>Irrigation Canal / Artificial Conduit Potentially Jurisdictional TOTAL</b>			<b>0</b>	<b>0.00</b>	
<b>Irrigation Canal / Artificial Conduit Potentially Non-Jurisdictional</b>			<b>16,363</b>	<b>8.26</b>	

### 4.1.1 Emergent Wetlands

#### W001

W001 is a delineated palustrine emergent wetland. The delineated boundary of W001 correlates with NWI polygon data coded PEM1C. Additionally, the delineated boundary of W001 partially correlates with open water polygons depicted on USGS topographic maps. A continuous surface connection between W001 and a relatively permanent water (T001B) exists through a culvert. Therefore, W001 should be considered a potentially jurisdictional feature. The delineated boundary of W001 is depicted on **Figure 7-17** in **Appendix A**. See Photographs 139-140 in **Appendix B**, and determination data forms 006 and 008 in **Appendix C**.

#### W002

W002 is a delineated palustrine emergent wetland. The delineated boundary of W002 partially correlates with NWI polygon data coded PEM1C. No aquatic features correlating with the delineated boundary of W002 are depicted on USGS topographic maps. A continuous surface connection between W002 and a relatively permanent water is not apparent. Therefore, W002 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of W002 is depicted on **Figure 7-16** in **Appendix A**. See Photograph 141 in **Appendix B**, and determination data form 016 in **Appendix C**.

#### W003

W003 is an assumed palustrine emergent wetland due to the lack of Right-of-Entry (ROE) to the parcel of land where W003 is located. The boundary of W003 is based on NWI polygon data coded PEM1A. No aquatic features correlating with the assumed boundary of W003 are depicted on USGS topographic maps. A review of lidar data, aerial photography, and visual line of sight from an adjacent parcel with ROE support the assumed presence and boundary of W003. However, a continuous surface connection between W003 and a relatively permanent water is not apparent. Therefore, W003 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W003 is depicted on **Figure 7-16** in **Appendix A**.

#### W005

W005 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W005 is located. The boundary of W005 is based on NWI polygon data coded PEM1A. The assumed boundary

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of W005 also correlates with open water depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W005. However, a continuous surface connection between W005 and a relatively permanent water is not apparent. Therefore, W005 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W005 is depicted on **Figure 7-16 in Appendix A**.

### W006

W006 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W006 is located. The boundary of W006 is based on NWI polygon data coded PEM1A. No aquatic features correlating with the assumed boundary of W006 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W006. However, a continuous surface connection between W006 and a relatively permanent water is not apparent. Therefore, W006 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W006 is depicted on **Figure 7-15 in Appendix A**.

### W008

W008 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W008 is located. The boundary of W008 is based on NWI polygon data coded PEM1C. No aquatic features correlating with the assumed boundary of W008 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W008. A continuous surface connection between W008 and a relatively permanent water (T001B) is strongly suggested by a signature on the lidar DEM. Therefore, W008 should be considered a potentially jurisdictional feature. The assumed boundary of W008 is depicted on **Figure 7-14 in Appendix A**.

### W010

W010 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W010 is located. The boundary of W010 is based on NWI polygon data coded PEM1A. No aquatic features correlating with the assumed boundary of W010 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W010. However, a continuous surface connection between W010 and a relatively permanent water is not apparent. Therefore, W010 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W010 is depicted on **Figure 7-7 in Appendix A**.

### W011

W011 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W011 is located. The boundary of W011 is based on NWI polygon data coded PEM1A. No aquatic features correlating with the assumed boundary of W011 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W011. However, a continuous surface connection between W011 and a relatively permanent water is not apparent. Therefore, W011 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W011 is depicted on **Figure 7-7 in Appendix A**.

### W012

W012 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W012 is located. The boundary of W012 is based on NWI polygon data coded PEM1A. No aquatic features

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correlating with the assumed boundary of W012 are depicted on USGS topographic maps. A review of lidar data, aerial photography, and visual line of sight from a nearby public roadway support the assumed presence and boundary of W012. A continuous surface connection between W012 and a relatively permanent water (T002B) is strongly suggested by a signature on the lidar DEM. Therefore, W012 should be considered a potentially jurisdictional feature. The assumed boundary of W012 is depicted on **Figure 7-6 in Appendix A**. See Photograph 143 in **Appendix B**.

### W013

W013 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W013 is located. The boundary of W013 is based on NWI polygon data coded PEM1A. The assumed boundary of W013 also correlates with open water depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W013. However, a continuous surface connection between W013 and a relatively permanent water is not apparent. Therefore, W013 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W013 is depicted on **Figure 7-6 in Appendix A**.

### W014

W014 is a delineated palustrine emergent wetland. The delineated boundary of W014 correlates with NWI polygon data coded PEM1C. Additionally, the delineated boundary of W014 partially correlates with open water depicted on USGS topographic maps. A continuous surface connection between W014 and a relatively permanent water (T001B) exists through an upland drainage ditch (T024) and a culvert. Therefore, W014 should be considered a potentially jurisdictional feature. The delineated boundary of W014 is depicted on **Figure 7-6 in Appendix A**. See Photograph 144 in **Appendix B**, and determination data form 045 in **Appendix C**.

### W015

W015 is a delineated palustrine emergent wetland. The delineated boundary of W015 correlates with NWI polygon data coded PEM1A. No aquatic features correlating with the delineated boundary of W015 are depicted on USGS topographic maps. A continuous surface connection between W015 and a relatively permanent water is not apparent. Therefore, W015 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of W015 is depicted on **Figure 7-6 in Appendix A**. See Photograph 145 in **Appendix B**, and determination data form 047 in **Appendix C**.

### W016

W016 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W016 is located. The boundary of W016 is based on NWI polygon data coded PEM1A. No aquatic features correlating with the assumed boundary of W016 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W016. A continuous surface connection between W016 and a relatively permanent water (T002B) is strongly suggested by a signature on the lidar DEM. Therefore, W016 should be considered a potentially jurisdictional feature. The assumed boundary of W016 is depicted on **Figure 7-5 in Appendix A**.

### W017

W017 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W017 is located. The boundary of W017 is based on NWI polygon data coded PEM1C. No aquatic features

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correlating with the assumed boundary of W017 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W017. A continuous surface connection between W017 and a relatively permanent water (T002B) is strongly suggested by a signature on the lidar DEM. Therefore, W017 should be considered a potentially jurisdictional feature. The assumed boundary of W017 is depicted on **Figure 7-5 in Appendix A**.

### W018

W018 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W018 is located. The boundary of W018 is based on NWI polygon data coded PEM1A. No aquatic features correlating with the assumed boundary of W018 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W018. However, a continuous surface connection between W018 and a relatively permanent water is not apparent. Therefore, W018 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W018 is depicted on **Figure 7-5 in Appendix A**.

### W019

W019 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W019 is located. The boundary of W019 is based on NWI polygon data coded PEM1A. The assumed boundary of W019 also correlates with open water depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W019. However, a continuous surface connection between W019 and a relatively permanent water is not apparent. Therefore, W019 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W018 is depicted on **Figure 7-5 in Appendix A**.

### W020

W020 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W020 is located. The boundary of W020 is based on NWI polygon data coded PEM1A. The assumed boundary of W020 also partially correlates with open water depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W020. A continuous surface connection between W020 and a relatively permanent water (T001B) through an upland drainage ditch (T002A) is strongly suggested by a signature on the lidar DEM. Therefore, W020 should be considered a potentially jurisdictional feature. The assumed boundary of W020 is depicted on **Figure 7-5 in Appendix A**.

### W021

W021 is an assumed palustrine emergent wetland due to the lack of ROE to the parcel of land where W021 is located. The boundary of W021 is based on NWI polygon data coded PEM1A. No aquatic features correlating with the assumed boundary of W021 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W021. A continuous surface connection between W021 and a relatively permanent water (T001B) through an upland drainage ditch (T002A) is strongly suggested by a signature on the lidar DEM. Therefore, W021 should be considered a potentially jurisdictional feature. The assumed boundary of W021 is depicted on **Figure 7-5 in Appendix A**

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### W022

W022 is a delineated palustrine emergent wetland. The delineated boundary of W022 partially correlates with NWI polygon data coded PEM1C, PUSJ, PSS1A, and R5UBH. The delineated boundary of W022 also partially correlates with open water depicted on USGS topographic maps. A continuous surface connection between W022 and a relatively permanent water (T001B) exists through an upland swale, and an upland drainage ditch (T002A). Therefore, W022 should be considered a potentially jurisdictional feature. The delineated boundary of W022 is depicted on **Figure 7-4** in **Appendix A**. See Photographs 146-148 in **Appendix B**, and determination data form 053 in **Appendix C**.

### W024

W024 is a delineated palustrine emergent wetland. No aquatic features correlating with the delineated boundary of W024 are depicted by NWI or on USGS topographic maps. A continuous surface connection between W024 and a relatively permanent water is not apparent. Therefore, W024 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of W024 is depicted on **Figure 7-4** in **Appendix A**. See Photograph 151 in **Appendix B**, and determination data form 061 in **Appendix C**.

### W026 and W027

W026 and W027 are delineated palustrine emergent wetlands. No aquatic features correlating with the delineated boundaries of W026 and W027 are depicted by NWI or on USGS topographic maps. A continuous surface connection between W026 and/or W027 with a relatively permanent water is not apparent. Therefore, W026 and W027 should be considered isolated and potentially non-jurisdictional features. The delineated boundaries of W026 and W027 are depicted on **Figure 7-4** in **Appendix A**. See Photographs 153-156 in **Appendix B**, and determination data form 079 in **Appendix C**.

### W028 and W029

W028 and W029 are delineated palustrine emergent wetlands. The delineated boundaries of W028 and W029 partially correlate with NWI polygon data coded PEM1/SS1A. No aquatic features correlating with the delineated boundaries of W028 and W029 are depicted on USGS topographic maps. A continuous surface connection between W028 and/or W029 with a relatively permanent water is not apparent. Therefore, W028 and W029 should be considered isolated and potentially non-jurisdictional features. The delineated boundaries of W028 and W029 are depicted on **Figure 7-4** in **Appendix A**. See Photographs 157-158 in **Appendix B**, and determination data form 085 in **Appendix C**.

## 4.1.2 Scrub-Shrub Wetlands

### W004

W004 is an assumed palustrine scrub-shrub wetland due to the lack of ROE to the parcel of land where W004 is located. The boundary of W004 is based on NWI polygon data coded PSS1A. No aquatic features correlating with the assumed boundary of W004 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W004. However, a continuous surface connection between W004 and a relatively permanent water is not apparent. Therefore, W004 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W004 is depicted on **Figure 7-16** in **Appendix A**.



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### W007

W007 is a delineated palustrine scrub-shrub wetland. The delineated boundary of W007 partially correlates with NWI polygon data coded PEM1C. No aquatic features correlating with the delineated boundary of W007 are depicted on USGS topographic maps. A continuous surface connection between W007 and a relatively permanent water is not apparent. Therefore, W007 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of W007 is depicted on **Figure 7-14** in **Appendix A**. See Photograph 142 in **Appendix B**, and determination data form 021 in **Appendix C**.

### W009

W009 is an assumed palustrine scrub-shrub wetland due to the lack of ROE to the parcel of land where W009 is located. The boundary of W009 is based on NWI polygon data coded PSS1A. No aquatic features correlating with the assumed boundary of W009 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of W009. However, a continuous surface connection between W009 and a relatively permanent water is not apparent. Therefore, W009 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W009 is depicted on **Figure 7-7** in **Appendix A**.

### W023

W023 is a delineated palustrine scrub-shrub wetland. The delineated boundary of W023 partially correlates with NWI polygon data coded PUSJ. No aquatic features correlating with the assumed boundary of W023 are depicted on USGS topographic maps. A continuous surface connection between W023 and a relatively permanent water (T001B) exists through W022, an upland swale, and an upland drainage ditch (T002A). Therefore, W023 should be considered a potentially jurisdictional feature. The delineated boundary of W023 is depicted on **Figure 7-4** in **Appendix A**. See Photographs 149-150 in **Appendix B**, and determination data form 055 in **Appendix C**.

### W025

W025 is a delineated palustrine scrub-shrub wetland. No aquatic features correlating with the delineated boundary of W025 are depicted by NWI or on USGS topographic maps. A continuous surface connection between W025 and a relatively permanent water is not apparent. Therefore, W025 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of W025 is depicted on **Figure 7-4** in **Appendix A**. See Photograph 152 in **Appendix B**, and determination data form 059 in **Appendix C**.

### W030

W030 is a delineated palustrine scrub-shrub wetland. The delineated boundary of W030 partially correlates with NWI polygon data coded PEM1/SS1A. No aquatic features correlating with the delineated boundary of W030 are depicted on USGS topographic maps. A continuous surface connection between W030 and a relatively permanent water is not apparent. Therefore, W030 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of W030 is depicted on **Figure 7-4** in **Appendix A**. See Photographs 159-160 in **Appendix B**, and determination data form 064 in **Appendix C**.

### W031

W031 is an assumed palustrine scrub-shrub wetland due to the lack of ROE to the parcel of land where W031 is located. The boundary of W031 is based on NWI polygon data coded PSS1J. No aquatic features correlating with the assumed boundary of W031 are depicted on USGS topographic maps. A review of lidar

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data and aerial photography support the assumed presence and boundary of W031. However, a continuous surface connection between W031 and a relatively permanent water is not apparent. Therefore, W031 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of W031 is depicted on **Figure 7-3 in Appendix A**.

### 4.1.3 Open Waters

#### OW001

OW001 is a delineated open water feature. The delineated boundary of OW001 correlates with NWI polygon data coded PUBHx. No aquatic features correlating with the delineated boundary of OW001 are depicted on USGS topographic maps. Approximately 24 inches of standing water was observed within this feature during the field investigation. OW001 is the result of an excavation for the apparent purpose of watering cattle and is best described as an upland stock tank. Additionally, a continuous surface connection between OW001 and a relatively permanent water is not apparent. Therefore, OW001 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of OW001 is depicted on **Figure 7-16 in Appendix A**. See Photograph 161 in **Appendix B**.

#### OW002

OW002 is a delineated open water feature. The delineated boundary of OW002 partially correlates with NWI polygon data coded PEM1A. No aquatic features correlating with the delineated boundary of OW002 are depicted on USGS topographic maps. Approximately 36 inches of standing water was observed within this feature during the field investigation. This feature is the result of an excavation for the apparent purpose of watering cattle and is best described as an upland stock tank. Additionally, a continuous surface connection between OW002 and a relatively permanent water is not apparent. Therefore, OW002 should be considered isolated and a potentially non-jurisdictional feature. The delineated boundary of OW002 is depicted on **Figure 7-16 in Appendix A**. See Photograph 162 in **Appendix B**.

#### OW003 (Cleo Tank)

OW003 is an assumed open water feature due to the lack of ROE to the parcel of land where OW003 is located. The boundary of OW003 is based on NWI polygon data coded PUBHx. The assumed boundary of OW003 also correlates with open water and corresponding label reading "Cleo Tank" on some USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of OW003. This feature appears to be the result of an excavation for the apparent purpose of watering cattle and is best described as an upland stock tank. Additionally, a continuous surface connection between OW003 and a relatively permanent water is not apparent. Therefore, OW003 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW003 is depicted on **Figure 7-16 in Appendix A**.

#### OW004 (Beto Tank)

OW004 is an assumed open water feature due to the lack of ROE to the parcel of land where OW004 is located. The boundary of OW004 is based on NWI polygon data coded PUBHx. The assumed boundary of OW004 also correlates with open water and corresponding label reading "Beto Tank" on some USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of OW004. This feature appears to be the result of an excavation for the apparent purpose of

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watering cattle and is best described as an upland stock tank. Additionally, a continuous surface connection between OW004 and a relatively permanent water is not apparent. Therefore, OW004 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW004 is depicted on **Figure 7-16 in Appendix A.**

### OW005

OW005 is an assumed open water feature due to the lack of ROE to the parcel of land where OW005 is located. The boundary of OW005 is based on NWI polygon data coded PUSC<sub>x</sub>. No aquatic features correlating with the assumed boundary of OW005 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of OW005. This feature appears to be the result of an excavation for the apparent purpose of watering cattle and is best described as an upland stock tank. Additionally, a continuous surface connection between OW005 and a relatively permanent water is not apparent. Therefore, OW005 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW005 is depicted on **Figure 7-14 in Appendix A.**

### OW006

OW006 is an assumed open water feature due to the lack of ROE to the parcel of land where OW006 is located. The boundary of OW006 is based on NWI polygon data coded PUBF<sub>h</sub>. No aquatic features correlating with the assumed boundary of OW006 are depicted on USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and boundary of OW006, but suggest relatively short hydroperiods consisting of ephemeral inundation. A continuous surface connection between OW006 and a relatively permanent water is not apparent. Therefore, OW006 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW006 is depicted on **Figure 7-6 in Appendix A.**

### OW007

OW007 is an assumed open water feature due to the lack of ROE to the parcel of land where OW007 is located. The boundary of OW007 is based on a unique signature and inundation visible on recent aerial photography. No aquatic features correlating with the assumed boundary of OW007 are depicted by NWI or on USGS topographic maps. OW007 is not visible on the lidar DEM and suggests relatively recent excavation of this open water feature. A continuous surface connection between OW007 and a relatively permanent water is not apparent. Therefore, OW007 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW007 is depicted on **Figure 7-5 in Appendix A.**

### OW008

OW008 is an assumed open water feature due to the lack of ROE to the parcel of land where OW008 is located. The boundary of OW008 is based on a unique signature and inundation visible on recent aerial photography. No aquatic features correlating with the assumed boundary of OW008 are depicted by NWI or on USGS topographic maps. OW008 is not visible on the lidar DEM and suggests relatively recent excavation of this open water feature. A continuous surface connection between OW008 and a relatively permanent water is not apparent. Therefore, OW008 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW008 is depicted on **Figure 7-5 in Appendix A.**

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### OW009

OW009 is an assumed open water feature due to the lack of ROE to the parcel of land where OW009 is located. The boundary of OW009 is based on NWI polygon data coded PUSJx. The assumed boundary of OW009 also correlates with open water depicted on USGS topographic maps. A review of lidar data, aerial photography, and visual line of sight from a nearby public roadway support the assumed presence and boundary of OW009. This feature appears to be the result of an excavation for the apparent purpose of watering cattle and is best described as an upland stock tank. Additionally, a continuous surface connection between OW009 and a relatively permanent water is not apparent. Therefore, OW009 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW009 is depicted on **Figure 7-2 in Appendix A**. See Photograph 163 in **Appendix B**.

### OW010

OW010 is an assumed open water feature due to the lack of ROE to the parcel of land where OW010 is located. The boundary of OW010 is based on a unique signature and inundation visible on recent aerial photography. No aquatic features correlating with the assumed boundary of OW010 are depicted by NWI or on USGS topographic maps. A review of lidar data, aerial photography, and visual line of sight from a nearby public roadway support the assumed presence and boundary of OW010. This feature appears to be the result of an excavation constructed for the purpose of obtaining fill material and/or to water cattle. Additionally, a continuous surface connection between OW010 and a relatively permanent water is not apparent. Therefore, OW010 should be considered isolated and a potentially non-jurisdictional feature. The assumed boundary of OW010 is depicted on **Figure 7-2 in Appendix A**. See Photograph 164 in **Appendix B**.

### Waterfilled Depressions Incidental to Construction

Directly east of the intersection of I-69C and the project area, there is an active construction area characterized by determination data form 073. This area partially correlates with NWI polygon data coded PUSJx and is consistent with a man-made excavation. Furthermore, this area is partially mapped by the NRCS as a soil borrow pit, further suggesting the historic use of this area as an area excavated to obtain fill material. Active excavation, machinery traffic, steep banks, unstable slopes, and ponded water due to recent rainfall were observed in this area during the field investigation. Although this area partially correlates with an open water polygon depicted on USGS topographic maps, this area does not meet the criteria of deep, open water habitat. This area has historically been used as an excavation created for the purpose of obtaining fill material, is currently active, and ponds shallow water immediately following rainfall events. The extent of this excavation is currently being expanded, as active excavation was noted during the time of the field investigation. This area consists of an isolated soil borrow area undergoing active expansion and should be considered potentially non-jurisdictional. See **Figure 7-2 in Appendix A**, Photographs 165-166 in **Appendix B**, and determination data form 073 in **Appendix C**.

## 4.1.4 Tributaries

### T001A (West Main Drain) and T001B (East Main Drain)

T001A and T001B appear to pre-date aerial imagery for the area and are visible on 1949 aerial images and depicted on USGS topographic maps dated 1957. The first soil survey for Willacy County, dated 1926,

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mentions flood preventions and control work being conducted at the present time (USDA 1926). T001A and T001B appear to have originated by means of excavation for the original purpose of flood prevention and control work in the 1920s.

T001A is a delineated perennial drainage ditch located within and serving as the approximate centerline for the central portion of the project area. The delineated OHWM of T001A correlates with NWI polygon data coded R2UBHx and a flowline on USGS topographic maps labeled “West Main Drain”. T001A conveys flow from near Lasara, Texas to the northeast and east to the IH-69 bridge, where this feature transitions to T001B (East Main Drain). Noticeable flow and a water depth of approximately 18-24 inches were observed within this tributary during field investigations. Gars (family Lepisosteidae) were observed throughout the reach of this tributary.

T001B is a delineated perennial drainage ditch located within and serving as the approximate centerline for the eastern portion of the project area. The delineated OHWM of T001B correlates with NWI polygon data coded R2UBHx and perennial flow on USGS topographic maps labeled “East Main Drain”. T001B conveys flow from the IH-69 bridge east to the terminus of the project area. Flow then continues outside of the project area to an eventual downstream confluence with Laguna Madre. Noticeable flow and a water depth of approximately 24-36 inches were observed within this tributary during field investigations. Gars (family Lepisosteidae) were observed throughout the reach of this tributary.

T001B is the most downgradient, lowest lying aquatic feature delineated within the project area. Therefore, T001B is the most likely aquatic feature within the project area to be subject to the ebb and flow of the tide. In order to delineate the extent of possible tidal influence, 18.6 years of tidal data was obtained from the nearest National Oceanic and Atmospheric Administration (NOAA) gage (8778490, Port Mansfield, Texas). From this data, the Mean High Water (MHW) elevation was calculated to be 1.28' above MSL. Ideally the calculated MHW elevation would be plotted against bathymetric data, but no bathymetric data is available for the area. Therefore, as a substitute, the MHW elevation was plotted against a DEM generated from the lidar data collected by USGS in 2018. The eastern terminus of the project area and the calculated MHW elevation (1.28') contour are depicted on **Figure 8 in Appendix A** for comparison. It should be noted that the DEM does not account for the depth of downgradient channels due to the presence of water within the channel at the time of data collection. Therefore, tidal influence likely extends further upgradient than the depicted MHW contour. Upgradient of the MHW contour and downgradient of the eastern terminus of the project area, a sudden shift in water turbidity is noticeable on aerial imagery collected by Texas Department of Transportation (TxDOT) in 2022. The relatively high turbidity in the upgradient portion of the channel correlates with turbidity observed within T001B during field investigations. The relatively clear turbidity of downgradient waters in the aerial image is likely due to tidal action and appears to serve as an indicator for the head of tide (HoT). The location of the shift in turbidity suggesting the location of the HoT and an excerpt from the 2022 TxDOT aerial image are also depicted on **Figure 8 in Appendix A**. Based on the calculated MHW elevation of 1.28' and suggestive HoT indicator observed on aerial imagery, it appears that the limits of tidal influence are located approximately 2.8 miles downgradient of the eastern terminus of the project area. Therefore, jurisdiction asserted to T001B should be limited to Section 404 of the CWA and should not include Section 10 of the Rivers and Harbors Act.

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Due to the long-term establishment and perennial flow characteristics of these tributaries, T001A and T001B should be considered relatively permanent waters with an eventual downgradient continuous surface connection to Laguna Madre. Therefore, T001A and T001B should be considered potentially jurisdictional features. Jurisdiction appears to be limited to Section 404 of the CWA and should not include Section 10 of the Rivers and Harbors Act due to the apparent lack of tidal influence. The delineated OHWM of T001A and T001B is depicted on **Figures 7-8** through **7-17** in **Appendix A**. See Photographs 86-97 in **Appendix B**.

### T002A

T002A is a delineated upland drainage ditch located within and serving as the approximate centerline for the western portion of the project area. The delineated OHWM of T002A correlates with NWI polygon data coded R5UBFx and a flowline on USGS topographic maps. T002A is located northwest of Hargill, Texas and conveys flow north until the transition of the channel to T002B. No flow or pools were observed within the channel of this tributary during field investigations. T002B is not depicted on USGS topographic maps dated 1963 but is visible on aerial imagery dated 1985. Therefore, this tributary appears to have been excavated sometime between 1963 and 1985. T002A is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T002A should be considered a potentially non-jurisdictional feature. The delineated OHWM of T002A is depicted on **Figures 7-4** and **7-5** in **Appendix A**. See Photographs 98-102 in **Appendix B**.

### T002B

T002B is a delineated perennial drainage ditch located within and serving as the approximate centerline for the western and central portion of the project area. The delineated OHWM of T002B correlates with NWI polygon data coded R5UBFx and R2UBHx, and a flowline on USGS topographic maps. T002B conveys flow north and then east to the downstream confluence with T001A (West Main Drain). Noticeable flow and a water depth of approximately 12 inches were observed within this tributary during field investigations. The downgradient portions of T002B are visible on 1949 aerial images and USGS topographic maps dated 1957. However, the upgradient portions of T002B are first visible on aerial imagery dated 1985. Therefore, it appears the downgradient portions of T002B were excavated prior to 1957, and then expanded in an upgradient direction between the years of 1957 and 1985. Due to the long-term establishment and perennial flow characteristics of this tributary, T002B should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T001A and T001B. Therefore, T002B should be considered a potentially jurisdictional feature. The delineated OHWM of T002B is depicted on **Figures 7-5** through **7-8** in **Appendix A**. See Photographs 101-106 in **Appendix B**.

### T003

T003 is an assumed perennial drainage ditch due to the lack of ROE to the parcel where T003 is located. The OHWM of T003 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R2USCx. The assumed OHWM of T003 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T003. This tributary conveys flow south to its confluence with T001B (East Main Drain). T003 is not visible on aerial imagery dated 1985, but visible on aerial imagery dated 1995. Therefore, T003 appears to have been excavated between 1985 and 1995. Due to the long-term establishment and assumed perennial flow

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characteristics of this tributary, T003 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T001B. Therefore, T003 should be considered a potentially jurisdictional feature. The assumed OHWM of T003 is depicted on **Figures 7-15 and 7-16 in Appendix A.**

### T004

T004 is an assumed upland drainage ditch due to the lack of ROE to the parcel where T004 is located. The OHWM of T004 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R5UBFx. The assumed OHWM of T004 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T004. This tributary conveys flow south to its confluence with T001B (East Main Drain). Due to the assumed ephemeral flow characteristics of this tributary, T004 should be considered a non-relatively permanent water. Therefore, T004 should be considered a potentially non-jurisdictional feature. The assumed OHWM of T004 is depicted on **Figure 7-15 in Appendix A.**

### T005

T005 is an assumed upland drainage ditch due to the lack of ROE to the parcel where T005 is located. The OHWM of T005 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R5UBFx. The assumed OHWM of T005 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T005. This tributary conveys flow north to its confluence with T001B (East Main Drain). Due to the assumed ephemeral flow characteristics of this tributary, T005 should be considered a non-relatively permanent water. Therefore, T005 should be considered a potentially non-jurisdictional feature. The assumed OHWM of T005 is depicted on **Figure 7-15 in Appendix A.**

### T006

T006 is an assumed upland drainage ditch due to the lack of ROE to the parcel where T006 is located. The OHWM of T006 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded PEM1Cx. The assumed OHWM of T006 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T006. This tributary conveys flow south to its confluence with T001B (East Main Drain). Due to the assumed ephemeral flow characteristics of this tributary, T006 should be considered a non-relatively permanent water. Therefore, T006 should be considered a potentially non-jurisdictional feature. The assumed OHWM of T006 is depicted on **Figure 7-15 in Appendix A.**

### T007

T007 is an assumed upland drainage ditch due to the lack of ROE to the parcel where T007 is located. The OHWM of T007 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R5UBFx. The assumed OHWM of T007 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T007. This tributary conveys flow northeast to its confluence with T001B (East Main Drain). Due to the assumed ephemeral flow characteristics of this tributary, T007 should be considered a non-relatively permanent water. Therefore, T007 should be considered a potentially non-jurisdictional feature. The assumed OHWM of T007 is depicted on **Figure 7-15 in Appendix A.**

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### T008

T008 is an assumed perennial drainage ditch due to the lack of ROE to the parcel where T008 is located. The OHWM of T008 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R2UBHx. The assumed OHWM of T008 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T008. This tributary conveys flow southwest to its confluence with T001B (East Main Drain). Due to the assumed perennial flow characteristics of this tributary, T008 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T001B. Therefore, T008 should be considered a potentially jurisdictional feature. The assumed OHWM of T008 is depicted on **Figure 7-15 in Appendix A.**

### T009

T009 is a delineated upland drainage ditch. The delineated OHWM of T009 correlates with NWI polygon data coded R5UBFx and a flowline on USGS topographic maps. This tributary conveys flow north to its confluence with T001B (East Main Drain). No flow or pools were observed within the channel of this tributary during field investigations. T009 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T009 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T009 is depicted on **Figure 7-13 in Appendix A.** See Photographs 107-110 in **Appendix B.**

### T010

T010 is a delineated perennial drainage ditch. The delineated OHWM of T010 correlates with NWI polygon data coded PEM1Cx and a flowline on USGS topographic maps. This tributary conveys flow north to its confluence with T001B (East Main Drain). Noticeable flow a water depth of approximately 18 inches, and gars (family Lepisosteidae) were observed within this tributary during field investigations. Due to the perennial flow characteristics of this tributary, T010 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T001B. Therefore, T010 should be considered a potentially jurisdictional feature. The delineated OHWM of T010 is depicted on **Figure 7-13 in Appendix A.** See Photographs 111-113 in **Appendix B.**

### T011

T011 is a delineated perennial drainage ditch. The delineated OHWM of T011 correlates with NWI polygon data coded PEM1Cx and a flowline on USGS topographic maps. This tributary conveys flow north to its confluence with T001B (East Main Drain). Noticeable flow and a water depth of approximately 24 inches were observed within this tributary during field investigations. Due to the perennial flow characteristics of this tributary, T011 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T001B. Therefore, T011 should be considered a potentially jurisdictional feature. The delineated OHWM of T011 is depicted on **Figure 7-12 in Appendix A.** See Photographs 114-115 in **Appendix B.**

### T012

T012 is a delineated upland drainage ditch. The delineated OHWM of T012 correlates with NWI polygon data coded R5UBFx and a flowline on USGS topographic maps. This tributary conveys flow south to its



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confluence with T001B (East Main Drain). No flow or pools were observed within the channel of this tributary during field investigations. T012 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T012 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T012 is depicted on **Figure 7-12** in **Appendix A**. See Photographs 116-117 in **Appendix B**.

### T013

T013 is a delineated upland drainage ditch. The delineated OHWM of T013 correlates with NWI polygon data coded PEM1Cx and a flowline on USGS topographic maps. This tributary conveys flow north to its confluence with T001B (East Main Drain). No flow or pools were observed within the channel of this tributary during field investigations. T013 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T013 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T013 is depicted on **Figure 7-12** in **Appendix A**. See Photographs 118-119 in **Appendix B**.

### T014

T014 is a delineated upland drainage ditch. The delineated OHWM of T014 is not depicted by NWI or USGS topographic maps. This tributary conveys flow north to its confluence with T001B (East Main Drain). No flow or pools were observed within the channel of this tributary during field investigations. T014 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T014 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T014 is depicted on **Figure 7-11** in **Appendix A**. See Photographs 120-121 in **Appendix B**.

### T015

T015 is a delineated perennial drainage ditch. The delineated OHWM of T015 correlates with NWI polygon data coded R2UBHx and a flowline on USGS topographic maps. This tributary conveys flow north to its confluence with T001A (West Main Drain). Noticeable flow and a water depth of approximately 24 inches were observed within this tributary during field investigations. Due to the perennial flow characteristics of this tributary, T015 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T001A and T001B. Therefore, T015 should be considered a potentially jurisdictional feature. The delineated OHWM of T015 is depicted on **Figure 7-11** in **Appendix A**. See Photographs 122-123 in **Appendix B**.

### T016

T016 is a delineated upland drainage ditch. The delineated OHWM of T016 is not depicted by NWI or USGS topographic maps. This tributary conveys flow north to its confluence with T001A (West Main Drain). No flow or pools were observed within the channel of this tributary during field investigations. T016 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T016 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T016 is depicted on **Figure 7-10** in **Appendix A**. See Photographs 124-125 in **Appendix B**.

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### T017

T017 is a delineated upland drainage ditch. The delineated OHWM of T017 correlates with NWI polygon data coded R5UBFx. No flowline correlating with T017 is depicted on USGS topographic maps. This tributary conveys flow north to its confluence with T001A (West Main Drain). No flow or pools were observed within the channel of this tributary during field investigations. T017 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T017 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T016 is depicted on **Figure 7-10** in **Appendix A**. See Photographs 126-127 in **Appendix B**.

### T018

T018 is a delineated perennial drainage ditch. The delineated OHWM of T018 correlates with NWI polygon data coded R2UBHx and a flowline on USGS topographic maps. This tributary conveys flow west to its confluence with T001A (West Main Drain). Noticeable flow and a water depth of approximately 24-36 inches were observed within this tributary during field investigations. Additionally, aquatic species dependent upon perennial water sources were observed within this tributary. Species observed included gar (family Lepisosteidae), softshell turtle (*Apalone* sp.), and crab (*Callinectes* sp.). Due to the perennial flow characteristics of this tributary, T018 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T001A and T001B. Therefore, T018 should be considered a potentially jurisdictional feature. The delineated OHWM of T018 is depicted on **Figure 7-9** in **Appendix A**. See Photographs 128-130 in **Appendix B**.

### T019

T019 is an assumed upland drainage ditch due to the lack of ROE to the parcel where T019 is located. The OHWM of T019 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R5UBFx. The assumed OHWM of T019 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T019. This tributary conveys flow west to its confluence with T001A (West Main Drain). Due to the assumed ephemeral flow characteristics of this tributary, T019 should be considered a non-relatively permanent water. Therefore, T019 should be considered a potentially non-jurisdictional feature. The assumed OHWM of T007 is depicted on **Figure 7-8** in **Appendix A**.

### T020 (Salt Lake Drain)

T020 is a delineated perennial drainage ditch. The delineated OHWM of T020 correlates with NWI polygon data coded R2UBHx and a flowline on USGS topographic maps labeled "Salt Lake Drain". NHD indicates that this tributary conveys flows toward La Sal Vieja. Noticeable flow and a water depth of approximately 12-24 inches were observed within this tributary during field investigations. Due to the perennial flow characteristics of this tributary, T020 should be considered a relatively permanent water. Therefore, T020 should be considered a potentially jurisdictional feature. The delineated OHWM of T020 is depicted on **Figure 7-8** in **Appendix A**. See Photographs 131-132 in **Appendix B**.

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### T021

T021 is a delineated upland drainage ditch. No aquatic features correlating with the delineated OHWM of T021 are depicted by NWI or USGS topographic maps. This tributary conveys flow south to its confluence with T002B. No flow or pools were observed within the channel of this tributary during field investigations. T021 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T021 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T021 is depicted on **Figures 7-7 and 7-8 in Appendix A**. See Photograph 133 in **Appendix B**.

### T022

T022 is a delineated upland drainage ditch. The delineated OHWM of T022 correlates with NWI polygon data coded PEM1Cx and a flowline on USGS topographic maps. This tributary conveys flow north to its confluence with T002B. No flow or pools were observed within the channel of this tributary during field investigations. T022 is an upland drainage ditch that carries only ephemeral flows in direct response to precipitation and should be considered a non-relatively permanent water. Therefore, T022 should be considered a potentially non-jurisdictional feature. The delineated OHWM of T022 is depicted on **Figure 7-7 in Appendix A**. See Photographs 134-135 in **Appendix B**.

### T023

T023 is an assumed perennial drainage ditch due to the lack of ROE to the parcel where T023 is located. The OHWM of T023 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R2UBHx. The assumed OHWM of T023 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T023. This tributary conveys flow north to its confluence with T002B. Due to the assumed perennial flow characteristics of this tributary, T023 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T002B, T001A, and T001B. Therefore, T023 should be considered a potentially jurisdictional feature. The assumed OHWM of T023 is depicted on **Figure 7-7 in Appendix A**.

### T024

T024 is an assumed upland drainage ditch due to the lack of ROE to the parcel where T024 is located. The OHWM of T024 is based on a strong linear lidar DEM signature, aerial imagery, and visual line of sight from an adjacent parcel with ROE. No aquatic features correlating with the assumed OHWM of T024 are depicted by NWI or USGS topographic maps. No flow or pools were observed within the channel of this tributary during field investigations (as viewed from an adjacent parcel with ROE). This tributary conveys flow north to its confluence with T002B. Due to the assumed ephemeral flow characteristics of this tributary, and visual confirmation from an adjacent parcel with ROE, T024 should be considered a non-relatively permanent water. Therefore, T024 should be considered a potentially non-jurisdictional feature. The assumed OHWM of T024 is depicted on **Figure 7-6 in Appendix A**. See Photograph 136 in **Appendix B**.

### T025

T025 is an assumed perennial drainage ditch due to the lack of ROE to the parcel where T025 is located. The OHWM of T025 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R5UBFx. The assumed OHWM of T025 correlates with a flowline on USGS topographic maps. A

## DELINEATION REPORT: RAYMONDVILLE DRAIN PROJECT

review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T025. This tributary conveys flow southeast to its confluence with T002B. Due to the assumed perennial flow characteristics of this tributary, T025 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T002B, T001A, and T001B. Therefore, T025 should be considered a potentially jurisdictional feature. The assumed OHWM of T025 is depicted on **Figure 7-5 in Appendix A**.

### T026

T026 is an assumed perennial drainage ditch due to the lack of ROE to the parcel where T026 is located. The OHWM of T026 is based on a strong linear lidar DEM signature correlating with NWI polygon data coded R5UBFx and visual line of site outside of the project area at an upgradient public road crossing. Noticeable flow and a water depth of approximately 24 inches were observed within this tributary during field investigations (as viewed from an upgradient public road crossing). The assumed OHWM of T026 correlates with a flowline on USGS topographic maps. A review of lidar data, aerial photography, and NHD data support the assumed presence and OHWM of T026. This tributary conveys flow northeast to its confluence with T002B. Due to the assumed perennial flow characteristics of this tributary, T026 should be considered a relatively permanent water with an eventual downgradient continuous surface connection to Laguna Madre through T002B, T001A, and T001B. Therefore, T026 should be considered a potentially jurisdictional feature. The assumed OHWM of T026 is depicted on **Figure 7-5 in Appendix A**. See Photograph 137 in **Appendix B**.

### T027

T027 is an assumed upland drainage ditch due to the lack of ROE to the parcel where T027 is located. The OHWM of T027 is based on a strong linear lidar DEM signature. No aquatic features correlating with the delineated OHWM of T027 are depicted by NWI or USGS topographic maps. A review of lidar data and aerial photography support the assumed presence and OHWM of T027. This tributary conveys flow northwest to an off-site open water feature. Due to the assumed ephemeral flow characteristics of this tributary, T027 should be considered a non-relatively permanent water. Therefore, T027 should be considered a potentially non-jurisdictional feature. The assumed OHWM of T027 is depicted on **Figure 7-1 in Appendix A**.

### T028 and T029

T028 and T029 are delineated upland drainage ditches separated by a culvert crossing. No aquatic features correlating with the assumed OHWM of T028 or T029 are depicted by NWI or USGS topographic maps. These tributaries convey flow west and then south to an offsite confluence with a more prominent drainage ditch, and eventually Lake Edinburg. No flow or pools were observed within the channel of this tributary during field investigations. T028 and T029 are upland drainage ditches that carry only ephemeral flows in direct response to precipitation and should be considered non-relatively permanent waters. Therefore, T028 and T029 should be considered potentially non-jurisdictional features. The delineated OHWM of T028 and T029 are depicted on **Figure 7-1 in Appendix A**. See Photograph 138 in **Appendix B**.

## DELINEATION REPORT: RAYMONDVILLE DRAIN PROJECT

### 4.1.5 Stormwater Management Structures

Five stormwater management structures (SWMS) consisting of SWMS001 through SWMS005 were delineated within the project area. These features consist of artificial excavations constructed in uplands for the purpose of creating storage volume for stormwater and flood control. No aquatic features correlating with the delineated boundary of SWMS001 through SWMS005 are depicted by NWI or USGS topographic maps. Additionally, a continuous surface connection between these features and a relatively permanent water is not apparent. SWMS001 through SWMS005 should be considered potentially non-jurisdictional features. The delineated boundaries are depicted on **Figures 7-1** and **7-2** in **Appendix A**. See Photographs 165-173 in **Appendix B**, and determination data forms 069, 076, and 077 in **Appendix C**.

### 4.1.6 Irrigation Canals / Artificial Conduits

A vast network of irrigation canals was delineated within the project area. Typically, these canals consist of an open, concrete lined ditch located upon an elevated berm. When aerially crossing project tributaries, these irrigation canals were observed to transition to a closed metal pipe measuring approximately 36 inches in diameter. Flow control valves and associated risers were also observed in-line with these features at several locations. These canals appear to have been originally constructed as an elevated canal system for the purpose of transporting freshwater throughout the area for the purpose of irrigating agricultural crops. These features do not exhibit an OHWM, were constructed in elevated uplands, do not drain naturally occurring aquatic features, do not contribute flow to project tributaries, and only convey controlled flows associated with irrigation of agricultural crops. Therefore, these canals / artificial conduits should be considered potentially non-jurisdictional features. The delineated boundaries are depicted on **Figures 7-3** through **7-8**, **7-10**, and **7-11** in **Appendix A**. See Photographs 176-183 in **Appendix B**.

## 4.2 USACE PERMITTING

The following 78 aquatic features were delineated within the limits of the 4,768-acre project area (**Table 3** and **Figure 7**):

- 31 Wetlands
- 10 Open Waters
- 31 Tributaries
- 5 Stormwater Management Structure
- 1 (Network) of Irrigation Canals / Artificial Conduits

Of these 78 delineated aquatic features, 10 wetlands and 13 tributaries would likely be considered potentially jurisdictional, would likely be subject to Section 404 of the Clean Water Act, and placement of dredged or fill material into these features would likely require USACE authorization (**Table 3** and **Figure 7**). It is Stantec's opinion that the remaining aquatic features would likely be considered potentially non-jurisdictional, would likely not be subject to Section 404 of the Clean Water Act, and placement of dredged or fill material would likely not require USACE authorization. These statements are based on our best professional opinion. The USACE and EPA reserve final authority regarding the boundaries and jurisdictional status of aquatic features.

## DELINEATION REPORT: RAYMONDVILLE DRAIN PROJECT

In the December 27, 2021 issue of the Federal Register (86 Federal Register 73522), the USACE announced the reissuance of 40 existing NWP and the issuance of one new NWP. The USACE also announced the reissuance of the 32 existing NWP general conditions. These 41 NWPs and their general conditions went into effect on February 25, 2022. If Hidalgo County Drainage District No. 1 proposes to impact potential waters of the U.S., including the placement of dredged and fill material, USACE authorization under Section 404 of the Clean Water Act will likely be required. These activities may be authorized by the USACE-Galveston District under the 2021/2022 NWP Program or under a Standard Individual Permit.

NWPs are general permits issued on a nationwide basis to streamline the authorization of activities that result in no more than minimal individual and cumulative adverse environmental effects. Many of the proposed NWPs require notification to the district engineer before commencing those activities, to ensure that the activities authorized by those NWPs cause no more than minimal individual and cumulative adverse environmental effects.

Under the 2021/2022 NWP Program, NWP 43 (Storm Water Management Facilities) allows the placement of dredged or fill material into non-tidal waters of the U.S. for the construction of stormwater management facilities, including stormwater detention basins and retention basins and other stormwater management facilities; the construction of water control structures, outfall structures and emergency spillways; the construction of low impact development integrated management features such as bioretention facilities (e.g., rain gardens), vegetated filter strips, grassed swales, and infiltration trenches; and the construction of pollutant reduction green infrastructure features designed to reduce inputs of sediments, nutrients, and other pollutants into waters, such as features needed to meet reduction targets established under Total Maximum Daily Loads set under the Clean Water Act. The discharge must not cause the loss of greater than ½-acre of non-tidal waters of the United States. This NWP does not authorize discharges of dredged or fill material into non-tidal wetlands adjacent to tidal waters. This NWP does not authorize discharges of dredged or fill material for the construction of new stormwater management facilities in perennial streams.

The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if the activity includes discharges of dredged or fill material into non-tidal waters of the United States for the construction of a new stormwater management facilities or pollutant reduction green infrastructure features, or the expansion of existing stormwater management facilities or pollutant reduction green infrastructure features. Maintenance activities do not require pre-construction notification if they are limited to restoring the original design capacities of the stormwater management facility or pollutant reduction green infrastructure feature. Compensatory mitigation for unavoidable permanent impacts to waters of the U.S. is generally required when the total impact acreage exceeds 1/10-acre of wetland or 3/10- acre of stream bed for each authorized action.

In addition to the NWP Program, the USACE issues project-specific authorizations for work that does not meet the above-mentioned NWP criteria. This request is known as a Standard Individual Permit (SIP) and requires pre-construction notification regardless of the proposed project activities, construction means/methods, or acreage of proposed temporary/permanent disturbances. The SIP process is generally a more strenuous process with requirements for public notice and project specific water quality certification (Section 401 of the Clean Water Act administered by the Texas Commission on Environmental Quality).

### 5.0 CONCLUSION

A delineation of aquatic features, including wetlands, was conducted for the approximate 4,768-acre project area in April through August 2024. This effort resulted in the delineation of 78 aquatic features. Of these 78 delineated aquatic features, 10 wetlands and 13 tributaries would likely be considered potentially jurisdictional, would likely be subject to Section 404 of the Clean Water Act, and placement of dredged or fill material into these features would likely require USACE authorization (**Table 3** and **Figure 7**). It is Stantec's opinion that the remaining aquatic features would likely be considered potentially non-jurisdictional, would likely not be subject to Section 404 of the Clean Water Act, and placement of dredged or fill material would likely not require USACE authorization.

The USACE and EPA reserve final authority regarding the boundaries and jurisdictional status of aquatic features. To coordinate delineation concurrence or obtain an official jurisdictional determination from the USACE, this report must be submitted to the USACE Galveston District with appropriate request forms.

## DELINEATION REPORT: RAYMONDVILLE DRAIN PROJECT

### 6.0 REFERENCES

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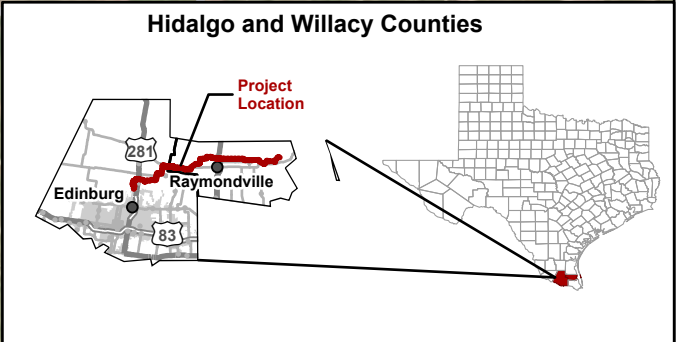
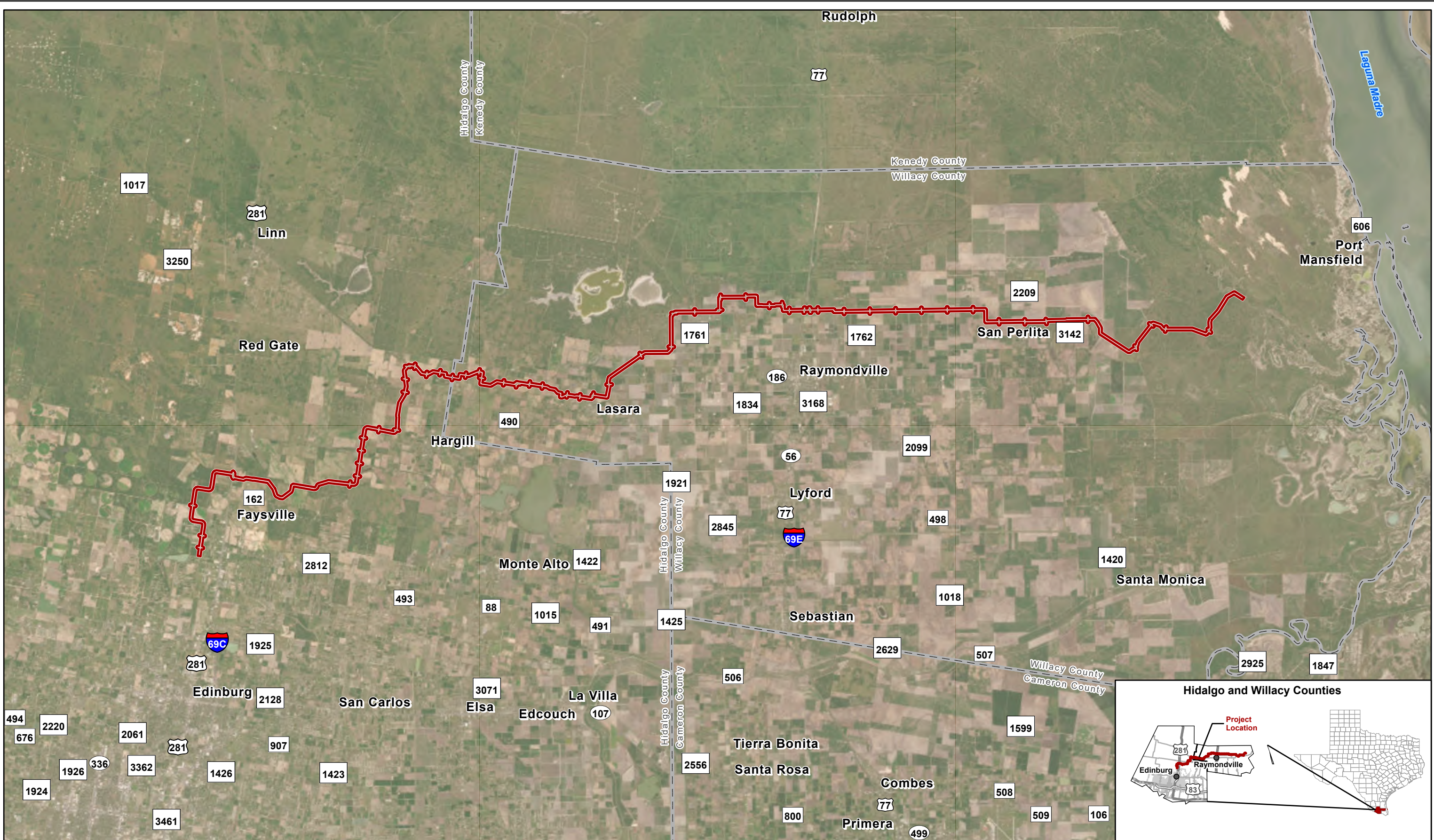


## APPENDICES

## **Appendix A**

### **FIGURES**







**Figure 1.**  
**Project Location (Aerial Base)**

Raymondville Drain

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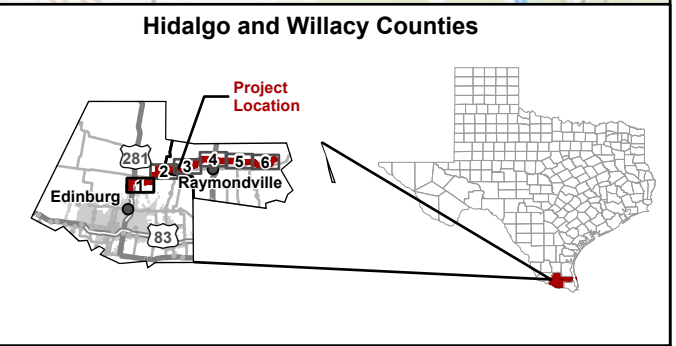
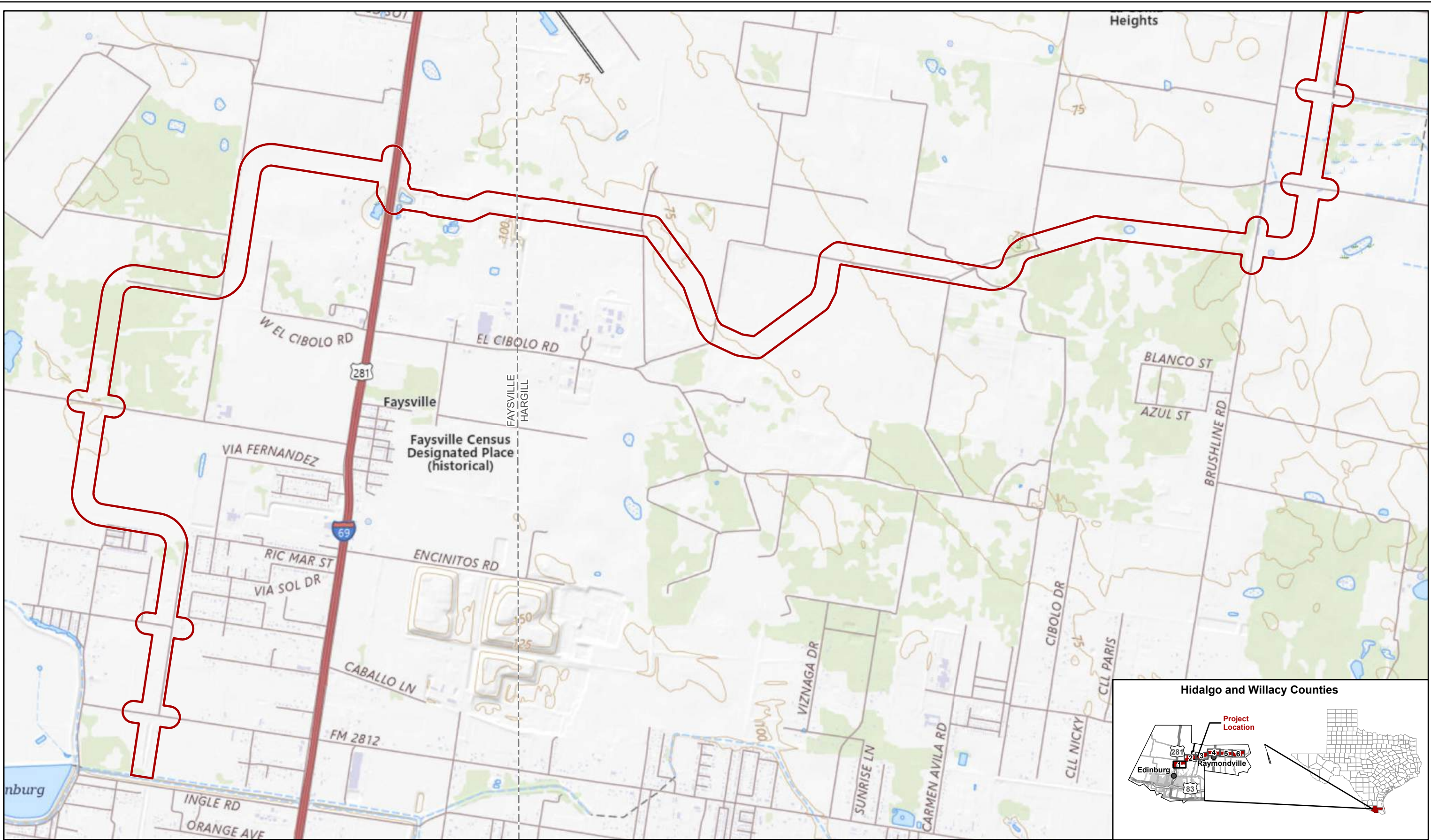
 Project Location



 Stantec

0 3.5 Miles 1 in = 3.5 miles  
0 5 Kilometers Scale: 1:221,760  
Date: 9/18/2024





**Figure 2-1.**  
**Project Location (Topographic Base)**

Raymondville Drain

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 Project Location

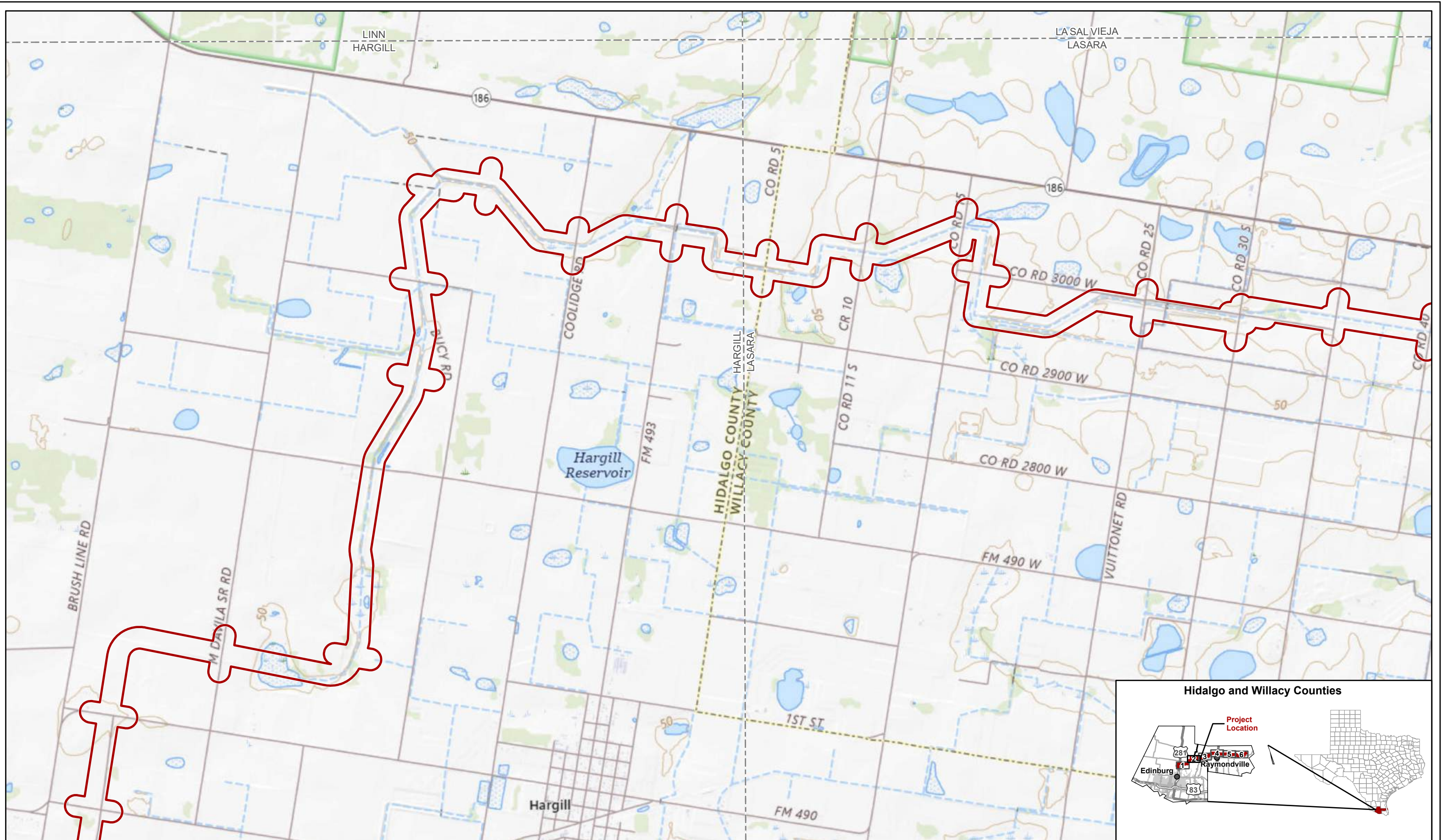


 Stantec

Topographic Source: USGS (2024)  
USGS 7.5' Quadrangles: Faysville, Hargill

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Date: 9/3/2024






**Figure 2-2.**  
**Project Location (Topographic Base)**

Raymondville Drain

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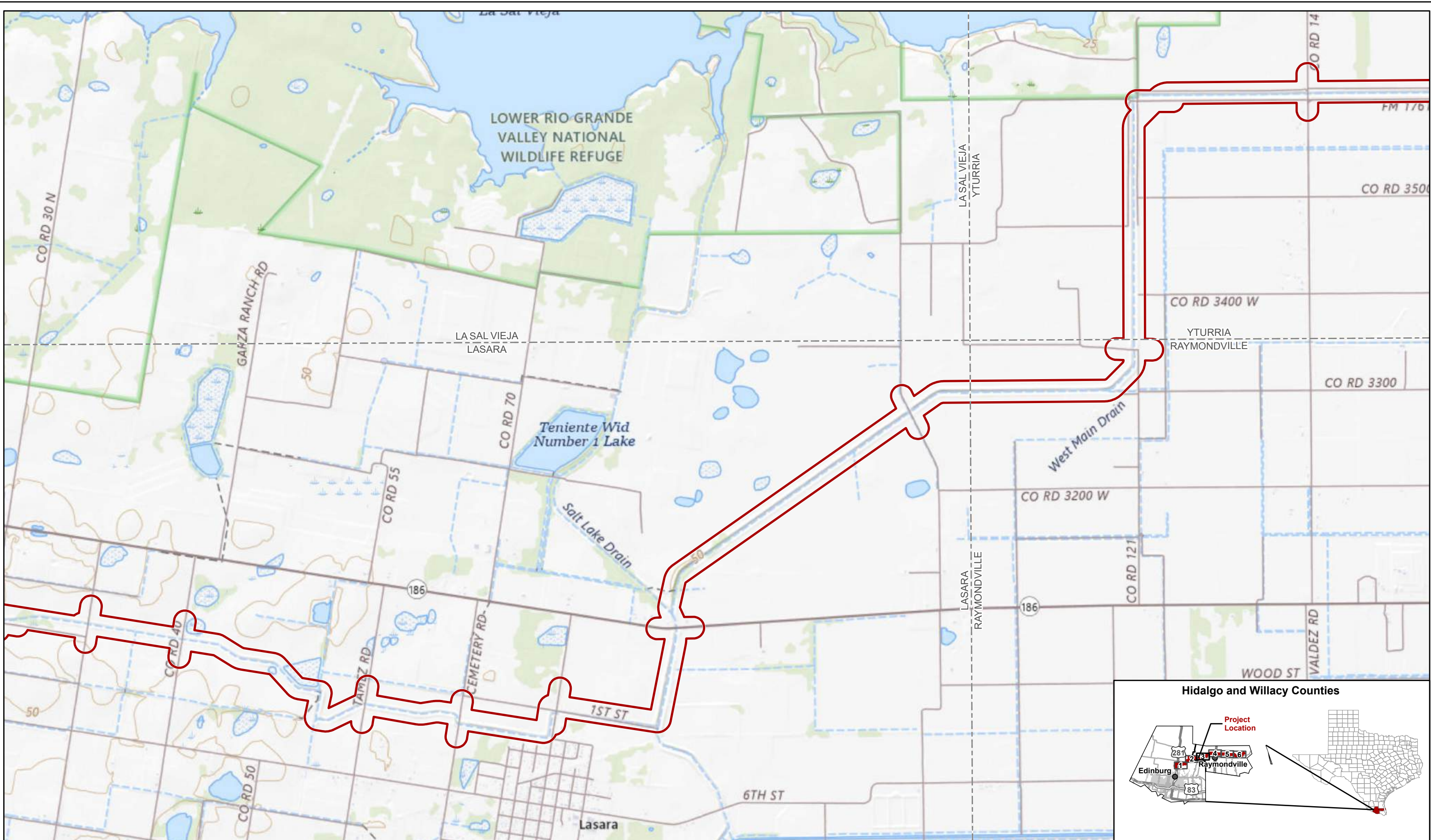


 Stantec

Topographic Source: USGS (2024)  
USGS 7.5' Quadrangles: Hargill, La Sal Vieja, Lasara, Linn

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0 600 Meters Scale: 1:30,000  
Date: 9/3/2024






**Figure 2-3.**  
**Project Location (Topographic Base)**

Raymondville Drain

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 Project Location



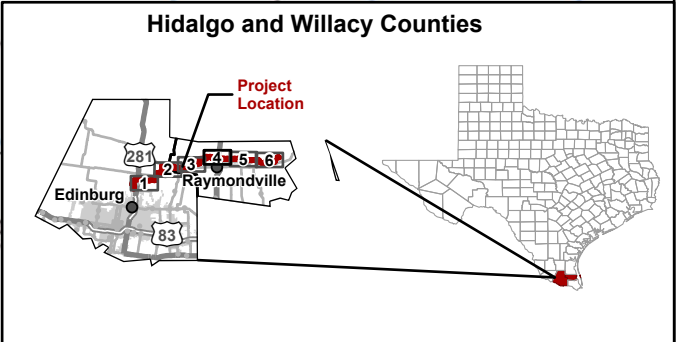
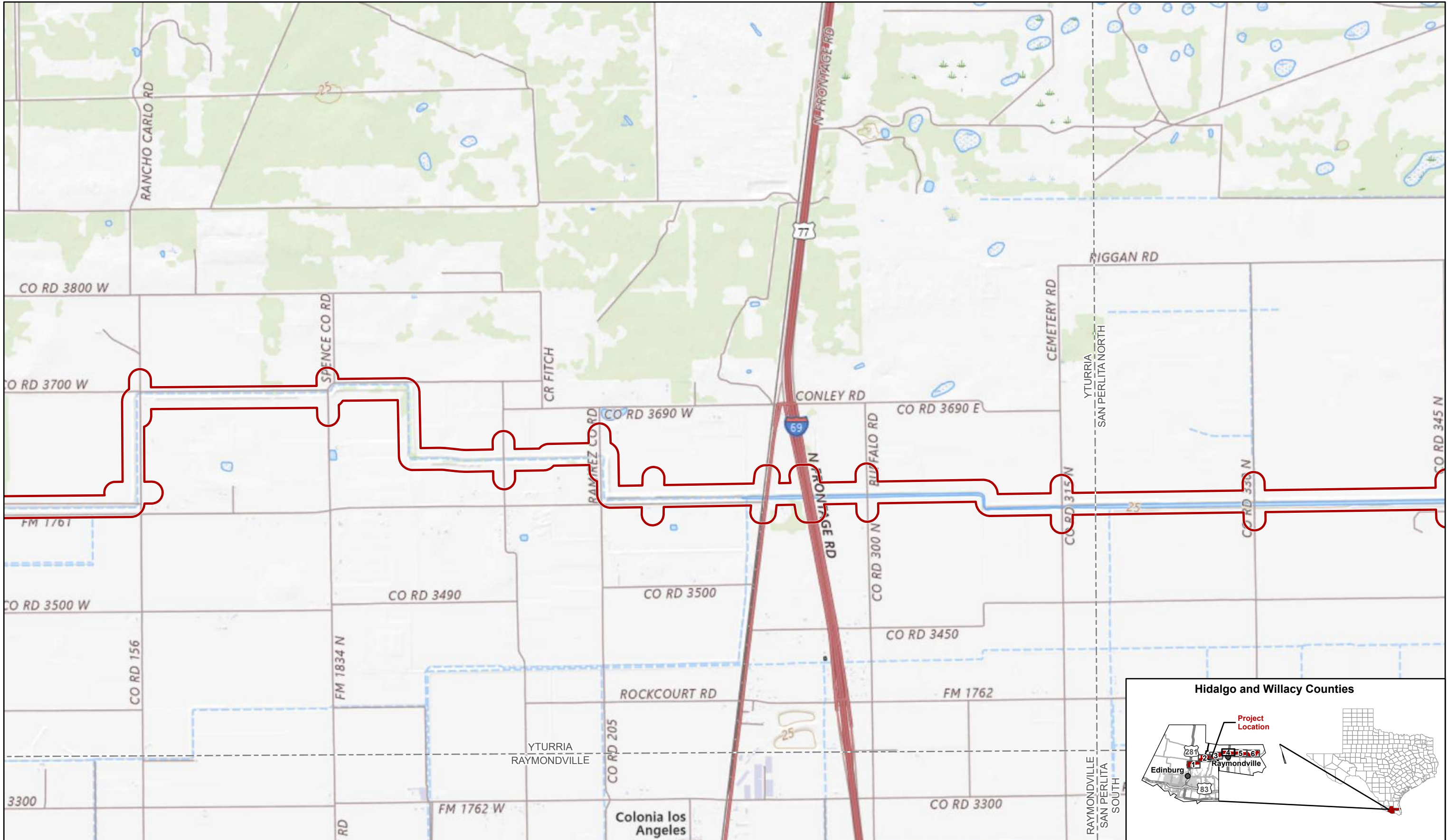
 Stantec

Topographic Source: USGS (2024)

USGS 7.5' Quadrangles: La Sal Vieja, Lasara, Raymondville, Yturria

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Date: 9/3/2024





**Figure 2-4.**  
**Project Location (Topographic Base)**

Raymondville Drain

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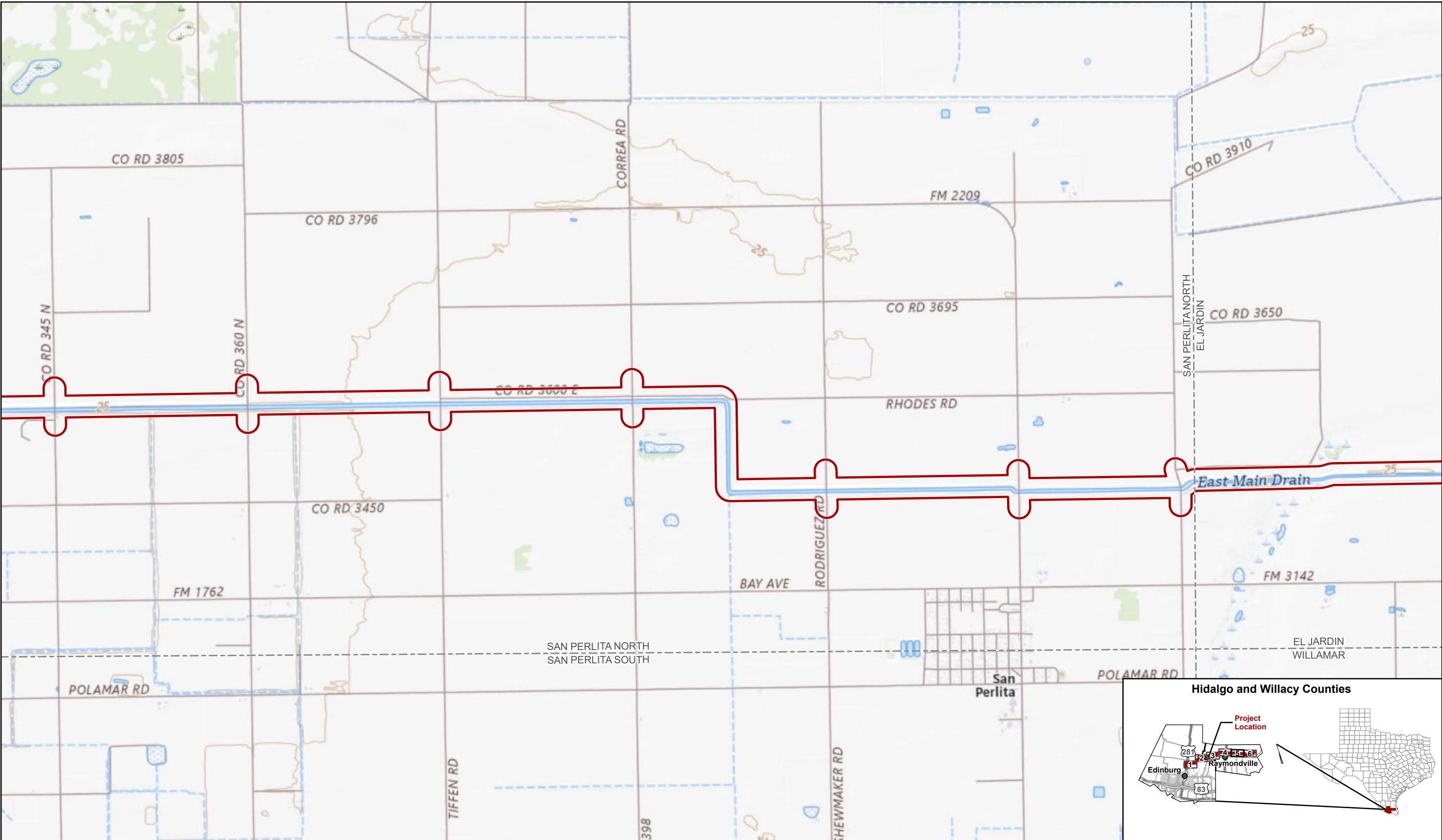


 Stantec

Topographic Source: USGS (2024)

USGS 7.5' Quadrangles: Raymondville, San Perlita North, San Perlita South, Yturria


0 2,500 Feet 1 in = 2,500 feet  
0 600 Meters Scale: 1:30,000  
Date: 9/3/2024



**Figure 2-5.**  
**Project Location (Topographic Base)**

Raymondville Drain

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 Project Location



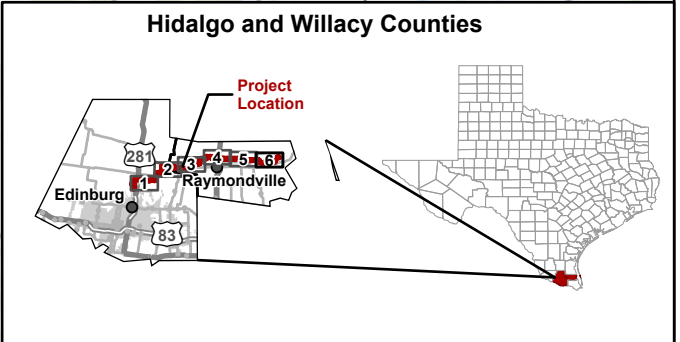
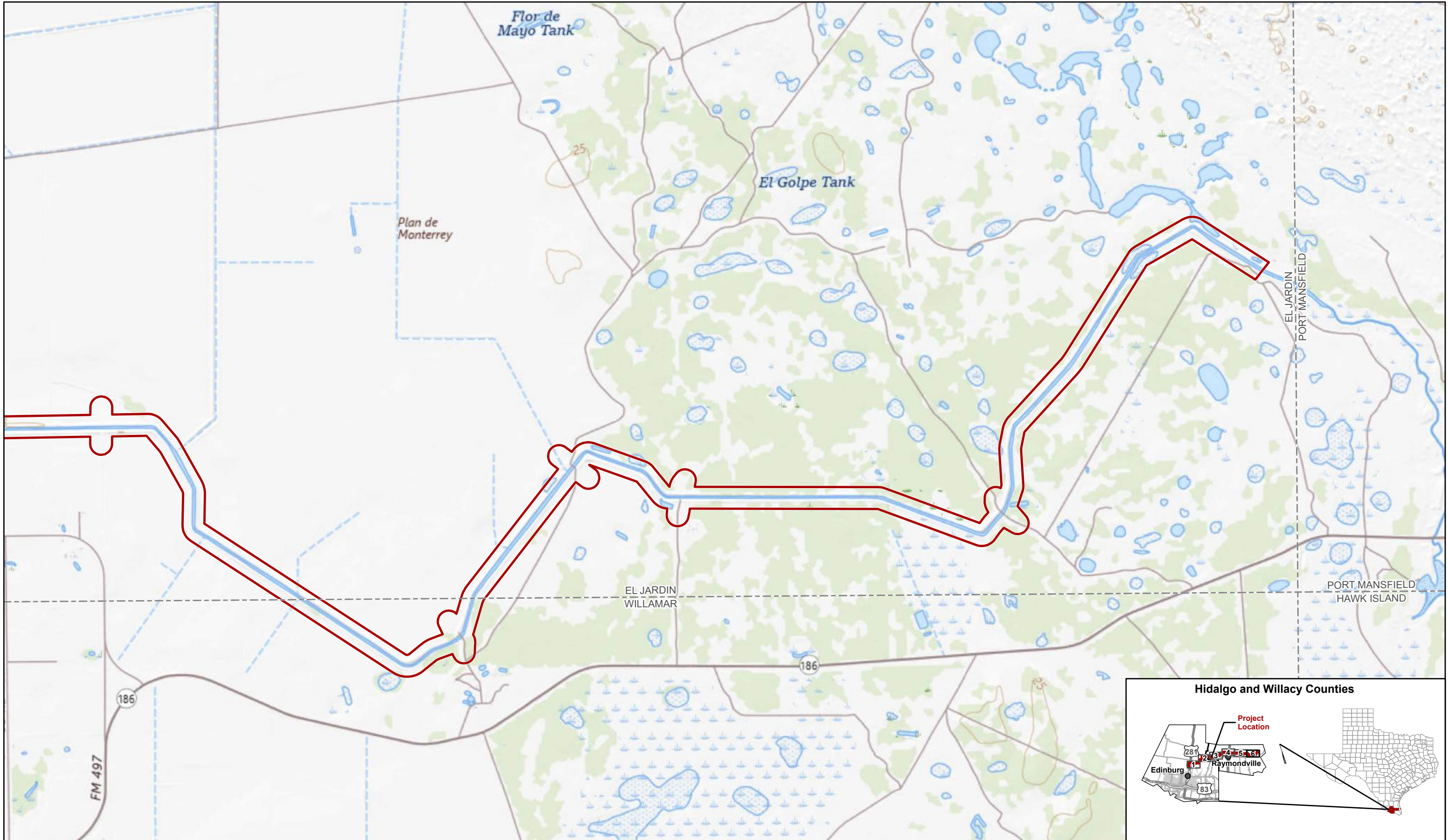
 Stantec

Topographic Source: USGS (2024)

USGS 7.5' Quadrangles: El Jardin, San Perlita North, San Perlita South, Willamar

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0 600 Meters Scale: 1:30,000  
Date: 9/3/2024





**Figure 2-6.**  
**Project Location (Topographic Base)**

Raymondville Drain

Path: U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx - raymondville drain delineation figure 2 project location topo. 20240903.tls

 Project Location



 Stantec

Topographic Source: USGS (2024)

USGS 7.5' Quadrangles: El Jardin, Hawk Island, Port Mansfield, Willamar

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Date: 9/3/2024



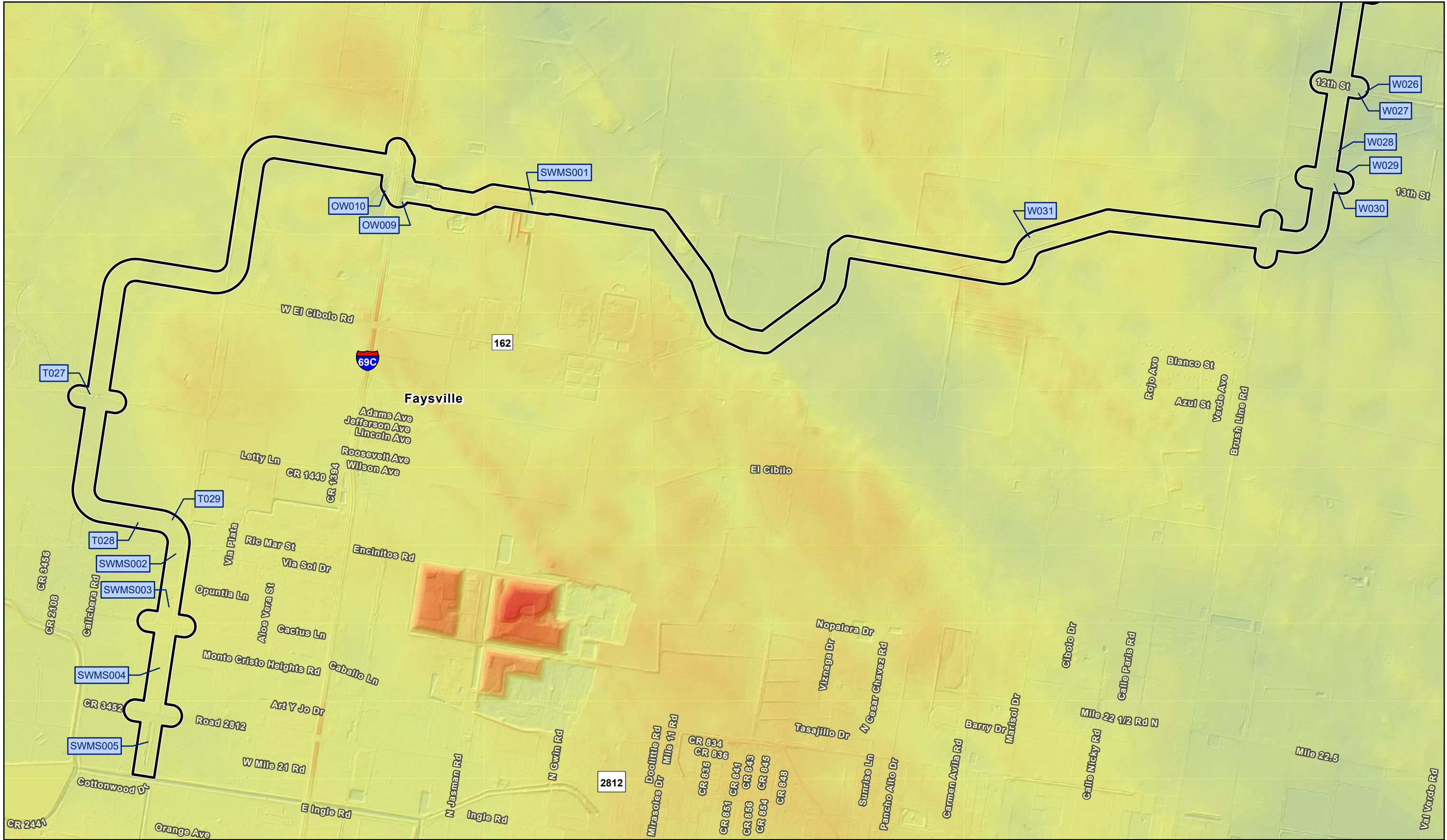
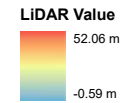


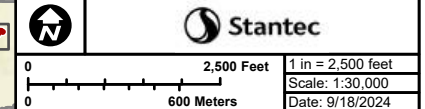
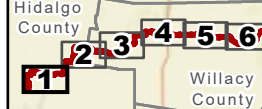
Figure 3-1.  
Project Area LiDAR

Raymondville Drain

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Project Location  
Delineated Feature  
Data Source: Stantec (2024)  
LIDAR Source: USGS (2018)



1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/18/2024



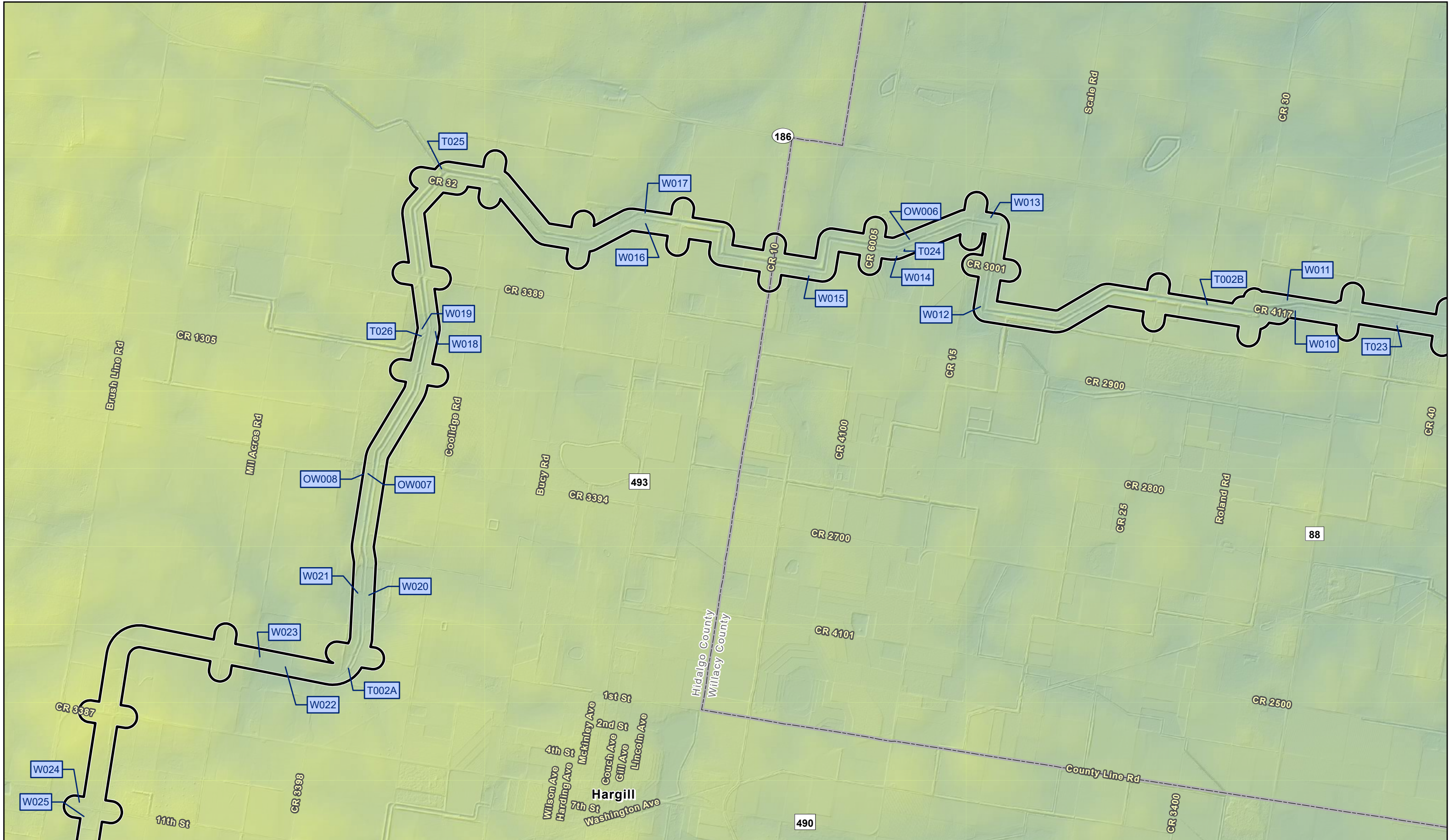
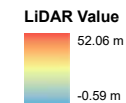


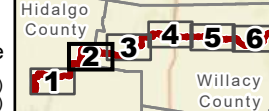
Figure 3-2.  
Project Area LiDAR

Raymondville Drain

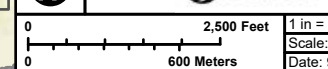
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Project Location  
 Delineated Feature  
Data Source: Stantec (2024)  
LiDAR Source: USGS (2018)



Stantec





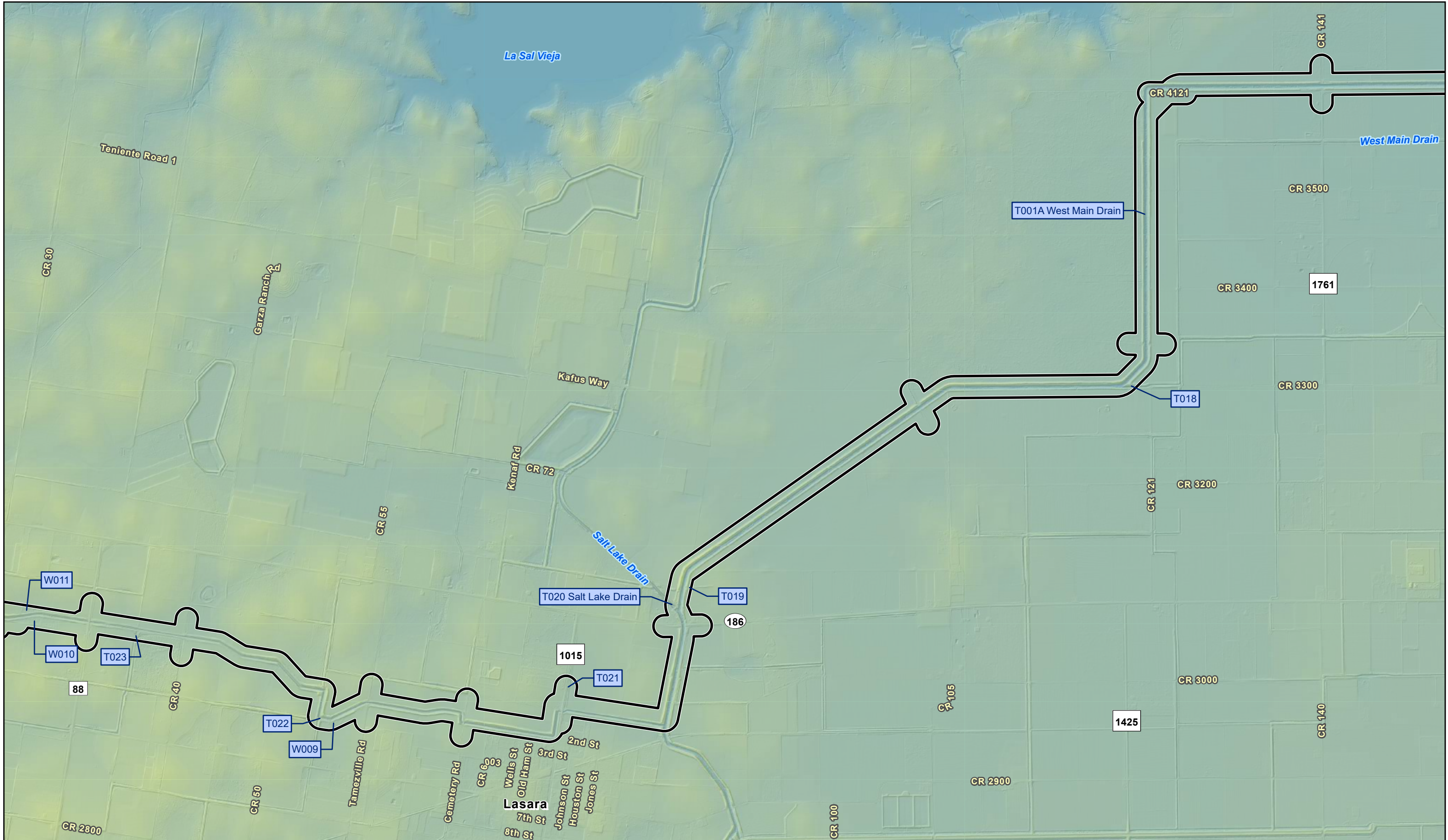
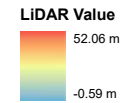


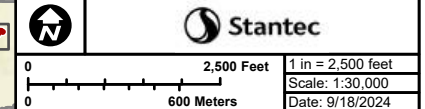
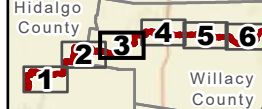
Figure 3-3.  
Project Area LiDAR

Raymondville Drain

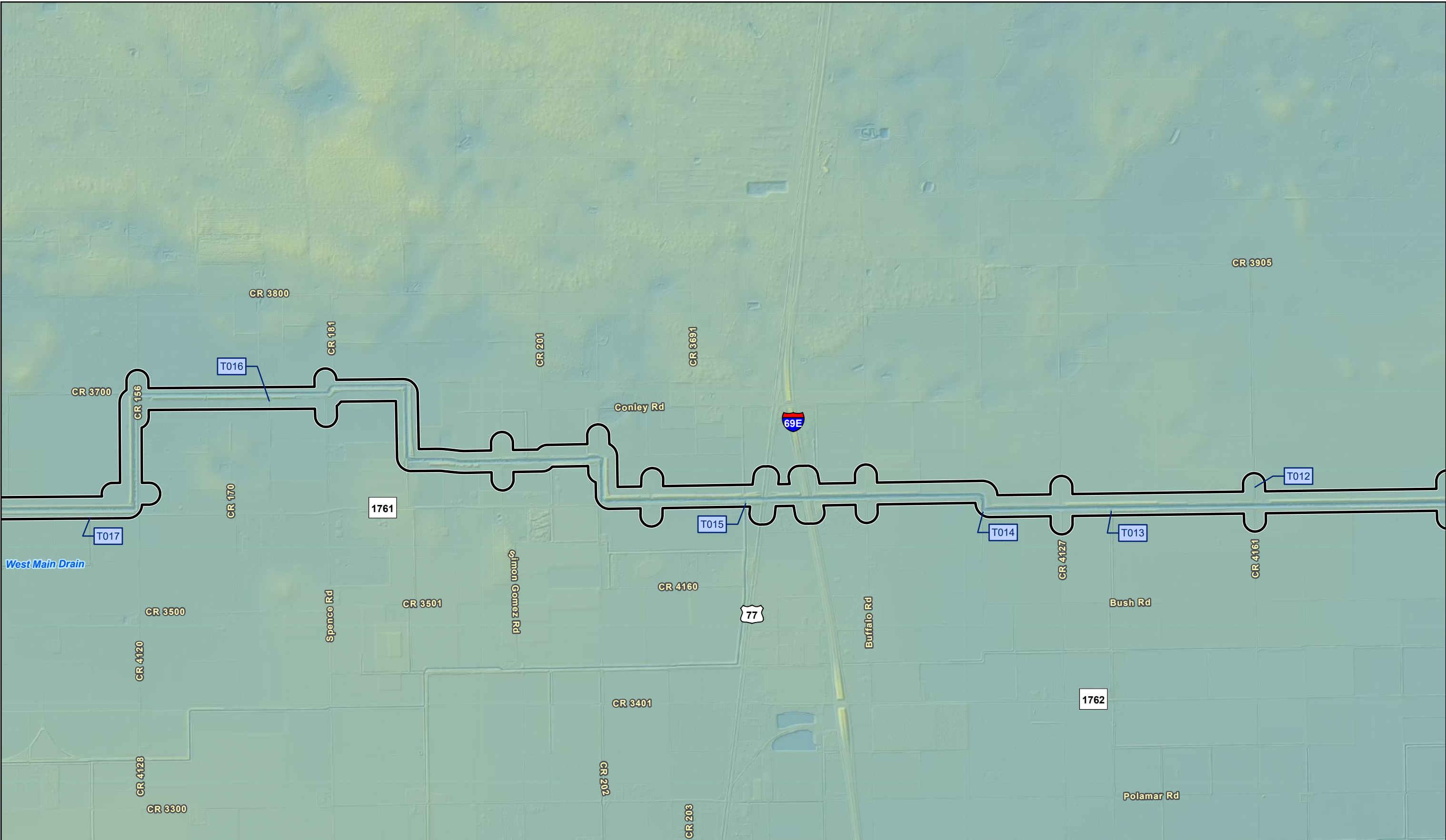
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Project Location  
Delineated Feature  
Data Source: Stantec (2024)  
LiDAR Source: USGS (2018)

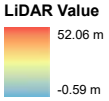




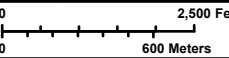
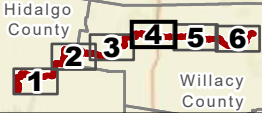


**Figure 3-4.**  
**Project Area LiDAR**

Raymondville Drain  
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**Project Location**  
 **Delineated Feature**  
Data Source: Stantec (2024)  
LiDAR Source: USGS (2018)



1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/18/2024



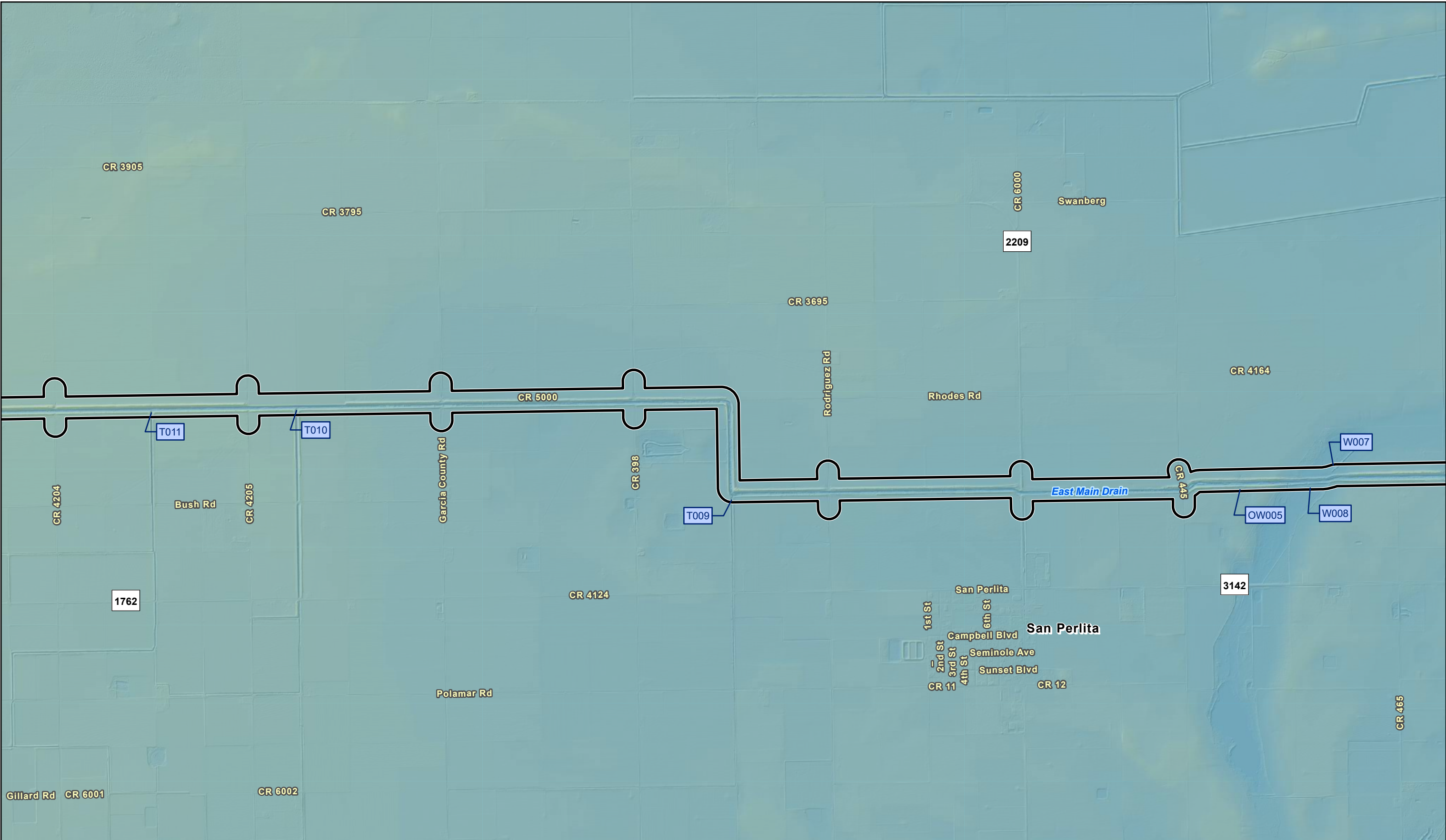
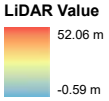
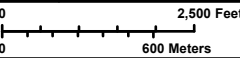
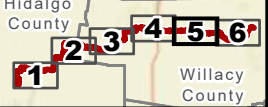


Figure 3-5.  
Project Area LiDAR

Raymondville Drain  
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx



Project Location  
 Delineated Feature  
Data Source: Stantec (2024)  
LiDAR Source: USGS (2018)



1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/18/2024

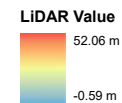




Figure 3-6.  
Project Area LiDAR

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

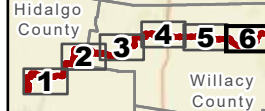


Project Location

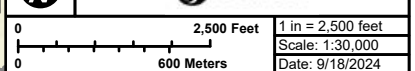
Delineated Feature

Data Source: Stantec (2024)

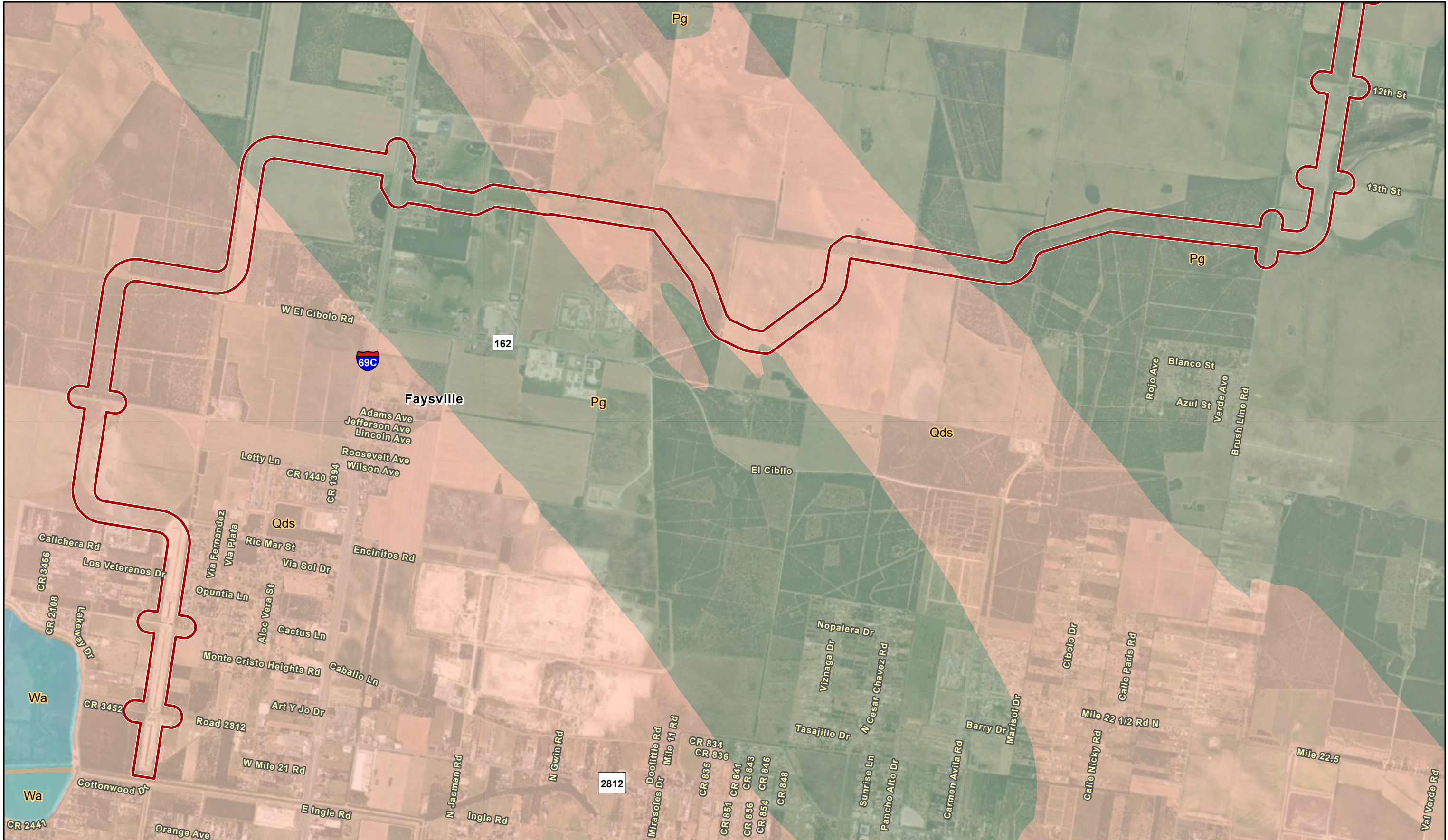
LiDAR Source: USGS (2018)



Stantec







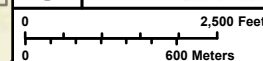
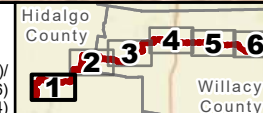
**Figure 4-1.**  
**Project Area Geology**

- Project Location
- Qds - Windblown deposits
- Pg - Goliad Formation
- Wa - Water

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Data Sources: Geologic Database of Texas (2007)/  
Geologic Atlas of Texas McAllen - Brownsville Sheet (1976)  
Aerial Source: Maxar (2021-2024)

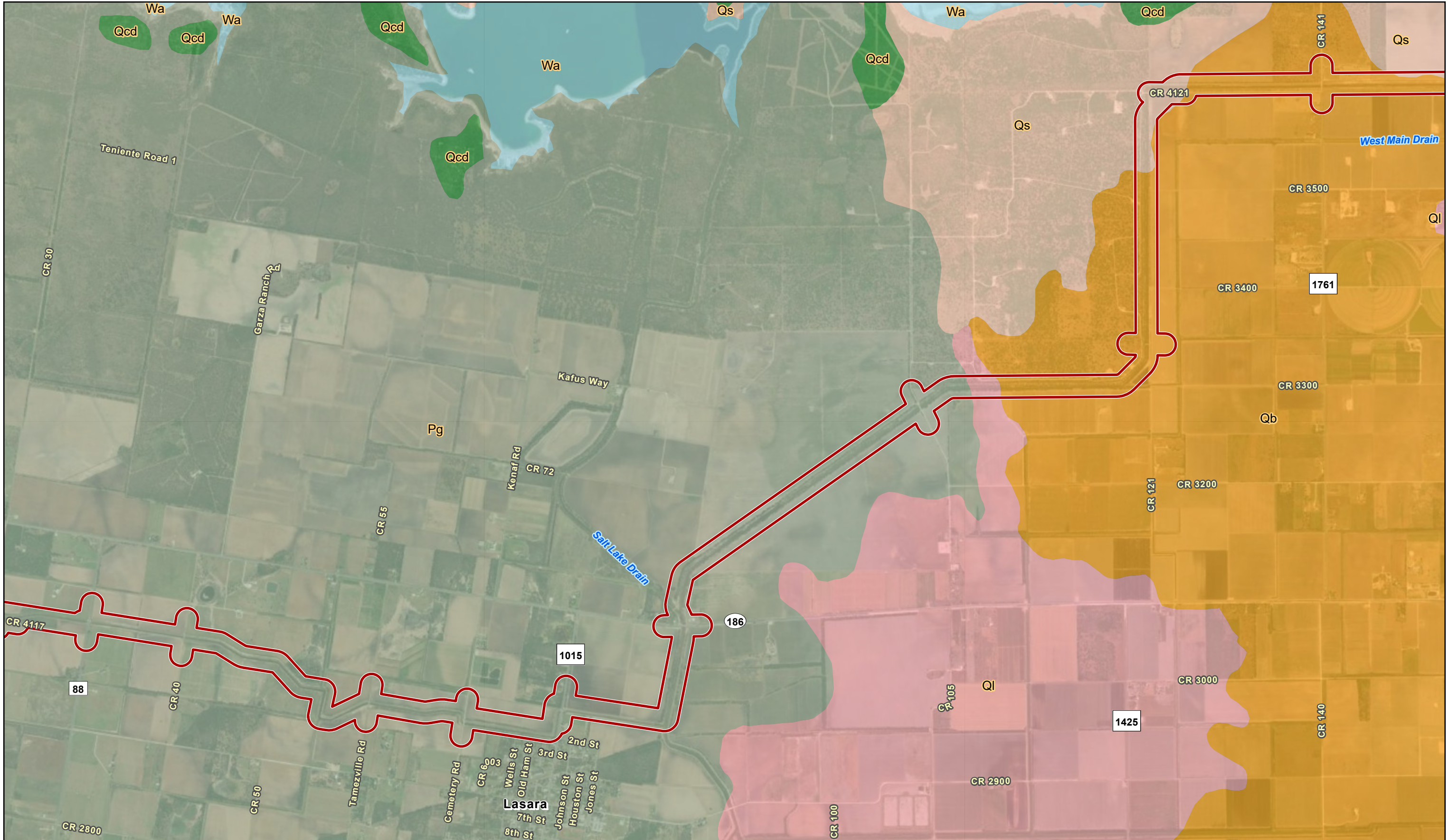


1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/18/2024









**Figure 4-3. Project Area Geology**

**Raymondville Drain**

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

**Legend:**

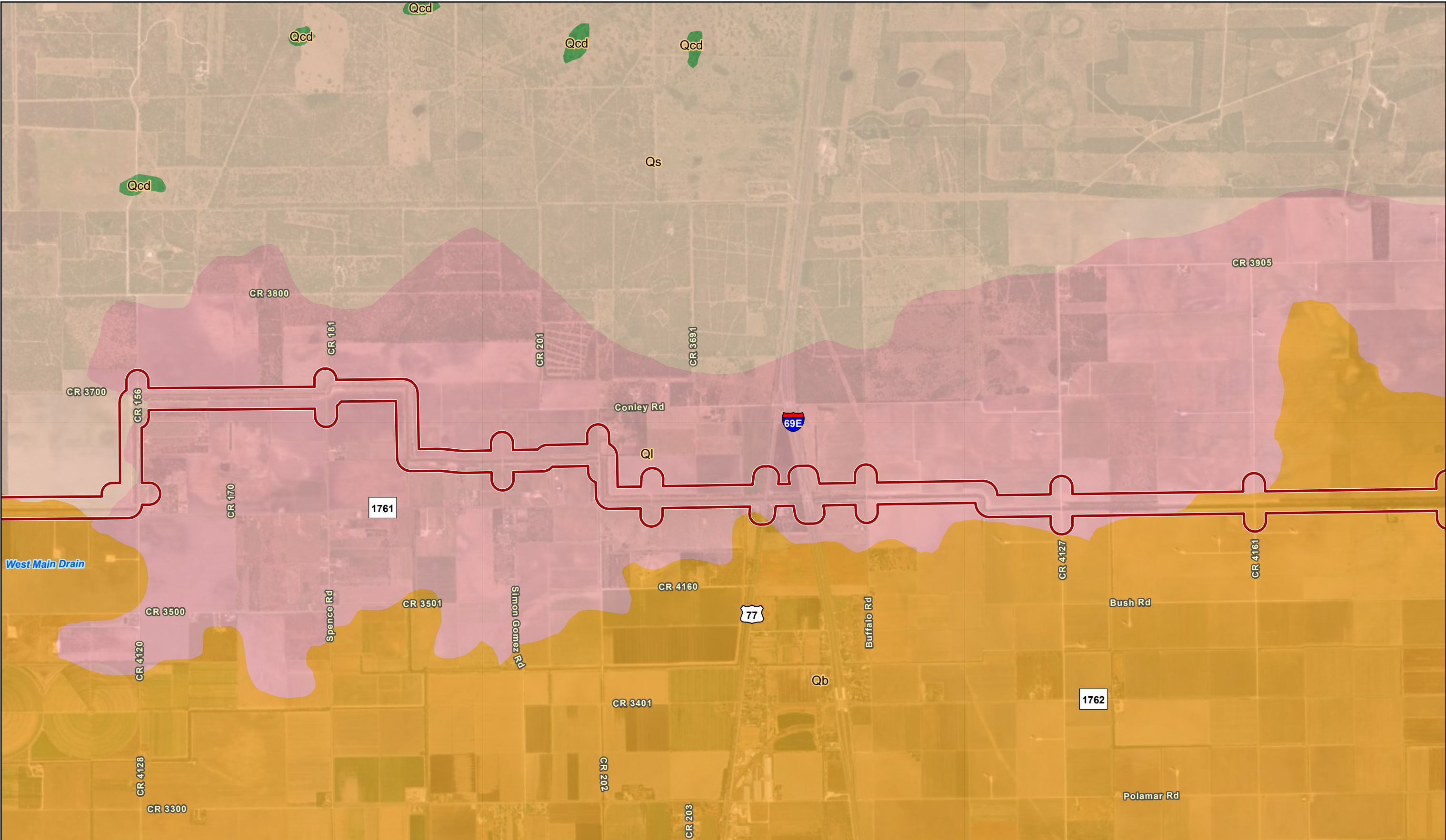
- Project Location
- Pg - Goliad Formation
- Qcd - Windblown sand (Clay-sand dune)
- Ql - Lissie Formation
- Qb - Beaumont Formation
- Qs - sand and silt in sheets
- Wa - Water

**Data Sources:** Geologic Database of Texas (2007)/  
Geologic Atlas of Texas McAllen - Brownsville Sheet (1976)  
Aerial Source: Maxar (2021-2024)

**Scale:** 1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/18/2024

**Stantec**





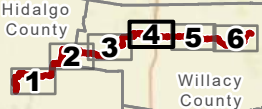
**Figure 4-4.**  
**Project Area Geology**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

- Project Location
- Qb - Beaumont Formation
- Qcd - Windblown sand (Clay-sand dune)
- Ql - Lissie Formation
- Qs - sand and silt in sheets

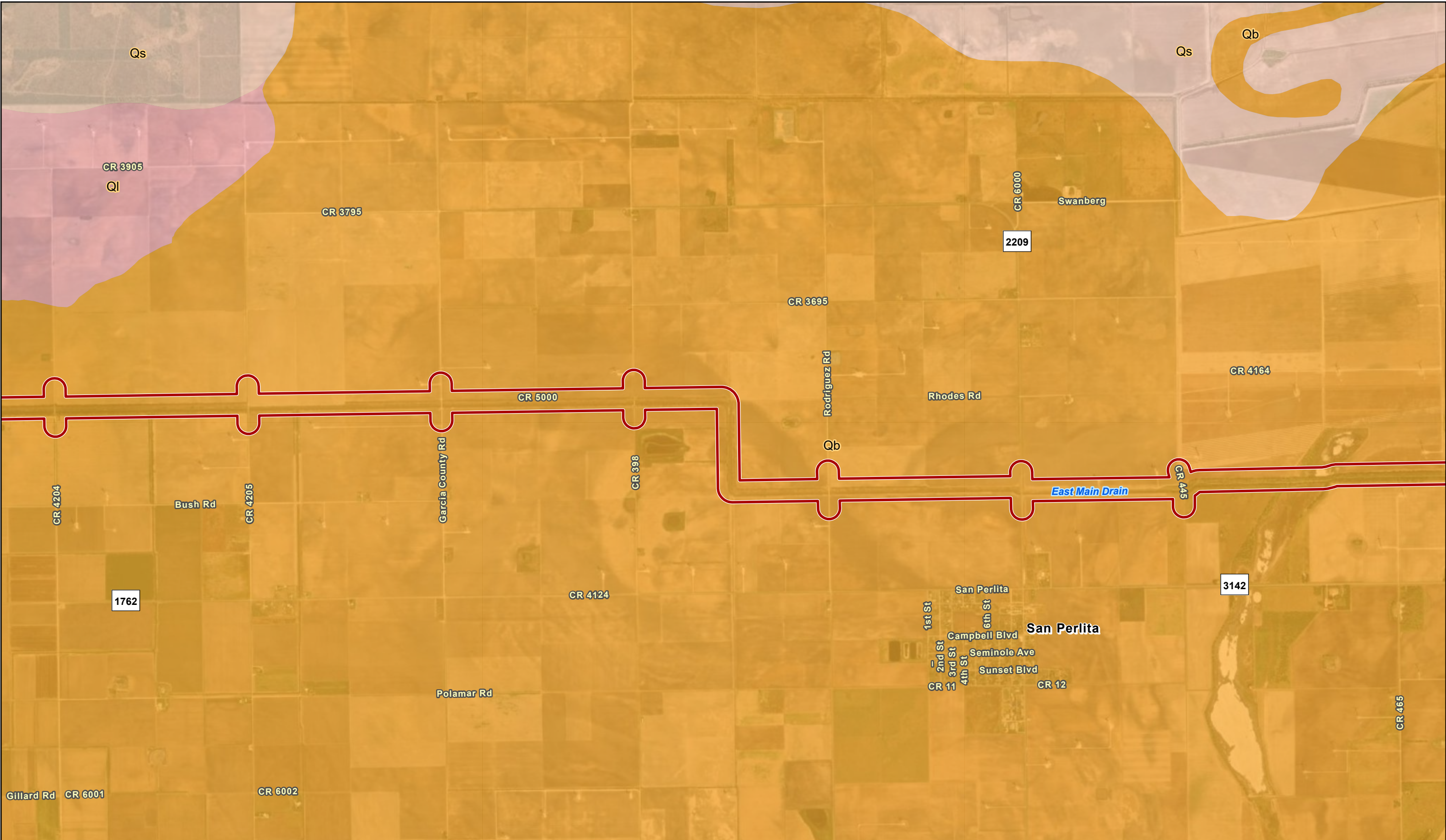
Data Sources: Geologic Database of Texas (2007)/  
Geologic Atlas of Texas McAllen - Brownsville Sheet (1976)  
Aerial Source: Maxar (2021-2024)



0 2,500 Feet  
0 600 Meters

1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/18/2024



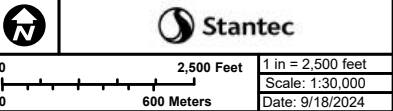
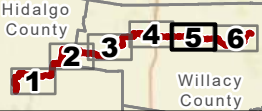


**Figure 4-5.**  
**Project Area Geology**

 Project Location  
 Qb - Beaumont Formation  
 QI - Lissie Formation  
 Qs - sand and silt in sheets

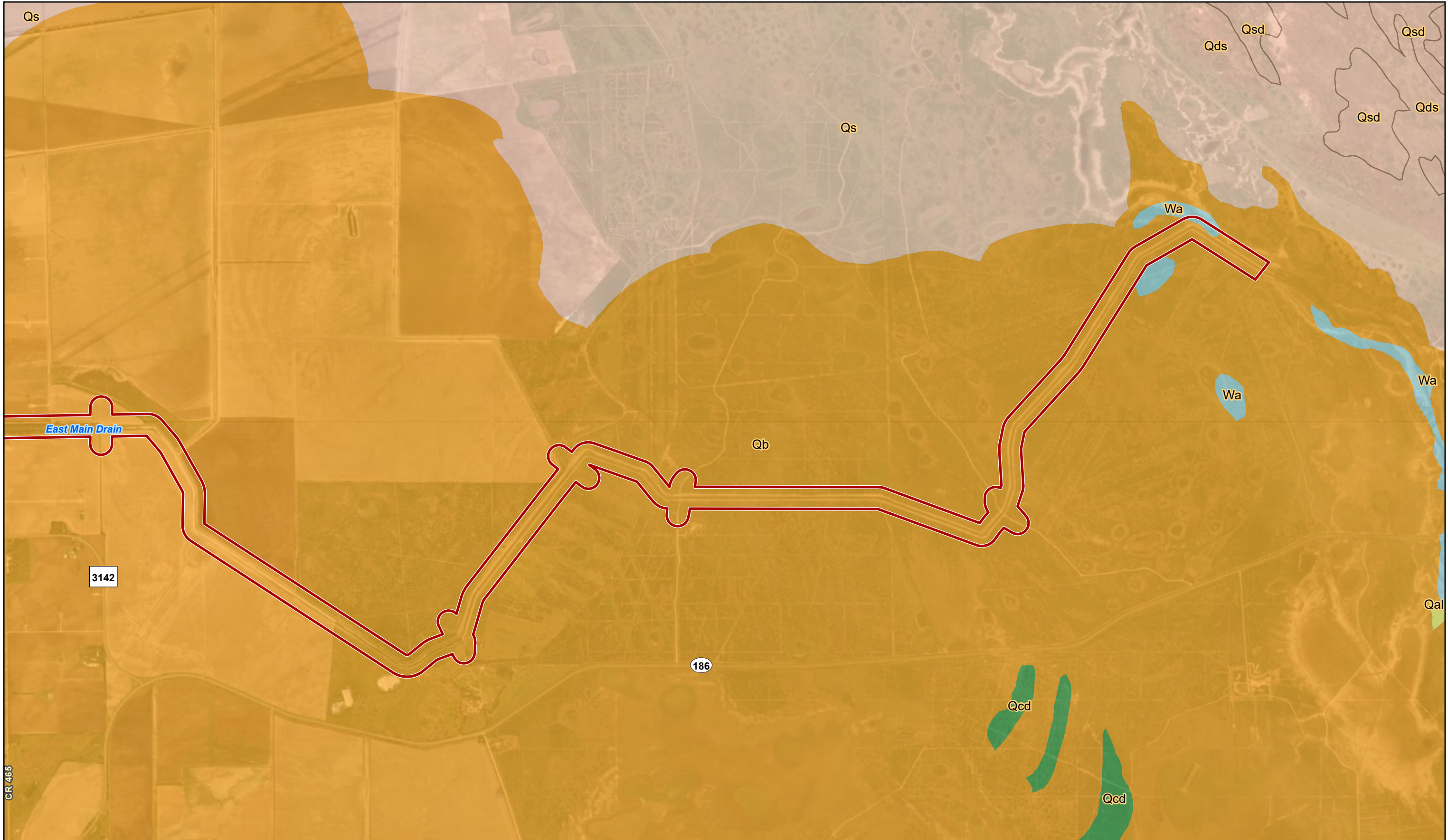
Raymondville Drain  
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Data Sources: Geologic Database of Texas (2007)/  
Geologic Atlas of Texas McAllen - Brownsville Sheet (1976)  
Aerial Source: Maxar (2021-2024)



 Stantec





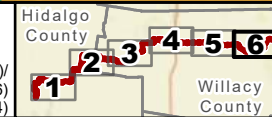
**Figure 4-6.**  
**Project Area Geology**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

- |                         |                                       |                      |
|-------------------------|---------------------------------------|----------------------|
| Project Location        | Qcd - Windblown sand (Clay-sand dune) | Qsd - Windblown sand |
| Qal - Alluvium          | Qds - Windblown deposits              | Wa - Water           |
| Qb - Beaumont Formation | Qs - sand and silt in sheets          |                      |

Data Sources: Geologic Database of Texas (2007)/  
Geologic Atlas of Texas McAllen - Brownsville Sheet (1976)  
Aerial Source: Maxar (2021-2024)



		1 in = 2,500 feet
0 2,500 Feet		Scale: 1:30,000
0 600 Meters		Date: 9/18/2024



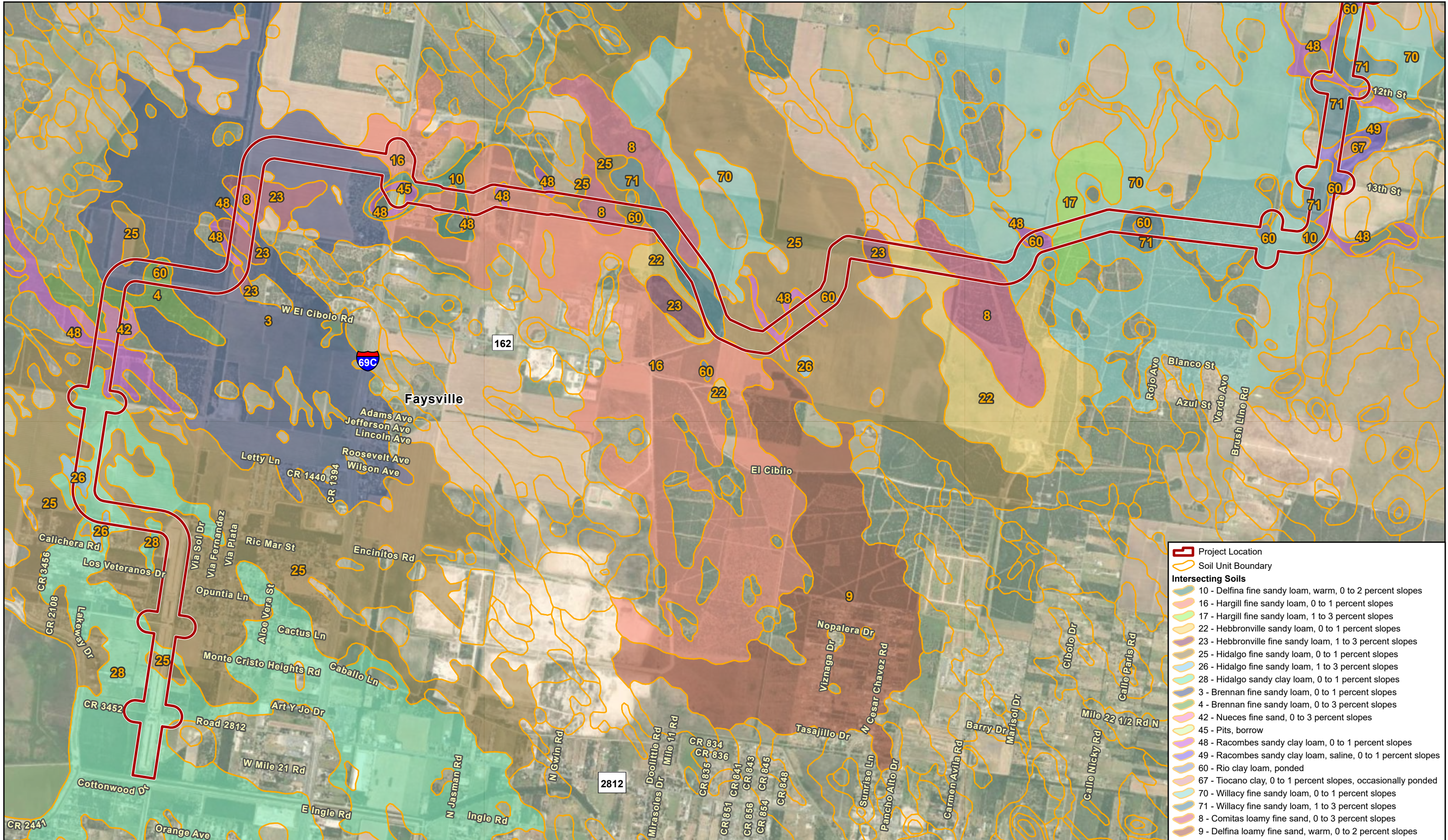
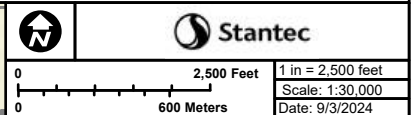
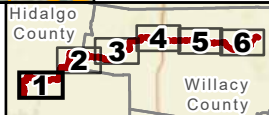


Figure 5-1.  
Project Area Soils

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Data Source: NRCS (2023)  
Aerial Source: Maxar (2021-2024)













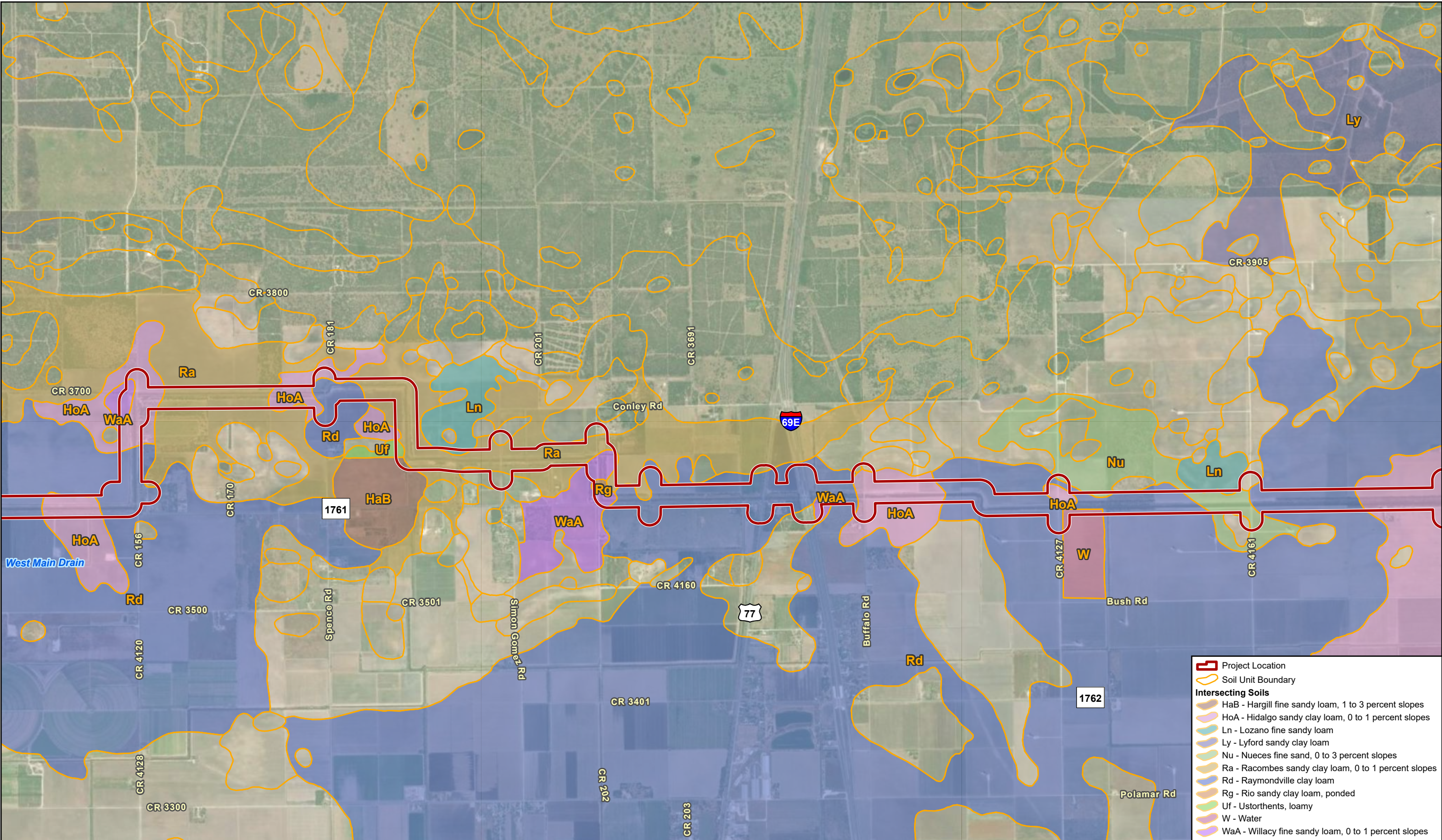
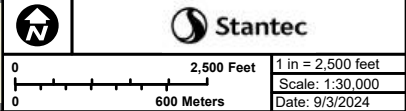
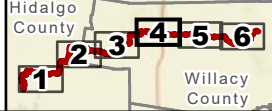


Figure 5-4.  
Project Area Soils

Raymondville Drain  
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Data Source: NRCS (2023)  
Aerial Source: Maxar (2021-2024)





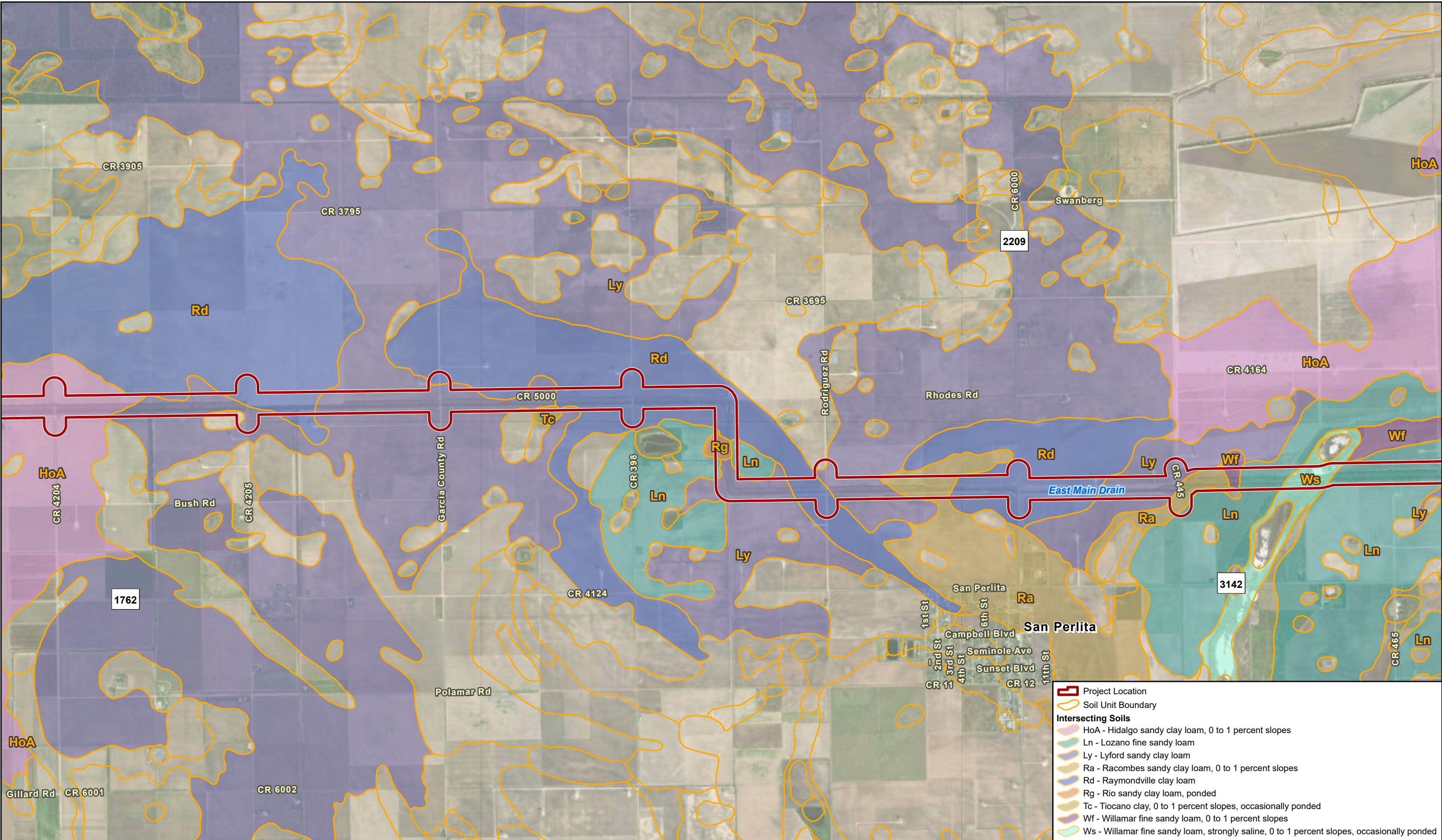
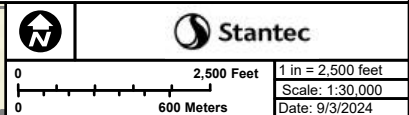
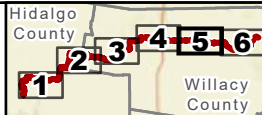


Figure 5-5.  
Project Area Soils

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Data Source: NRCS (2023)  
Aerial Source: Maxar (2021-2024)





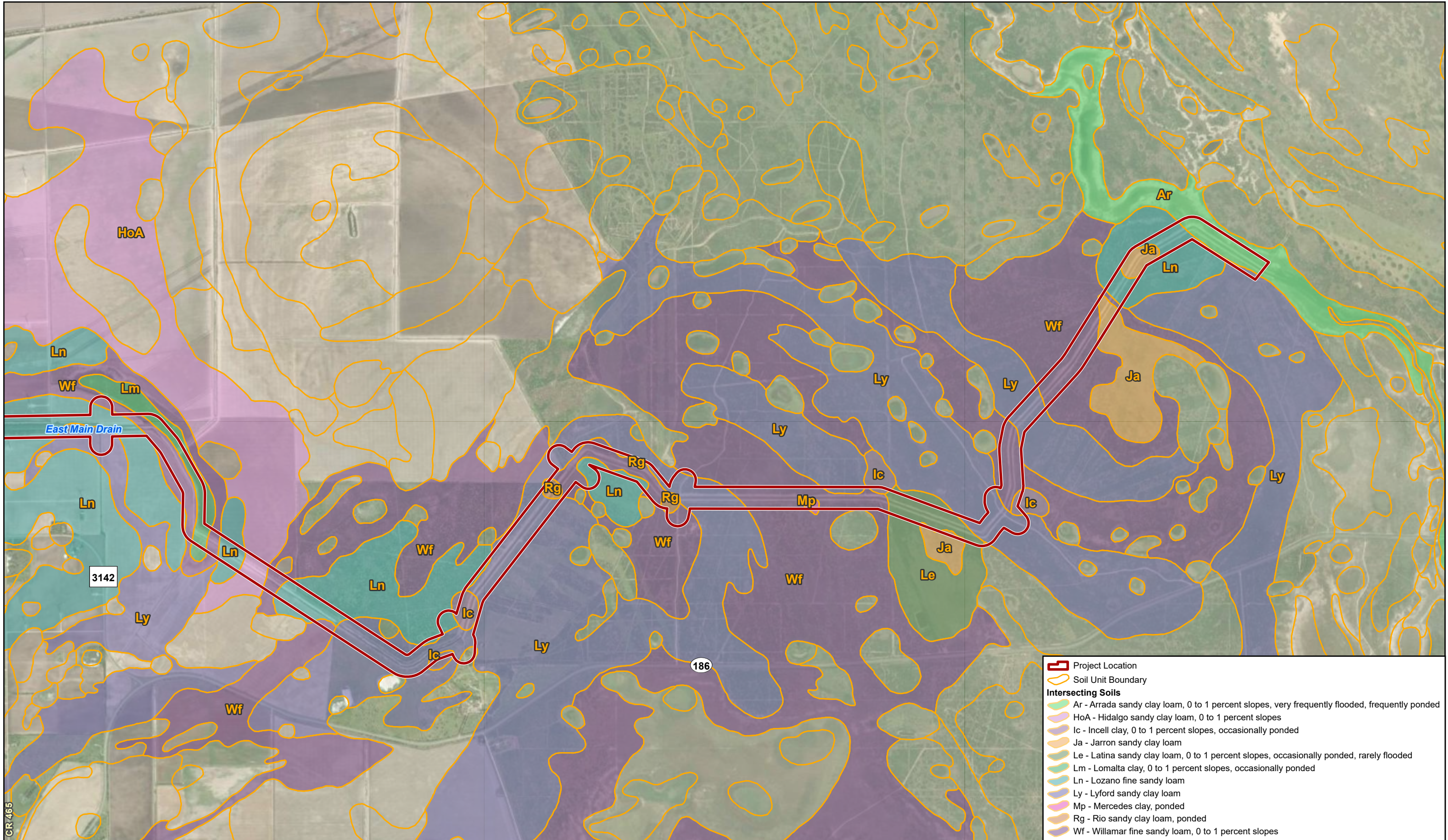
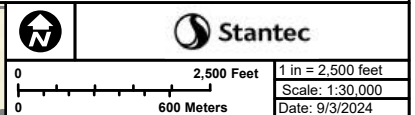
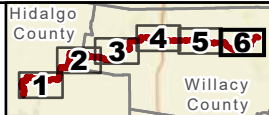


Figure 5-6.  
Project Area Soils

Raymondville Drain

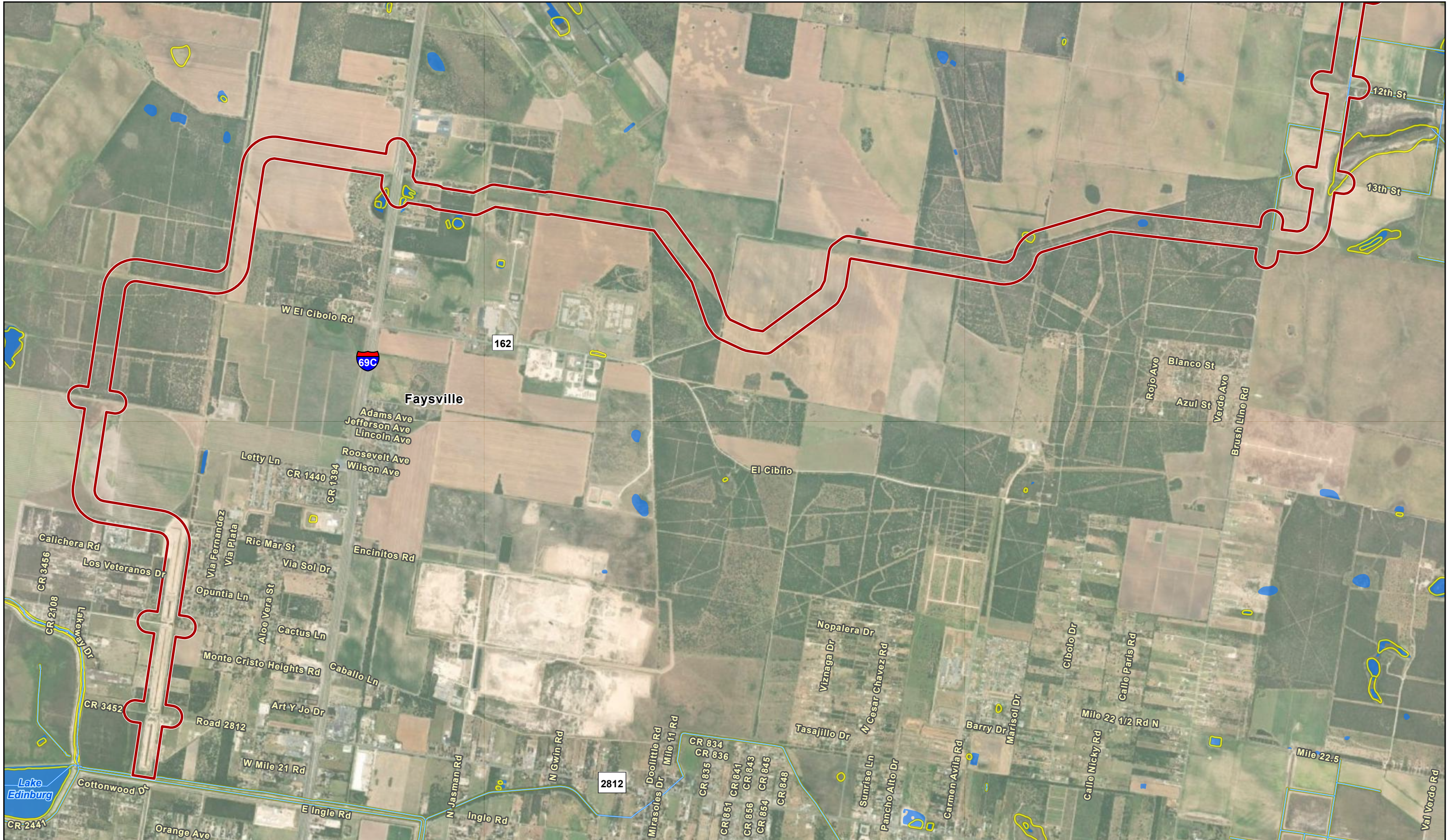
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Data Source: NRCS (2023)  
Aerial Source: Maxar (2021-2024)






Date: 9/3/2024





**Figure 6-1.**  
**Desktop Water Resources**

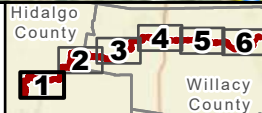
 Project Location  
 NHD Stream  
 NHD Water  
 NWI Wetland



Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Note: the map extent falls partially within an area unmapped by FEMA

Data Sources: NHD (2023), NWI (2024),  
FEMA NFHL (2024), Stantec (2024)  
Aerial Source: Maxar (2021-2024)

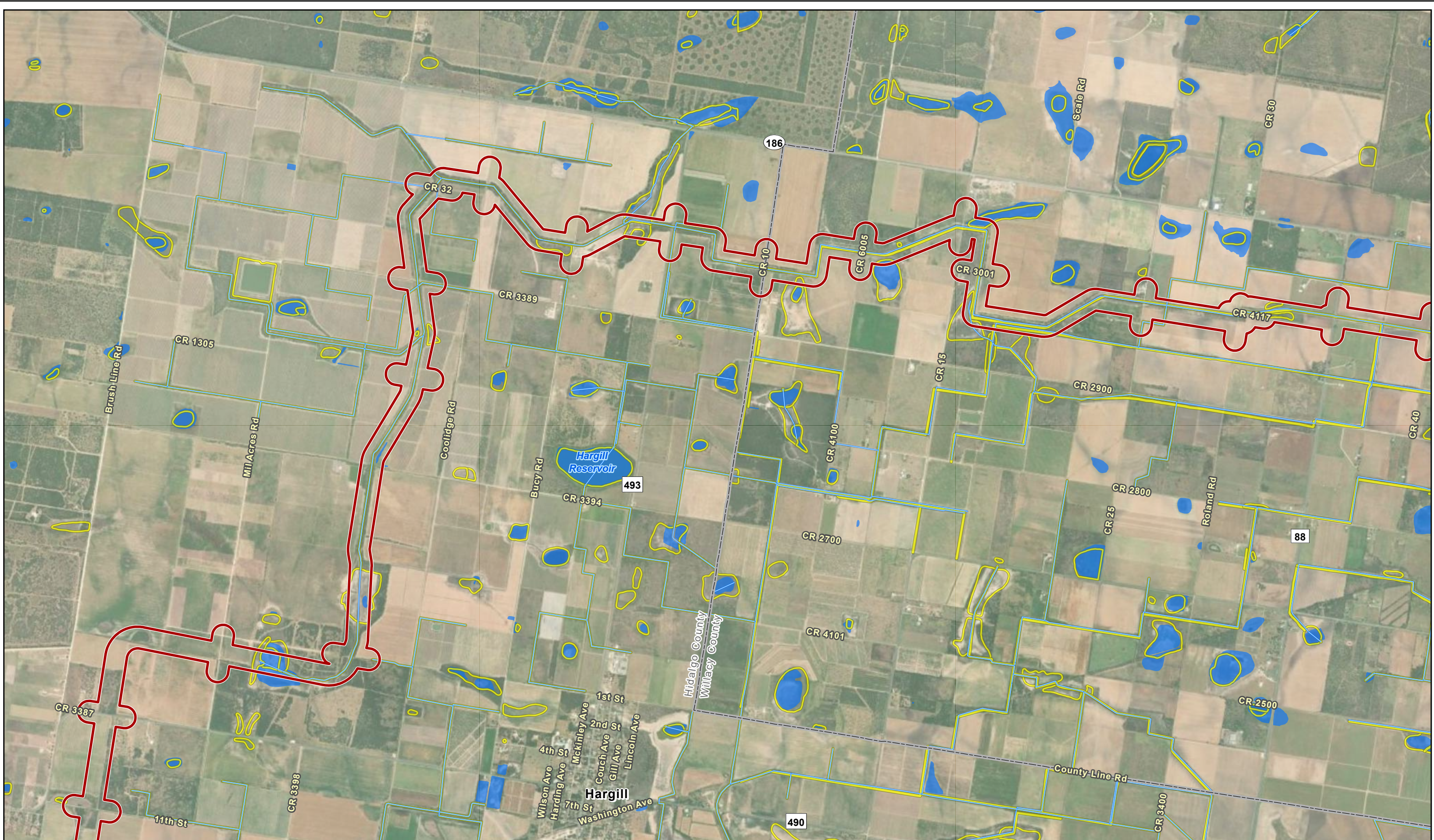


0 2,500 Feet  
0 600 Meters

1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/3/2024





**Figure 6-2.**  
**Desktop Water Resources**

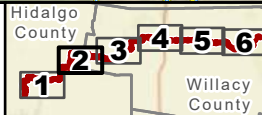
- Project Location
- NHD Water
- NWI Wetland
- NHD Stream

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

Note: the map extent falls partially within an area unmapped by FEMA

Data Sources: NHD (2023), NWI (2024),  
FEMA NFHL (2024), Stantec (2024)  
Aerial Source: Maxar (2021-2024)

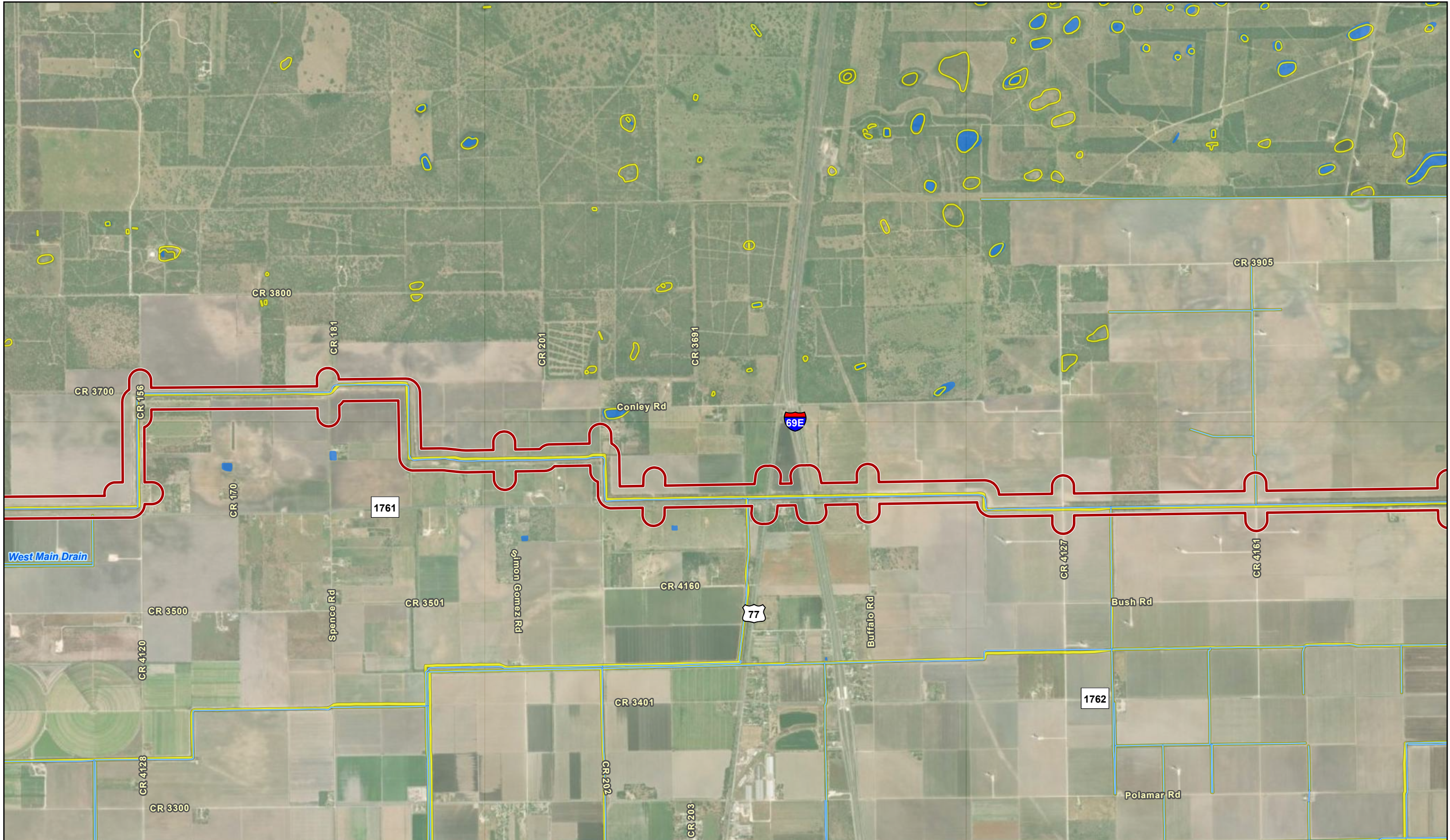


1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/3/2024












**Figure 6-4.**  
**Desktop Water Resources**

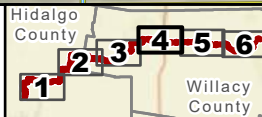
Raymondville Drain



U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

 Project Location  
 NHD Stream  
 NHD Water  
 NWI Wetland

Note: the map extent falls partially within an area unmapped by FEMA

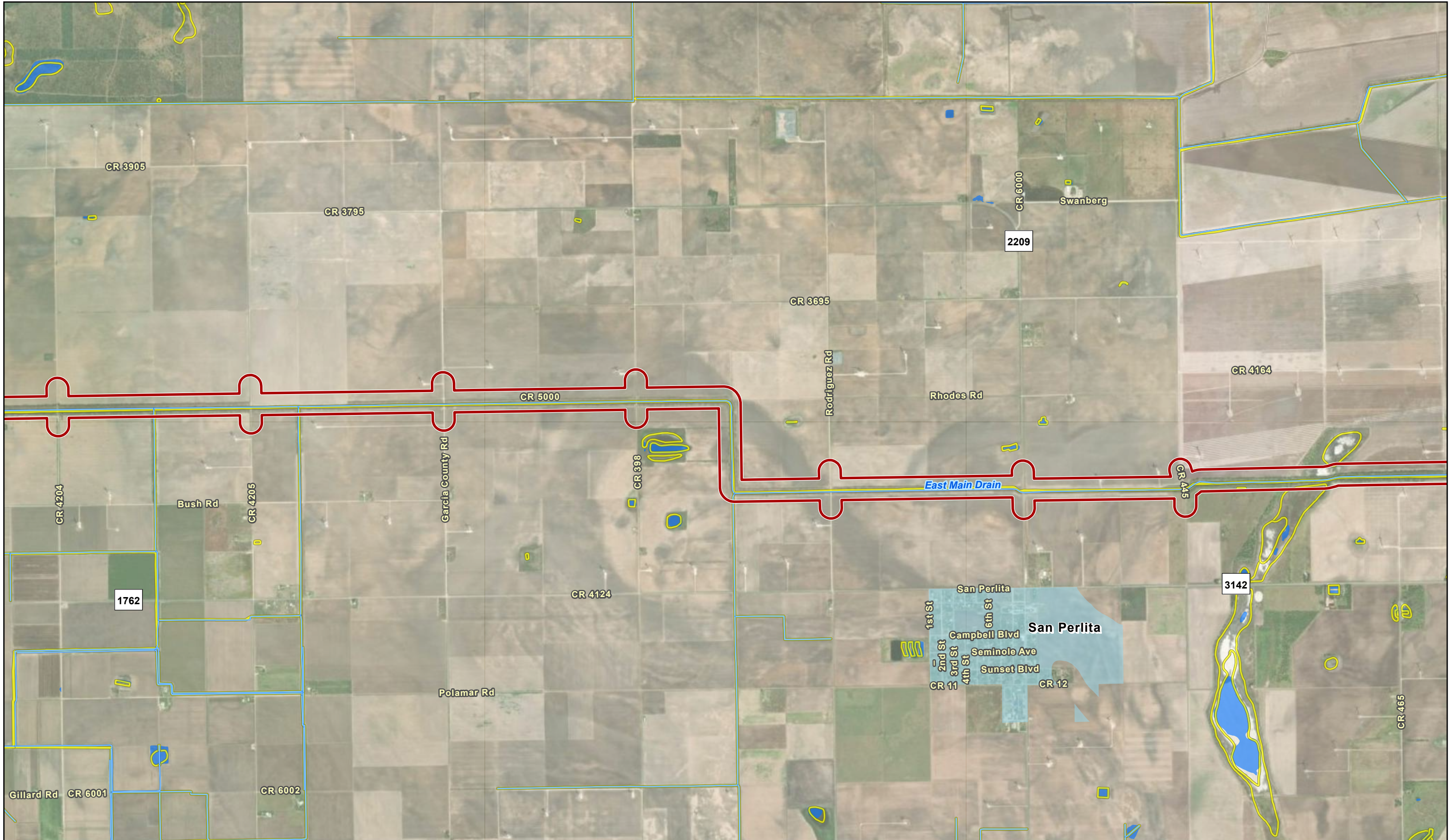
Data Sources: NHD (2023), NWI (2024),  
FEMA NFHL (2024), Stantec (2024)  
Aerial Source: Maxar (2021-2024)



0 2,500 Feet 1 in = 2,500 feet  
0 600 Meters Scale: 1:30,000  
Date: 9/3/2024





**Figure 6-5.**  
**Desktop Water Resources**

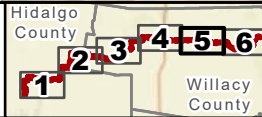
Raymondville Drain



U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

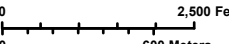
-  Project Location
-  NHD Stream
-  NHD Water
-  NWI Wetland
-  100-Year Flood Zone

Note: the map extent falls partially within an area unmapped by FEMA

Data Sources: NHD (2023), NWI (2024),  
FEMA NFHL (2024), Stantec (2024)  
Aerial Source: Maxar (2021-2024)



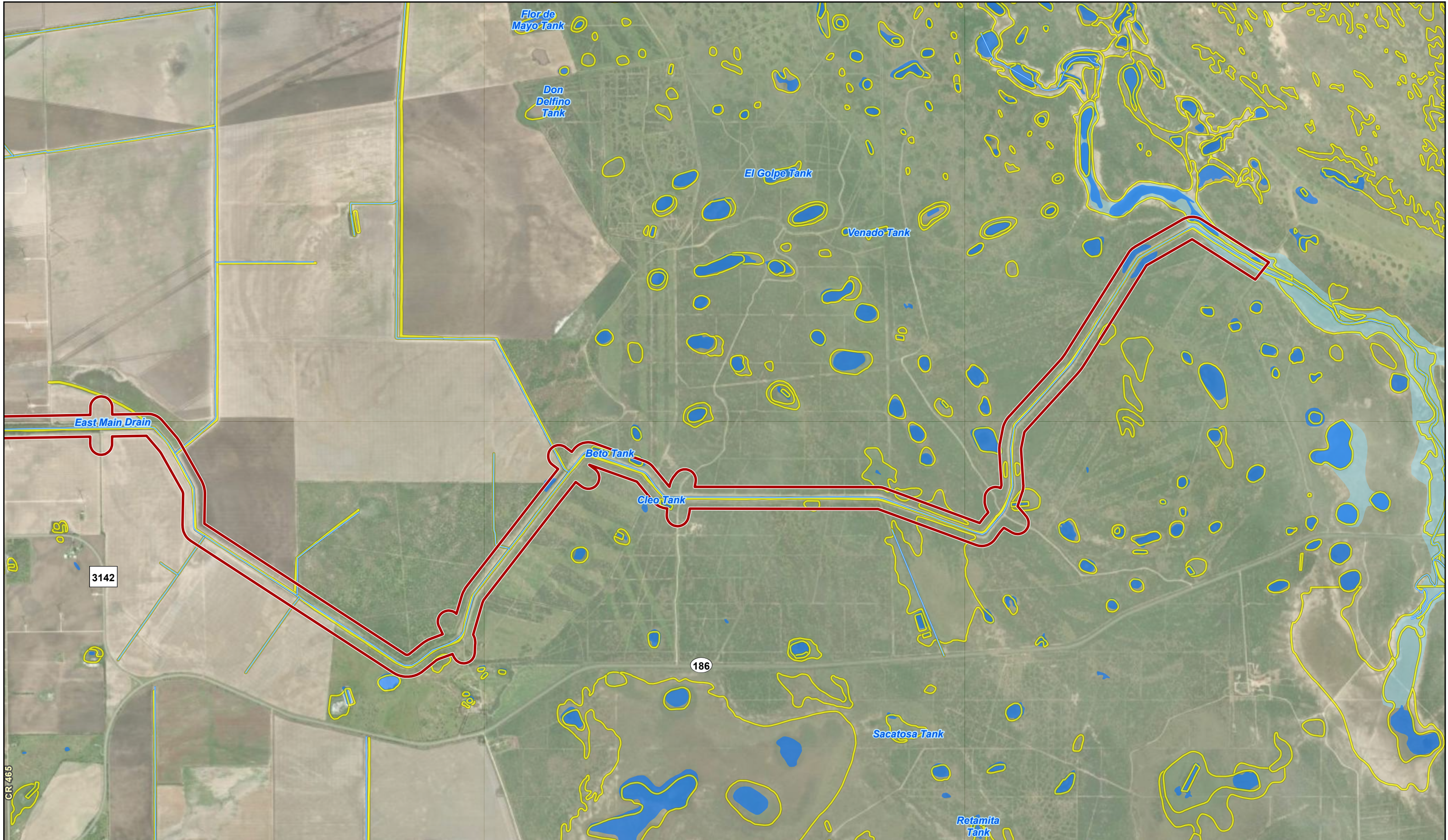




0 2,500 Feet  
0 600 Meters

1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/3/2024







**Figure 6-6.**  
**Desktop Water Resources**

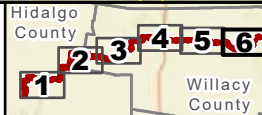
Raymondville Drain



U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

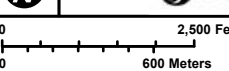
-  Project Location
-  NHD Stream
-  NHD Water
-  NWI Wetland
-  100-Year Flood Zone

Note: the map extent falls partially within an area unmapped by FEMA

Data Sources: NHD (2023), NWI (2024),  
FEMA NFHL (2024), Stantec (2024)  
Aerial Source: Maxar (2021-2024)



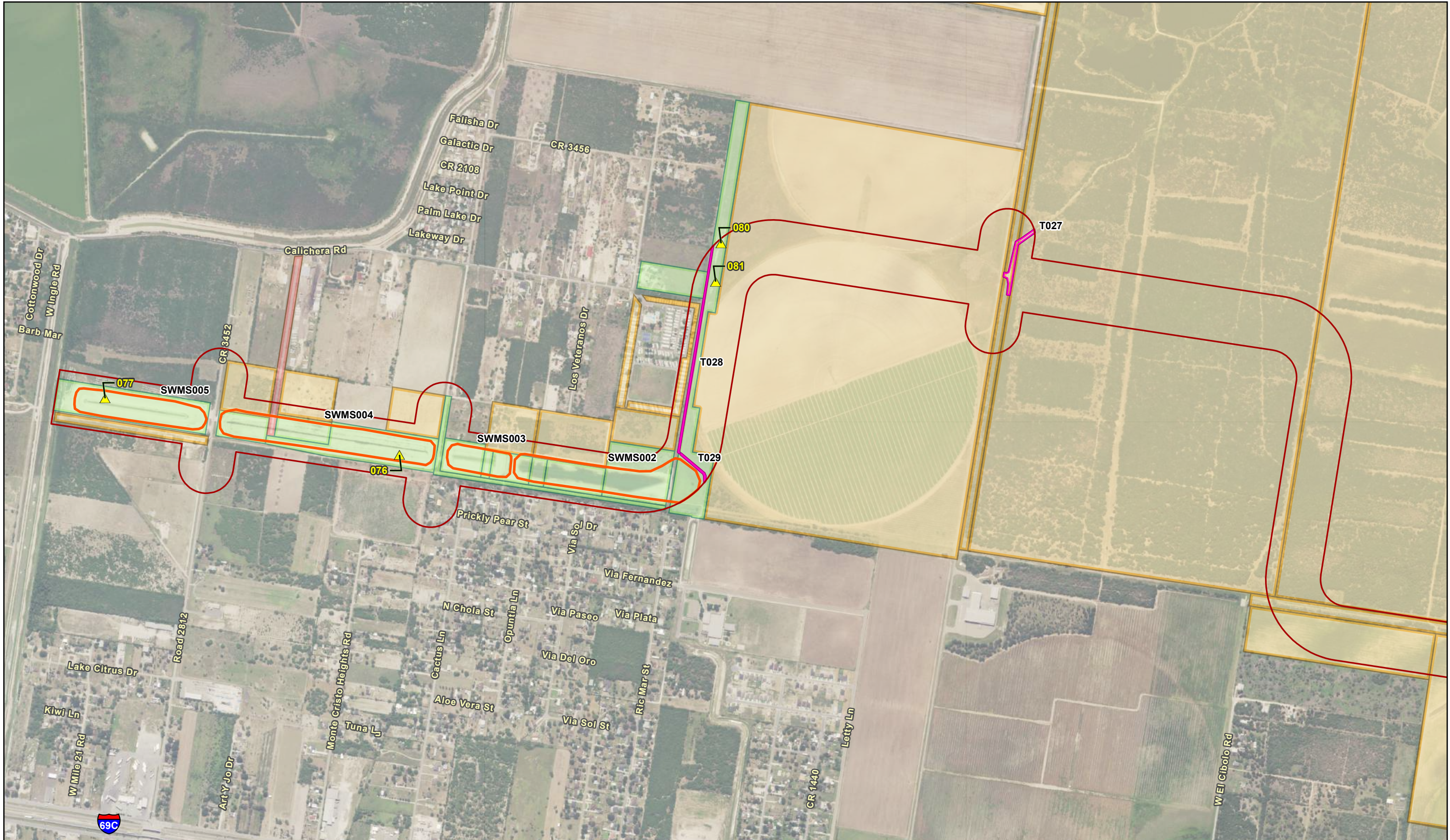




0 2,500 Feet  
0 600 Meters

1 in = 2,500 feet  
Scale: 1:30,000  
Date: 9/3/2024





**Figure 7-1.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

- |                     |             |                                 |
|---------------------|-------------|---------------------------------|
| Project Location    | ROE Granted | Culvert                         |
| Data Point - Upland | ROE Denied  | Stormwater Management Structure |
|                     | ROE Pending | Upland Drainage Ditch           |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



0	1,000 Feet	1 in = 1,000 feet
0	300 Meters	Scale: 1:12,000
		Date: 9/17/2024





**Figure 7-2.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

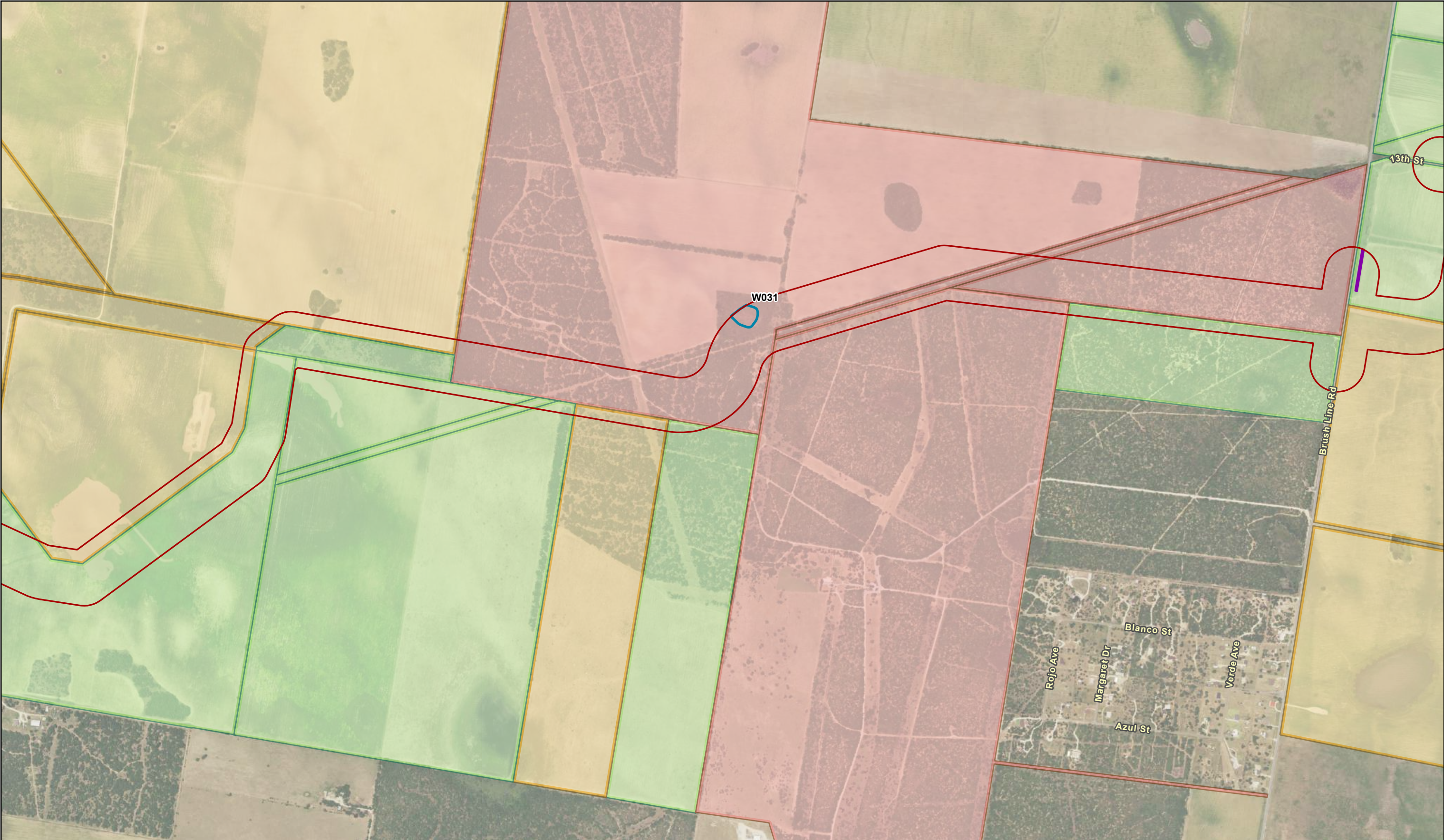
- |                     |             |                                 |
|---------------------|-------------|---------------------------------|
| Project Location    | ROE Granted | Open Water                      |
| Data Point - Upland | ROE Denied  | Stormwater Management Structure |
|                     | ROE Pending |                                 |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



		1 in = 1,000 feet
		Scale: 1:12,000
		Date: 9/17/2024





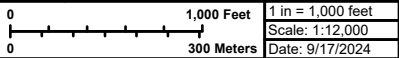
**Figure 7-3.  
Delineated Water Features**

Raymondville Drain

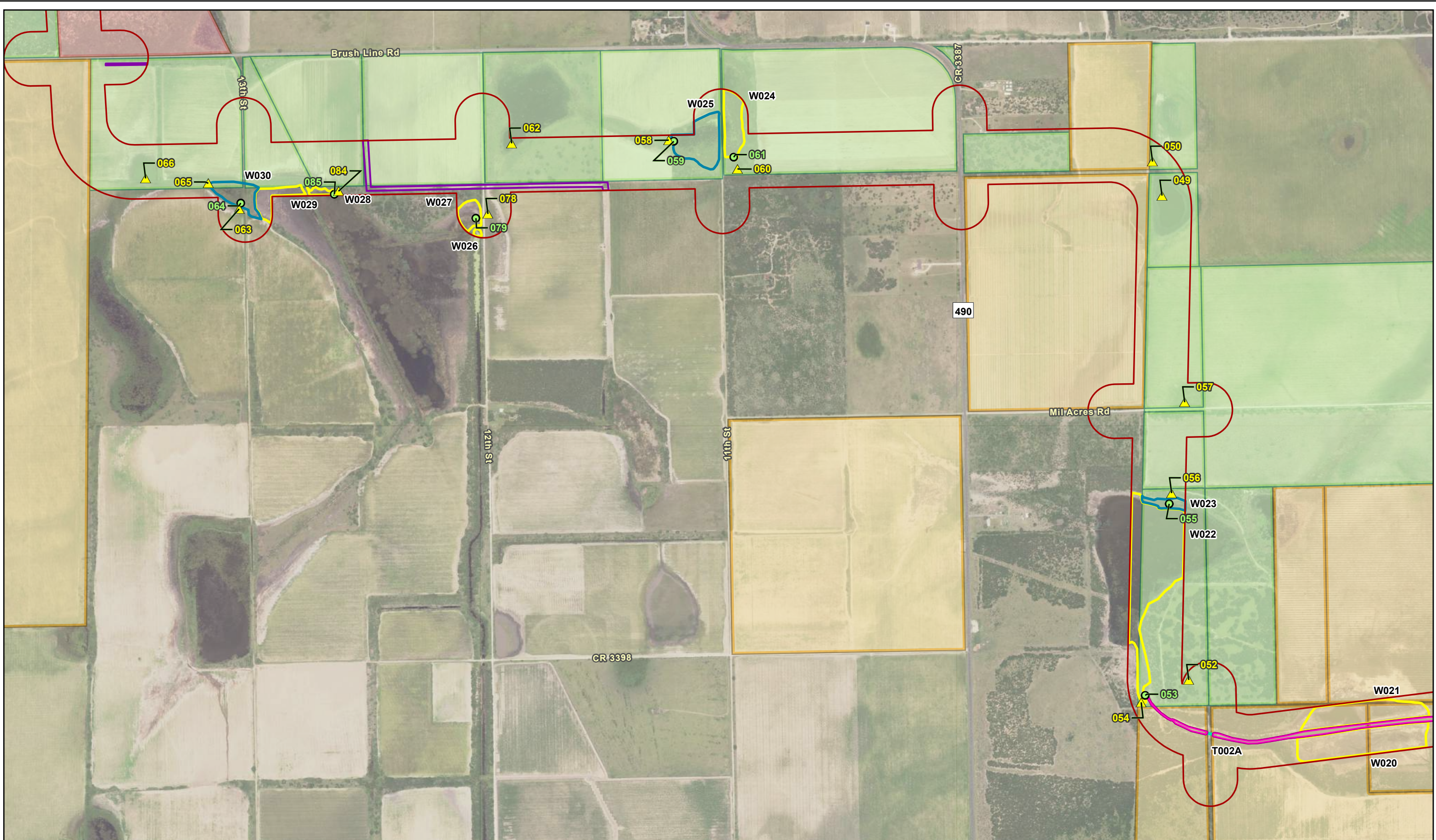
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

- Project Location
- ROE Granted
- ROE Denied
- ROE Pending
- Irrigation Canal / Artificial Conduit
- Scrub/Shrub Wetland

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)







**Figure 7-4.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

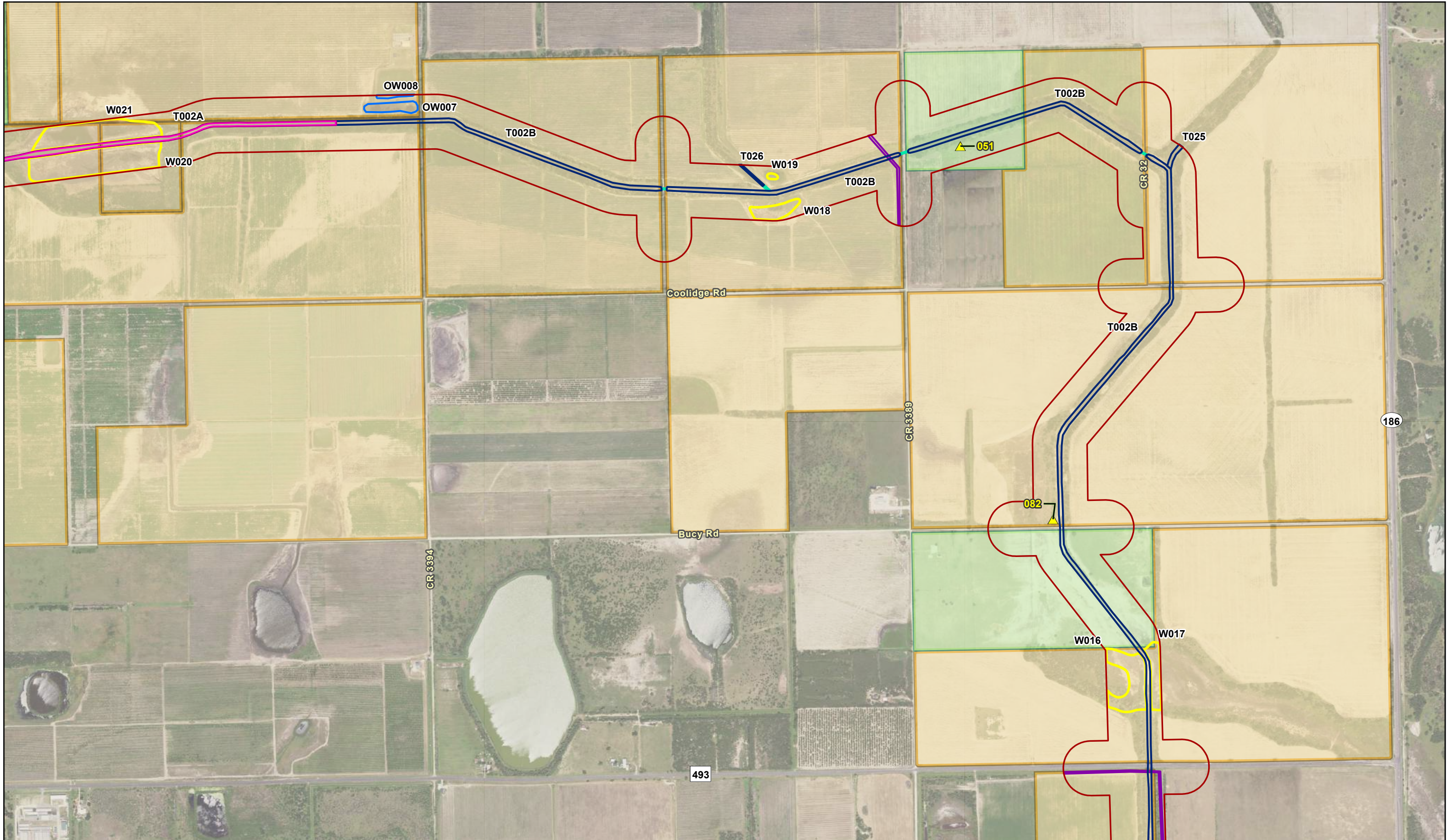
- |                      |             |                                       |                       |
|----------------------|-------------|---------------------------------------|-----------------------|
| Project Location     | ROE Granted | Culvert                               | Upland Drainage Ditch |
| Data Point - Upland  | ROE Denied  | Emergent Wetland                      |                       |
| Data Point - Wetland | ROE Pending | Irrigation Canal / Artificial Conduit |                       |
|                      |             | Scrub/Shrub Wetland                   |                       |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



0	1,000 Feet	1 in = 1,000 feet
0	300 Meters	Scale: 1:12,000
		Date: 9/17/2024





**Figure 7-5.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

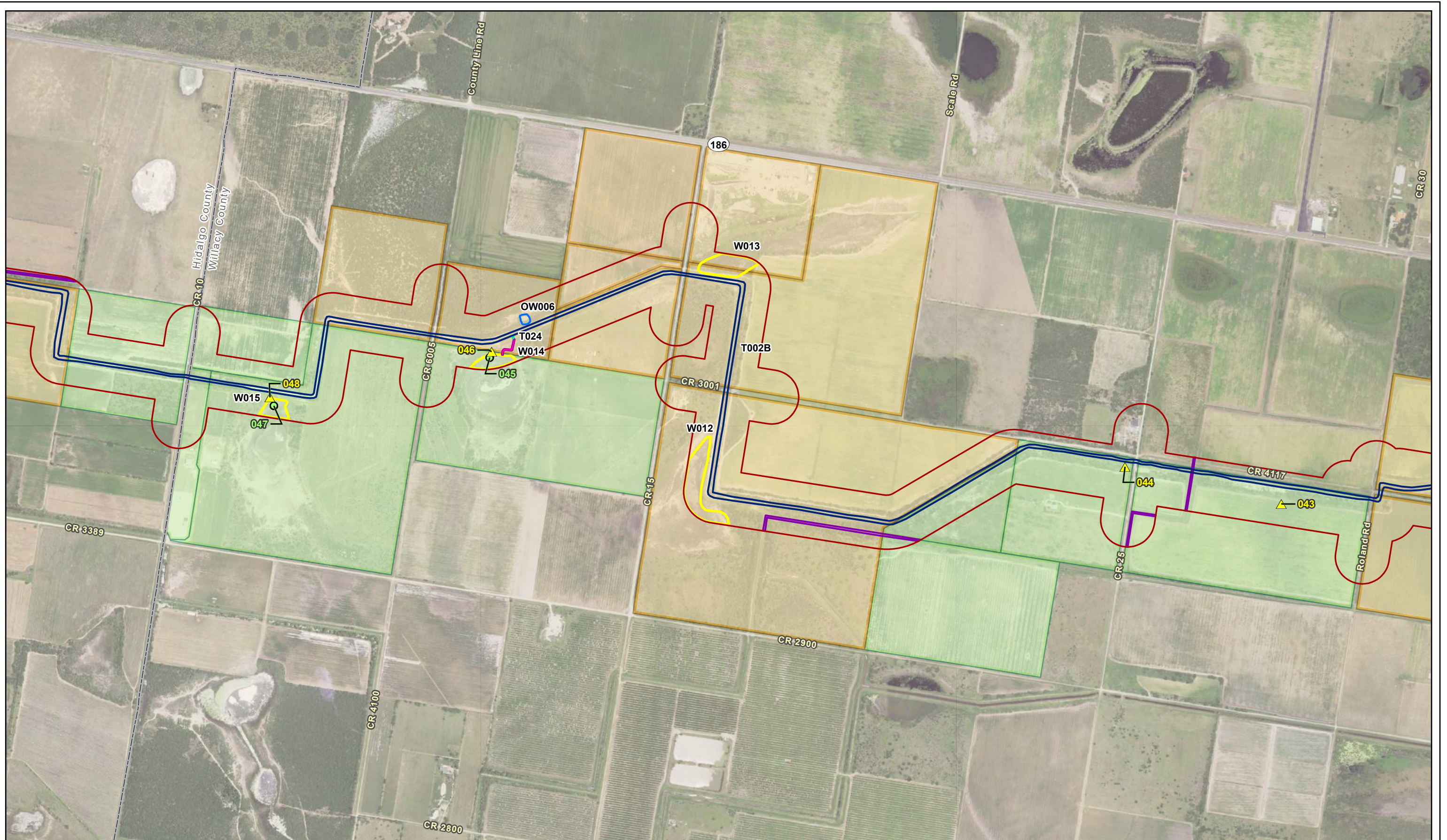
- |                     |             |                                       |                          |
|---------------------|-------------|---------------------------------------|--------------------------|
| Project Location    | ROE Granted | Culvert                               | Perennial Drainage Ditch |
| Data Point - Upland | ROE Pending | Emergent Wetland                      | Upland Drainage Ditch    |
|                     |             | Irrigation Canal / Artificial Conduit |                          |
|                     |             | Open Water                            |                          |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



		1 in = 1,000 feet
0	1,000 Feet	Scale: 1:12,000
0	300 Meters	Date: 9/17/2024





**Figure 7-6.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03 data\gis cad\gis\raymondville delineation.aprx

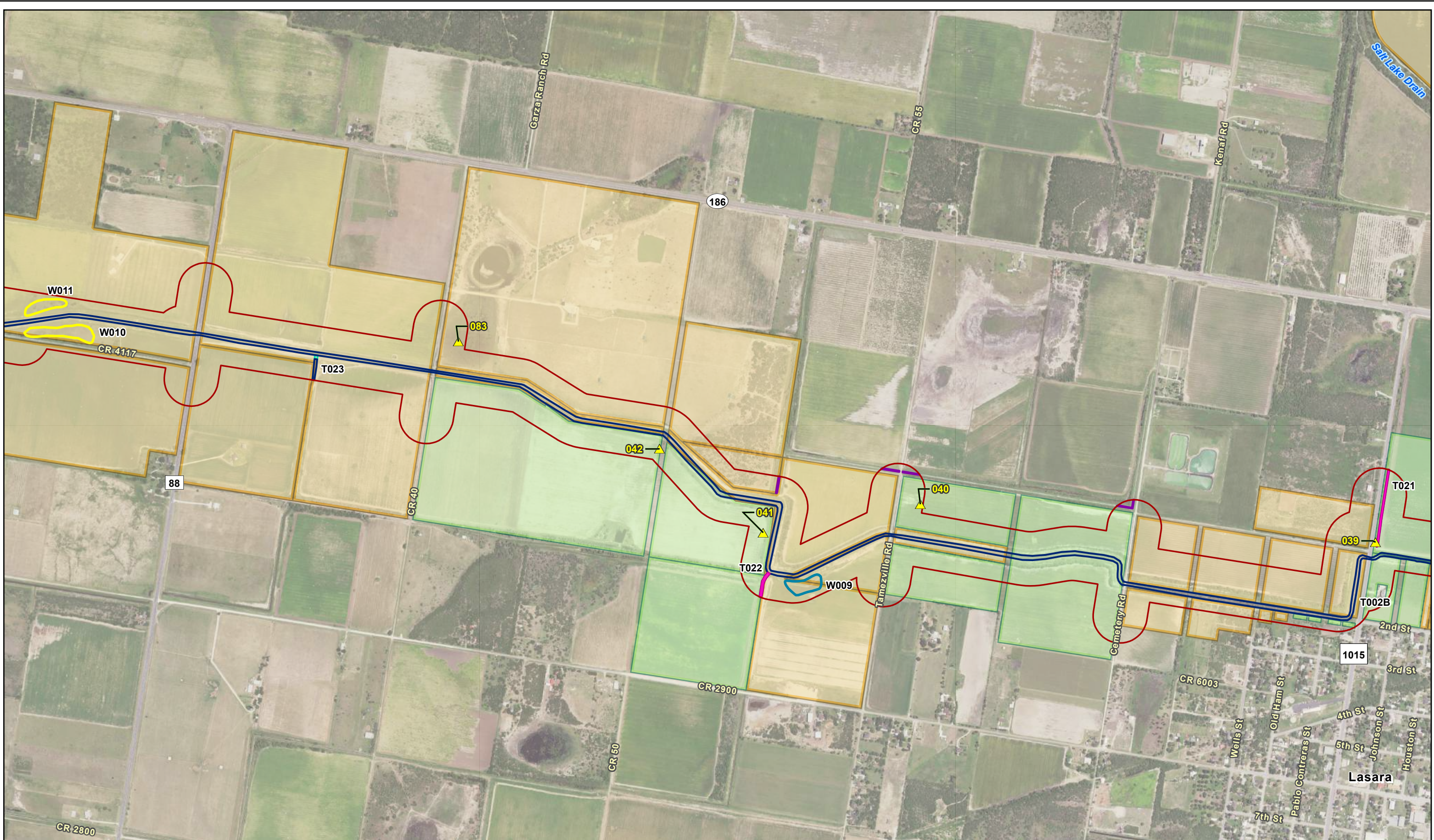
- |                      |             |                                       |                          |
|----------------------|-------------|---------------------------------------|--------------------------|
| Project Location     | ROE Granted | Culvert                               | Perennial Drainage Ditch |
| Data Point - Upland  | ROE Pending | Emergent Wetland                      | Upland Drainage Ditch    |
| Data Point - Wetland |             | Irrigation Canal / Artificial Conduit | Open Water               |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



0 1,000 Feet 1 in = 1,000 feet	Scale: 1:12,000
0 300 Meters	Date: 9/17/2024





**Figure 7-7.  
Delineated Water Features**

Raymondville Drain

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- |                     |             |                                       |                       |
|---------------------|-------------|---------------------------------------|-----------------------|
| Project Location    | ROE Granted | Culvert                               | Scrub/Shrub Wetland   |
| Data Point - Upland | ROE Pending | Emergent Wetland                      | Upland Drainage Ditch |
|                     |             | Irrigation Canal / Artificial Conduit |                       |
|                     |             | Perennial Drainage Ditch              |                       |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



		1 in = 1,000 feet
0	1,000 Feet	Scale: 1:12,000
0	300 Meters	Date: 9/17/2024



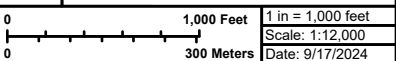


**Figure 7-8.  
Delineated Water Features**

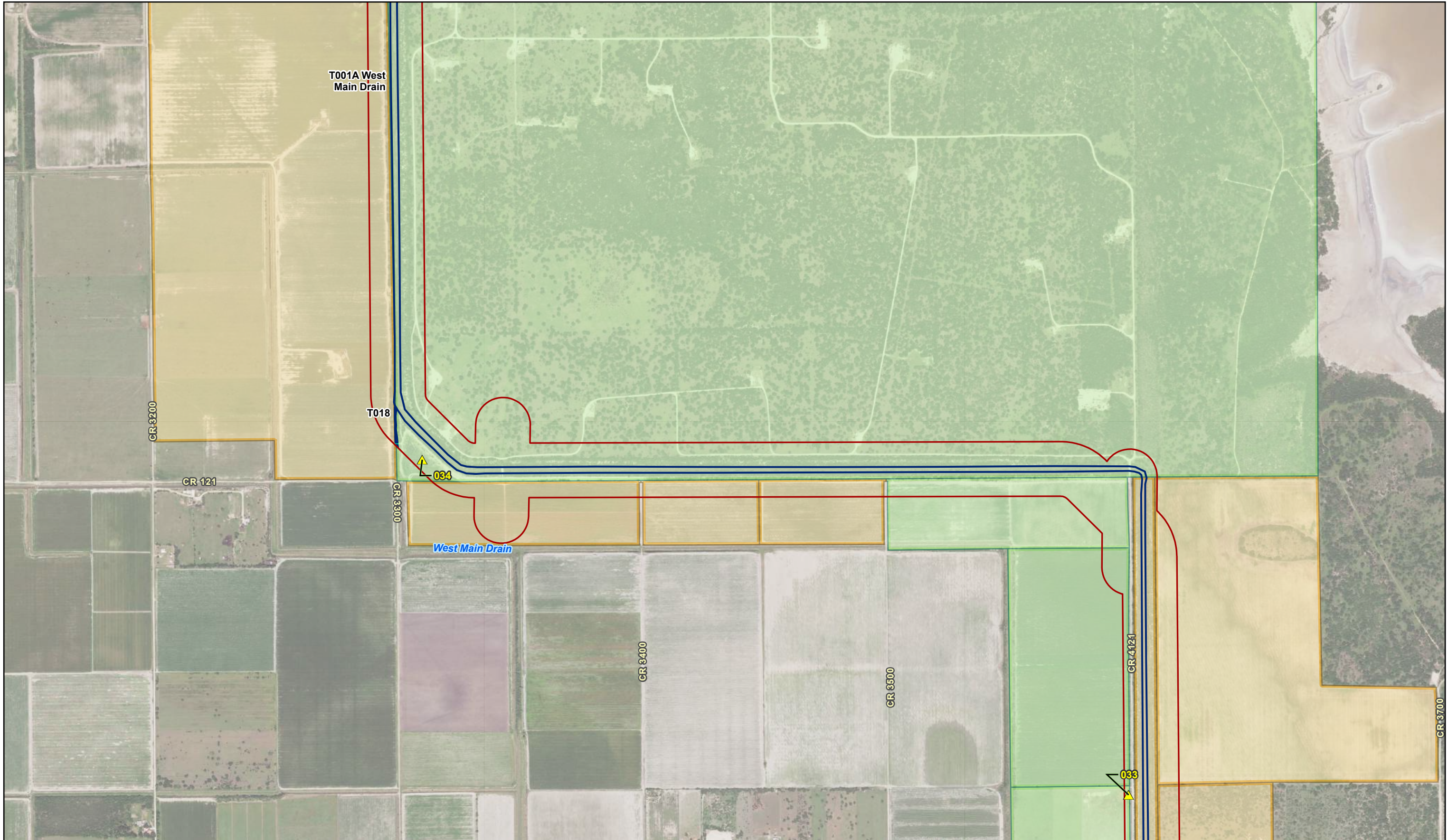
Raymondville Drain  
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

- Project Location
- ROE Granted
- Culvert
- Data Point - Upland
- ROE Pending
- Irrigation Canal / Artificial Conduit
- Perennial Drainage Ditch
- Upland Drainage Ditch

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)







**Figure 7-9.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

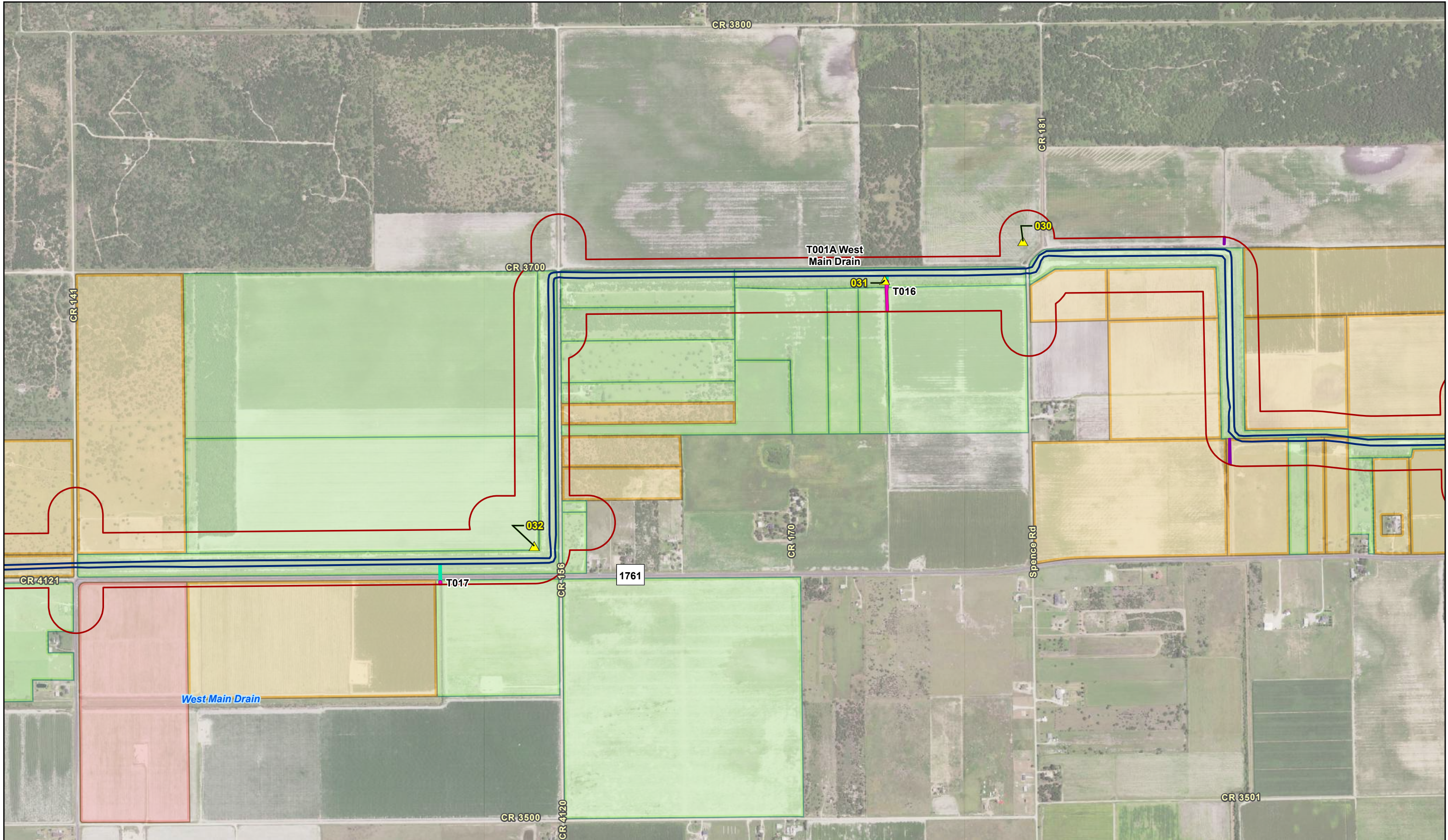
- Project Location
- ROE Granted
- ROE Pending
- Culvert
- Perennial Drainage Ditch
- Data Point - Upland

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



1 in = 1,000 feet  
Scale: 1:12,000  
Date: 9/17/2024





**Figure 7-10.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

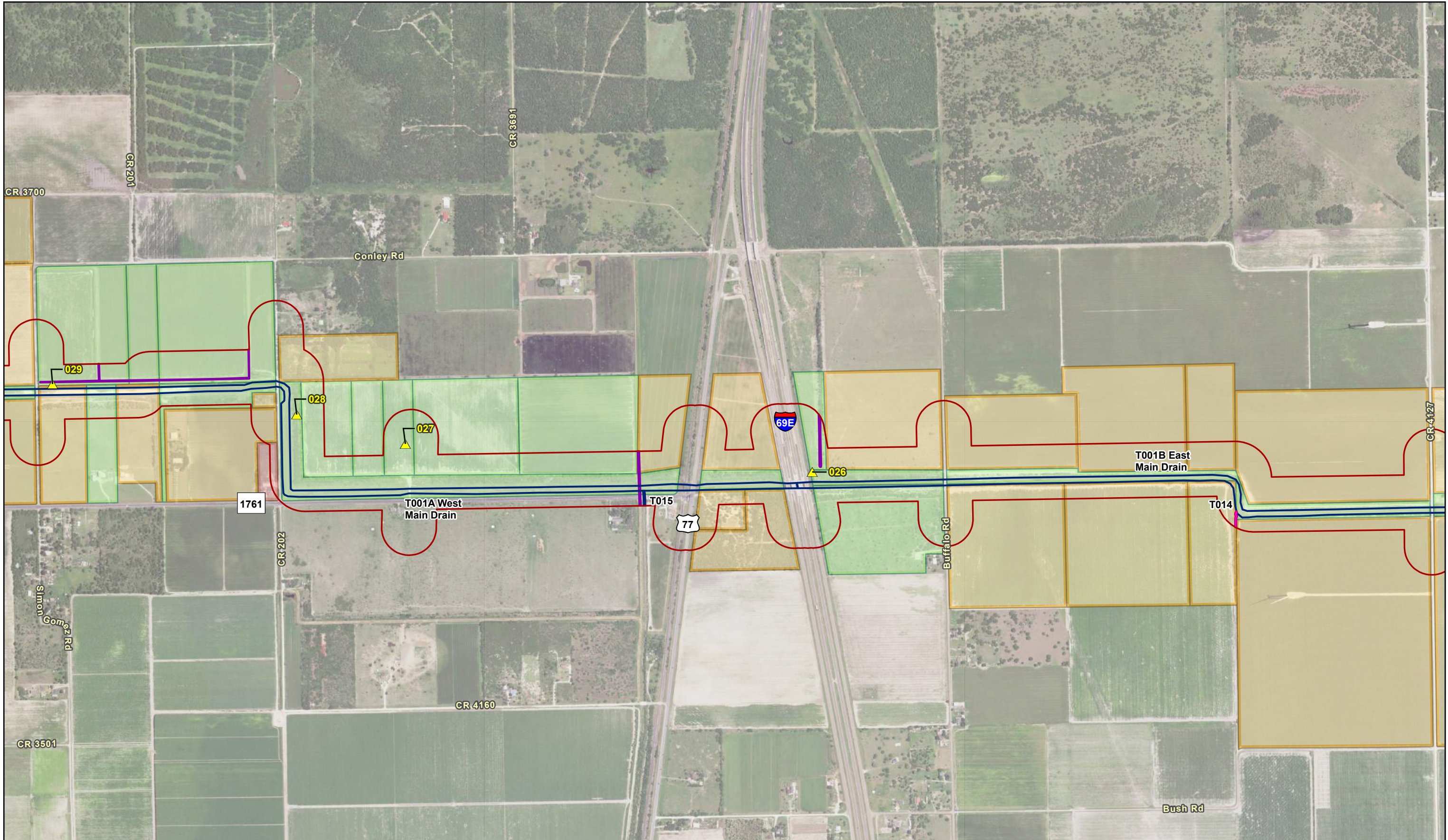
- |                     |             |                                       |
|---------------------|-------------|---------------------------------------|
| Project Location    | ROE Granted | Culvert                               |
| Data Point - Upland | ROE Denied  | Irrigation Canal / Artificial Conduit |
|                     | ROE Pending | Perennial Drainage Ditch              |
|                     |             | Upland Drainage Ditch                 |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



		1 in = 1,000 feet
		Scale: 1:12,000
		Date: 9/17/2024





**Figure 7-11.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

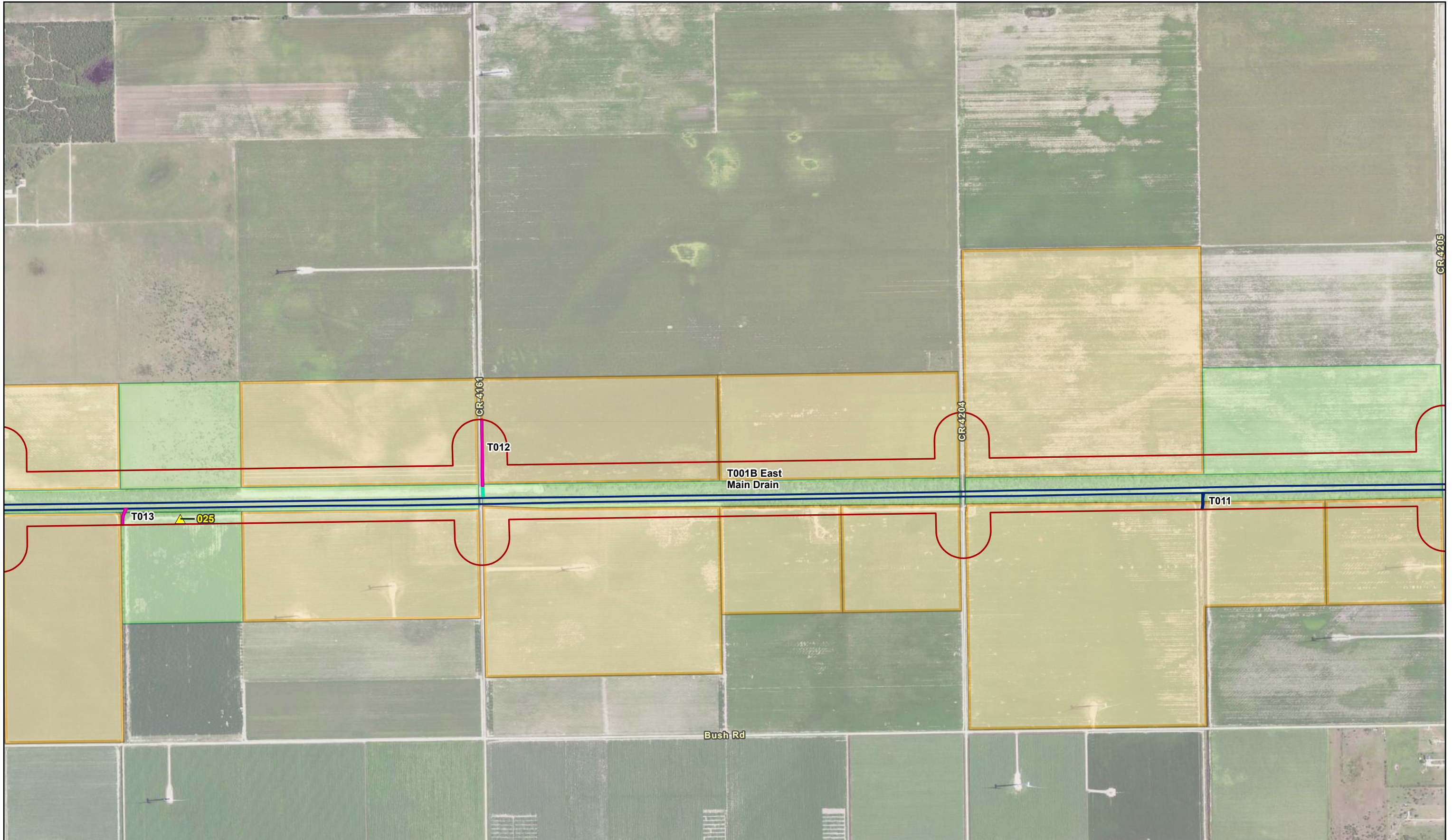
- |                     |             |                                       |
|---------------------|-------------|---------------------------------------|
| Project Location    | ROE Granted | Irrigation Canal / Artificial Conduit |
| Data Point - Upland | ROE Denied  | Perennial Drainage Ditch              |
|                     | ROE Pending | Upland Drainage Ditch                 |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



		1 in = 1,000 feet
0 1,000 Feet		Scale: 1:12,000
0 300 Meters		Date: 9/17/2024





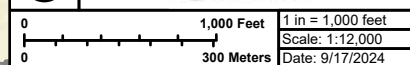
**Figure 7-12.**  
**Delineated Water Features**

Raymondville Drain

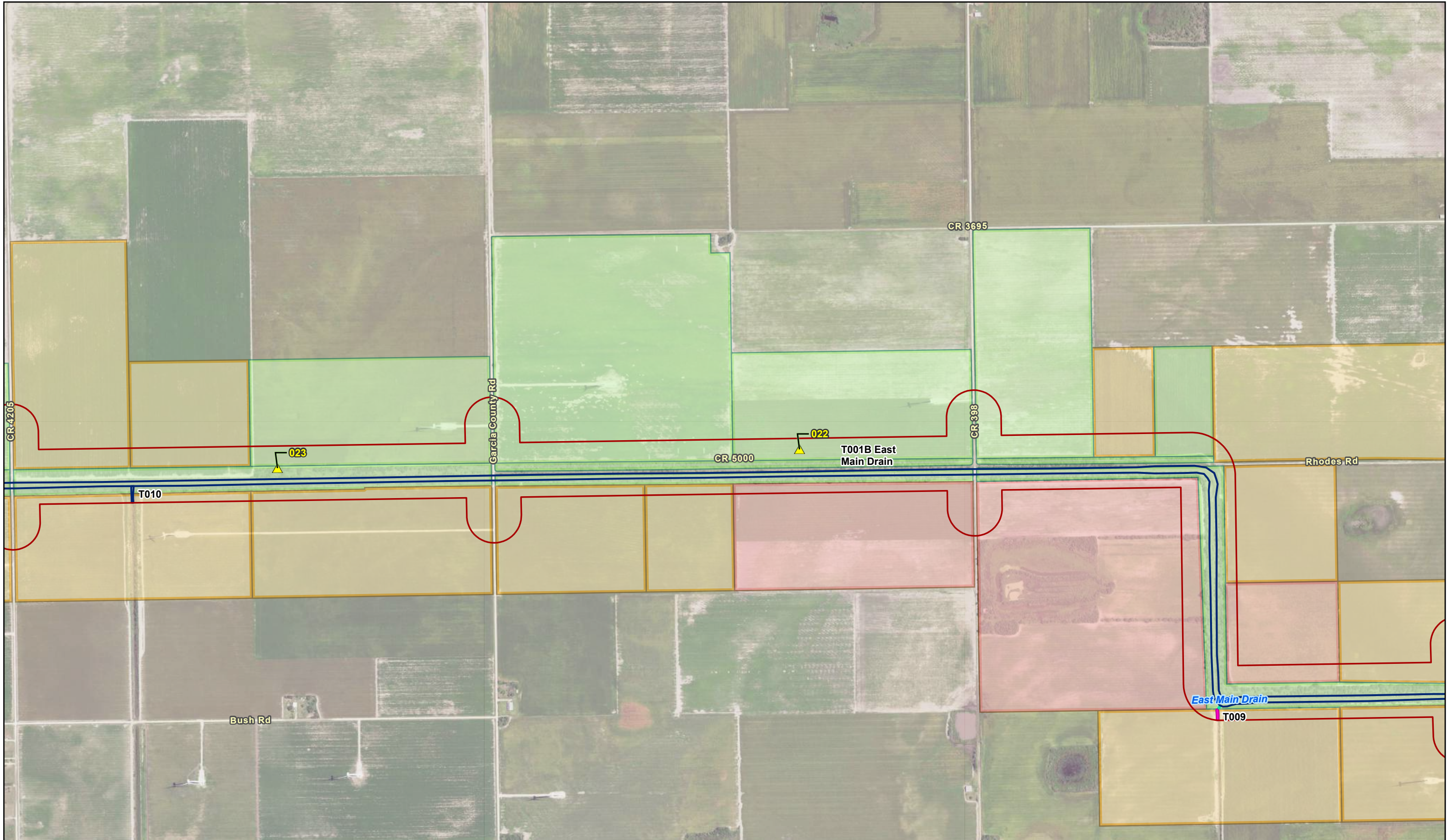
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

- |                     |             |                          |
|---------------------|-------------|--------------------------|
| Project Location    | ROE Granted | Culvert                  |
| Data Point - Upland | ROE Pending | Perennial Drainage Ditch |
|                     |             | Upland Drainage Ditch    |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)







**Figure 7-13.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

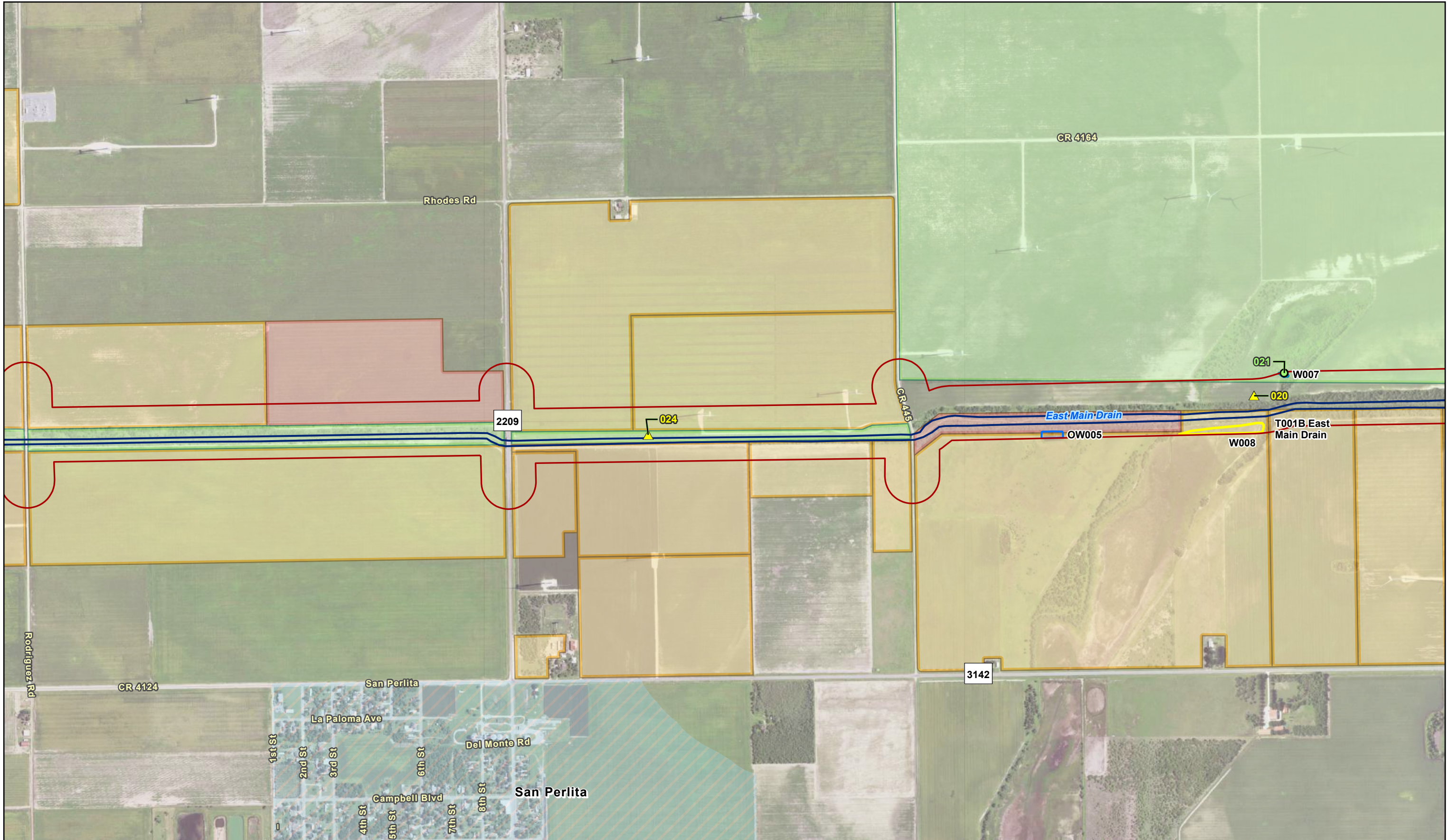
- |                     |                       |                          |
|---------------------|-----------------------|--------------------------|
| Project Location    | ROE Granted           | Culvert                  |
| Data Point - Upland | ROE Denied            | Perennial Drainage Ditch |
| ROE Pending         | Upland Drainage Ditch |                          |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



				Date: 9/17/2024





**Figure 7-14.**  
**Delineated Water Features**

Raymondville Drain

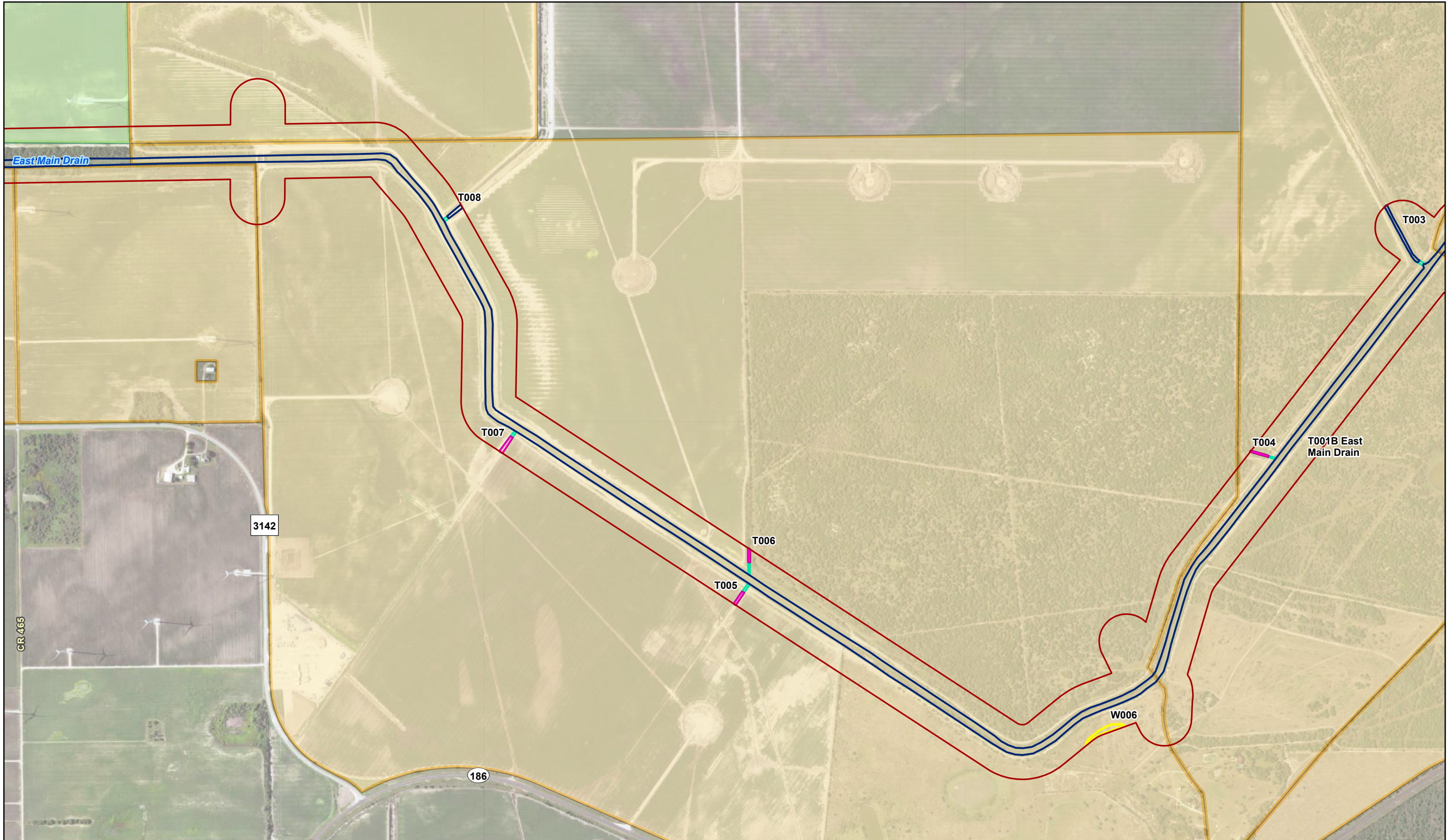
U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

- |                      |             |                          |
|----------------------|-------------|--------------------------|
| Project Location     | ROE Granted | Emergent Wetland         |
| Data Point - Upland  | ROE Denied  | Open Water               |
| Data Point - Wetland | ROE Pending | Perennial Drainage Ditch |
| 100-Year Flood Zone  |             | Scrub/Shrub Wetland      |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)





**Figure 7-15.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

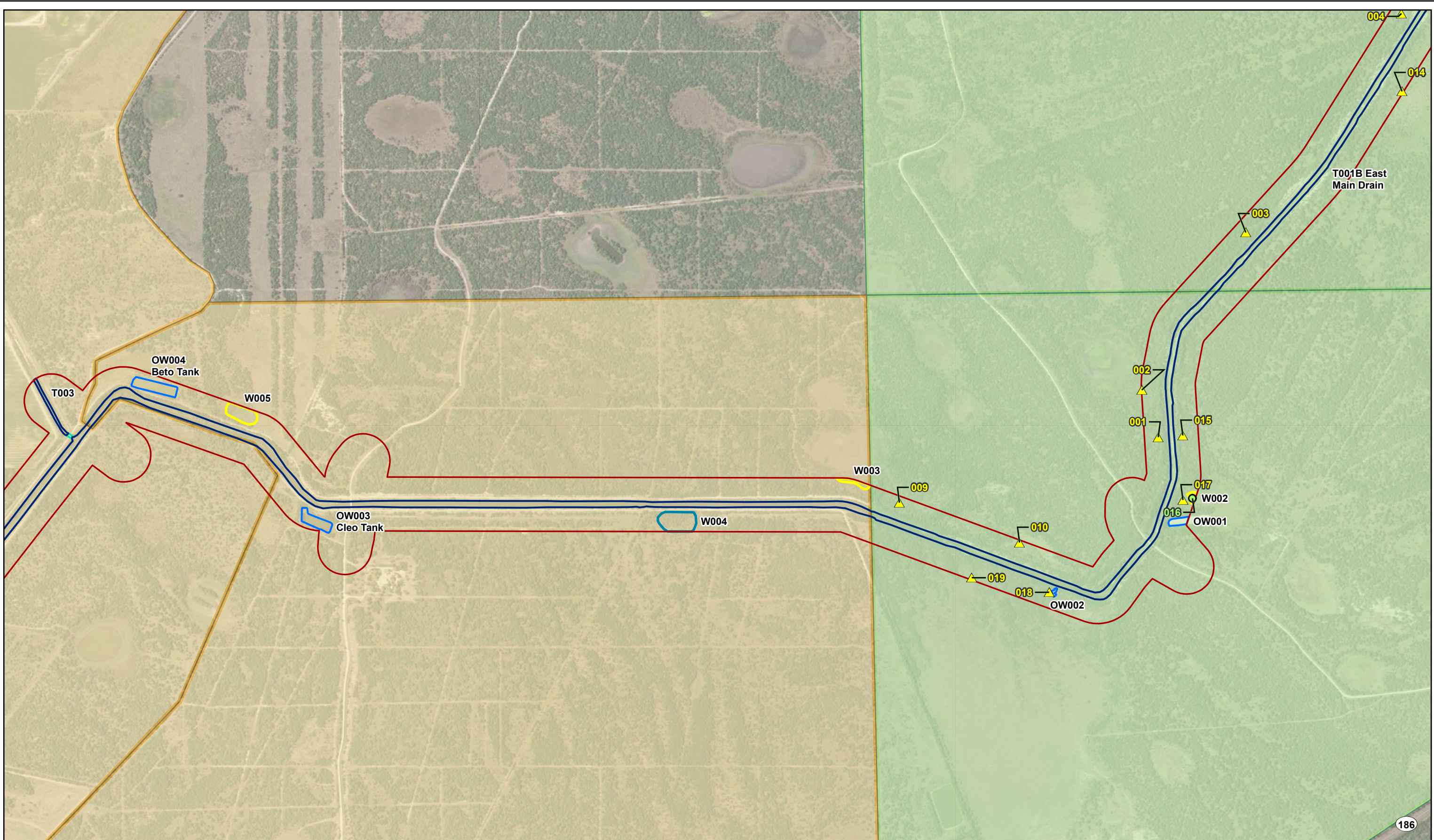
- Project Location
- ROE Granted
- ROE Pending
- Culvert
- Emergent Wetland
- Perennial Drainage Ditch
- Upland Drainage Ditch

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



1 in = 1,000 feet  
Scale: 1:12,000  
Date: 9/17/2024





**Figure 7-16.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

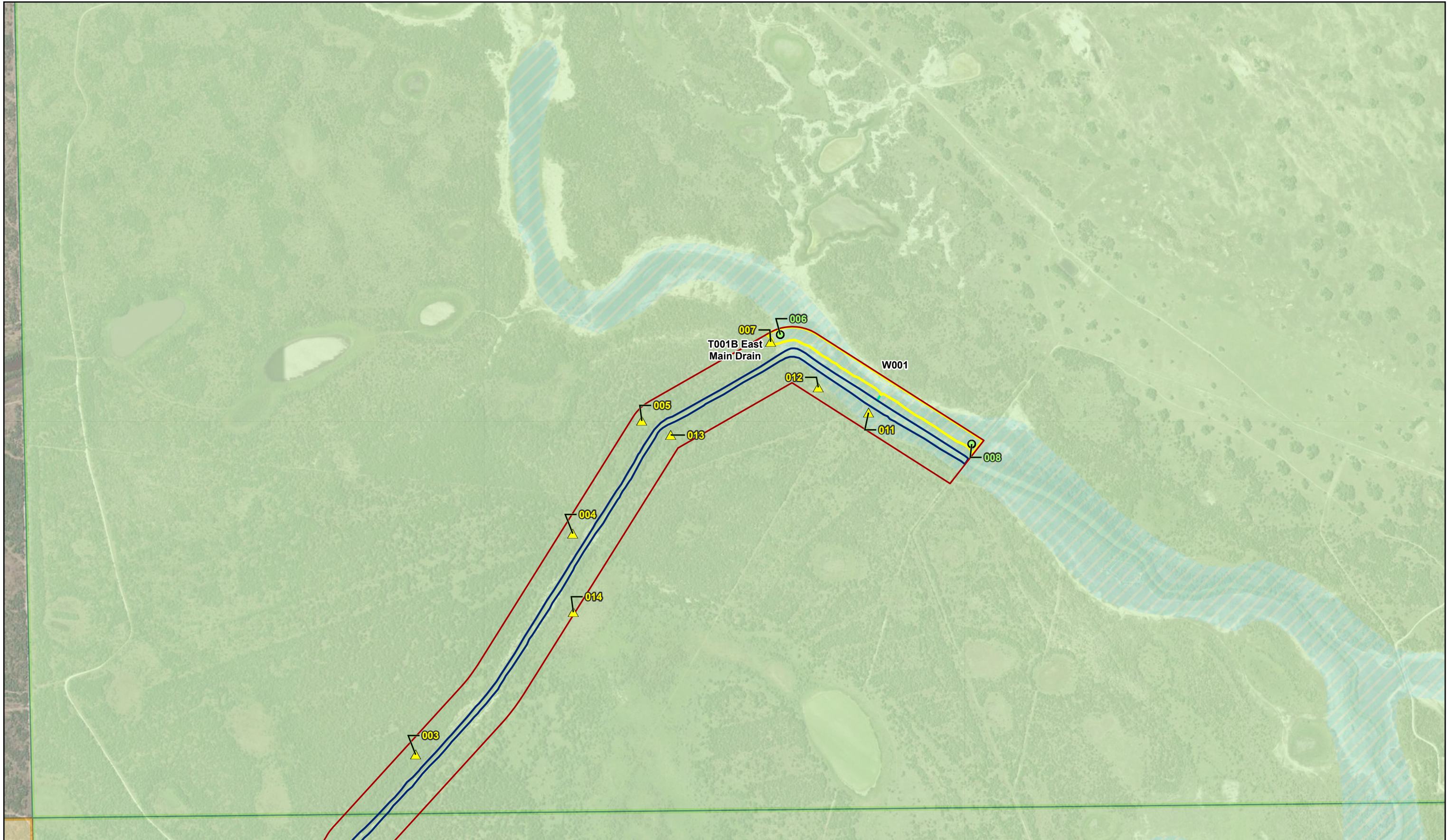
- |                      |             |                          |                     |
|----------------------|-------------|--------------------------|---------------------|
| Project Location     | ROE Granted | Culvert                  | Scrub/Shrub Wetland |
| Data Point - Upland  | ROE Pending | Emergent Wetland         |                     |
| Data Point - Wetland |             | Open Water               |                     |
|                      |             | Perennial Drainage Ditch |                     |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)



			 Scale: 1:12,000 Date: 9/17/2024
--	--	--	--





**Figure 7-17.**  
**Delineated Water Features**

Raymondville Drain

U:\2353\235300992\03\_data\gis\_cad\gis\raymondville\_delineation.aprx

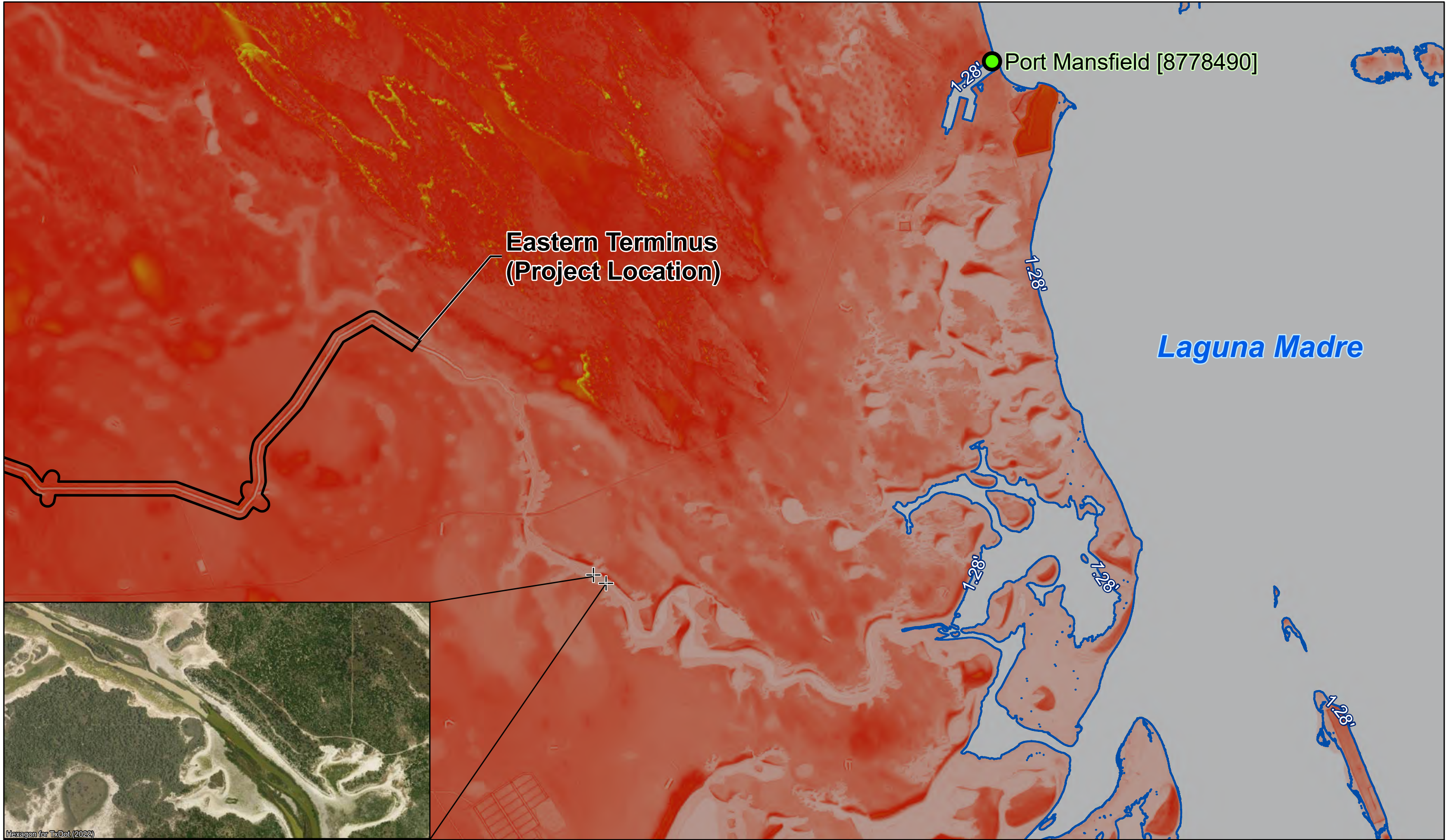
- |                      |             |                          |
|----------------------|-------------|--------------------------|
| Project Location     | ROE Granted | Culvert                  |
| Data Point - Upland  | ROE Pending | Emergent Wetland         |
| Data Point - Wetland |             | Perennial Drainage Ditch |
| 100-Year Flood Zone  |             |                          |

Data Sources: Stantec (2024),  
HCAD (2022), WCAD (2022),  
FEMA NFHL (2024)  
Aerial Source: NAIP (2022)







0	1,000 Feet	1 in = 1,000 feet
0	300 Meters	Scale: 1:12,000
		Date: 9/17/2024







**Figure 8.**  
**Tidal Data (Digital Elevation Model Base)**

-  Project Location
-  1.28 Foot Mean High Water (Based on 18.6 Years of Data)
-  Turbidity Shift
-  NOAA Station

Raymondville Drain

Path: U:\2353\235300992\03\_data\gis\_cad\gis\KMC\_Working\RVD\_Delineation.aprx - raymondville\_drain\_delineation\_figure\_8\_tidal\_data\_20240927.kr



00.75 Mile1 in = 0.75 mile

01 KilometerScale: 1:47,520Date: 9/27/2024



DEM Source: USGS (2018)





## **Appendix B**

### **PROJECT AREA PHOTOGRAPHS**





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 1</b>			
<b>Latitude/Longitude:</b> 26.5093377, -97.5243449			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 001 (Upland)			
<b>Photograph ID: 2</b>			
<b>Latitude/Longitude:</b> 26.51076852, -97.52488266			
<b>Photo Direction:</b> northeast			
<b>Description:</b> DP 002 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 3</b>			
<b>Latitude/Longitude:</b> 26.51554771, -97.52136333			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 003 (Upland)			
<b>Photograph ID: 4</b>			
<b>Latitude/Longitude:</b> 26.52218032, -97.51600061			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 004 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 5</b>			
<b>Latitude/Longitude:</b> 26.52555406, -97.51367136			
<b>Photo Direction:</b> northwest			
<b>Description:</b> DP 005 (Upland)			
<b>Photograph ID: 6</b>			
<b>Latitude/Longitude:</b> 26.52814781, -97.50901358			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 006 (Wetland) at W001			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 7</b>			
<b>Latitude/Longitude:</b> 26.52792849, -97.50935289			
<b>Photo Direction:</b> southeast			
<b>Description:</b> DP 007 (Upland)			
<b>Photograph ID: 8</b>			
<b>Latitude/Longitude:</b> 26.52479511, -97.50262783			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 008 (Wetland) at W001			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 9</b>			
<b>Latitude/Longitude:</b> 26.50738995, -97.5331313			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 009 (Upland)			
<b>Photograph ID: 10</b>			
<b>Latitude/Longitude:</b> 26.50617692, -97.52909293			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 010 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 11</b>			
<b>Latitude/Longitude:</b> 26.52573939, -97.50607271			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 011 (Upland)			
<b>Photograph ID: 12</b>			
<b>Latitude/Longitude:</b> 26.52654809, -97.50775605			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 012 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 13</b>			
<b>Latitude/Longitude:</b> 26.52512983, -97.5127388			
<b>Photo Direction:</b> southeast			
<b>Description:</b> DP 013 (Upland)			
<b>Photograph ID: 14</b>			
<b>Latitude/Longitude:</b> 26.51982201, -97.51601115			
<b>Photo Direction:</b> northwest			
<b>Description:</b> DP 014 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 15</b>			
<b>Latitude/Longitude:</b> 26.50940022, -97.52361266			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 015 (Upland)			
<b>Photograph ID: 16</b>			
<b>Latitude/Longitude:</b> 26.50746811, -97.52325025			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 016 (Wetland) at W002			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 17</b>			
<b>Latitude/Longitude:</b> 26.50739441, -97.52352931			
<b>Photo Direction:</b> northeast			
<b>Description:</b> DP 017 (Upland)			
<b>Photograph ID: 18</b>			
<b>Latitude/Longitude:</b> 26.50462805, -97.52811494			
<b>Photo Direction:</b> southwest			
<b>Description:</b> DP 018 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 19</b>			
<b>Latitude/Longitude:</b> 26.50511523, -97.5307326			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 019 (Upland)			
<b>Photograph ID: 20</b>			
<b>Latitude/Longitude:</b> 26.51317548, -97.61471005			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 020 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 21</b>			
<b>Latitude/Longitude:</b> 26.51390049, -97.61365692			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 021 (Wetland) at W007			
<b>Photograph ID: 22</b>			
<b>Latitude/Longitude:</b> 26.51964541, -97.67800398			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 022 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 23</b>			
<b>Latitude/Longitude:</b> 26.51917301, -97.69551507			
<b>Photo Direction:</b> northwest			
<b>Description:</b> DP 023 (Upland)			
<b>Photograph ID: 24</b>			
<b>Latitude/Longitude:</b> 26.5121445, -97.63508768			
<b>Photo Direction:</b> northeast			
<b>Description:</b> DP 024 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 25</b>			
<b>Latitude/Longitude:</b> 26.51800815, -97.74683291			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 025 (Upland)			
<b>Photograph ID: 26</b>			
<b>Latitude/Longitude:</b> 26.51961341, -97.77359262			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 026 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 27</b>			
<b>Latitude/Longitude:</b> 26.52041442, -97.78726257			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 027 (Upland)			
<b>Photograph ID: 28</b>			
<b>Latitude/Longitude:</b> 26.52142391, -97.79088047			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 028 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 29</b>			
<b>Latitude/Longitude:</b> 26.52241605, -97.79904302			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 029 (Upland)			
<b>Photograph ID: 30</b>			
<b>Latitude/Longitude:</b> 26.52812975, -97.81434916			
<b>Photo Direction:</b> northwest			
<b>Description:</b> DP 030 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 31</b>			
<b>Latitude/Longitude:</b> 26.52713665, -97.81913204			
<b>Photo Direction:</b> northeast			
<b>Description:</b> DP 031 (Upland)			
<b>Photograph ID: 32</b>			
<b>Latitude/Longitude:</b> 26.51916591, -97.83091862			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 032 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 33</b>			
<b>Latitude/Longitude:</b> 26.51816576, -97.8500621			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 033 (Upland)			
<b>Photograph ID: 34</b>			
<b>Latitude/Longitude:</b> 26.49680432, -97.86144234			
<b>Photo Direction:</b> northwest			
<b>Description:</b> DP 034 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 35</b>			
<b>Latitude/Longitude:</b> 26.49621428, -97.88083352			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 035 (Upland)			
<b>Photograph ID: 36</b>			
<b>Latitude/Longitude:</b> 26.49123138, -97.88491433			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 036 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 37</b>			
<b>Latitude/Longitude:</b> 26.48035673, -97.90090774			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 037 (Upland)			
<b>Photograph ID: 38</b>			
<b>Latitude/Longitude:</b> 26.47933368, -97.90107211			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 038 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 39</b>			
<b>Latitude/Longitude:</b> 26.4720097, -97.90998641			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 039 (Upland)			
<b>Photograph ID: 40</b>			
<b>Latitude/Longitude:</b> 26.47341306, -97.92550681			
<b>Photo Direction:</b> southeast			
<b>Description:</b> DP 040 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 41</b>			
<b>Latitude/Longitude:</b> 26.47253396, -97.93076428			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 041 (Upland)			
<b>Photograph ID: 42</b>			
<b>Latitude/Longitude:</b> 26.47512168, -97.93407658			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 042 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 43</b>			
<b>Latitude/Longitude:</b> 26.47853015, -97.96110353			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 043 (Upland)			
<b>Photograph ID: 44</b>			
<b>Latitude/Longitude:</b> 26.47944335, -97.96644976			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 044 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 45</b>			
<b>Latitude/Longitude:</b> 26.48309629, -97.98785111			
<b>Photo Direction:</b> southeast			
<b>Description:</b> DP 045 (Wetland) at W014			
<b>Photograph ID: 46</b>			
<b>Latitude/Longitude:</b> 26.48328428, -97.98782702			
<b>Photo Direction:</b> southeast			
<b>Description:</b> DP 046 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 47</b>			
<b>Latitude/Longitude:</b> 26.48171674, -97.99529972			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 047 (Wetland) at W015			
<b>Photograph ID: 48</b>			
<b>Latitude/Longitude:</b> 26.48193109, -97.99535973			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 048 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 49			
<b>Latitude/Longitude:</b> 26.45453726, -98.05143783			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 049 (upland)			
<b>Photograph ID:</b> 50			
<b>Latitude/Longitude:</b> 26.45443423, -98.05262598			
<b>Photo Direction:</b> northwest			
<b>Description:</b> DP 050 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 51</b>			
<b>Latitude/Longitude:</b> 26.48338004, -98.02744389			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 051 (Upland)			
<b>Photograph ID: 52</b>			
<b>Latitude/Longitude:</b> 26.45272975, -98.03514715			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 052 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 53</b>			
<b>Latitude/Longitude:</b> 26.45133099, -98.03491771			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 053 (Wetland) at W022			
<b>Photograph ID: 54</b>			
<b>Latitude/Longitude:</b> 26.45116135, -98.03468616			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 054 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 55</b>			
<b>Latitude/Longitude:</b> 26.45307626, -98.04111871			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 055 (Wetland) at W023			
<b>Photograph ID: 56</b>			
<b>Latitude/Longitude:</b> 26.4531614, -98.04140074			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 056 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 57</b>			
<b>Latitude/Longitude:</b> 26.4540876, -98.0444312			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 057 (Upland)			
<b>Photograph ID: 58</b>			
<b>Latitude/Longitude:</b> 26.44007276, -98.05622423			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 058 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 59</b>			
<b>Latitude/Longitude:</b> 26.44021715, -98.05615023			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 059 (Wetland) at W025			
<b>Photograph ID: 60</b>			
<b>Latitude/Longitude:</b> 26.44195163, -98.0548886			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 060 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 61</b>			
<b>Latitude/Longitude:</b> 26.44198148, -98.05523048			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 061 (Wetland) at W024			
<b>Photograph ID: 62</b>			
<b>Latitude/Longitude:</b> 26.43535635, -98.05707299			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 062 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 63</b>			
<b>Latitude/Longitude:</b> 26.42682686, -98.05653679			
<b>Photo Direction:</b> northwest			
<b>Description:</b> DP 063 (Upland)			
<b>Photograph ID: 64</b>			
<b>Latitude/Longitude:</b> 26.42691068, -98.05670746			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 064 (Wetland) at W029			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 65</b>			
<b>Latitude/Longitude:</b> 26.42604761, -98.05756799			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 065 (Upland)			
<b>Photograph ID: 66</b>			
<b>Latitude/Longitude:</b> 26.42418867, -98.05809074			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 066 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 67</b>			
<b>Latitude/Longitude:</b> 26.41697699, -98.10902083			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 067 (Upland)			
<b>Photograph ID: 68</b>			
<b>Latitude/Longitude:</b> 26.4214891, -98.11160057			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 068 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 69</b>			
<b>Latitude/Longitude:</b> 26.42586679, -98.12421794			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 069 (Upland)			
<b>Photograph ID: 70</b>			
<b>Latitude/Longitude:</b> 26.42656329, -98.12779629			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 070 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 71</b>			
<b>Latitude/Longitude:</b> 26.42590476, -98.12856572			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 071 (Upland)			
<b>Photograph ID: 72</b>			
<b>Latitude/Longitude:</b> 26.42630428, -98.13169839			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 072 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 73</b>			
<b>Latitude/Longitude:</b> 26.42674258, -98.13456061			
<b>Photo Direction:</b> southwest			
<b>Description:</b> DP 073 (Upland), site of water filled depression incidental to construction.			
<b>Photograph ID: 74</b>			
<b>Latitude/Longitude:</b> 26.4270734, -98.13379406			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 074 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 75</b>			
<b>Latitude/Longitude:</b> 26.4270252, -98.1328768			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 075 (Upland)			
<b>Photograph ID: 76</b>			
<b>Latitude/Longitude:</b> 26.39280611, -98.15495868			
<b>Photo Direction:</b> north			
<b>Description:</b> DP 076 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 77</b>			
<b>Latitude/Longitude:</b> 26.38395406, -98.15690395			
<b>Photo Direction:</b> south			
<b>Description:</b> DP 077 (Upland)			
<b>Photograph ID: 78</b>			
<b>Latitude/Longitude:</b> 26.43426508, -98.05485461			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 078 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 79</b>			
<b>Latitude/Longitude:</b> 26.43389068, -98.05480044			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 079 (Wetland) at W027			
<b>Photograph ID: 80</b>			
<b>Latitude/Longitude:</b> 26.40251737, -98.1620458			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 080 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 81</b>			
<b>Latitude/Longitude:</b> 26.40234954, -98.1607293			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 081 (Upland)			
<b>Photograph ID: 82</b>			
<b>Latitude/Longitude:</b> 26.4842014, -98.01434905			
<b>Photo Direction:</b> southwest			
<b>Description:</b> DP 082 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 83</b>			
<b>Latitude/Longitude:</b> 26.47832634, -97.94171591			
<b>Photo Direction:</b> east			
<b>Description:</b> DP 083 (Upland)			
<b>Photograph ID: 84</b>			
<b>Latitude/Longitude:</b> 26.42989475, -98.05649527			
<b>Photo Direction:</b> west			
<b>Description:</b> DP 084 (Upland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 85			
<b>Latitude/Longitude:</b> 26.42975122, -98.05641223			
<b>Photo Direction:</b> southwest			
<b>Description:</b> DP 085 (Wetland) at W028			
<b>Photograph ID:</b> 86			
<b>Latitude/Longitude:</b> 26.494551, -97.880125			
<b>Photo Direction:</b> east			
<b>Description:</b> T001A West Main Drain (Perennial Drainage Ditch) looking downstream			




<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 87</b>			
<b>Latitude/Longitude:</b> 26.518209, -97.861081			
<b>Photo Direction:</b> east			
<b>Description:</b> T001A West Main Drain (Perennial Drainage Ditch) looking upstream			
<b>Photograph ID: 88</b>			
<b>Latitude/Longitude:</b> 26.471715, -97.910317			
<b>Photo Direction:</b> southeast			
<b>Description:</b> T001A West Main Drain (Perennial Drainage Ditch) looking upstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 89			
<b>Latitude/Longitude:</b> 26.518184, -97.8611			
<b>Photo Direction:</b> south			
<b>Description:</b> T001A West Main Drain (Perennial Drainage Ditch) looking upstream			
<b>Photograph ID:</b> 90			
<b>Latitude/Longitude:</b> 26.47825, -97.899969			
<b>Photo Direction:</b> north			
<b>Description:</b> T001A West Main Drain (Perennial Drainage Ditch) near T001A terminus, looking downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 91			
<b>Latitude/Longitude:</b> 26.478136, -97.899939			
<b>Photo Direction:</b> southwest			
<b>Description:</b> T001A West Main Drain (Perennial Drainage Ditch) near T001A terminus, looking upstream in direction of T002B			
<b>Photograph ID:</b> 92			
<b>Latitude/Longitude:</b> 26.524222, -97.502983			
<b>Photo Direction:</b> southeast			
<b>Description:</b> T001B East Main Drain (Perennial Drainage Ditch) at eastern terminus looking downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 93			
<b>Latitude/Longitude:</b> 26.524223, -97.502983			
<b>Photo Direction:</b> northwest			
<b>Description:</b> T001B East Main Drain (Perennial Drainage Ditch) at eastern terminus looking upstream			
<b>Photograph ID:</b> 94			
<b>Latitude/Longitude:</b> 26.5055, -97.529977			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T001B East Main Drain (Perennial Drainage Ditch) looking across			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 95</b>			
<b>Latitude/Longitude:</b> 26.518465, -97.759472			
<b>Photo Direction:</b> north			
<b>Description:</b> T001B East Main Drain (Perennial Drainage Ditch) looking across			
<b>Photograph ID: 96</b>			
<b>Latitude/Longitude:</b> 26.519183, -97.7698			
<b>Photo Direction:</b> east			
<b>Description:</b> T001B East Main Drain (Perennial Drainage Ditch) looking downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 97</b>			
<b>Latitude/Longitude:</b> 26.519146, -97.772677			
<b>Photo Direction:</b> west			
<b>Description:</b> T001B East Main Drain (Perennial Drainage Ditch) looking upstream			
<b>Photograph ID: 98</b>			
<b>Latitude/Longitude:</b> 26.45157591, -98.03452951			
<b>Photo Direction:</b> west			
<b>Description:</b> T002A (Upland Drainage Ditch) beginning of drainage ditch, looking downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 99			
<b>Latitude/Longitude:</b> 26.453064, -98.033236			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T002A (Upland Drainage Ditch) looking downstream			
<b>Photograph ID:</b> 100			
<b>Latitude/Longitude:</b> 26.453064, -98.033237			
<b>Photo Direction:</b> southwest			
<b>Description:</b> T002A (Upland Drainage Ditch) looking upstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 101			
<b>Latitude/Longitude:</b> 26.464938, -98.0317883			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T002A/T002B (Upland Drainage Ditch to Perennial Drainage Ditch Transition) looking downstream towards T002B			
<b>Photograph ID:</b> 102			
<b>Latitude/Longitude:</b> 26.464938, -98.0317883			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T002A/T002B (Upland Drainage Ditch to Perennial Drainage Ditch Transition) looking upstream towards T002A			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 103			
<b>Latitude/Longitude:</b> 26.484351, -98.014251			
<b>Photo Direction:</b> east			
<b>Description:</b> T002B (Perennial Drainage Ditch) looking downstream			
<b>Photograph ID:</b> 104			
<b>Latitude/Longitude:</b> 26.474356, -98.027776			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T002B (Perennial Drainage Ditch) looking downstream, at the beginning of perennial flow			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 105			
<b>Latitude/Longitude:</b> 26.48431, -98.014247			
<b>Photo Direction:</b> west			
<b>Description:</b> T002B (Perennial Drainage Ditch) looking upstream			
<b>Photograph ID:</b> 106			
<b>Latitude/Longitude:</b> 26.474355, -98.027776			
<b>Photo Direction:</b> southwest			
<b>Description:</b> T002B (Perennial Drainage Ditch) looking upstream, at the beginning of perennial flow			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 107			
<b>Latitude/Longitude:</b> 26.50454723, -97.66379			
<b>Photo Direction:</b> south			
<b>Description:</b> T009 (Upland Drainage Ditch) up-gradient from nearby public road			
<b>Photograph ID:</b> 108			
<b>Latitude/Longitude:</b> 26.50454735, -97.66379			
<b>Photo Direction:</b> north			
<b>Description:</b> T009 (Upland Drainage Ditch) down-gradient from nearby public road			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 109			
<b>Latitude/Longitude:</b> 26.51177408, -97.663991			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T009 (Upland Drainage Ditch) facing downstream and facing confluence of T001B			
<b>Photograph ID:</b> 110			
<b>Latitude/Longitude:</b> 26.51177242, -97.664005			
<b>Photo Direction:</b> south			
<b>Description:</b> T009 (Upland Drainage Ditch) facing upstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 111</b>			
<b>Latitude/Longitude:</b> 26.51855943, -97.700374			
<b>Photo Direction:</b> north			
<b>Description:</b> T010 (Perennial Drainage Ditch) facing downstream			
<b>Photograph ID: 112</b>			
<b>Latitude/Longitude:</b> 26.51858306, -97.700371			
<b>Photo Direction:</b> south			
<b>Description:</b> T010 (Perennial Drainage Ditch) facing upstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 113			
<b>Latitude/Longitude:</b> 26.51894739, -97.700436			
<b>Photo Direction:</b> south			
<b>Description:</b> T010 (Perennial Drainage Ditch) view up-gradient at confluence with RVD (No ROE)			
<b>Photograph ID:</b> 114			
<b>Latitude/Longitude:</b> 26.51852154, -97.712528			
<b>Photo Direction:</b> north			
<b>Description:</b> T011 (Perennial Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 115			
<b>Latitude/Longitude:</b> 26.518524, -97.712527			
<b>Photo Direction:</b> south			
<b>Description:</b> T011 (Perennial Drainage Ditch) facing upstream			
<b>Photograph ID:</b> 116			
<b>Latitude/Longitude:</b> 26.51901756, -97.736703			
<b>Photo Direction:</b> south			
<b>Description:</b> T012 (Upland Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 117</b>			
<b>Latitude/Longitude:</b> 26.51894245, -97.736659			
<b>Photo Direction:</b> north			
<b>Description:</b> T012 (Upland Drainage Ditch) facing upstream			
<b>Photograph ID: 118</b>			
<b>Latitude/Longitude:</b> 26.51815317, -97.748599			
<b>Photo Direction:</b> north			
<b>Description:</b> T013 (Upland Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 119			
<b>Latitude/Longitude:</b> 26.51827923, -97.748551			
<b>Photo Direction:</b> south			
<b>Description:</b> T013 (Upland Drainage Ditch) facing upstream			
<b>Photograph ID:</b> 120			
<b>Latitude/Longitude:</b> 26.51806243, -97.759408			
<b>Photo Direction:</b> north			
<b>Description:</b> T014 (Upland Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 121			
<b>Latitude/Longitude:</b> 26.5182129, -97.75939			
<b>Photo Direction:</b> south			
<b>Description:</b> T014 (Upland Drainage Ditch) facing upstream			
<b>Photograph ID:</b> 122			
<b>Latitude/Longitude:</b> 26.51895938, -97.779286			
<b>Photo Direction:</b> north			
<b>Description:</b> T015 (Perennial Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 123			
<b>Latitude/Longitude:</b> 26.5188534, -97.779267			
<b>Photo Direction:</b> north			
<b>Description:</b> T015 (Perennial Drainage Ditch) facing upstream			
<b>Photograph ID:</b> 124			
<b>Latitude/Longitude:</b> 26.52716393, -97.819067			
<b>Photo Direction:</b> south			
<b>Description:</b> T016 (Upland Drainage Ditch) facing upstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 125			
<b>Latitude/Longitude:</b> 26.52751515, -97.819099			
<b>Photo Direction:</b> south			
<b>Description:</b> T016 (Upland Drainage Ditch) facing upstream at culvert confluence with T001A			
<b>Photograph ID:</b> 126			
<b>Latitude/Longitude:</b> 26.51794815, -97.834042			
<b>Photo Direction:</b> north			
<b>Description:</b> T017 (Upland Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 127			
<b>Latitude/Longitude:</b> 26.51815635, -97.834093			
<b>Photo Direction:</b> south			
<b>Description:</b> T017 (Upland Drainage Ditch) facing upstream			
<b>Photograph ID:</b> 128			
<b>Latitude/Longitude:</b> 26.4960625, -97.862041			
<b>Photo Direction:</b> west			
<b>Description:</b> T018 (Perennial Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 129			
<b>Latitude/Longitude:</b> 26.49607348, -97.861989			
<b>Photo Direction:</b> east			
<b>Description:</b> T018 (Perennial Drainage Ditch) facing upstream			
<b>Photograph ID:</b> 130			
<b>Latitude/Longitude:</b> 26.49597238, -97.862047			
<b>Photo Direction:</b> west			
<b>Description:</b> T018 (Perennial Drainage Ditch) view of flow control structure			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 131			
<b>Latitude/Longitude:</b> 26.47967649, -97.901117			
<b>Photo Direction:</b> southeast			
<b>Description:</b> T020 (Salt Lake Drain, Perennial Drainage Ditch) facing downstream. Flood control structure visible.			
<b>Photograph ID:</b> 132			
<b>Latitude/Longitude:</b> 26.47921516, -97.900622			
<b>Photo Direction:</b> northwest			
<b>Description:</b> T020 (Salt Lake Drain, Perennial Drainage Ditch) facing upstream. Flood control structure visible.			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 133</b>			
<b>Latitude/Longitude:</b> 26.47200724, -97.90998837			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T021 (Upland Drainage Ditch) facing upstream			
<b>Photograph ID: 134</b>			
<b>Latitude/Longitude:</b> 26.47116424, -97.930801			
<b>Photo Direction:</b> northeast			
<b>Description:</b> T022 (Upland Drainage Ditch) facing downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 135			
<b>Latitude/Longitude:</b> 26.47116469, -97.930801			
<b>Photo Direction:</b> southwest			
<b>Description:</b> T022 (Upland Drainage Ditch) facing upstream			
<b>Photograph ID:</b> 136			
<b>Latitude/Longitude:</b> 26.48318121, -97.98748683			
<b>Photo Direction:</b> northwest			
<b>Description:</b> T024 (Upland Drainage Ditch) looking downstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 137			
<b>Latitude/Longitude:</b> 26.47765519, -98.040002			
<b>Photo Direction:</b> west			
<b>Description:</b> T026 (Perennial Drainage Ditch) upgradient (outside project area at public access)			
<b>Photograph ID:</b> 138			
<b>Latitude/Longitude:</b> 26.40220418, -98.16104901			
<b>Photo Direction:</b> west			
<b>Description:</b> T028 (Upland Drainage Ditch) looking upstream			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 139			
<b>Latitude/Longitude:</b> 26.52758251, -97.50776			
<b>Photo Direction:</b> north			
<b>Description:</b> W001 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 140			
<b>Latitude/Longitude:</b> 26.52757293, -97.507745			
<b>Photo Direction:</b> northeast			
<b>Description:</b> W001 (Palustrine Emergent Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 141			
<b>Latitude/Longitude:</b> 26.50735996, -97.523139			
<b>Photo Direction:</b> east			
<b>Description:</b> W002 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 142			
<b>Latitude/Longitude:</b> 26.51388488, -97.613656			
<b>Photo Direction:</b> north			
<b>Description:</b> W007 (Palustrine Scrub/Shrub Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 143			
<b>Latitude/Longitude:</b> 26.47745379, -97.982783			
<b>Photo Direction:</b> east			
<b>Description:</b> W012 (Palustrine Emergent Wetland); No ROE			
<b>Photograph ID:</b> 144			
<b>Latitude/Longitude:</b> 26.48323897, -97.987906			
<b>Photo Direction:</b> south			
<b>Description:</b> W014 (Palustrine Emergent Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 145			
<b>Latitude/Longitude:</b> 26.48192092, -97.995374			
<b>Photo Direction:</b> south			
<b>Description:</b> W015 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 146			
<b>Latitude/Longitude:</b> 26.45130749, -98.034726			
<b>Photo Direction:</b> east			
<b>Description:</b> W022 (Palustrine Emergent Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 147			
<b>Latitude/Longitude:</b> 26.45135603, -98.035035			
<b>Photo Direction:</b> northwest			
<b>Description:</b> W022 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 148			
<b>Latitude/Longitude:</b> 26.45336814, -98.040958			
<b>Photo Direction:</b> east			
<b>Description:</b> W022 (Palustrine Emergent Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 149			
<b>Latitude/Longitude:</b> 26.4535055, -98.041059			
<b>Photo Direction:</b> west			
<b>Description:</b> W023 (Palustrine Scrub/Shrub Wetland)			
<b>Photograph ID:</b> 150			
<b>Latitude/Longitude:</b> 26.45337268, -98.040939			
<b>Photo Direction:</b> south			
<b>Description:</b> W023 (Palustrine Scrub/Shrub Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 151			
<b>Latitude/Longitude:</b> 26.44171615, -98.055735			
<b>Photo Direction:</b> north			
<b>Description:</b> W024 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 152			
<b>Latitude/Longitude:</b> 26.44101634, -98.056739			
<b>Photo Direction:</b> east			
<b>Description:</b> W025 (Palustrine Scrub/Shrub Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 153			
<b>Latitude/Longitude:</b> 26.43367646, -98.054127			
<b>Photo Direction:</b> northwest			
<b>Description:</b> W026 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 154			
<b>Latitude/Longitude:</b> 26.43405364, -98.054489			
<b>Photo Direction:</b> south			
<b>Description:</b> W026 (Palustrine Emergent Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 155			
<b>Latitude/Longitude:</b> 26.4340211, -98.05455			
<b>Photo Direction:</b> south			
<b>Description:</b> W026 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 156			
<b>Latitude/Longitude:</b> 26.43413838, -98.055039			
<b>Photo Direction:</b> south			
<b>Description:</b> W027 (Palustrine Emergent Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 157			
<b>Latitude/Longitude:</b> 26.42777368, -98.056978			
<b>Photo Direction:</b> northeast			
<b>Description:</b> W028 (Palustrine Emergent Wetland)			
<b>Photograph ID:</b> 158			
<b>Latitude/Longitude:</b> 26.42901767, -98.056701			
<b>Photo Direction:</b> northeast			
<b>Description:</b> W029 (Palustrine Emergent Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 159			
<b>Latitude/Longitude:</b> 26.42691001, -98.056708			
<b>Photo Direction:</b> west			
<b>Description:</b> W030 (Palustrine Scrub/Shrub Wetland)			
<b>Photograph ID:</b> 160			
<b>Latitude/Longitude:</b> 26.42644317, -98.05752			
<b>Photo Direction:</b> east			
<b>Description:</b> W030 (Palustrine Scrub/Shrub Wetland)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 161			
<b>Latitude/Longitude:</b> 26.50679554, -97.52413			
<b>Photo Direction:</b> east			
<b>Description:</b> OW001			
<b>Photograph ID:</b> 162			
<b>Latitude/Longitude:</b> 26.50477394, -97.527856			
<b>Photo Direction:</b> south			
<b>Description:</b> OW002			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 163			
<b>Latitude/Longitude:</b> 26.42577854, -98.135463			
<b>Photo Direction:</b> east			
<b>Description:</b> OW009; Off-site Open water			
<b>Photograph ID:</b> 164			
<b>Latitude/Longitude:</b> 26.4265107, -98.136167			
<b>Photo Direction:</b> southwest			
<b>Description:</b> OW010; No ROE, Open Water			





<b>Client:</b> <b>Report:</b>	<b>Hidalgo County Drainage District No. 1</b> <b>Wetland Delineation Report</b>	<b>Project:</b> <b>Site Location:</b>	<b>Raymondville Drain Project</b> <b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 165  <b>Latitude/Longitude:</b> 26.25367299, -98.8488  <b>Photo Direction:</b> southeast  <b>Description:</b> Active construction and associated water filled depression incidental to construction located immediately east of I69C (characterized by DP 073)			
<b>Photograph ID:</b> 166  <b>Latitude/Longitude:</b> 26.25405899, -98.84809  <b>Photo Direction:</b> southwest  <b>Description:</b> Active construction and associated water filled depression incidental to construction located immediately east of I69C (characterized by DP 073)			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 167			
<b>Latitude/Longitude:</b> 26.42621994, -98.12417861			
<b>Photo Direction:</b> south			
<b>Description:</b> SWMS001 Overview, representative of stormwater management structures			
<b>Photograph ID:</b> 168			
<b>Latitude/Longitude:</b> 26.42621994, -98.12417861			
<b>Photo Direction:</b> south			
<b>Description:</b> SWMS001, Representative photo of storm water detention pond			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 169			
<b>Latitude/Longitude:</b> 26.39418681, -98.15483306			
<b>Photo Direction:</b> north			
<b>Description:</b> SWMS003 Overview, representative of stormwater management structures			
<b>Photograph ID:</b> 170			
<b>Latitude/Longitude:</b> 26.39396652, -98.15485335			
<b>Photo Direction:</b> southwest			
<b>Description:</b> SWMS004 Overview, representative of stormwater management structures			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 171			
<b>Latitude/Longitude:</b> 26.3936138, -98.1550487			
<b>Photo Direction:</b> south			
<b>Description:</b> SWMS004 Overview, representative of stormwater management structures			
<b>Photograph ID:</b> 172			
<b>Latitude/Longitude:</b> 26.39362505, -98.15503059			
<b>Photo Direction:</b> north			
<b>Description:</b> SWMS004, Representative photo of stormwater management structure, no culvert observed			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 173</b>			
<b>Latitude/Longitude:</b> 26.38704102, -98.15627096			
<b>Photo Direction:</b> south			
<b>Description:</b> SWMS005 Overview, representative of stormwater management structures			
<b>Photograph ID: 174</b>			
<b>Latitude/Longitude:</b> 26.42611099, -98.12431808			
<b>Photo Direction:</b> south			
<b>Description:</b> SWMS01, Representative photo of storm water detention pond			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 175</b>			
<b>Latitude/Longitude:</b> 26.42609719, -98.12425114			
<b>Photo Direction:</b> south			
<b>Description:</b> SWMS01, Representative photo of stormwater detention basin spillway			
<b>Photograph ID: 176</b>			
<b>Latitude/Longitude:</b> 26.52257671, -97.79246116			
<b>Photo Direction:</b> north			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit			





<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID: 177</b>			
<b>Latitude/Longitude:</b> 26.47326366, -97.93039055			
<b>Photo Direction:</b> north			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit			
<b>Photograph ID: 178</b>			
<b>Latitude/Longitude:</b> 26.49243726, -97.86078109			
<b>Photo Direction:</b> west			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit			




<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 179			
<b>Latitude/Longitude:</b> 26.47323749, -97.91836484			
<b>Photo Direction:</b> northeast			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit			
<b>Photograph ID:</b> 180			
<b>Latitude/Longitude:</b> 26.47304156, -97.9427044			
<b>Photo Direction:</b> south			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit			



<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 181			
<b>Latitude/Longitude:</b> 26.51906413, -97.83014728			
<b>Photo Direction:</b> northwest			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit control valve			
<b>Photograph ID:</b> 182			
<b>Latitude/Longitude:</b> 26.51907728, -97.83015461			
<b>Photo Direction:</b> west			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit control valve			



<b>Client:</b>	<b>Hidalgo County Drainage District No. 1</b>	<b>Project:</b>	<b>Raymondville Drain Project</b>
<b>Report:</b>	<b>Wetland Delineation Report</b>	<b>Site Location:</b>	<b>Hidalgo and Willacy County, Texas</b>
<b>Photograph ID:</b> 183			
<b>Latitude/Longitude:</b> 26.52813424, -97.80774006			
<b>Photo Direction:</b> north			
<b>Description:</b> Representative photo of irrigation canal / artificial conduit with control valve			



## **Appendix C**

### **WETLAND DETERMINATION DATA FORMS**



<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</div> <div>See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R</div>	<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
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Project/Site: Raymondville Drain	City/County: Willacy County	Sampling Date: 4-30-2024
Applicant/Owner: HCDD1	State: TX	Sampling Point: 001
Investigator(s): K. Compton, K. Rubio	Section, Township, Range: N/A	
Landform (hillside, terrace, etc.): Rise	Local relief (concave, convex, none): Convex	Slope (%): 0
Subregion (LRR or MLRA): LRR T, MLRA 150B	Lat: 26.509331	Long: -97.524366
Datum: WGS84		
Soil Map Unit Name: Willamar fine sandy loam, 0 to 1 percent slopes	NWI classification: PEM1A	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

HYDROLOGY

<div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one is required; check all that apply)</div> <div><div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift Deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div></div><div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> Marl Deposits (B15) (LRR U)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div></div>
--



Tree Stratum	(Plot size: 30' Radius )	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

=Total Cover  
50% of total cover: 20% of total cover:

Sapling/Shrub Stratum	(Plot size: 30' Radius )			
1.	<i>Vachellia farnesiana</i>	50	Yes	FACU
2.				
3.				
4.				
5.				
6.				
7.				
8.				

50 =Total Cover  
50% of total cover: 25 20% of total cover: 10

Herb Stratum	(Plot size: 30' Radius )			
1.	<i>Cyperus enterianus</i>	15	Yes	FACW
2.	<i>Cenchrus ciliaris</i>	5	Yes	UPL
3.	<i>Nepeta cataria</i>	1	No	FACU
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

21 =Total Cover  
50% of total cover: 11 20% of total cover: 5

Woody Vine Stratum	(Plot size: 30' Radius )			
1.				
2.				
3.				
4.				
5.				

=Total Cover  
50% of total cover: 20% of total cover:

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 15	x 2 = 30
FAC species 0	x 3 = 0
FACU species 51	x 4 = 204
UPL species 5	x 5 = 25
Column Totals: 71 (A)	259 (B)
Prevalence Index = B/A = 3.65	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes No X

Remarks: (If observed, list morphological adaptations below.)



## SOIL

Sampling Point: 001

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/1	100					Loamy/Clayey	
6-18	10YR 2/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</div> <div>See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R</div>	<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
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Project/Site: Raymondville Drain	City/County: Willacy County	Sampling Date: 4-30-2024
Applicant/Owner: HCDD1	State: TX	Sampling Point: 002
Investigator(s): K. Compton, K. Rubio	Section, Township, Range: N/A	
Landform (hillside, terrace, etc.): Dip	Local relief (concave, convex, none): concave	Slope (%): 0-1
Subregion (LRR or MLRA): LRR T, MLRA 150B	Lat: 26.510769	Long: -97.52491
Datum: WGS84		
Soil Map Unit Name: Willamar fine sandy loam, 0 to 1 percent slopes	NWI classification: PEM1C	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

HYDROLOGY

<div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one is required; check all that apply)</div> <div><div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift Deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div></div><div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> Marl Deposits (B15) (LRR U)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div></div>
--



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 002

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>50</u> =Total Cover		
50% of total cover: <u>25</u>	20% of total cover: <u>10</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cenchrus ciliaris</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>
2. <u>Waltheria indica</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>
3. <u>Borrichia frutescens</u>	<u>2</u>	<u>No</u>	<u>OBL</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>42</u> =Total Cover		
50% of total cover: <u>21</u>	20% of total cover: <u>9</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>2</u>	x 1 = <u>2</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>50</u>	x 4 = <u>200</u>
UPL species <u>40</u>	x 5 = <u>200</u>
Column Totals: <u>92</u> (A)	<u>402</u> (B)
Prevalence Index = B/A = <u>4.37</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes    No X



## SOIL

Sampling Point: 002

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	100					Loamy/Clayey	
5-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 4-30-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 003  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Rise Local relief (concave, convex, none): convex Slope (%): 1  
Subregion (LRR or MLRA): LRR T, MLRA 150B Lat: 26.515546 Long: -97.521348 Datum: WGS84  
Soil Map Unit Name: Willamar fine sandy loam, 0 to 1 percent slopes NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>    </u> Surface Water (A1) <u>    </u> Aquatic Fauna (B13) <u>    </u> High Water Table (A2) <u>    </u> Marl Deposits (B15) ( <b>LRR U</b> ) <u>    </u> Saturation (A3) <u>    </u> Hydrogen Sulfide Odor (C1) <u>    </u> Water Marks (B1) <u>    </u> Oxidized Rhizospheres on Living Roots (C3) <u>    </u> Sediment Deposits (B2) <u>    </u> Presence of Reduced Iron (C4) <u>    </u> Drift Deposits (B3) <u>    </u> Recent Iron Reduction in Tilled Soils (C6) <u>    </u> Algal Mat or Crust (B4) <u>    </u> Thin Muck Surface (C7) <u>    </u> Iron Deposits (B5) <u>    </u> Other (Explain in Remarks) <u>    </u> Inundation Visible on Aerial Imagery (B7) <u>    </u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <u>    </u> Surface Soil Cracks (B6) <u>    </u> Sparsely Vegetated Concave Surface (B8) <u>    </u> Drainage Patterns (B10) <u>    </u> Moss Trim Lines (B16) <u>    </u> Dry-Season Water Table (C2) <u>    </u> Crayfish Burrows (C8) <u>    </u> Saturation Visible on Aerial Imagery (C9) <u>    </u> Geomorphic Position (D2) <u>    </u> Shallow Aquitard (D3) <u>    </u> FAC-Neutral Test (D5) <u>    </u> Sphagnum Moss (D8) ( <b>LRR T, U</b> )
<b>Field Observations:</b> Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>    </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 003

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Diospyros texana</u>	<u>25</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>25</u> =Total Cover		
50% of total cover: <u>13</u>	20% of total cover: <u>5</u>		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prosopis glandulosa</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>40</u> =Total Cover		
50% of total cover: <u>20</u>	20% of total cover: <u>8</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Spartina spartinae</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Cenchrus ciliaris</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>20</u> =Total Cover		
50% of total cover: <u>10</u>	20% of total cover: <u>4</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>75</u>	x 5 = <u>375</u>
Column Totals: <u>85</u> (A)	<u>385</u> (B)
Prevalence Index = B/A = <u>4.53</u>	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes    No X



## SOIL

Sampling Point: 003

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/3	100					Loamy/Clayey	
4-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</div> <div>See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R</div>	<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
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Project/Site: Raymondville Drain	City/County: Willacy County	Sampling Date: 4-30-2024
Applicant/Owner: HCDD1	State: TX	Sampling Point: 004
Investigator(s): K. Compton, K. Rubio	Section, Township, Range: N/A	
Landform (hillside, terrace, etc.): Depression	Local relief (concave, convex, none): concave	Slope (%): 0
Subregion (LRR or MLRA): LRR T, MLRA 150B	Lat: 26.522179	Long: -97.516021
Datum: WGS84		
Soil Map Unit Name: Jarron sandy clay loam	NWI classification: None	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

HYDROLOGY

<div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one is required; check all that apply)</div> <div><div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift Deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div></div><div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> Marl Deposits (B15) (LRR U)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div></div>
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**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 004

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>10</u> =Total Cover		
50% of total cover: <u>5</u>	20% of total cover: <u>2</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Spartina spartinae</u>	<u>80</u>	<u>Yes</u>	<u>OBL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>80</u> =Total Cover		
50% of total cover: <u>40</u>	20% of total cover: <u>16</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>80</u>	x 1 = <u>80</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>120</u> (B)
Prevalence Index = B/A = <u>1.33</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

**Yes** X **No** X



## SOIL

Sampling Point: 004

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</div> <div>See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R</div>	<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
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Project/Site: Raymondville Drain	City/County: Willacy County	Sampling Date: 4-30-2024
Applicant/Owner: HCDD1	State: TX	Sampling Point: 005
Investigator(s): K. Compton, K. Rubio	Section, Township, Range: N/A	
Landform (hillside, terrace, etc.): Depression	Local relief (concave, convex, none): concave	Slope (%): 0
Subregion (LRR or MLRA): LRR T, MLRA 150B	Lat: 26.525565	Long: -97.513675
Datum: WGS84		
Soil Map Unit Name: Jarron sandy clay loam	NWI classification: None	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

HYDROLOGY

<div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one is required; check all that apply)</div> <div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input type="checkbox"/> Marl Deposits (B15) (LRR U)</div><div><input type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Drift Deposits (B3)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div></div>
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**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 005

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>25</u> =Total Cover		
50% of total cover: <u>13</u>	20% of total cover: <u>5</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ambrosia artemisiifolia</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Cenchrus ciliaris</u>	<u>15</u>	<u>No</u>	<u>UPL</u>
3. <u>Setaria parviflora</u>	<u>15</u>	<u>No</u>	<u>FACW</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>80</u> =Total Cover		
50% of total cover: <u>40</u>	20% of total cover: <u>16</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>75</u>	x 4 = <u>300</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>105</u> (A)	<u>405</u> (B)
Prevalence Index = B/A = <u>3.86</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes    No X



## SOIL

Sampling Point: 005

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/2	98	10YR 4/6	2	C	M	Loamy/Clayey	
4-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> ( <b>MLRA 149A, 153C, 153D</b> )
<input type="checkbox"/> ( <b>LRR S, T, U</b> )	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> ( <b>MLRA 138, 152A in FL, 154</b> )

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> ( <b>outside MLRA 150A, 150B</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> ( <b>MLRA 153B</b> )
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> ( <b>outside MLRA 138, 152A in FL, 154</b> )
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Willacy County</u>	Sampling Date: <u>4-30-2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>006</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0</u>
Subregion (LRR or MLRA): <u>LRR T, MLRA 150B</u>	Lat: <u>26.528132</u>	Long: <u>-97.509008</u>
Datum: <u>WGS84</u>		
Soil Map Unit Name: <u>Arrada sandy clay loam, 0 to 1 percent slopes, very frequently flooded, frequently ponded</u>	NWI classification: <u>PEM1C</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>    </u> (If no, explain in Remarks.)		
Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>    </u>		
Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>    </u> Surface Water (A1)	<u>    </u> Surface Soil Cracks (B6)
<u>    </u> High Water Table (A2)	<u>    </u> Sparsely Vegetated Concave Surface (B8)
<u>    </u> Saturation (A3)	<u>    </u> Drainage Patterns (B10)
<u>    </u> Water Marks (B1)	<u>    </u> Moss Trim Lines (B16)
<u>    </u> Sediment Deposits (B2)	<u>    </u> Dry-Season Water Table (C2)
<u>    </u> Drift Deposits (B3)	<u>X</u> Crayfish Burrows (C8)
<u>    </u> Algal Mat or Crust (B4)	<u>X</u> Saturation Visible on Aerial Imagery (C9)
<u>    </u> Iron Deposits (B5)	<u>X</u> Geomorphic Position (D2)
<u>X</u> Inundation Visible on Aerial Imagery (B7)	<u>    </u> Shallow Aquitard (D3)
<u>    </u> Water-Stained Leaves (B9)	<u>X</u> FAC-Neutral Test (D5)
	<u>    </u> Sphagnum Moss (D8) (LRR T, U)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Secondary Indicator C8 consisted of crab burrows rather than crayfish.	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 006

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Borrchia frutescens</i>	70	Yes	OBL
2. <i>Batis maritima</i>	20	Yes	OBL
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	90 =Total Cover		
50% of total cover: 45	20% of total cover: 18		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>90</u>	x 1 = <u>90</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u> (A)	<u>90</u> (B)
Prevalence Index = B/A = <u>1.00</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 006

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 5/2	95	10YR 5/6	5	C	PL	Loamy/Clayey	
9-18	10YR 5/2	85	10YR 5/6	15	C	PL	Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> ( <b>MLRA 149A, 153C, 153D</b> )
<input type="checkbox"/> ( <b>LRR S, T, U</b> )	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> ( <b>MLRA 138, 152A in FL, 154</b> )

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> ( <b>outside MLRA 150A, 150B</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> ( <b>MLRA 153B</b> )
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> ( <b>outside MLRA 138, 152A in FL, 154</b> )
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 4-30-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 007  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Rise Local relief (concave, convex, none): convex Slope (%): 1  
Subregion (LRR or MLRA): LRR T, MLRA 150B Lat: 26.527918 Long: -97.509334 Datum: WGS84  
Soil Map Unit Name: Arrada sandy clay loam, 0 to 1 percent slopes, very frequently flooded, frequently ponded NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>      </u> Surface Water (A1) <u>      </u> Aquatic Fauna (B13) <u>      </u> High Water Table (A2) <u>      </u> Marl Deposits (B15) <b>(LRR U)</b> <u>      </u> Saturation (A3) <u>      </u> Hydrogen Sulfide Odor (C1) <u>      </u> Water Marks (B1) <u>      </u> Oxidized Rhizospheres on Living Roots (C3) <u>      </u> Sediment Deposits (B2) <u>      </u> Presence of Reduced Iron (C4) <u>      </u> Drift Deposits (B3) <u>      </u> Recent Iron Reduction in Tilled Soils (C6) <u>      </u> Algal Mat or Crust (B4) <u>      </u> Thin Muck Surface (C7) <u>      </u> Iron Deposits (B5) <u>      </u> Other (Explain in Remarks) <u>      </u> Inundation Visible on Aerial Imagery (B7) <u>      </u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <u>      </u> Surface Soil Cracks (B6) <u>      </u> Sparsely Vegetated Concave Surface (B8) <u>      </u> Drainage Patterns (B10) <u>      </u> Moss Trim Lines (B16) <u>      </u> Dry-Season Water Table (C2) <u>      </u> Crayfish Burrows (C8) <u>      </u> Saturation Visible on Aerial Imagery (C9) <u>      </u> Geomorphic Position (D2) <u>      </u> Shallow Aquitard (D3) <u>      </u> FAC-Neutral Test (D5) <u>      </u> Sphagnum Moss (D8) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>      </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 007

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prosopis glandulosa</u>	<u>35</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>35</u> =Total Cover		
50% of total cover: <u>18</u>	20% of total cover: <u>7</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Spartina spartinae</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>60</u> =Total Cover		
50% of total cover: <u>30</u>	20% of total cover: <u>12</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>60</u>	x 1 = <u>60</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>35</u>	x 5 = <u>175</u>
Column Totals: <u>95</u> (A)	<u>235</u> (B)
Prevalence Index = B/A = <u>2.47</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 007

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> ( <b>MLRA 149A, 153C, 153D</b> )
<input type="checkbox"/> ( <b>LRR S, T, U</b> )	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> ( <b>MLRA 138, 152A in FL, 154</b> )

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> ( <b>outside MLRA 150A, 150B</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> ( <b>MLRA 153B</b> )
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> ( <b>outside MLRA 138, 152A in FL, 154</b> )
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Willacy County</u>	Sampling Date: <u>4-30-2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>008</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0</u>
Subregion (LRR or MLRA): <u>LRR T, MLRA 150B</u>	Lat: <u>26.524788</u>	Long: <u>-97.502615</u>
Datum: <u>WGS84</u>		
Soil Map Unit Name: <u>Arrada sandy clay loam, 0 to 1 percent slopes, very frequently flooded, frequently ponded</u>	NWI classification: <u>PEM1C</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>      </u>		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>      </u>
Hydric Soil Present? Yes <u>X</u> No <u>      </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>      </u> Surface Water (A1)	<u>      </u> Surface Soil Cracks (B6)
<u>      </u> High Water Table (A2)	<u>      </u> Sparsely Vegetated Concave Surface (B8)
<u>      </u> Saturation (A3)	<u>      </u> Drainage Patterns (B10)
<u>      </u> Water Marks (B1)	<u>      </u> Moss Trim Lines (B16)
<u>      </u> Sediment Deposits (B2)	<u>      </u> Dry-Season Water Table (C2)
<u>      </u> Drift Deposits (B3)	<u>  X  </u> Crayfish Burrows (C8)
<u>      </u> Algal Mat or Crust (B4)	<u>  X  </u> Saturation Visible on Aerial Imagery (C9)
<u>      </u> Iron Deposits (B5)	<u>  X  </u> Geomorphic Position (D2)
<u>  X  </u> Inundation Visible on Aerial Imagery (B7)	<u>      </u> Shallow Aquitard (D3)
<u>      </u> Water-Stained Leaves (B9)	<u>      </u> FAC-Neutral Test (D5)
	<u>      </u> Sphagnum Moss (D8) (LRR T, U)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u>	Wetland Hydrology Present? Yes <u>  X  </u> No <u>      </u>
Water Table Present? Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u>	
Saturation Present? Yes <u>      </u> No <u>  X  </u> Depth (inches): <u>      </u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Secondary hydrology indicator C8 consisted of crab burrows rather than crayfish.	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 008

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Parkinsonia aculeata</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Vachellia farnesiana</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>30</u> =Total Cover		
50% of total cover: <u>15</u>	20% of total cover: <u>6</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Borrchia frutescens</u>	<u>90</u>	<u>Yes</u>	<u>OBL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>90</u> =Total Cover		
50% of total cover: <u>45</u>	20% of total cover: <u>18</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>90</u>	x 1 = <u>90</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>120</u> (A)	<u>195</u> (B)
Prevalence Index = B/A = <u>1.63</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 008

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/1	98	10YR 4/6	2	C	PL	Loamy/Clayey	
6-18	10YR 5/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Willacy County</u>	Sampling Date: <u>4-30-2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>009</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Flat</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-1</u>
Subregion (LRR or MLRA): <u>LRR T, MLRA 150B</u>	Lat: <u>26.507396</u>	Long: <u>-97.533149</u>
Datum: <u>WGS84</u>		
Soil Map Unit Name: <u>Latina sandy clay loam, 0 to 1 percent slopes, occasionally ponded, rarely flooded</u>	NWI classification: <u>PSS1A</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>    </u> (If no, explain in Remarks.)		
Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>    </u>		
Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>    </u> Surface Water (A1)	<u>    </u> Surface Soil Cracks (B6)
<u>    </u> High Water Table (A2)	<u>    </u> Sparsely Vegetated Concave Surface (B8)
<u>    </u> Saturation (A3)	<u>    </u> Drainage Patterns (B10)
<u>    </u> Water Marks (B1)	<u>    </u> Moss Trim Lines (B16)
<u>    </u> Sediment Deposits (B2)	<u>    </u> Dry-Season Water Table (C2)
<u>    </u> Drift Deposits (B3)	<u>    </u> Crayfish Burrows (C8)
<u>    </u> Algal Mat or Crust (B4)	<u>    </u> Saturation Visible on Aerial Imagery (C9)
<u>    </u> Iron Deposits (B5)	<u>    </u> Geomorphic Position (D2)
<u>    </u> Inundation Visible on Aerial Imagery (B7)	<u>    </u> Shallow Aquitard (D3)
<u>    </u> Water-Stained Leaves (B9)	<u>X</u> FAC-Neutral Test (D5)
	<u>    </u> Sphagnum Moss (D8) (LRR T, U)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>	<b>Wetland Hydrology Present?</b> Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 009

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>30</u> =Total Cover		
50% of total cover: <u>15</u>	20% of total cover: <u>6</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Spartina spartinae</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Cyclospermum leptophyllum</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
3. <u>Agrimonia gryposepala</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
4. <u>Heliotropium indicum</u>	<u>1</u>	<u>No</u>	<u>FAC</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>61</u> =Total Cover		
50% of total cover: <u>31</u>	20% of total cover: <u>13</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>50</u>	x 1 = <u>50</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>6</u>	x 3 = <u>18</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>91</u> (A)	<u>208</u> (B)
Prevalence Index = B/A = <u>2.29</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 009

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	100					Loamy/Clayey	
5-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</div> <div>See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R</div>	<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
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Project/Site: Raymondville Drain	City/County: Willacy County	Sampling Date: 4-30-2024
Applicant/Owner: HCDD1	State: TX	Sampling Point: 010
Investigator(s): K. Compton, K. Rubio	Section, Township, Range: N/A	
Landform (hillside, terrace, etc.): Flat	Local relief (concave, convex, none): none	Slope (%): 0-1
Subregion (LRR or MLRA): LRR T, MLRA 150B	Lat: 26.506154	Long: -97.529093
Datum: WGS84		
Soil Map Unit Name: Latina sandy clay loam, 0 to 1 percent slopes, occasionally ponded, rarely flooded	NWI classification: PSS1A	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

HYDROLOGY

<div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one is required; check all that apply)</div> <div><div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift Deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div></div><div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> Marl Deposits (B15) (LRR U)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input type="checkbox"/> Other (Explain in Remarks)</div></div></div>
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**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 010

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prosopis glandulosa</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>30</u> =Total Cover		
50% of total cover: <u>15</u>	20% of total cover: <u>6</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Borrchia frutescens</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>60</u> =Total Cover		
50% of total cover: <u>30</u>	20% of total cover: <u>12</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>60</u>	x 1 = <u>60</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>30</u>	x 5 = <u>150</u>
Column Totals: <u>90</u> (A)	<u>210</u> (B)
Prevalence Index = B/A = <u>2.33</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 010

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	100					Loamy/Clayey	
6-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Willacy County</u>	Sampling Date: <u>5-1-2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>011</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0</u>
Subregion (LRR or MLRA): <u>LRR T, MLRA 150B</u>	Lat: <u>26.525758</u>	Long: <u>-97.506067</u>
	Datum: <u>WGS84</u>	
Soil Map Unit Name: <u>Arrada sandy clay loam, 0 to 1 percent slopes, very frequently flooded, frequently ponded</u>	NWI classification: <u>None</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>      </u>		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>      </u> Surface Water (A1)	<u>      </u> Surface Soil Cracks (B6)
<u>      </u> High Water Table (A2)	<u>      </u> Sparsely Vegetated Concave Surface (B8)
<u>      </u> Saturation (A3)	<u>      </u> Drainage Patterns (B10)
<u>      </u> Water Marks (B1)	<u>      </u> Moss Trim Lines (B16)
<u>      </u> Sediment Deposits (B2)	<u>      </u> Dry-Season Water Table (C2)
<u>      </u> Drift Deposits (B3)	<u>X</u> Crayfish Burrows (C8)
<u>      </u> Algal Mat or Crust (B4)	<u>      </u> Saturation Visible on Aerial Imagery (C9)
<u>      </u> Iron Deposits (B5)	<u>X</u> Geomorphic Position (D2)
<u>      </u> Inundation Visible on Aerial Imagery (B7)	<u>      </u> Shallow Aquitard (D3)
<u>      </u> Water-Stained Leaves (B9)	<u>      </u> FAC-Neutral Test (D5)
	<u>      </u> Sphagnum Moss (D8) (LRR T, U)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>      </u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Secondary hydrology indicator C8 consisted of crab burrows rather than crayfish.	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 011

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prosopis glandulosa</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>15</u> =Total Cover		
50% of total cover: <u>8</u>	20% of total cover: <u>3</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Batis maritima</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Borrchia frutescens</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>
3. <u>Cynodon dactylon</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>75</u> =Total Cover		
50% of total cover: <u>38</u>	20% of total cover: <u>15</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>50</u>	x 1 = <u>50</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>25</u>	x 4 = <u>100</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>90</u> (A)	<u>225</u> (B)
Prevalence Index = B/A = <u>2.50</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 011

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> ( <b>MLRA 149A, 153C, 153D</b> )
<input type="checkbox"/> ( <b>LRR S, T, U</b> )	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> ( <b>MLRA 138, 152A in FL, 154</b> )

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> ( <b>outside MLRA 150A, 150B</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> ( <b>MLRA 153B</b> )
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> ( <b>outside MLRA 138, 152A in FL, 154</b> )
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Willacy County</u>	Sampling Date: <u>5-1-2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>012</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0-1</u>
Subregion (LRR or MLRA): <u>LRR T, MLRA 150B</u>	Lat: <u>26.526535</u>	Long: <u>-97.50775</u>
Datum: <u>WGS84</u>		
Soil Map Unit Name: <u>Arrada sandy clay loam, 0 to 1 percent slopes, very frequently flooded, frequently ponded</u>	NWI classification: <u>None</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>      </u>		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>      </u> Surface Water (A1)	<u>      </u> Surface Soil Cracks (B6)
<u>      </u> High Water Table (A2)	<u>      </u> Sparsely Vegetated Concave Surface (B8)
<u>      </u> Saturation (A3)	<u>      </u> Drainage Patterns (B10)
<u>      </u> Water Marks (B1)	<u>      </u> Moss Trim Lines (B16)
<u>      </u> Sediment Deposits (B2)	<u>      </u> Dry-Season Water Table (C2)
<u>      </u> Drift Deposits (B3)	<u>X</u> Crayfish Burrows (C8)
<u>      </u> Algal Mat or Crust (B4)	<u>      </u> Saturation Visible on Aerial Imagery (C9)
<u>      </u> Iron Deposits (B5)	<u>X</u> Geomorphic Position (D2)
<u>      </u> Inundation Visible on Aerial Imagery (B7)	<u>      </u> Shallow Aquitard (D3)
<u>      </u> Water-Stained Leaves (B9)	<u>X</u> FAC-Neutral Test (D5)
<u>      </u> Aquatic Fauna (B13)	<u>      </u> Sphagnum Moss (D8) (LRR T, U)
<u>      </u> Marl Deposits (B15) (LRR U)	
<u>      </u> Hydrogen Sulfide Odor (C1)	
<u>      </u> Oxidized Rhizospheres on Living Roots (C3)	
<u>      </u> Presence of Reduced Iron (C4)	
<u>      </u> Recent Iron Reduction in Tilled Soils (C6)	
<u>      </u> Thin Muck Surface (C7)	
<u>      </u> Other (Explain in Remarks)	
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>      </u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Secondary hydrology indicator C8 consisted of crab burrows rather than crayfish.	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 012

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prosopis glandulosa</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>15</u> =Total Cover		
50% of total cover: <u>8</u>	20% of total cover: <u>3</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Borrchia frutescens</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Mimosa strigillosa</u>	<u>15</u>	<u>No</u>	<u>FAC</u>
3. <u>Spartina spartinae</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>80</u> =Total Cover		
50% of total cover: <u>40</u>	20% of total cover: <u>16</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>65</u>	x 1 = <u>65</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>95</u> (A)	<u>185</u> (B)
Prevalence Index = B/A = <u>1.95</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 012

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/3	100					Loamy/Clayey	
4-18	10YR 3/3	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Willacy County</u>	Sampling Date: <u>5-1-2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>013</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0-1</u>
Subregion (LRR or MLRA): <u>LRR T, MLRA 150B</u>	Lat: <u>26.525133</u>	Long: <u>-97.512709</u>
Datum: <u>WGS84</u>		
Soil Map Unit Name: <u>Jarron sandy clay loam</u>	NWI classification: <u>None</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>      </u>		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>      </u> Surface Water (A1)	<u>      </u> Surface Soil Cracks (B6)
<u>      </u> High Water Table (A2)	<u>      </u> Sparsely Vegetated Concave Surface (B8)
<u>      </u> Saturation (A3)	<u>      </u> Drainage Patterns (B10)
<u>      </u> Water Marks (B1)	<u>      </u> Moss Trim Lines (B16)
<u>      </u> Sediment Deposits (B2)	<u>      </u> Dry-Season Water Table (C2)
<u>      </u> Drift Deposits (B3)	<u>      </u> Crayfish Burrows (C8)
<u>      </u> Algal Mat or Crust (B4)	<u>      </u> Saturation Visible on Aerial Imagery (C9)
<u>      </u> Iron Deposits (B5)	<u>X</u> Geomorphic Position (D2)
<u>      </u> Inundation Visible on Aerial Imagery (B7)	<u>      </u> Shallow Aquitard (D3)
<u>      </u> Water-Stained Leaves (B9)	<u>X</u> FAC-Neutral Test (D5)
<u>      </u> Aquatic Fauna (B13)	<u>      </u> Sphagnum Moss (D8) (LRR T, U)
<u>      </u> Marl Deposits (B15) (LRR U)	
<u>      </u> Hydrogen Sulfide Odor (C1)	
<u>      </u> Oxidized Rhizospheres on Living Roots (C3)	
<u>      </u> Presence of Reduced Iron (C4)	
<u>      </u> Recent Iron Reduction in Tilled Soils (C6)	
<u>      </u> Thin Muck Surface (C7)	
<u>      </u> Other (Explain in Remarks)	
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>      </u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 013

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prosopis glandulosa</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>15</u> =Total Cover		
50% of total cover: <u>8</u>	20% of total cover: <u>3</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Borrchia frutescens</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Spartina spartinae</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>
3. <u>Teucrium cubense</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>50</u> =Total Cover		
50% of total cover: <u>25</u>	20% of total cover: <u>10</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>35</u>	x 1 = <u>35</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>65</u> (A)	<u>140</u> (B)
Prevalence Index = B/A = <u>2.15</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 013

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	99	10YR 4/6	1	C	M	Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> ( <b>MLRA 149A, 153C, 153D</b> )
<input type="checkbox"/> ( <b>LRR S, T, U</b> )	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> ( <b>MLRA 138, 152A in FL, 154</b> )

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> ( <b>outside MLRA 150A, 150B</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> ( <b>MLRA 153B</b> )
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> ( <b>outside MLRA 138, 152A in FL, 154</b> )
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 5-1-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 014  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-1  
Subregion (LRR or MLRA): LRR T, MLRA 150B Lat: 26.519807 Long: -97.516022 Datum: WGS84  
Soil Map Unit Name: Jarron sandy clay loam NWI classification: PEM1A  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>      </u> Surface Water (A1) <u>      </u> Aquatic Fauna (B13) <u>      </u> High Water Table (A2) <u>      </u> Marl Deposits (B15) ( <b>LRR U</b> ) <u>      </u> Saturation (A3) <u>      </u> Hydrogen Sulfide Odor (C1) <u>      </u> Water Marks (B1) <u>      </u> Oxidized Rhizospheres on Living Roots (C3) <u>      </u> Sediment Deposits (B2) <u>      </u> Presence of Reduced Iron (C4) <u>      </u> Drift Deposits (B3) <u>      </u> Recent Iron Reduction in Tilled Soils (C6) <u>      </u> Algal Mat or Crust (B4) <u>      </u> Thin Muck Surface (C7) <u>      </u> Iron Deposits (B5) <u>      </u> Other (Explain in Remarks) <u>      </u> Inundation Visible on Aerial Imagery (B7) <u>      </u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <u>      </u> Surface Soil Cracks (B6) <u>      </u> Sparsely Vegetated Concave Surface (B8) <u>      </u> Drainage Patterns (B10) <u>      </u> Moss Trim Lines (B16) <u>      </u> Dry-Season Water Table (C2) <u>      </u> Crayfish Burrows (C8) <u>      </u> Saturation Visible on Aerial Imagery (C9) <u>X</u> Geomorphic Position (D2) <u>      </u> Shallow Aquitard (D3) <u>      </u> FAC-Neutral Test (D5) <u>      </u> Sphagnum Moss (D8) ( <b>LRR T, U</b> )
<b>Field Observations:</b> Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>      </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 014

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	=Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>15</u> =Total Cover		
50% of total cover: <u>8</u>	20% of total cover: <u>3</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cynodon dactylon</u>	<u>80</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Spartina spartinae</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
3. <u>Ambrosia artemisiifolia</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>90</u> =Total Cover		
50% of total cover: <u>45</u>	20% of total cover: <u>18</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	=Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>100</u>	x 4 = <u>400</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>405</u> (B)
Prevalence Index = B/A = <u>3.86</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes    No X



## SOIL

Sampling Point: 014

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Willacy County</u>	Sampling Date: <u>5-1-2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>015</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Depression</u>	Local relief (concave, convex, none): <u>concave</u>	Slope (%): <u>0-1</u>
Subregion (LRR or MLRA): <u>LRR T, MLRA 150B</u>	Lat: <u>26.509378</u>	Long: <u>-97.523534</u>
Datum: <u>WGS84</u>		
Soil Map Unit Name: <u>Willamar fine sandy loam, 0 to 1 percent slopes</u>	NWI classification: <u>PSS1A</u>	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>      </u>		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>	Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<u>      </u> Surface Water (A1)	<u>      </u> Surface Soil Cracks (B6)
<u>      </u> High Water Table (A2)	<u>      </u> Sparsely Vegetated Concave Surface (B8)
<u>      </u> Saturation (A3)	<u>      </u> Drainage Patterns (B10)
<u>      </u> Water Marks (B1)	<u>      </u> Moss Trim Lines (B16)
<u>      </u> Sediment Deposits (B2)	<u>      </u> Dry-Season Water Table (C2)
<u>      </u> Drift Deposits (B3)	<u>      </u> Crayfish Burrows (C8)
<u>      </u> Algal Mat or Crust (B4)	<u>      </u> Saturation Visible on Aerial Imagery (C9)
<u>      </u> Iron Deposits (B5)	<u>X</u> Geomorphic Position (D2)
<u>      </u> Inundation Visible on Aerial Imagery (B7)	<u>      </u> Shallow Aquitard (D3)
<u>      </u> Water-Stained Leaves (B9)	<u>X</u> FAC-Neutral Test (D5)
	<u>      </u> Sphagnum Moss (D8) (LRR T, U)
<b>Field Observations:</b>	
Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>
Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u>	
Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 015

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prosopis glandulosa</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>10</u> =Total Cover		
50% of total cover: <u>5</u>	20% of total cover: <u>2</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Helenium microcephalum</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Borrchia frutescens</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>
3. <u>Spartina spartinae</u>	<u>10</u>	<u>No</u>	<u>OBL</u>
4. <u>Cynodon dactylon</u>	<u>10</u>	<u>No</u>	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>60</u> =Total Cover		
50% of total cover: <u>30</u>	20% of total cover: <u>12</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>25</u>	x 1 = <u>25</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals: <u>70</u> (A)	<u>165</u> (B)
Prevalence Index = B/A = <u>2.36</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No

## SOIL

Sampling Point: 015

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</div> <div>See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R</div>	<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
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Project/Site: Raymondville Drain	City/County: Willacy County	Sampling Date: 5-1-2024
Applicant/Owner: HCDD1	State: TX	Sampling Point: 016
Investigator(s): K. Compton, K. Rubio	Section, Township, Range: N/A	
Landform (hillside, terrace, etc.): Depression	Local relief (concave, convex, none): concave	Slope (%): 0-1
Subregion (LRR or MLRA): LRR T, MLRA 150B	Lat: 26.507458	Long: -97.523225
Datum: WGS84		
Soil Map Unit Name: Incell clay, 0 to 1 percent slopes, occasionally ponded	NWI classification: PEM1C	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

HYDROLOGY

<div>Wetland Hydrology Indicators:</div> <div>Primary Indicators (minimum of one is required; check all that apply)</div> <div><div><div><input type="checkbox"/> Surface Water (A1)</div><div><input type="checkbox"/> High Water Table (A2)</div><div><input type="checkbox"/> Saturation (A3)</div><div><input type="checkbox"/> Water Marks (B1)</div><div><input type="checkbox"/> Sediment Deposits (B2)</div><div><input type="checkbox"/> Drift Deposits (B3)</div><div><input type="checkbox"/> Algal Mat or Crust (B4)</div><div><input type="checkbox"/> Iron Deposits (B5)</div><div><input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</div><div><input type="checkbox"/> Water-Stained Leaves (B9)</div></div><div><div><input type="checkbox"/> Aquatic Fauna (B13)</div><div><input type="checkbox"/> Marl Deposits (B15) (LRR U)</div><div><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</div><div><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</div><div><input type="checkbox"/> Presence of Reduced Iron (C4)</div><div><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</div><div><input type="checkbox"/> Thin Muck Surface (C7)</div><div><input checked="" type="checkbox"/> Other (Explain in Remarks)</div></div></div>
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**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 016

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Phyla nodiflora</i>	45	Yes	FAC
2. <i>Ambrosia artemisiifolia</i>	15	No	FACU
3. <i>Cynodon dactylon</i>	5	No	FACU
4. <i>Helenium microcephalum</i>	5	No	FACW
5. <i>Setaria parviflora</i>	5	No	FACW
6. <i>Cyperus eragrostis</i>	5	No	FACW
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	80 =Total Cover		
50% of total cover: <u>40</u>	20% of total cover: <u>16</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>15</u>	x 2 = <u>30</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>80</u> (A)	<u>245</u> (B)
Prevalence Index = B/A = <u>3.06</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No



## SOIL

Sampling Point: 016

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/1	95	10YR 4/6	5	C	M	Loamy/Clayey	
6-18	10YR 3/1	90	10YR 4/6	10	C	M	Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> ( <b>MLRA 149A, 153C, 153D</b> )
<input type="checkbox"/> ( <b>LRR S, T, U</b> )	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> ( <b>MLRA 138, 152A in FL, 154</b> )

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> ( <b>outside MLRA 150A, 150B</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> ( <b>MLRA 153B</b> )
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> ( <b>outside MLRA 138, 152A in FL, 154</b> )
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks:

<div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</div> <div>See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R</div>	<div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>
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Project/Site: Raymondville Drain	City/County: Willacy County	Sampling Date: 5-1-2024
Applicant/Owner: HCDD1	State: TX	Sampling Point: 017
Investigator(s): K. Compton, K. Rubio	Section, Township, Range: N/A	
Landform (hillside, terrace, etc.): Depression	Local relief (concave, convex, none): concave	Slope (%): 0-1
Subregion (LRR or MLRA): LRR T, MLRA 150B	Lat: 26.507409	Long: -97.523547
Datum: WGS84		
Soil Map Unit Name: Incell clay, 0 to 1 percent slopes, occasionally ponded	NWI classification: None	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> FAC-Neutral Test (D5)	
		<input type="checkbox"/> Sphagnum Moss (D8) (LRR T, U)	
<b>Field Observations:</b>			
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 017

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>40</u> =Total Cover		
50% of total cover: <u>20</u>	20% of total cover: <u>8</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ambrosia artemisiifolia</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Cynodon dactylon</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Phyla nodiflora</u>	<u>10</u>	<u>No</u>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>60</u> =Total Cover		
50% of total cover: <u>30</u>	20% of total cover: <u>12</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>90</u>	x 4 = <u>360</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>390</u> (B)
Prevalence Index = B/A = <u>3.90</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes    No X

## SOIL

Sampling Point: 017

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/3	100					Loamy/Clayey	
3-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 5-1-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 018  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-1  
Subregion (LRR or MLRA): LRR T, MLRA 150B Lat: 26.504634 Long: -97.528098 Datum: WGS84  
Soil Map Unit Name: Latina sandy clay loam, 0 to 1 percent slopes, occasionally ponded, rarely flooded NWI classification: PEM1A  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>      </u> Surface Water (A1) <u>      </u> Aquatic Fauna (B13) <u>      </u> High Water Table (A2) <u>      </u> Marl Deposits (B15) <b>(LRR U)</b> <u>      </u> Saturation (A3) <u>      </u> Hydrogen Sulfide Odor (C1) <u>      </u> Water Marks (B1) <u>      </u> Oxidized Rhizospheres on Living Roots (C3) <u>      </u> Sediment Deposits (B2) <u>      </u> Presence of Reduced Iron (C4) <u>      </u> Drift Deposits (B3) <u>      </u> Recent Iron Reduction in Tilled Soils (C6) <u>      </u> Algal Mat or Crust (B4) <u>      </u> Thin Muck Surface (C7) <u>      </u> Iron Deposits (B5) <u>      </u> Other (Explain in Remarks) <u>      </u> Inundation Visible on Aerial Imagery (B7) <u>      </u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <u>      </u> Surface Soil Cracks (B6) <u>      </u> Sparsely Vegetated Concave Surface (B8) <u>      </u> Drainage Patterns (B10) <u>      </u> Moss Trim Lines (B16) <u>      </u> Dry-Season Water Table (C2) <u>      </u> Crayfish Burrows (C8) <u>      </u> Saturation Visible on Aerial Imagery (C9) <u>X</u> Geomorphic Position (D2) <u>      </u> Shallow Aquitard (D3) <u>      </u> FAC-Neutral Test (D5) <u>      </u> Sphagnum Moss (D8) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>      </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 018

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	=Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>75</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Prosopis glandulosa</u>	<u>5</u>	<u>No</u>	<u>UPL</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>80</u> =Total Cover		
50% of total cover: <u>40</u>	20% of total cover: <u>16</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Cynodon dactylon</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>10</u> =Total Cover		
50% of total cover: <u>5</u>	20% of total cover: <u>2</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	=Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>90</u> (A)	<u>365</u> (B)
Prevalence Index = B/A = <u>4.06</u>	

**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes    No X



## SOIL

Sampling Point: 018

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) (LRR U)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<b>(MLRA 149A, 153C, 153D)</b>
<b>(LRR S, T, U)</b>	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<b>(MLRA 138, 152A in FL, 154)</b>

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 149A)
<input type="checkbox"/> Reduced Vertic (F18)
<b>(outside MLRA 150A, 150B)</b>
<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, T)
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<b>(MLRA 153B)</b>
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<b>(outside MLRA 138, 152A in FL, 154)</b>
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<b>(MLRA 153B, 153D)</b>
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Atlantic and Gulf Coastal Plain Region</b> See ERDC/EL TR-10-20; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 5-1-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 019  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): none Slope (%): 0-1  
Subregion (LRR or MLRA): LRR T, MLRA 150B Lat: 26.505096 Long: -97.53072 Datum: WGS84  
Soil Map Unit Name: Latina sandy clay loam, 0 to 1 percent slopes, occasionally ponded, rarely flooded NWI classification: PEM1A  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present? Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u>      </u> Surface Water (A1) <u>      </u> Aquatic Fauna (B13) <u>      </u> High Water Table (A2) <u>      </u> Marl Deposits (B15) <b>(LRR U)</b> <u>      </u> Saturation (A3) <u>      </u> Hydrogen Sulfide Odor (C1) <u>      </u> Water Marks (B1) <u>      </u> Oxidized Rhizospheres on Living Roots (C3) <u>      </u> Sediment Deposits (B2) <u>      </u> Presence of Reduced Iron (C4) <u>      </u> Drift Deposits (B3) <u>      </u> Recent Iron Reduction in Tilled Soils (C6) <u>      </u> Algal Mat or Crust (B4) <u>      </u> Thin Muck Surface (C7) <u>      </u> Iron Deposits (B5) <u>      </u> Other (Explain in Remarks) <u>      </u> Inundation Visible on Aerial Imagery (B7) <u>      </u> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <u>      </u> Surface Soil Cracks (B6) <u>      </u> Sparsely Vegetated Concave Surface (B8) <u>      </u> Drainage Patterns (B10) <u>      </u> Moss Trim Lines (B16) <u>      </u> Dry-Season Water Table (C2) <u>      </u> Crayfish Burrows (C8) <u>      </u> Saturation Visible on Aerial Imagery (C9) <u>X</u> Geomorphic Position (D2) <u>      </u> Shallow Aquitard (D3) <u>      </u> FAC-Neutral Test (D5) <u>      </u> Sphagnum Moss (D8) <b>(LRR T, U)</b>
<b>Field Observations:</b> Surface Water Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Water Table Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> Saturation Present? Yes <u>      </u> No <u>X</u> Depth (inches): <u>      </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>      </u> No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



**VEGETATION (Four Strata) – Use scientific names of plants.**

 Sampling Point: 019

Tree Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Sapling/Shrub Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vachellia farnesiana</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
	<u>10</u> =Total Cover		
50% of total cover: <u>5</u>	20% of total cover: <u>2</u>		

Herb Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Solanum carolinense</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Cynodon dactylon</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Batis maritima</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>55</u> =Total Cover		
50% of total cover: <u>28</u>	20% of total cover: <u>11</u>		

Woody Vine Stratum (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	_____ =Total Cover		
50% of total cover: _____	20% of total cover: _____		

Remarks: (If observed, list morphological adaptations below.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>60</u>	x 4 = <u>240</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>65</u> (A)	<u>245</u> (B)
Prevalence Index = B/A = <u>3.77</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody Vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes    No X

## SOIL

Sampling Point: 019

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR S, T, U</b> )
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Barrier Islands 1 cm Muck (S12)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR O</b> )
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Organic Bodies (A6) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) ( <b>LRR P, T, U</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Muck Presence (A8) ( <b>LRR U</b> )	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR P, T</b> )	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Marl (F10) ( <b>LRR U</b> )
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Ochric (F11) ( <b>MLRA 151</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 150A</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR O, P, T</b> )
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR O, S</b> )	<input type="checkbox"/> Umbric Surface (F13) ( <b>LRR P, T, U</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Delta Ochric (F17) ( <b>MLRA 151</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Reduced Vertic (F18) ( <b>MLRA 150A, 150B</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR P, S, T, U</b> )	<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> Polyvalue Below Surface (S8)	<input type="checkbox"/> ( <b>MLRA 149A, 153C, 153D</b> )
<input type="checkbox"/> ( <b>LRR S, T, U</b> )	<input type="checkbox"/> Very Shallow Dark Surface (F22)
	<input type="checkbox"/> ( <b>MLRA 138, 152A in FL, 154</b> )

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR O</b> )
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR S</b> )
<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 149A</b> )
<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> ( <b>outside MLRA 150A, 150B</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>LRR P, T</b> )
<input type="checkbox"/> Anomalous Bright Floodplain Soils (F20)
<input type="checkbox"/> ( <b>MLRA 153B</b> )
<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> ( <b>outside MLRA 138, 152A in FL, 154</b> )
<input type="checkbox"/> Barrier Islands Low Chroma Matrix (TS7)
<input type="checkbox"/> ( <b>MLRA 153B, 153D</b> )
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 5-2-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 020  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-1  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.513219 Long: -97.6147 Datum: WGS84  
Soil Map Unit Name: Willamar fine sandy loam, strongly saline, 0 to 1 percent slopes NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> <u>    </u> =Total Cover	<b>Absolute % Cover</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominant Species?</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Indicator Status</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> <u>    </u> =Total Cover	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>		<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>90</u> x 4 = <u>360</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>90</u> (A) <u>360</u> (B) Prevalence Index = B/A = <u>4.00</u>		
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Sorghum bicolor</u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> 6. <u>    </u> 7. <u>    </u> 8. <u>    </u> 9. <u>    </u> 10. <u>    </u> <u>90</u> =Total Cover	<u>90</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>Yes</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>FACU</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>			<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> <u>    </u> =Total Cover	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>				<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>X</u>
% Bare Ground in Herb Stratum <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>				

Remarks:

## SOIL

Sampling Point: 020

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy County		Sampling Date: 5-2-2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 021	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.513897		Long: -97.613685 Datum: WGS84	
Soil Map Unit Name: Willamar fine sandy loam, strongly saline, 0 to 1 percent slopes		NW1 classification: PEM1C			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  Total Number of Dominant Species Across All Strata: 2 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1. _____		_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 95 x 2 = 190 FAC species 30 x 3 = 90 FACU species 10 x 4 = 40 UPL species 0 x 5 = 0 Column Totals: 135 (A) 320 (B) Prevalence Index = B/A = 2.37
1. <i>Parkinsonia aculeata</i>		30	Yes	FAC	
2. <i>Vachellia farnesiana</i>		5	No	FACU	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
		35 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>  4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <i>Borrchia frutescens</i>		95	Yes	FACW	
2. <i>Ambrosia artemisiifolia</i>		5	No	FACU	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
5. _____		_____	_____	_____	
6. _____		_____	_____	_____	
7. _____		_____	_____	_____	
8. _____		_____	_____	_____	
9. _____		_____	_____	_____	
10. _____		_____	_____	_____	
		100 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____		_____	_____	_____	
2. _____		_____	_____	_____	
		=Total Cover			
% Bare Ground in Herb Stratum _____					
Remarks:					

## SOIL

Sampling Point: 021

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/1	98	10YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
8-18	10YR 2/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <b>(LRR F)</b> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR F, G, H)</b> <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) <b>(LRR G, H)</b> <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <b>(LRR F)</b>	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16) <b>(MLRA 72 &amp; 73 of LRR H)</b>
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**Indicators for Problematic Hydric Soils<sup>3</sup>:**  
☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Remarks:

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	

<b>Field Observations:</b> Surface Water Present?    Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes _____    No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy County		Sampling Date: 5-2-2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 022	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Flat		Local relief (concave, convex, none): none		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.51966		Long: -97.677973 Datum: WGS84	
Soil Map Unit Name: Raymondville clay loam		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 50 x 5 = 250 Column Totals: 50 (A) 250 (B) Prevalence Index = B/A = 5.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Gossypium hirsutum		45	Yes	UPL	
2. Urochloa texana		5	No	UPL	Hydrophytic Vegetation Present? Yes No X
3.					
4.					
5.					
6.					
7.					Remarks:
8.					
9.					
10.					
		50 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum					
Remarks:					

## SOIL

Sampling Point: 022

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy County		Sampling Date: 5-2-2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 023	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Rise		Local relief (concave, convex, none): convex		Slope (%): 5-6	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.519195		Long: -97.695486	
Soil Map Unit Name: Lyford sandy clay loam		Datum: WGS84			
		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  Total Number of Dominant Species Across All Strata: 4 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 10 x 3 = 30 FACU species 80 x 4 = 320 UPL species 40 x 5 = 200 Column Totals: 130 (A) 550 (B) Prevalence Index = B/A = 4.23
1. Prosopis glandulosa		40	Yes	FACU	
2. Parkinsonia aculeata		10	Yes	FAC	
3.					
4.					
		50 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Cenchrus ciliaris		40	Yes	UPL	
2. Dichanthelium oligosanthes		40	Yes	FACU	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
		80 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 20					
Remarks:					

## SOIL

Sampling Point: 023

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 5-2-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 024  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 1-2  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.512166 Long: -97.63509 Datum: WGS84  
Soil Map Unit Name: Raymondville clay loam NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>      </u> No <u>X</u> Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>      </u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> <u>      </u> =Total Cover	<b>Absolute % Cover</b> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<b>Dominant Species?</b> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<b>Indicator Status</b> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>      </u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> =Total Cover	<u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>		<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>90</u> x 5 = <u>450</u> Column Totals: <u>90</u> (A) <u>450</u> (B) Prevalence Index = B/A = <u>5.00</u>		
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Zea mays</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>90</u> =Total Cover	<u>90</u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>Yes</u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>UPL</u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>			<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>      </u> 2. <u>      </u> <u>      </u> =Total Cover	<u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u>				<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>
% Bare Ground in Herb Stratum <u>10</u>	<u>10</u>	<u>      </u>	<u>      </u>				

Remarks:

ENG FORM 6416-5, FEB 2024 Great Plains Version 2.0

## SOIL

Sampling Point: 024

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain

City/County: Willacy County

Sampling Date: 5-2-2024

Applicant/Owner: HCDD1

State: TX

Sampling Point: 025

Investigator(s): K. Compton, K. Rubio

Section, Township, Range: N/A

Landform (hillside, terrace, etc.): Flat

Local relief (concave, convex, none): none

Slope (%): 1

Subregion (LRR/MLRA): LRR I, MLRA 83D

Lat: 26.517780

Long: -97.745953

Datum: WGS84

Soil Map Unit Name: Raymondville clay loam

NW1 classification: None

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

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

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

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

Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u> Hydric Soil Present?    Yes <u>      </u> No <u>X</u> Wetland Hydrology Present?    Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
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Remarks:  
 The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15' Radius</u> )				
1.					
2.					
3.					
4.					
5.					
=Total Cover					
Herb Stratum	(Plot size: <u>5' Radius</u> )				
1.	<u>Gossypium hirsutum</u>	<u>35</u>	<u>Yes</u>	<u>UPL</u>	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
<u>35</u> =Total Cover					
Woody Vine Stratum	(Plot size: <u>30' Radius</u> )				
1.					
2.					
=Total Cover					
% Bare Ground in Herb Stratum		<u>65</u>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>35</u>	x 5 = <u>175</u>
Column Totals: <u>35</u> (A)	<u>175</u> (B)
Prevalence Index = B/A = <u>5.00</u>	

**Hydrophytic Vegetation Indicators:**

       1 - Rapid Test for Hydrophytic Vegetation

       2 - Dominance Test is >50%

       3 - Prevalence Index is ≤3.0<sup>1</sup>

       4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

       Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?**    Yes           No X

Remarks:

## SOIL

Sampling Point: 025

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Willacy County Sampling Date: 5-2-2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 026  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Ridge Local relief (concave, convex, none): convex Slope (%): 2-3  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.519628 Long: -97.773599 Datum: WGS84  
Soil Map Unit Name: Raymondville clay loam NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 11 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> <u>    </u> =Total Cover	Absolute % Cover <u>    </u> <u>    </u> <u>    </u> <u>    </u>	Dominant Species? <u>    </u> <u>    </u> <u>    </u> <u>    </u>	Indicator Status <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>Prosopis glandulosa</u> 2. <u>Parkinsonia aculeata</u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> <u>45</u> =Total Cover	30 15 <u>    </u> <u>    </u> <u>    </u>	Yes Yes <u>    </u> <u>    </u> <u>    </u>	FACU FAC <u>    </u> <u>    </u> <u>    </u>	
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Cenchrus ciliaris</u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> 6. <u>    </u> 7. <u>    </u> 8. <u>    </u> 9. <u>    </u> 10. <u>    </u> <u>80</u> =Total Cover	80 <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	Yes <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	UPL <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> <u>    </u> =Total Cover	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>	
% Bare Ground in Herb Stratum <u>20</u>	<u>20</u>	<u>    </u>	<u>    </u>	

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>80</u>	x 5 = <u>400</u>
Column Totals: <u>125</u> (A)	<u>565</u> (B)
Prevalence Index = B/A = <u>4.52</u>	

**Hydrophytic Vegetation Indicators:**

     1 - Rapid Test for Hydrophytic Vegetation  
     2 - Dominance Test is >50%  
     3 - Prevalence Index is ≤3.0<sup>1</sup>  
     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
     Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

<b>Hydrophytic Vegetation Present?</b>	Yes <u>    </u>	No <u>X</u>
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Remarks:

ENG FORM 6416-5, FEB 2024 Great Plains Version 2.0

## SOIL

Sampling Point: 026

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 05/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 027	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Terrace		Local relief (concave, convex, none): convex		Slope (%):	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.520544		Long: -97.787279 Datum: WGS84	
Soil Map Unit Name: Raymondville clay loam		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 1 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 85 x 5 = 425 Column Totals: 85 (A) 425 (B) Prevalence Index = B/A = 5.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Gossypium hirsutum		85	Yes	UPL	
2.					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
3.					
4.					
5.					
6.					
7.					Remarks:
8.					
9.					
10.					
		85 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 15					
Remarks:					

## SOIL

Sampling Point: 027

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 05/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 028	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Hillside		Local relief (concave, convex, none): Convex		Slope (%): 4-5	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.521445		Long: -97.790876 Datum: WGS84	
Soil Map Unit Name: Willacy fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  Total Number of Dominant Species Across All Strata: 4 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 10 x 3 = 30 FACU species 20 x 4 = 80 UPL species 80 x 5 = 400 Column Totals: 110 (A) 510 (B) Prevalence Index = B/A = 4.64
1. Prosopis glandulosa		10	Yes	FACU	
2. Parkinsonia aculeata		10	Yes	FAC	
3. Vachellia farnesiana		10	Yes	FACU	
4.					
5.					
		30 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Cenchrus ciliaris		80	Yes	UPL	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		80 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 20					
Remarks:					

## SOIL

Sampling Point: 028

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 05/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 029	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Terrace		Local relief (concave, convex, none): convex		Slope (%): 3-4	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.52241		Long: -97.799062 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 1 x 2 = 2 FAC species 10 x 3 = 30 FACU species 0 x 4 = 0 UPL species 10 x 5 = 50 Column Totals: 21 (A) 82 (B) Prevalence Index = B/A = 3.90
1. Parkinsonia aculeata		5	Yes	FAC	
2.					
3.					
4.					
5.					
		5 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Solanum carolinense		10	Yes	UPL	
2. Parthenium hysterophorus		5	Yes	FAC	
3. Phragmites australis		1	No	FACW	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		16 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes X No
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 84					
Remarks:					

## SOIL

Sampling Point: 029

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 5/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 030	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Flat		Local relief (concave, convex, none): none		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.528597		Long: -97.814834 Datum: WGS84	
Soil Map Unit Name: Raymondville clay loam		NWI classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 4 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 10 x 4 = 40 UPL species 75 x 5 = 375 Column Totals: 85 (A) 415 (B) Prevalence Index = B/A = 4.88
1. Vachellia farnesiana		5	Yes	FACU	
2. Prosopis glandulosa		5	Yes	FACU	
3.					
4.					
		10 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Ratibida columnifera		40	Yes	UPL	
2. Chloris ciliata		25	Yes	UPL	
3. Opuntia engelmannii		5	No	UPL	
4. Cenchrus ciliaris		5	No	UPL	
5.					
6.					
7.					
8.					
9.					
		75 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 25					
Remarks:					

## SOIL

Sampling Point: 030

<b>Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)</b>								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	100					Loamy/Clayey	
6-18	10YR 3/2	100					Loamy/Clayey	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>							<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
___ Histosol (A1)			___ Sandy Gleyed Matrix (S4)			___ 1 cm Muck (A9) ( <b>LRR I, J</b> )		
___ Histic Epipedon (A2)			___ Sandy Redox (S5)			___ High Plains Depressions (F16)		
___ Black Histic (A3)			___ Stripped Matrix (S6)			<b>(LRR H outside of MLRA 72 &amp; 73)</b>		
___ Hydrogen Sulfide (A4)			___ Loamy Mucky Mineral (F1)			___ Reduced Vertic (F18)		
___ Stratified Layers (A5) ( <b>LRR F</b> )			___ Loamy Gleyed Matrix (F2)			___ Red Parent Material (F21)		
___ 1 cm Muck (A9) ( <b>LRR F, G, H</b> )			___ Depleted Matrix (F3)			___ Very Shallow Dark Surface (F22)		
___ Depleted Below Dark Surface (A11)			___ Redox Dark Surface (F6)			___ Other (Explain in Remarks)		
___ Thick Dark Surface (A12)			___ Depleted Dark Surface (F7)					
___ Sandy Mucky Mineral (S1)			___ Redox Depressions (F8)					
___ 2.5 cm Mucky Peat or Peat (S2) ( <b>LRR G, H</b> )			___ High Plains Depressions (F16)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
___ 5 cm Mucky Peat or Peat (S3) ( <b>LRR F</b> )			<b>(MLRA 72 &amp; 73 of LRR H)</b>					
<b>Restrictive Layer (if observed):</b>								
Type: _____						<b>Hydric Soil Present?</b> Yes ___ No <u>X</u>		
Depth (inches): _____								
Remarks:								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 05/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 031	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Dip		Local relief (concave, convex, none): concave		Slope (%): 3-4	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.52713		Long: -97.819126 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 5 x 1 = 5 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 95 x 4 = 380 UPL species 0 x 5 = 0 Column Totals: 100 (A) 385 (B) Prevalence Index = B/A = 3.85
1. Prosopis glandulosa		35	Yes	FACU	
2.					
3.					
4.					
5.					
		35 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Dichanthelium oligosanthes		30	Yes	FACU	
2. Panicum hallii		30	Yes	FACU	
3. Batis maritima		5	No	OBL	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		65 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 35					
Remarks:					

## SOIL

Sampling Point: 031

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/3	100					Loamy/Clayey	
8-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____ Depth (inches): _____	Yes _____ No <u>X</u>

Remarks: \_\_\_\_\_

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> X Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

Field Observations:				Wetland Hydrology Present? Yes _____ No <u>X</u>
Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): _____		
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): _____		
Saturation Present?	Yes _____ No <u>X</u>	Depth (inches): _____		

(includes capillary fringe)

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

Remarks: \_\_\_\_\_



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 05/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 032	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Flat		Local relief (concave, convex, none): none		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.519163		Long: -97.830927 Datum: WGS84	
Soil Map Unit Name: Raymondville clay loam		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 1 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1. _____		_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
		=Total Cover			Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 85 x 4 = 340 UPL species 0 x 5 = 0 Column Totals: 85 (A) 340 (B) Prevalence Index = B/A = 4.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. _____		_____	_____	_____	
2. _____		_____	_____	_____	
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____		_____	_____	_____	
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Sorghum bicolor		85	Yes	FACU	
2. _____		_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
3. _____		_____	_____	_____	
4. _____		_____	_____	_____	
5. _____		_____	_____	_____	
6. _____		_____	_____	_____	
7. _____		_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
8. _____		_____	_____	_____	
9. _____		_____	_____	_____	
10. _____		_____	_____	_____	
		85 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____		_____	_____	_____	
2. _____		_____	_____	_____	
		=Total Cover			
% Bare Ground in Herb Stratum 15					
Remarks:					

## SOIL

Sampling Point: 032

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 05/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 033	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Terrace		Local relief (concave, convex, none): none		Slope (%): 1-2	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.518092		Long: -97.850096 Datum: WGS84	
Soil Map Unit Name: Raymondville clay loam		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 2 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 115 x 4 = 460 UPL species 5 x 5 = 25 Column Totals: 120 (A) 485 (B) Prevalence Index = B/A = 4.04
1. Prosopis glandulosa		25	Yes	FACU	
2.					
3.					
4.					
		25 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Cynodon dactylon		90	Yes	FACU	
2. Bothriochloa ischaemum		5	No	UPL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		95 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 5					
Remarks:					

## SOIL

Sampling Point: 033

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 05/16/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 034	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): Concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.496830		Long: -97.861459	
Soil Map Unit Name: Raymondville clay loam		Datum: WGS84			
		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 10 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 90 x 4 = 360 UPL species 30 x 5 = 150 Column Totals: 120 (A) 510 (B) Prevalence Index = B/A = 4.25
1. Prosopis glandulosa		30	Yes	FACU	
2.					
3.					
4.					
		30 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Dichanthelium oligosanthes		60	Yes	FACU	
2. Cenchrus ciliaris		20	Yes	UPL	
3. Solanum carolinense		10	No	UPL	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 034

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No ☒

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1) ☐ Salt Crust (B11)  
☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13)  
☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1)  
☐ Water Marks (B1) ☐ Dry-Season Water Table (C2)  
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3)  
☐ Drift Deposits (B3) **(where not tilled)**  
☐ Algal Mat or Crust (B4) ☐ Presence of Reduced Iron (C4)  
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)  
☒ Inundation Visible on Aerial Imagery (B7) ☒ Other (Explain in Remarks)  
☐ Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☒ Saturation Visible on Aerial Imagery (C9)  
☒ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**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)

**Wetland Hydrology Present?** Yes ☒ No \_\_\_\_\_

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

Remarks:

Snags of UPL and FACU tree species observed and suggest relatively recent inundation.



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 035	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Ridge		Local relief (concave, convex, none): convex		Slope (%): 1-2	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.496253		Long: -97.880589 Datum: WGS84	
Soil Map Unit Name: Raymondville clay loam		NWI classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 30 x 3 = 90 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Column Totals: 130 (A) 490 (B) Prevalence Index = B/A = 3.77
1. Zanthoxylum fagara		30	Yes	FAC	
2. Prosopis glandulosa		15	Yes	FACU	
3.					
4.					
5.					
		45 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Sorghum halepense		85	Yes	FACU	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		85 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 15					
Remarks:					

## SOIL

Sampling Point: 035

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 036	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Rise		Local relief (concave, convex, none): convex		Slope (%): 2-3	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.491119		Long: -97.884871 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: R5UBFx			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X				Is the Sampled Area within a Wetland? Yes No X	
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )			Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
			=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					
5.					
			=Total Cover		
Herb Stratum (Plot size: 5' Radius )					
1. Gossypium hirsutum			60	Yes	UPL
2. Chloris virgata			35	Yes	FACU
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
			95	=Total Cover	
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
			=Total Cover		
% Bare Ground in Herb Stratum 5					
Remarks:					
D dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)					
Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 35 x 4 = 140 UPL species 60 x 5 = 300 Column Totals: 95 (A) 440 (B) Prevalence Index = B/A = 4.63					
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
Hydrophytic Vegetation Present? Yes No X					

## SOIL

Sampling Point: 036

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 5/3	100					Sandy	
4-8	10YR 3/2	100					Sandy	sandy clay
8-18	10YR 5/3	100					Sandy	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <b>(LRR F)</b> <input type="checkbox"/> 1 cm Muck (A9) <b>(LRR F, G, H)</b> <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) <b>(LRR G, H)</b> <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) <b>(LRR F)</b>	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> High Plains Depressions (F16) <b>(MLRA 72 &amp; 73 of LRR H)</b>
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**Indicators for Problematic Hydric Soils<sup>3</sup>:**  
☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
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Remarks:

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 037	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Saddle		Local relief (concave, convex, none): concave		Slope (%): 1-2	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.480536		Long: -97.900978 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Column Totals: 100 (A) 400 (B) Prevalence Index = B/A = 4.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Sorghum bicolor		100	Yes	FACU	
2.					Hydrophytic Vegetation Present? Yes No X
3.					
4.					
5.					
6.					
7.					Hydrophytic Vegetation Present? Yes No X
8.					
9.					
10.					
		100 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 0					
Remarks:					

## SOIL

Sampling Point: 037

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 038	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.479339		Long: -97.901061 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NWI classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 3 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 5 x 3 = 15 FACU species 120 x 4 = 480 UPL species 5 x 5 = 25 Column Totals: 130 (A) 520 (B) Prevalence Index = B/A = 4.00
1. Prosopis glandulosa		15	Yes	FACU	
2. Vachellia farnesiana		15	Yes	FACU	
3. Parkinsonia aculeata		5	No	FAC	
4. Diospyros texana		5	No	UPL	
5.					
		40 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Sorghum halepense		90	Yes	FACU	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 038

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 039	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Ridge		Local relief (concave, convex, none): convex		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.472176		Long: -97.910031 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NWI classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 40 x 3 = 120 FACU species 85 x 4 = 340 UPL species 0 x 5 = 0 Column Totals: 125 (A) 460 (B) Prevalence Index = B/A = 3.68
1. Prosopis glandulosa		10	Yes	FACU	
2. Vachellia farnesiana		20	Yes	FACU	
3. Parkinsonia aculeata		5	No	FAC	
4.					
5.					
		35 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Sorghum halepense		55	Yes	FACU	
2. Panicum virgatum		30	Yes	FAC	
3. Parthenium hysterophorus		5	No	FAC	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 039

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/3	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☒ X Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Hidalgo and Willacy Sampling Date: 07/23/2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 040  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0-1  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.473190 Long: -97.922679 Datum: WGS84  
Soil Map Unit Name: Rio sandy clay loam, ponded NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No X (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> <u>    </u> =Total Cover	<b>Absolute % Cover</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominant Species?</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Indicator Status</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> <u>    </u> =Total Cover	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>		<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>50</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>4.00</u>
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Sorghum bicolor</u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> 6. <u>    </u> 7. <u>    </u> 8. <u>    </u> 9. <u>    </u> 10. <u>    </u> <u>50</u> =Total Cover	<u>50</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>Yes</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>FACU</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>		
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> <u>    </u> =Total Cover	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>		
% Bare Ground in Herb Stratum <u>50</u>				<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>X</u>					

Remarks:

ENG FORM 6416-5, FEB 2024 Great Plains Version 2.0

## SOIL

Sampling Point: 040

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 041	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Valley		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.472549		Long: -97.930758 Datum: WGS84	
Soil Map Unit Name: Rio sandy clay loam, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 115 x 4 = 460 UPL species 0 x 5 = 0 Column Totals: 115 (A) 460 (B) Prevalence Index = B/A = 4.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Vachellia farnesiana		15	Yes	FACU	
2.					
3.					
4.					
5.					
		15 =Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Cynodon dactylon		90	Yes	FACU	
2. Amaranthus albus		5	No	FACU	
3. Helianthus annuus		5	No	FACU	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		100 =Total Cover			Hydrophytic Vegetation Present? Yes No X
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 0					
Remarks:					

## SOIL

Sampling Point: 041

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 042	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Valley		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.474814		Long: -97.934452 Datum: WGS84	
Soil Map Unit Name: Rio sandy clay loam, saline, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 45 x 2 = 90 FAC species 0 x 3 = 0 FACU species 70 x 4 = 280 UPL species 0 x 5 = 0 Column Totals: 115 (A) 370 (B) Prevalence Index = B/A = 3.22
1. Vachellia farnesiana		15	Yes	FACU	
2. Prosopis glandulosa		5	Yes	FACU	
3.					
4.					
		20 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Echinochloa colona		45	Yes	FACW	
2. Sorghum halepense		40	Yes	FACU	
3. Helianthus annuus		10	No	FACU	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		95 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 5					
Remarks:					

## SOIL

Sampling Point: 042

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 043	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.478538		Long: -97.961093	
				Datum: WGS84	
Soil Map Unit Name: Rio sandy clay loam, saline, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 1 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 20 x 4 = 80 UPL species 0 x 5 = 0 Column Totals: 20 (A) 80 (B) Prevalence Index = B/A = 4.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Sorghum bicolor		20	Yes	FACU	
2.					Hydrophytic Vegetation Present? Yes No X
3.					
4.					
5.					
6.					
7.					Remarks:
8.					
9.					
10.					
		20 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 80					

## SOIL

Sampling Point: 043

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☒ X Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 044	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Hill		Local relief (concave, convex, none): convex		Slope (%): 2	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.478759		Long: -97.967688 Datum: WGS84	
Soil Map Unit Name: Delfina fine sandy loam, warm, 0 to 2 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X				Is the Sampled Area within a Wetland? Yes No X	
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )			Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
			=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Vachellia farnesiana			20	Yes	FACU
2. Parkinsonia aculeata			15	Yes	FAC
3.					
4.					
5.					
			35 =Total Cover		
Herb Stratum (Plot size: 5' Radius )					
1. Panicum hallii			50	Yes	FACU
2. Helianthus annuus			25	Yes	FACU
3. Cynodon dactylon			25	Yes	FACU
4.					
5.					
6.					
7.					
8.					
9.					
10.					
			100 =Total Cover		
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
			=Total Cover		
% Bare Ground in Herb Stratum 0					
Remarks:					
Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 5 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)					
Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 15 x 3 = 45 FACU species 120 x 4 = 480 UPL species 0 x 5 = 0 Column Totals: 135 (A) 525 (B) Prevalence Index = B/A = 3.89					
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
Hydrophytic Vegetation Present? Yes No X					

## SOIL

Sampling Point: 044

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 045	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.483099		Long: -97.987899 Datum: WGS84	
Soil Map Unit Name: Tiocano clay, 0 to 1 percent slopes, occasionally ponded		NW1 classification: PEM1C			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No			Is the Sampled Area within a Wetland? Yes X No		
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 45 x 1 = 45 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 45 (A) 45 (B) Prevalence Index = B/A = 1.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					
5.					
		=Total Cover			Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Suaeda linearis		30	Yes	OBL	
2. Batis maritima		10	Yes	OBL	
3. Borrchia frutescens		5	No	OBL	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		45 =Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 65					
Remarks:					

## SOIL

Sampling Point: 045

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 07/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 046	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Toeslope		Local relief (concave, convex, none): none		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.483279		Long: -97.987833 Datum: WGS84	
Soil Map Unit Name: Tiocano clay, 0 to 1 percent slopes, occasionally ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 3 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 90 x 4 = 360 UPL species 35 x 5 = 175 Column Totals: 125 (A) 535 (B) Prevalence Index = B/A = 4.28
1. Condalia hookeri		35	Yes	UPL	
2. Vachellia farnesiana		10	Yes	FACU	
3.					
4.					
5.					
		45 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Panicum hallii		80	Yes	FACU	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		80 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 20					
Remarks:					

## SOIL

Sampling Point: 046

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R			OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)		
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 7/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 047	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.481199		Long: -97.995311 Datum: WGS84	
Soil Map Unit Name: Rio sandy clay loam, saline, ponded		NWI classification: PEM1A			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation , Soil , or Hydrology significantly disturbed? Are “Normal Circumstances” present? Yes X No					
Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes X No		
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  Total Number of Dominant Species Across All Strata: 2 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 15 x 1 = 15 FACW species 0 x 2 = 0 FAC species 50 x 3 = 150 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 65 (A) 165 (B) Prevalence Index = B/A = 2.54
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)  ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Present? Yes X No
1. Neptunia pubescens		50	Yes	FAC	
2. Batis maritima		15	Yes	OBL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		65	=Total Cover		
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 35					
Remarks:					

## SOIL

Sampling Point: 047

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/1	95	7.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations
5-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

<b>Field Observations:</b> Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 7/23/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 048	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Toeslope		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.481918		Long: -97.995353	
				Datum: WGS84	
Soil Map Unit Name: Rio sandy clay loam, saline, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 15 x 4 = 60 UPL species 90 x 5 = 450 Column Totals: 105 (A) 510 (B) Prevalence Index = B/A = 4.86
1. Vachellia farnesiana		15	Yes	FACU	
2.					
3.					
4.					
5.					
		15 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Cenchrus ciliaris		90	Yes	UPL	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 048

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 049	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.454537		Long: -98.051438 Datum: WGS84	
Soil Map Unit Name: Tiocano clay, 0 to 1 percent slopes, occasionally ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 10 x 5 = 50 Column Totals: 10 (A) 50 (B) Prevalence Index = B/A = 5.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					
5.					
		=Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Zea mays		10	Yes	UPL	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		10 =Total Cover			Hydrophytic Vegetation Present? Yes No X
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 90					
Remarks: Recently harvested corn field.					

## SOIL

Sampling Point: 049

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0-6"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Hidalgo Sampling Date: 7/24/2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 050  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Rise Local relief (concave, convex, none): Convex Slope (%): 1  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.454438 Long: -98.05263 Datum: WGS84  
Soil Map Unit Name: Willacy fine sandy loam, 0 to 1 percent slopes NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>Celtis ehrenbergiana</u> Absolute % Cover <u>5</u> Dominant Species? <u>Yes</u> Indicator Status <u>UPL</u> 2. <u>    </u> <u>    </u> <u>    </u> 3. <u>    </u> <u>    </u> <u>    </u> 4. <u>    </u> <u>    </u> <u>    </u> <u>5</u> =Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>Celtis ehrenbergiana</u> <u>30</u> <u>Yes</u> <u>UPL</u> 2. <u>    </u> <u>    </u> <u>    </u> 3. <u>    </u> <u>    </u> <u>    </u> 4. <u>    </u> <u>    </u> <u>    </u> 5. <u>    </u> <u>    </u> <u>    </u> <u>30</u> =Total Cover <b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Panicum hallii</u> <u>80</u> <u>Yes</u> <u>FACU</u> 2. <u>    </u> <u>    </u> <u>    </u> 3. <u>    </u> <u>    </u> <u>    </u> 4. <u>    </u> <u>    </u> <u>    </u> 5. <u>    </u> <u>    </u> <u>    </u> 6. <u>    </u> <u>    </u> <u>    </u> 7. <u>    </u> <u>    </u> <u>    </u> 8. <u>    </u> <u>    </u> <u>    </u> 9. <u>    </u> <u>    </u> <u>    </u> 10. <u>    </u> <u>    </u> <u>    </u> <u>80</u> =Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> <u>    </u> <u>    </u> 2. <u>    </u> <u>    </u> <u>    </u> <u>    </u> =Total Cover % Bare Ground in Herb Stratum <u>    </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)  <b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>80</u> x 4 = <u>320</u> UPL species <u>35</u> x 5 = <u>175</u> Column Totals: <u>115</u> (A) <u>495</u> (B) Prevalence Index = B/A = <u>4.30</u>  <b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>X</u>
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Remarks:

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## SOIL

Sampling Point: 050

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Hidalgo Sampling Date: 7/24/2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 051  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Toeslope Local relief (concave, convex, none): concave Slope (%): 1  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.483383 Long: -98.027438 Datum: WGS84  
Soil Map Unit Name: Rio fine sandy loam, saline, ponded NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>      </u> No <u>X</u> Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>      </u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> <u>      </u> =Total Cover	<b>Absolute % Cover</b> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<b>Dominant Species?</b> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<b>Indicator Status</b> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>      </u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> =Total Cover	<u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>		<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>90</u> x 4 = <u>360</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>92</u> (A) <u>364</u> (B) Prevalence Index = B/A = <u>3.96</u>
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Panicum hallii</u> 2. <u>Cyperus esculentus</u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>92</u> =Total Cover	<u>90</u> <u>2</u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>Yes</u> <u>No</u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>	<u>FACU</u> <u>FACW</u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u>		
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>      </u> 2. <u>      </u> <u>      </u> =Total Cover	<u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u>	<u>      </u> <u>      </u> <u>      </u>		
<b>% Bare Ground in Herb Stratum</b> <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>		

Remarks:

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## SOIL

Sampling Point: 051

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 052	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Sideslope		Local relief (concave, convex, none): none		Slope (%): 2-3	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.452726		Long: -98.035161 Datum: WGS84	
Soil Map Unit Name: Willacy fine sandy loam, 1 to 3 percent slopes		NWI classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 60 x 4 = 240 UPL species 55 x 5 = 275 Column Totals: 115 (A) 515 (B) Prevalence Index = B/A = 4.48
1. Celtis ehrenbergiana		20	Yes	UPL	
2. Vachellia farnesiana		20	Yes	FACU	
3.					
4.					
5.					
		40 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Panicum hallii		40	Yes	FACU	
2. Hibiscus martianus		25	Yes	UPL	
3. Opuntia engelmannii		10	No	UPL	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		75 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 25					
Remarks:					

## SOIL

Sampling Point: 052

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 053	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): Concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.45134		Long: -98.034909 Datum: WGS84	
Soil Map Unit Name: Delfina fine sandy loam, warm, 0 to 2 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  Total Number of Dominant Species Across All Strata: 2 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 50 x 1 = 50 FACW species 0 x 2 = 0 FAC species 10 x 3 = 30 FACU species 2 x 4 = 8 UPL species 0 x 5 = 0 Column Totals: 62 (A) 88 (B) Prevalence Index = B/A = 1.42
1. Parkinsonia aculeata		10	Yes	FAC	
2.					
3.					
4.					
		10 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Suaeda linearis		40	Yes	OBL	
2. Batis maritima		10	No	OBL	
3. Panicum hallii		2	No	FACU	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		52 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 48					
Remarks:					

## SOIL

Sampling Point: 053

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0-18"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 054	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Toeslope		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.45118		Long: -98.034704 Datum: WGS84	
Soil Map Unit Name: Rio fine sandy loam, saline, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 120 x 4 = 480 UPL species 8 x 5 = 40 Column Totals: 128 (A) 520 (B) Prevalence Index = B/A = 4.06
1. Vachellia farnesiana		30	Yes	FACU	
2.					
3.					
4.					
		30 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Panicum hallii		90	Yes	FACU	
2. Opuntia engelmannii		8	No	UPL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		98 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 2					
Remarks:					

## SOIL

Sampling Point: 054

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 055	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): Concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.453092		Long: -98.041137	
				Datum: WGS84	
Soil Map Unit Name: Rio fine sandy loam, saline, ponded		NW1 classification: PUSJ			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes X No		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 12 x 1 = 12 FACW species 20 x 2 = 40 FAC species 15 x 3 = 45 FACU species 2 x 4 = 8 UPL species 0 x 5 = 0 Column Totals: 49 (A) 105 (B) Prevalence Index = B/A = 2.14
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Tamarix aphylla		20	Yes	FACW	
2. Parkinsonia aculeata		15	Yes	FAC	
3.					
4.					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		35 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Batis maritima		10	Yes	OBL	
2. Panicum hallii		2	No	FACU	Hydrophytic Vegetation Present? Yes X No
3. Suaeda linearis		2	No	OBL	
4.					
5.					
6.					
7.					Hydrophytic Vegetation Present? Yes X No
8.					
9.					
10.					
		14 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes X No
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 86					
Remarks:					

## SOIL

Sampling Point: 055

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0-18"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 056	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Toeslope		Local relief (concave, convex, none): Convex		Slope (%): 1-2	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.453221		Long: -98.04148	
				Datum: WGS84	
Soil Map Unit Name: Rio fine sandy loam, saline, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  Total Number of Dominant Species Across All Strata: 2 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 150 x 4 = 600 UPL species 0 x 5 = 0 Column Totals: 150 (A) 600 (B) Prevalence Index = B/A = 4.00
1. Vachellia farnesiana		60	Yes	FACU	
2.					
3.					
4.					
		60 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Panicum hallii		90	Yes	FACU	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 056

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 057	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Dip		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.454104		Long: -98.044429	
				Datum: WGS84	
Soil Map Unit Name: Rio clay loam, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  Total Number of Dominant Species Across All Strata: 3 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 50 x 2 = 100 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 30 x 5 = 150 Column Totals: 80 (A) 250 (B) Prevalence Index = B/A = 3.13
1. Tamarix aphylla		5	Yes	FACW	
2.					
3.					
4.					
5.					
		5 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Cyperus esculentus		45	Yes	FACW	
2. Heterotheca subaxillaris		30	Yes	UPL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		75 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 25					
Remarks:					

## SOIL

Sampling Point: 057

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No ☒

Remarks:  
 salt crystal throughout

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☒ Geomorphic Position (D2)  
☒ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**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)

**Wetland Hydrology Present?** Yes ☒ No \_\_\_\_\_

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 058	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Valley		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.440066		Long: -98.056237	
				Datum: WGS84	
Soil Map Unit Name: Rio clay loam, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 10 x 3 = 30 FACU species 90 x 4 = 360 UPL species 0 x 5 = 0 Column Totals: 100 (A) 390 (B) Prevalence Index = B/A = 3.90
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Parkinsonia aculeata		10	Yes	FAC	
2.					
3.					
4.					
5.					
		10 =Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Panicum hallii		60	Yes	FACU	
2. Amaranthus albus		30	Yes	FACU	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			Hydrophytic Vegetation Present? Yes No X
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 058

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 059	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.441969		Long: -98.054866	
				Datum: WGS84	
Soil Map Unit Name: Willacy fine sandy loam, 0 to 1 percent slopes				NW1 classification: None	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes X No		
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 75 x 1 = 75 FACW species 45 x 2 = 90 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 120 (A) 165 (B) Prevalence Index = B/A = 1.38
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Parkinsonia aculeata		40	Yes	FACW	
2.					
3.					
4.					
5.					
		40 =Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Typha angustifolia		75	Yes	OBL	
2. Persicaria pensylvanica		5	No	FACW	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		80 =Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 20					
Remarks:					

## SOIL

Sampling Point: 059

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="6"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 060	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Toeslope		Local relief (concave, convex, none): none		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.441969		Long: -98.054866 Datum: WGS84	
Soil Map Unit Name: Willacy fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, explain in Remarks.)					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed? Are "Normal Circumstances" present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 130 x 4 = 520 UPL species 0 x 5 = 0 Column Totals: 130 (A) 520 (B) Prevalence Index = B/A = 4.00
1. Vachellia farnesiana		40	Yes	FACU	
2.					
3.					
4.					
		40 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Panicum hallii		90	Yes	FACU	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 060

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 061	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: None			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.441921		Long: -98.055281 Datum: WGS84	
Soil Map Unit Name: Willacy fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes X No		
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 30 x 1 = 30 FACW species 40 x 2 = 80 FAC species 0 x 3 = 0 FACU species 10 x 4 = 40 UPL species 0 x 5 = 0 Column Totals: 80 (A) 150 (B) Prevalence Index = B/A = 1.88
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Persicaria pensylvanica		40	Yes	FACW	
2. Typha angustifolia		30	Yes	OBL	
3. Helianthus annuus		10	No	FACU	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		80	=Total Cover		
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes X No
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 20					
Remarks:					

## SOIL

Sampling Point: 061

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="6-18"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

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Great Plains – Version 1.0



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo and Willacy		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 062	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Dip		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.435346		Long: -98.057069 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 1 x 1 = 1 FACW species 0 x 2 = 0 FAC species 5 x 3 = 15 FACU species 85 x 4 = 340 UPL species 0 x 5 = 0 Column Totals: 91 (A) 356 (B) Prevalence Index = B/A = 3.91
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Cynodon dactylon		60	Yes	FACU	
2. Panicum hallii		20	Yes	FACU	
3. Phyla nodiflora		5	No	FAC	
4. Amaranthus albus		5	No	FACU	
5. Batis maritima		1	No	OBL	
6.					Hydrophytic Vegetation Present? Yes No X
7.					
8.					
9.					
10.					
		91 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 9					
Remarks:					

## SOIL

Sampling Point: 062

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☒ X Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 063	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Toeslope		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.426833		Long: -98.056518 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 110 x 4 = 440 UPL species 0 x 5 = 0 Column Totals: 110 (A) 440 (B) Prevalence Index = B/A = 4.00
1. Vachellia farnesiana		10	Yes	FACU	
2.					
3.					
4.					
		10 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Cynodon dactylon		90	Yes	FACU	
2. Panicum hallii		10	No	FACU	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		100 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 0					
Remarks:					

## SOIL

Sampling Point: 063

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/4	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 064	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.426913		Long: -98.056704 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: PEM1/SS1A			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes X No		
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 15 x 1 = 15 FACW species 30 x 2 = 60 FAC species 35 x 3 = 105 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 80 (A) 180 (B) Prevalence Index = B/A = 2.25
1. Parkinsonia aculeata		35	Yes	FAC	
2.					
3.					
4.					
5.					
		35 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Phalaris arundinacea		30	Yes	FACW	
2. Typha angustifolia		15	Yes	OBL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		45 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes X No
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 55					
Remarks:					

## SOIL

Sampling Point: 064

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/1	100					Loamy/Clayey	
8-18	10YR 4/1	90	10YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____ Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: \_\_\_\_\_

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		

(includes capillary fringe)

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

Remarks: \_\_\_\_\_



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 065	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Valley		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.426047		Long: -98.057558 Datum: WGS84	
Soil Map Unit Name: Rio clay loam, ponded		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X				Is the Sampled Area within a Wetland? Yes No X	
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )			Absolute % Cover	Dominant Species?	Indicator Status
1.					
2.					
3.					
4.					
			=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Prosopis glandulosa			30	Yes	FACU
2. Vachellia farnesiana			10	Yes	FACU
3. Parkinsonia aculeata			5	No	FAC
4.					
5.					
			45 =Total Cover		
Herb Stratum (Plot size: 5' Radius )					
1. Panicum hallii			90	Yes	FACU
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
			90 =Total Cover		
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
			=Total Cover		
% Bare Ground in Herb Stratum					
Remarks:					
D dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)					
Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 5 x 3 = 15 FACU species 130 x 4 = 520 UPL species 0 x 5 = 0 Column Totals: 135 (A) 535 (B) Prevalence Index = B/A = 3.96					
Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
Hydrophytic Vegetation Present? Yes No X					

## SOIL

Sampling Point: 065

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/24/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 066	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Dip		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.424197		Long: -98.058094 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 150 x 2 = 300 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 150 (A) 300 (B) Prevalence Index = B/A = 2.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Sesbania drummondii		60	Yes	FACW	
2.					
3.					
4.					
5.					
		60 =Total Cover			Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Echinochloa colona		90	Yes	FACW	
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 066

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="2"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<input type="text" value="0-18"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 067	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Toeslope		Local relief (concave, convex, none): none		Slope (%): 1-2	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.417099		Long: -98.108999 Datum: WGS84	
Soil Map Unit Name: Willacy fine sandy loam, 1 to 3 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 40 x 4 = 160 UPL species 75 x 5 = 375 Column Totals: 115 (A) 535 (B) Prevalence Index = B/A = 4.65
1. Prosopis glandulosa		25	Yes	FACU	
2. Vachellia farnesiana		5	No	FACU	
3.					
4.					
5.					
		30 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Heterotheca subaxillaris		75	Yes	UPL	
2. Panicum hallii		10	No	FACU	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		85 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum					
Remarks:					

## SOIL

Sampling Point: 067

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text" value="0"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Hidalgo Sampling Date: 7/25/2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 068  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Saddle Local relief (concave, convex, none): none Slope (%): 2-3  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.421476 Long: -98.111616 Datum: WGS84  
Soil Map Unit Name: Comitas loamy fine sand, 0 to 3 percent slopes NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> <u>    </u> =Total Cover	<b>Absolute % Cover</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominant Species?</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Indicator Status</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> <u>    </u> =Total Cover	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>		<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>60</u> (A) <u>220</u> (B) Prevalence Index = B/A = <u>3.67</u>		
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Sorghum bicolor</u> 2. <u>Echinochloa colona</u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> 6. <u>    </u> 7. <u>    </u> 8. <u>    </u> 9. <u>    </u> 10. <u>    </u> <u>60</u> =Total Cover	<u>50</u> <u>10</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>Yes</u> <u>No</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>FACU</u> <u>FACW</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>			<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> <u>    </u> =Total Cover	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>				<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>X</u>
% Bare Ground in Herb Stratum <u>40</u>	<u>    </u>	<u>    </u>	<u>    </u>				

Remarks:

ENG FORM 6416-5, FEB 2024 Great Plains Version 2.0

## SOIL

Sampling Point: 068

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/3	100					Sandy	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 069	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Artificial Basin		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.425881		Long: -98.124197 Datum: WGS84	
Soil Map Unit Name: Hargill fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 25 x 3 = 75 FACU species 65 x 4 = 260 UPL species 0 x 5 = 0 Column Totals: 90 (A) 335 (B) Prevalence Index = B/A = 3.72
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Cynodon dactylon		65	Yes	FACU	
2. Phyla nodiflora		25	Yes	FAC	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			Hydrophytic Vegetation Present? Yes No X
Woody Vine Stratum (Plot size: 30' Radius )					
1.					Remarks:
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					

## SOIL

Sampling Point: 069

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Hidalgo</u>	Sampling Date: <u>7/25/2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>070</u>
Investigator(s): <u>K. Compton, K. Rubio</u>		Section, Township, Range: <u>N/A</u>
Landform (hillside, terrace, etc.): <u>Ridge</u>	Local relief (concave, convex, none): <u>convex</u>	Slope (%): <u>1</u>
Subregion (LRR/MLRA): <u>LRR I, MLRA 83D</u>	Lat: <u>26.426566</u>	Long: <u>-98.1278</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Hargill fine sandy loam, 0 to 1 percent slopes</u>		NWI classification: <u>None</u>

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

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

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

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

Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u> Hydric Soil Present?    Yes <u>      </u> No <u>X</u> Wetland Hydrology Present?    Yes <u>      </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.	

**VEGETATION – Use scientific names of plants.**

Tree Stratum	(Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
=Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>15' Radius</u> )				
1. <u>Vachellia farnesiana</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>	
2.					
3.					
4.					
5.					
<u>15</u> =Total Cover					
Herb Stratum	(Plot size: <u>5' Radius</u> )				
1. <u>Cenchrus ciliaris</u>		<u>40</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Panicum hallii</u>		<u>25</u>	<u>Yes</u>	<u>FAC</u>	
3. <u>Solanum carolinense</u>		<u>10</u>	<u>No</u>	<u>UPL</u>	
4. <u>Parthenium hysterophorus</u>		<u>10</u>	<u>No</u>	<u>FAC</u>	
5.					
6.					
7.					
8.					
9.					
10.					
<u>85</u> =Total Cover					
Woody Vine Stratum	(Plot size: <u>30' Radius</u> )				
1.					
2.					
=Total Cover					
% Bare Ground in Herb Stratum		<u>15</u>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>35</u>	x 3 = <u>105</u>
FACU species <u>15</u>	x 4 = <u>60</u>
UPL species <u>50</u>	x 5 = <u>250</u>
Column Totals: <u>100</u> (A)	<u>415</u> (B)
Prevalence Index = B/A = <u>4.15</u>	

**Hydrophytic Vegetation Indicators:**

       1 - Rapid Test for Hydrophytic Vegetation

       2 - Dominance Test is >50%

       3 - Prevalence Index is ≤3.0<sup>1</sup>

       4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

       Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?**    Yes           No X

Remarks:

## SOIL

Sampling Point: 070

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 071	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Ridge		Local relief (concave, convex, none): convex		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.425923		Long: -98.128349 Datum: WGS84	
Soil Map Unit Name: Hargill fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 10 x 2 = 20 FAC species 0 x 3 = 0 FACU species 90 x 4 = 360 UPL species 0 x 5 = 0 Column Totals: 100 (A) 380 (B) Prevalence Index = B/A = 3.80
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Sorghum bicolor		90	Yes	FACU	
2. Echinochloa colona		10	No	FACW	Hydrophytic Vegetation Present? Yes No X
3.					
4.					
5.					
6.					
7.					Hydrophytic Vegetation Present? Yes No X
8.					
9.					
10.					
		100 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum					
Remarks:					

## SOIL

Sampling Point: 071

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/3	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R		<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>																	
Project/Site: <u>Raymondville Drain</u>		City/County: <u>Hidalgo</u>																	
Applicant/Owner: <u>HCDD1</u>		State: <u>TX</u>																	
Investigator(s): <u>K. Compton, K. Rubio</u>		Section, Township, Range: <u>N/A</u>																	
Landform (hillside, terrace, etc.): <u>Sideslope</u>		Local relief (concave, convex, none): <u>none</u>																	
Subregion (LRR/MLRA): <u>LRR I, MLRA 83D</u>		Slope (%): <u>1</u>																	
Lat: <u>26.426281</u>		Long: <u>-98.131904</u>																	
Datum: <u>WGS84</u>		Soil Map Unit Name: <u>Hargill fine sandy loam, 0 to 1 percent slopes</u>																	
NW1 classification: <u>None</u>		Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)																	
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No <u>      </u>		Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic?    (If needed, explain any answers in Remarks.)																	
<b>SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.</b>																			
Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u> Hydric Soil Present?    Yes <u>      </u> No <u>X</u> Wetland Hydrology Present?    Yes <u>      </u> No <u>X</u>		<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>																	
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.																			
<b>VEGETATION – Use scientific names of plants.</b>																			
<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>      </u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> <div style="text-align: right;">=Total Cover</div>		<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>Prosopis glandulosa</u> <u>50</u> Yes                      FACU 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <div style="text-align: right;"><u>50</u> =Total Cover</div>																			
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Panicum hallii</u> <u>90</u> Yes                      FACU 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <div style="text-align: right;"><u>90</u> =Total Cover</div>																			
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>      </u> 2. <u>      </u> <div style="text-align: right;">=Total Cover</div>																			
% Bare Ground in Herb Stratum <u>10</u>																			
Remarks:		<b>Prevalence Index worksheet:</b>  <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species                      <u>0</u></td> <td>x 1 =                      <u>0</u></td> </tr> <tr> <td>FACW species                      <u>0</u></td> <td>x 2 =                      <u>0</u></td> </tr> <tr> <td>FAC species                      <u>0</u></td> <td>x 3 =                      <u>0</u></td> </tr> <tr> <td>FACU species                      <u>140</u></td> <td>x 4 =                      <u>560</u></td> </tr> <tr> <td>UPL species                      <u>0</u></td> <td>x 5 =                      <u>0</u></td> </tr> <tr> <td>Column Totals:                      <u>140</u> (A)</td> <td><u>560</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =                      <u>4.00</u></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>140</u>	x 4 = <u>560</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>140</u> (A)	<u>560</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>0</u>	x 2 = <u>0</u>																		
FAC species <u>0</u>	x 3 = <u>0</u>																		
FACU species <u>140</u>	x 4 = <u>560</u>																		
UPL species <u>0</u>	x 5 = <u>0</u>																		
Column Totals: <u>140</u> (A)	<u>560</u> (B)																		
Prevalence Index = B/A = <u>4.00</u>																			
<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>																	

## SOIL

Sampling Point: 072

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<input type="text"/>
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 073	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Excavation		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.426764		Long: -98.134731 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: PUSJx			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes X No			Is the Sampled Area within a Wetland? Yes No X		
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day. Active excavation, machinery traffic, steep banks, unstable slopes, and ponded water due to recent rainfall were observed in this area during the field investigation.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )			Dominance Test worksheet:		
1.			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)		
2.			Total Number of Dominant Species Across All Strata: 1 (B)		
3.			Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)		
4.					
=Total Cover					
Sapling/Shrub Stratum (Plot size: 15' Radius )			Prevalence Index worksheet:		
1.			Total % Cover of: Multiply by:		
2.			OBL species 0 x 1 = 0		
3.			FACW species 20 x 2 = 40		
4.			FAC species 0 x 3 = 0		
5.			FACU species 0 x 4 = 0		
			UPL species 0 x 5 = 0		
=Total Cover			Column Totals: 20 (A) 40 (B)		
			Prevalence Index = B/A = 2.00		
Herb Stratum (Plot size: 5' Radius )			Hydrophytic Vegetation Indicators:		
1. Echinochloa colona 20 Yes FACW			X 1 - Rapid Test for Hydrophytic Vegetation		
2.			X 2 - Dominance Test is >50%		
3.			3 - Prevalence Index is ≤3.0 <sup>1</sup>		
4.			4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
5.			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
6.			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
7.			Hydrophytic Vegetation Present? Yes X No		
8.					
9.					
10.					
20 =Total Cover					
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
=Total Cover					
% Bare Ground in Herb Stratum 80					
Remarks: Active excavation, machinery traffic, steep banks, unstable slopes, and ponded water due to recent rainfall were observed in this area during the field investigation.					

## SOIL

Sampling Point: 073

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 6/3	80	7.5YR 4/6	20	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No ☒

Remarks:

Active excavation, machinery traffic, steep banks, unstable slopes, and ponded water due to recent rainfall were observed in this area during the field investigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☒ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☒ Saturation Visible on Aerial Imagery (C9)  
☒ Geomorphic Position (D2)  
☒ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**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)

**Wetland Hydrology Present?** Yes ☒ No \_\_\_\_\_

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

Remarks:

Active excavation, machinery traffic, steep banks, unstable slopes, and ponded water due to recent rainfall were observed in this area during the field investigation.



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 074	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Artificial Basin		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.42707		Long: -98.133784 Datum: WGS84	
Soil Map Unit Name: Delfina fine sandy loam, warm, 0 to 2 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 40 x 2 = 80 FAC species 0 x 3 = 0 FACU species 100 x 4 = 400 UPL species 15 x 5 = 75 Column Totals: 155 (A) 555 (B) Prevalence Index = B/A = 3.58
1. Baccharis salicifolia		40	Yes	FACW	
2. Vachellia farnesiana		25	Yes	FACU	
3.					
4.					
5.					
		65 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Panicum hallii		75	Yes	FACU	
2. Cenchrus ciliaris		15	No	UPL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 074

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	50					Loamy/Clayey	
0-18	10YR 3/4	50					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____	Yes _____ No <input checked="" type="checkbox"/>
Depth (inches): _____	

Remarks: \_\_\_\_\_

## HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-Stained Leaves (B9)	

Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drainage Patterns (B10)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> FAC-Neutral Test (D5)
<b>(where tilled)</b>	<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)

Field Observations:		Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Yes _____ No <input checked="" type="checkbox"/>
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	
(includes capillary fringe)	Depth (inches): _____	

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

Remarks: \_\_\_\_\_



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 075	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Artificial Basin		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.427034		Long: -98.132681 Datum: WGS84	
Soil Map Unit Name: Delfina fine sandy loam, warm, 0 to 2 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 60 x 2 = 120 FAC species 15 x 3 = 45 FACU species 45 x 4 = 180 UPL species 20 x 5 = 100 Column Totals: 140 (A) 445 (B) Prevalence Index = B/A = 3.18
1. Baccharis salicifolia		60	Yes	FACW	
2.					
3.					
4.					
5.					
		60 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Panicum hallii		40	Yes	FACU	
2. Cenchrus ciliaris		20	Yes	UPL	
3. Parthenium hysterophorus		15	No	FAC	
4. Helianthus annuus		5	No	FACU	
5.					
6.					
7.					
8.					
9.					
10.					
		80 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum					
Remarks:					

## SOIL

Sampling Point: 075

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/2	50					Loamy/Clayey	
0-18	10YR 3/4	50					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
Remarks:	

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> X Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 076	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Artificial Basin		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.392815		Long: -98.154975 Datum: WGS84	
Soil Map Unit Name: Delfina fine sandy loam, warm, 0 to 2 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 2 x 1 = 2 FACW species 0 x 2 = 0 FAC species 41 x 3 = 123 FACU species 2 x 4 = 8 UPL species 5 x 5 = 25 Column Totals: 50 (A) 158 (B) Prevalence Index = B/A = 3.16
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					
5.					
		=Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Eragrostis spectabilis		40	Yes	FAC	
2. Palafoxia callosa		5	No	UPL	
3. Batis maritima		2	No	OBL	
4. Chloris barbata		2	No	FACU	
5. Neptunia pubescens		1	No	FAC	
6.					
7.					
8.					
9.					
10.					
		50 =Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 50					
Remarks:					

## SOIL

Sampling Point: 076

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			



<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: Raymondville Drain City/County: Hidalgo Sampling Date: 7/25/2024  
Applicant/Owner: HCDD1 State: TX Sampling Point: 077  
Investigator(s): K. Compton, K. Rubio Section, Township, Range: N/A  
Landform (hillside, terrace, etc.): Artificial Basin Local relief (concave, convex, none): concave Slope (%): 0-1  
Subregion (LRR/MLRA): LRR I, MLRA 83D Lat: 26.383953 Long: -98.156892 Datum: WGS84  
Soil Map Unit Name: Hidalgo sandy clay loam, 0 to 1 percent slopes NWI classification: None  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u> Hydric Soil Present? Yes <u>    </u> No <u>X</u> Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>    </u> No <u>X</u>
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Remarks:  
The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> <u>    </u> = Total Cover	<b>Absolute % Cover</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominant Species?</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Indicator Status</b> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> ) 1. <u>Vachellia farnesiana</u> 2. <u>    </u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> <u>5</u> = Total Cover	<u>5</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>Yes</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>FACU</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>		<b>Prevalence Index worksheet:</b> Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>50</u> (A) <u>160</u> (B) Prevalence Index = B/A = <u>3.20</u>
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> ) 1. <u>Helianthus ciliaris</u> 2. <u>Helianthus annuus</u> 3. <u>    </u> 4. <u>    </u> 5. <u>    </u> 6. <u>    </u> 7. <u>    </u> 8. <u>    </u> 9. <u>    </u> 10. <u>    </u> <u>45</u> = Total Cover	<u>40</u> <u>5</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>Yes</u> <u>No</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>	<u>FAC</u> <u>FACU</u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u> <u>    </u>		
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> ) 1. <u>    </u> 2. <u>    </u> <u>    </u> = Total Cover	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>	<u>    </u> <u>    </u> <u>    </u>	<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>    </u> 2 - Dominance Test is >50% <u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
% Bare Ground in Herb Stratum <u>    </u>	<u>    </u>	<u>    </u>	<u>    </u>		<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>X</u>

Remarks:

## SOIL

Sampling Point: 077

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5YR 5/4	95	7.5YR 4/2	5	D	M	Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No X

Remarks:

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)  
☐ High Water Table (A2)  
☐ Saturation (A3)  
☐ Water Marks (B1)  
☐ Sediment Deposits (B2)  
☐ Drift Deposits (B3)  
☐ Algal Mat or Crust (B4)  
☐ Iron Deposits (B5)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Water-Stained Leaves (B9)  
☐ Salt Crust (B11)  
☐ Aquatic Invertebrates (B13)  
☐ Hydrogen Sulfide Odor (C1)  
☐ Dry-Season Water Table (C2)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where not tilled)**  
☐ Presence of Reduced Iron (C4)  
☐ Thin Muck Surface (C7)  
☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☒ Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No X

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

Remarks:



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 078	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.434257		Long: -98.054865 Datum: WGS84	
Soil Map Unit Name: Willacy fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  Total Number of Dominant Species Across All Strata: 3 (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet:  Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 10 x 3 = 30 FACU species 95 x 4 = 380 UPL species 0 x 5 = 0 Column Totals: 105 (A) 410 (B) Prevalence Index = B/A = 3.90
1. Parkinsonia aculeata		10	Yes	FAC	
2.					
3.					
4.					
		10 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Ambrosia artemisiifolia		60	Yes	FACU	
2. Amaranthus albus		30	Yes	FACU	
3. Panicum hallii		5	No	FACU	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		95 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum					
Remarks:					

## SOIL

Sampling Point: 078

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR 3/1	100					Loamy/Clayey	
1-18	10YR 3/2	100					Loamy/Clayey	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
Remarks:	

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> X Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present?      Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present?        Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 7/25/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 079	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.433873		Long: -98.054794 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes X No		
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 90 x 1 = 90 FACW species 0 x 2 = 0 FAC species 15 x 3 = 45 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 105 (A) 135 (B) Prevalence Index = B/A = 1.29
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Parkinsonia aculeata		15	Yes	FAC	
2.					
3.					
4.					
5.					
		15 =Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Typha angustifolia		60	Yes	OBL	
2. Batis maritima		30	Yes	OBL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					

## SOIL

Sampling Point: 079

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/1	100					Loamy/Clayey	
4-18	10YR 4/2	98	10YR 3/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____ Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: \_\_\_\_\_

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):		

(includes capillary fringe)

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

Remarks: \_\_\_\_\_



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 8/20/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 080	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Ridge		Local relief (concave, convex, none): concave		Slope (%): 0-1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.402525		Long: -98.162028 Datum: WGS84	
Soil Map Unit Name: Hidalgo fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes X No			Is the Sampled Area within a Wetland? Yes No X		
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 10 x 1 = 10 FACW species 0 x 2 = 0 FAC species 30 x 3 = 90 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 40 (A) 100 (B) Prevalence Index = B/A = 2.50
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					
5.					
		=Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Spartina spartinae		30	Yes	FAC	
2. Batis maritima		10	Yes	OBL	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		=Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 60					
Remarks:					

## SOIL

Sampling Point: 080

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	100					Loamy/Clayey	Highly compacted, salt crystals and shells throughout
6-18	10YR 3/2	100					Loamy/Clayey	Highly compacted, salt crystals and shells throughout
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> High Plains Depressions (F16)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<b>(LRR H outside of MLRA 72 &amp; 73)</b>		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Reduced Vertic (F18)		
<input type="checkbox"/> Stratified Layers (A5) (LRR F)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Red Parent Material (F21)		
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)			<input type="checkbox"/> Depleted Matrix (F3)			<input type="checkbox"/> Very Shallow Dark Surface (F22)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)			<input type="checkbox"/> High Plains Depressions (F16)			<sup>3</sup> Indicators of hydrophytic vegetation and		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)			<b>(MLRA 72 &amp; 73 of LRR H)</b>			wetland hydrology must be present,		
						unless disturbed or problematic.		
<b>Restrictive Layer (if observed):</b>								
Type: _____								
Depth (inches): _____						<b>Hydric Soil Present?</b> Yes _____ No <input checked="" type="checkbox"/>		
Remarks:								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	
<b>Field Observations:</b>			
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 8/20/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 081	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Ridge		Local relief (concave, convex, none): none		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.402358		Long: -98.160741 Datum: WGS84	
Soil Map Unit Name: Hidalgo fine sandy loam, 0 to 1 percent slopes		NW1 classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No X					
Wetland Hydrology Present? Yes No X					
Remarks: The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			
Sapling/Shrub Stratum (Plot size: 15' Radius )					Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 10 x 2 = 20 FAC species 10 x 3 = 30 FACU species 80 x 4 = 320 UPL species 0 x 5 = 0 Column Totals: 100 (A) 370 (B) Prevalence Index = B/A = 3.70
1. Tamarix aphylla		10	Yes	FACW	
2.					
3.					
4.					
		10 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Bothriochloa bladhii		80	Yes	FACU	
2. Phyla nodiflora		10	No	FAC	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		90 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					Hydrophytic Vegetation Present? Yes No X
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 10					
Remarks:					



## SOIL

Sampling Point: 081

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 8/20/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 082	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: None			
Landform (hillside, terrace, etc.): Dip		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.484138		Long: -98.01457	
				Datum: WGS84	
Soil Map Unit Name: Rio fine sandy loam, saline, ponded		NW1 classification: PEM1A			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Hydric Soil Present? Yes No No ROE					
Wetland Hydrology Present? Yes No X					
Remarks: ROE was not granted to this location, therefore vegetation/hydrology was recorded from nearby public access. The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 15 x 3 = 45 FACU species 120 x 4 = 480 UPL species 20 x 5 = 100 Column Totals: 155 (A) 625 (B) Prevalence Index = B/A = 4.03
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Prosopis glandulosa		60	Yes	FACU	
2. Parkinsonia aculeata		15	Yes	FAC	
3.					
4.					Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5.					
		75 =Total Cover			
Herb Stratum (Plot size: 5' Radius )					
1. Panicum hallii		60	Yes	FACU	
2. Cenchrus ciliaris		20	Yes	UPL	Hydrophytic Vegetation Present? Yes No X
3.					
4.					
5.					
6.					
7.					Remarks: ROE was not granted to this location, therefore vegetation was recorded from nearby public access.
8.					
9.					
10.					
		80 =Total Cover			
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 20					

## SOIL

Sampling Point: 082

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5) **(LRR F)**  
☐ 1 cm Muck (A9) **(LRR F, G, H)**  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 2.5 cm Mucky Peat or Peat (S2) **(LRR G, H)**  
☐ 5 cm Mucky Peat or Peat (S3) **(LRR F)**

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)  
☐ High Plains Depressions (F16)  
**(MLRA 72 & 73 of LRR H)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ 1 cm Muck (A9) **(LRR I, J)**  
☐ High Plains Depressions (F16)  
**(LRR H outside of MLRA 72 & 73)**  
☐ Reduced Vertic (F18)  
☐ Red Parent Material (F21)  
☐ Very Shallow Dark Surface (F22)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No \_\_\_\_\_

Remarks:

No ROE was available to this location, therefore a soil profile was not attainable.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1) ☐ Salt Crust (B11)  
☐ High Water Table (A2) ☐ Aquatic Invertebrates (B13)  
☐ Saturation (A3) ☐ Hydrogen Sulfide Odor (C1)  
☐ Water Marks (B1) ☐ Dry-Season Water Table (C2)  
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3)  
☐ Drift Deposits (B3) **(where not tilled)**  
☐ Algal Mat or Crust (B4) ☐ Presence of Reduced Iron (C4)  
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)  
☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks)  
☐ Water-Stained Leaves (B9)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)  
☐ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Oxidized Rhizospheres on Living Roots (C3)  
**(where tilled)**  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☒ X Geomorphic Position (D2)  
☐ FAC-Neutral Test (D5)  
☐ Frost-Heave Hummocks (D7) **(LRR F)**

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?** Yes \_\_\_\_\_ No ☒ X

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

Remarks:

No ROE was available to this location, therefore only hydrology indicators available from a desktop review / view from nearby public access were attainable.



U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Willacy		Sampling Date: 8/20/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 083	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Dip		Local relief (concave, convex, none): concave		Slope (%): 1	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.478412		Long: -97.941047 Datum: WGS84	
Soil Map Unit Name: Rio sandy clay loam, saline, ponded		NW1 classification: PEM1Ad			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No No ROE Wetland Hydrology Present? Yes No X			Is the Sampled Area within a Wetland? Yes No X		
Remarks: ROE was not granted to this location, therefore vegetation/hydrology was recorded from nearby public access. The antecedent precipitation tool (APT) reports a score of 16 (Wetter Than Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 100 x 4 = 400 UPL species 0 x 5 = 0 Column Totals: 100 (A) 400 (B) Prevalence Index = B/A = 4.00
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1.					
2.					
3.					
4.					
5.					
		=Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Cynodon dactylon		50	Yes	FACU	
2. Bothriochloa barbinodis		50	Yes	FACU	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		100 =Total Cover			Hydrophytic Vegetation Present? Yes No X
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum					
Remarks: ROE was not granted to this location, therefore vegetation was recorded from nearby public access.					

## SOIL

Sampling Point: 083

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	
(includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
No ROE was available to this location, therefore only hydrology indicators available from a dekstop review / view form nearby public access were attainable.			

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<b>U.S. Army Corps of Engineers</b> <b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b> See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R	<b>OMB Control #: 0710-0024, Exp: 11/30/2024</b> <b>Requirement Control Symbol EXEMPT:</b> <b>(Authority: AR 335-15, paragraph 5-2a)</b>
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Project/Site: <u>Raymondville Drain</u>	City/County: <u>Hidalgo</u>	Sampling Date: <u>8/21/2024</u>
Applicant/Owner: <u>HCDD1</u>	State: <u>TX</u>	Sampling Point: <u>084</u>
Investigator(s): <u>K. Compton, K. Rubio</u>	Section, Township, Range: <u>N/A</u>	
Landform (hillside, terrace, etc.): <u>Toeslope</u>	Local relief (concave, convex, none): <u>convex</u>	Slope (%): <u>1</u>
Subregion (LRR/MLRA): <u>LRR I, MLRA 83D</u>	Lat: <u>26.429906</u>	Long: <u>-98.056516</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Racombes sandy clay loam, saline, 0 to 1 percent slopes</u>	NWI classification: <u>None</u>	
Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No <u>      </u>		
Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic?    (If needed, explain any answers in Remarks.)		

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

Hydrophytic Vegetation Present?    Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?                      Yes <u>      </u> No <u>X</u>	
Wetland Hydrology Present?            Yes <u>      </u> No <u>X</u>	
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.	

**VEGETATION – Use scientific names of plants.**

<b>Tree Stratum</b> (Plot size: <u>30' Radius</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)
1. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>      </u> =Total Cover				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15' Radius</u> )				<b>Prevalence Index worksheet:</b>  Total % Cover of:                      Multiply by: OBL species <u>65</u> x 1 = <u>65</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>75</u> (A) <u>105</u> (B) Prevalence Index = B/A = <u>1.40</u>
1. <u>Prosopis glandulosa</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>10</u> =Total Cover				
<b>Herb Stratum</b> (Plot size: <u>5' Radius</u> )				<b>Hydrophytic Vegetation Indicators:</b>  <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Batis maritima</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Suaeda nigra</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>65</u> =Total Cover				
<b>Woody Vine Stratum</b> (Plot size: <u>30' Radius</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
<u>      </u> =Total Cover				
% Bare Ground in Herb Stratum <u>35</u>				

Remarks:
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## SOIL

Sampling Point: 084

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/1	100					Loamy/Clayey	Salt crystals throughout
3-18	10YR 3/2	100					Loamy/Clayey	Salt crystals throughout

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes _____ No <u>X</u>
Remarks:	

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

<b>Field Observations:</b> Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present?    Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present?    Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Great Plains Region See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R				OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)	
Project/Site: Raymondville Drain		City/County: Hidalgo		Sampling Date: 8/21/2024	
Applicant/Owner: HCDD1		State: TX		Sampling Point: 085	
Investigator(s): K. Compton, K. Rubio		Section, Township, Range: N/A			
Landform (hillside, terrace, etc.): Depression		Local relief (concave, convex, none): concave		Slope (%): 0	
Subregion (LRR/MLRA): LRR I, MLRA 83D		Lat: 26.429761		Long: -98.056439 Datum: WGS84	
Soil Map Unit Name: Racombes sandy clay loam, saline, 0 to 1 percent slopes				NW1 classification: None	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No			Is the Sampled Area within a Wetland? Yes X No		
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes X No					
Remarks: The antecedent precipitation tool (APT) reports a score of 13 (Normal Conditions) for this day.					
VEGETATION – Use scientific names of plants.					
Tree Stratum (Plot size: 30' Radius )		Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
1.					
2.					
3.					
4.					
		=Total Cover			Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 80 x 1 = 80 FACW species 5 x 2 = 10 FAC species 5 x 3 = 15 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 90 (A) 105 (B) Prevalence Index = B/A = 1.17
Sapling/Shrub Stratum (Plot size: 15' Radius )					
1. Parkinsonia aculeata		5	Yes	FAC	
2.					
3.					
4.					
5.					
		5 =Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: 5' Radius )					
1. Typha angustifolia		80	Yes	OBL	
2. Pluchea odorata		5	No	FACW	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		85 =Total Cover			Hydrophytic Vegetation Present? Yes X No
Woody Vine Stratum (Plot size: 30' Radius )					
1.					
2.					
		=Total Cover			
% Bare Ground in Herb Stratum 15					
Remarks:					

## SOIL

Sampling Point: 085

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features				Texture	Remarks
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/1	98	7.5YR 3/3	2	C	M	Loamy/Clayey	Salt crystals throughout
8-18	10YR 3/2	100					Loamy/Clayey	Salt crystals throughout

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> High Plains Depressions (F16)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<b>(LRR H outside of MLRA 72 &amp; 73)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR F)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Very Shallow Dark Surface (F22)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	<input type="checkbox"/> High Plains Depressions (F16)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)	<b>(MLRA 72 &amp; 73 of LRR H)</b>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present?
Type: _____ Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks: \_\_\_\_\_

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<b>(where tilled)</b>	
<input type="checkbox"/> Drift Deposits (B3)	<b>(where not tilled)</b>	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)	

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)				

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

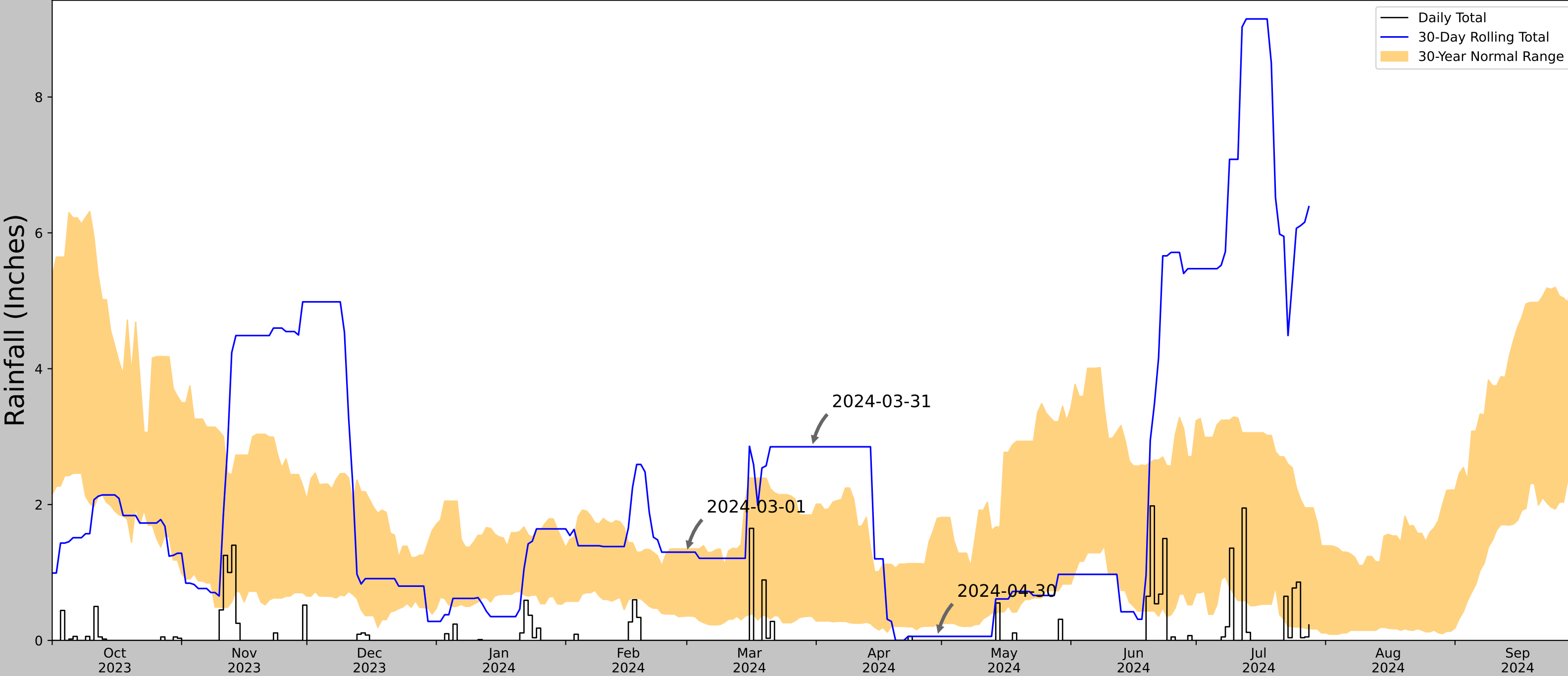
Remarks: \_\_\_\_\_



## **Appendix D**

### **ANTECEDENT PRECIPITATION REPORT**

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.516170, -97.519849
Observation Date	2024-04-30
Elevation (ft)	6.021
Drought Index (PDSI)	Mild drought

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-04-30	0.22874	1.798819	0.059055	Dry	1	3	3
2024-03-31	0.354724	1.848032	2.850394	Wet	3	2	6
2024-03-01	0.358661	1.348425	1.299213	Normal	2	1	2
Result							Normal Conditions - 11

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PORT MANSFIELD	26.5578, -97.4264	8.858	6.453	2.837	2.922	10768	89
PORT MANSFIELD 0.6 WSW	26.5508, -97.4341	8.858	0.679	0.0	0.306	184	0
RIO HONDO 9.4 NE	26.334, -97.4785	12.139	15.795	3.281	7.16	86	0
RIO HONDO 10.0 NE	26.3261, -97.4574	5.906	16.123	2.952	7.303	35	0
RAYMONDVILLE	26.4644, -97.7847	30.84	23.074	21.982	10.891	105	1
RIO HONDO 7.9 E	26.2144, -97.4576	19.029	23.805	10.171	10.954	145	0
RAYMONDVILLE 2.0 SSW	26.452, -97.7924	33.136	23.782	24.278	11.279	18	0
HARLINGEN RIO GRANDE VLY INTL	26.2303, -97.6556	30.84	26.707	21.982	12.605	11	0



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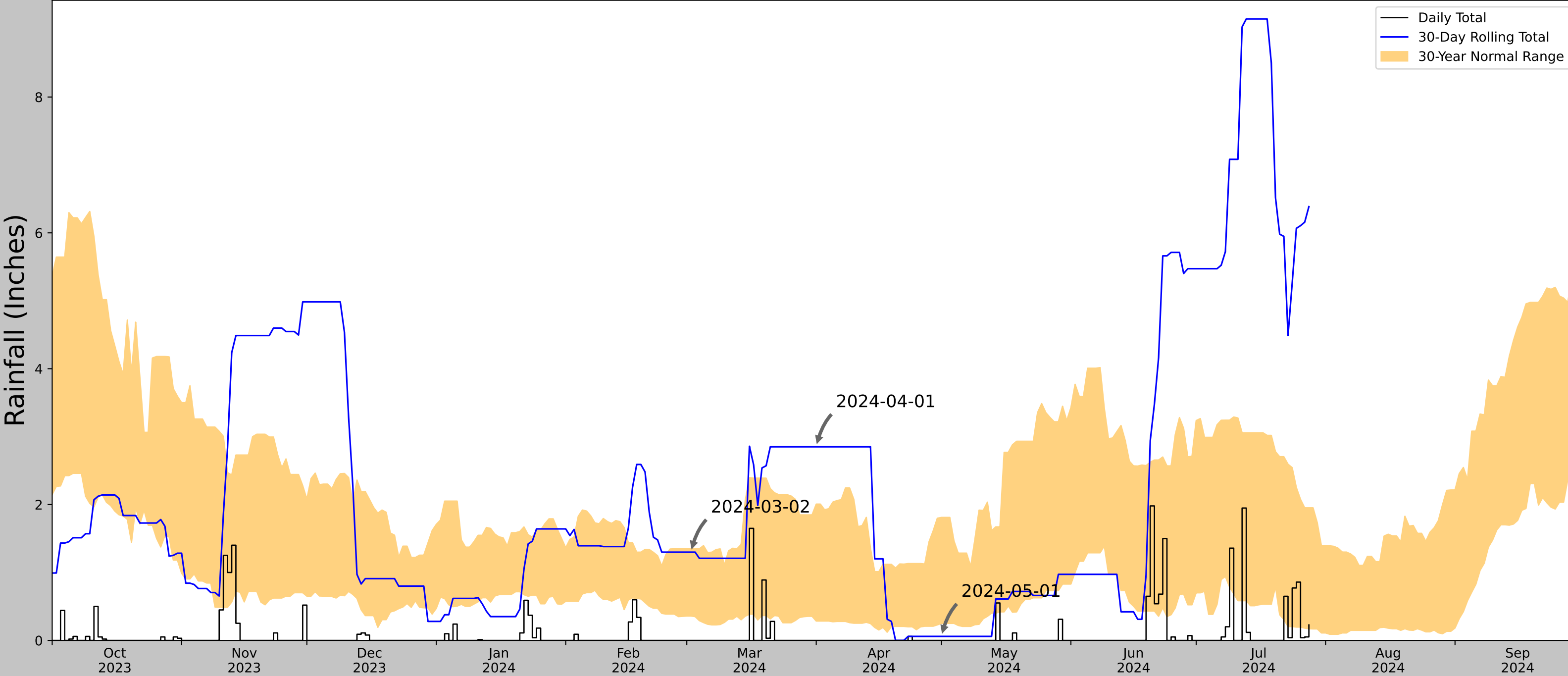
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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.516170, -97.519849
Observation Date	2024-05-01
Elevation (ft)	6.021
Drought Index (PDSI)	Moderate drought

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-05-01	0.250787	1.81063	0.059055	Dry	1	3	3
2024-04-01	0.285039	2.006693	2.850394	Wet	3	2	6
2024-03-02	0.358661	1.348425	1.299213	Normal	2	1	2
Result							Normal Conditions - 11

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PORT MANSFIELD	26.5578, -97.4264	8.858	6.453	2.837	2.922	10768	89
PORT MANSFIELD 0.6 WSW	26.5508, -97.4341	8.858	0.679	0.0	0.306	184	0
RIO HONDO 9.4 NE	26.334, -97.4785	12.139	15.795	3.281	7.16	86	0
RIO HONDO 10.0 NE	26.3261, -97.4574	5.906	16.123	2.952	7.303	35	0
RAYMONDVILLE	26.4644, -97.7847	30.84	23.074	21.982	10.891	105	1
RIO HONDO 7.9 E	26.2144, -97.4576	19.029	23.805	10.171	10.954	145	0
RAYMONDVILLE 2.0 SSW	26.452, -97.7924	33.136	23.782	24.278	11.279	18	0
HARLINGEN RIO GRANDE VLY INTL	26.2303, -97.6556	30.84	26.707	21.982	12.605	11	0



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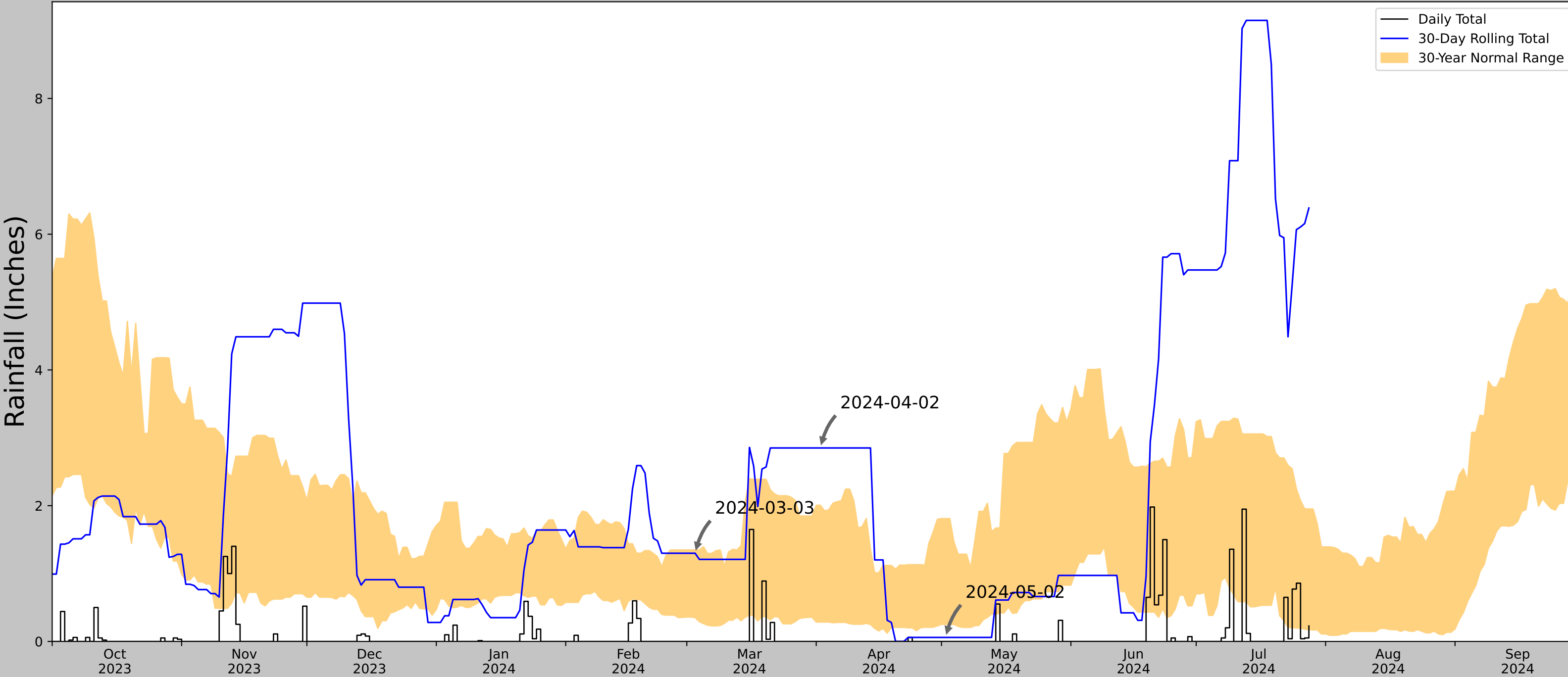
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Coordinates	26.513801, -97.613637
Observation Date	2024-05-02
Elevation (ft)	12.462
Drought Index (PDSI)	Moderate drought
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-05-02	0.250787	1.81063	0.059055	Dry	1	3	3
2024-04-02	0.285039	2.006693	2.850394	Wet	3	2	6
2024-03-03	0.350394	1.348425	1.299213	Normal	2	1	2
Result							Normal Conditions - 11

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
PORT MANSFIELD	26.5578, -97.4264	8.858	11.967	3.604	5.428	10768	89
PORT MANSFIELD 0.6 WSW	26.5508, -97.4341	8.858	0.679	0.0	0.306	184	0
RIO HONDO 9.4 NE	26.334, -97.4785	12.139	15.795	3.281	7.16	86	0
RIO HONDO 10.0 NE	26.3261, -97.4574	5.906	16.123	2.952	7.303	35	0
RAYMONDVILLE	26.4644, -97.7847	30.84	23.074	21.982	10.891	105	1
RIO HONDO 7.9 E	26.2144, -97.4576	19.029	23.805	10.171	10.954	145	0
RAYMONDVILLE 2.0 SSW	26.452, -97.7924	33.136	23.782	24.278	11.279	18	0
HARLINGEN RIO GRANDE VLY INTL	26.2303, -97.6556	30.84	26.707	21.982	12.605	11	0



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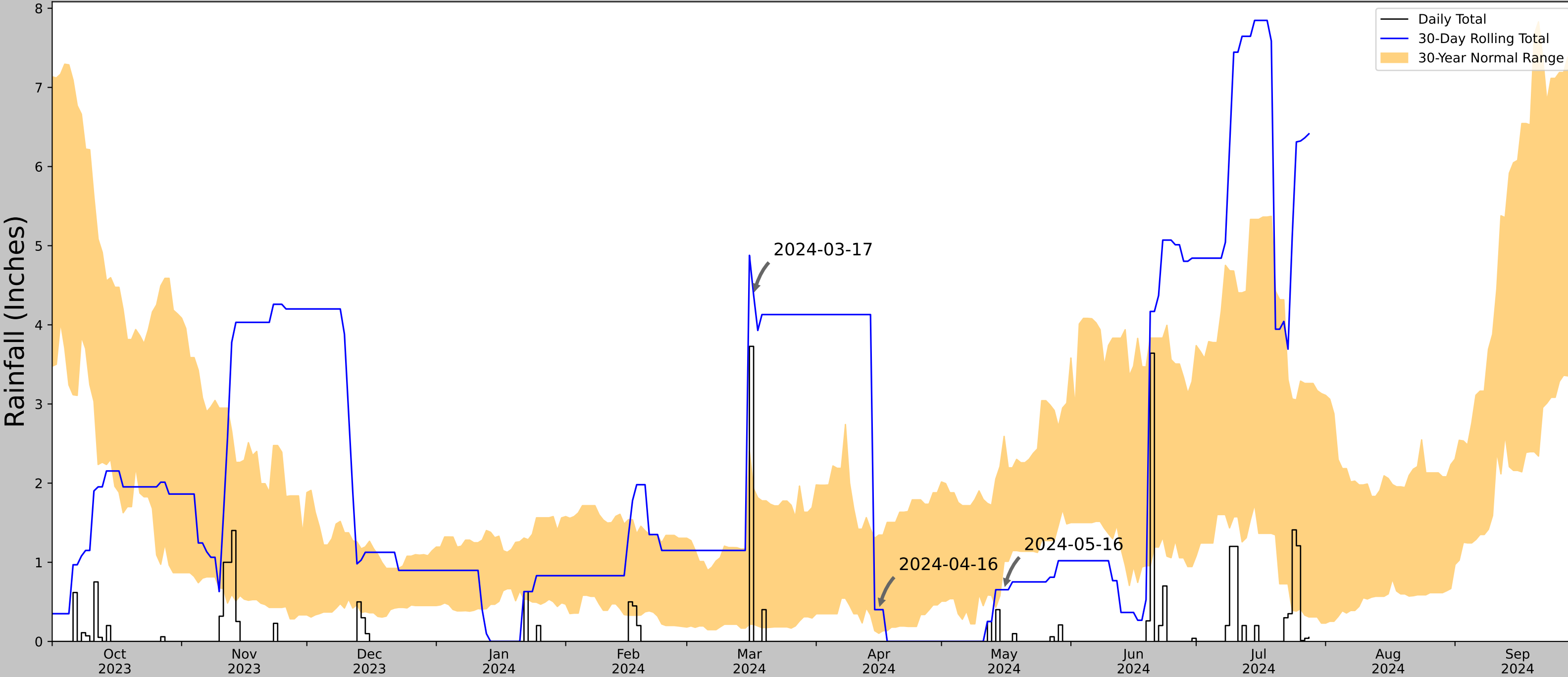
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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.527315, -97.830069
Observation Date	2024-05-16
Elevation (ft)	21.309
Drought Index (PDSI)	Moderate drought
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-05-16	1.011811	2.591339	0.653543	Dry	1	3	3
2024-04-16	0.102362	1.344488	0.401575	Normal	2	2	4
2024-03-17	0.216535	1.928347	4.377953	Wet	3	1	3
Result							Normal Conditions - 10

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
RAYMONDVILLE	26.4644, -97.7847	30.84	5.174	9.531	2.377	9213	73
RAYMONDVILLE 2.0 SSW	26.452, -97.7924	33.136	0.98	2.296	0.443	995	0
LYFORD 0.6 S	26.4023, -97.789	45.932	4.299	15.092	1.999	57	0
RAYMONDVILLE 5.8 E	26.4828, -97.6874	21.982	6.151	8.858	2.822	5	0
LYFORD 7.3 ESE	26.358, -97.688	27.887	9.479	2.953	4.294	7	0
SANTA ROSA 3 WNW	26.2656, -97.8714	49.869	14.747	19.029	6.917	491	16
HARLINGEN RIO GRANDE VLY INTL	26.2303, -97.6556	30.84	18.042	0.0	8.119	582	1
HARLINGEN 4.2 W	26.2049, -97.7524	43.963	18.041	13.123	8.355	2	0



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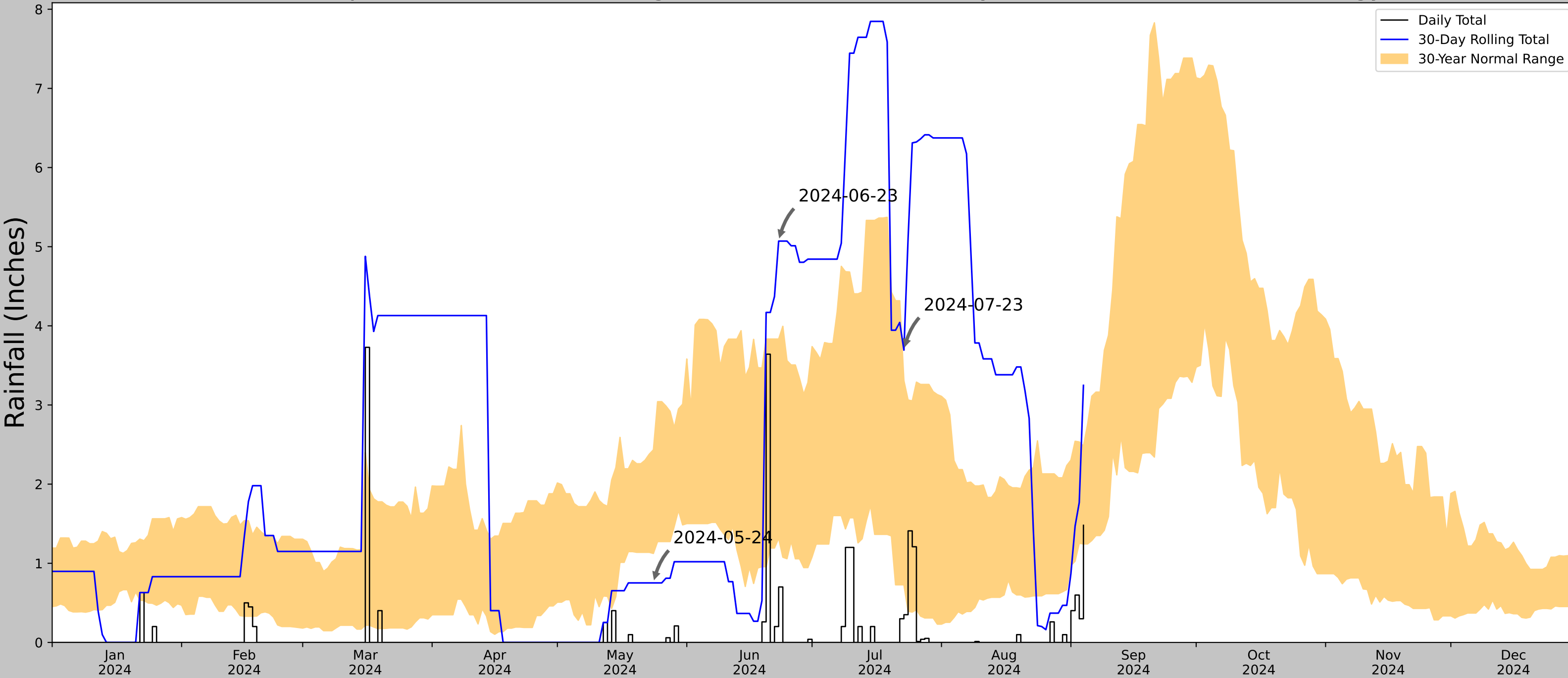
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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.4787176, -97.9546000
Observation Date	2024-07-23
Elevation (ft)	40.966
Drought Index (PDSI)	Mild wetness
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-07-23	0.727559	3.308662	3.692914	Wet	3	3	9
2024-06-23	1.316535	3.833465	5.070866	Wet	3	2	6
2024-05-24	1.124016	2.433465	0.751969	Dry	1	1	1
Result							Wetter than Normal - 16

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
RAYMONDVILLE	26.4644, -97.7847	30.84	10.555	10.126	4.856	9213	77
RAYMONDVILLE 2.0 SSW	26.452, -97.7924	33.136	0.98	2.296	0.443	995	0
LYFORD 0.6 S	26.4023, -97.789	45.932	4.299	15.092	1.999	57	0
RAYMONDVILLE 5.8 E	26.4828, -97.6874	21.982	6.151	8.858	2.822	5	0
LYFORD 7.3 ESE	26.358, -97.688	27.887	9.479	2.953	4.294	7	0
SANTA ROSA 3 WNW	26.2656, -97.8714	49.869	14.747	19.029	6.917	491	3
HARLINGEN RIO GRANDE VLY INTL	26.2303, -97.6556	30.84	18.042	0.0	8.119	582	10
HARLINGEN 4.2 W	26.2049, -97.7524	43.963	18.041	13.123	8.355	2	0



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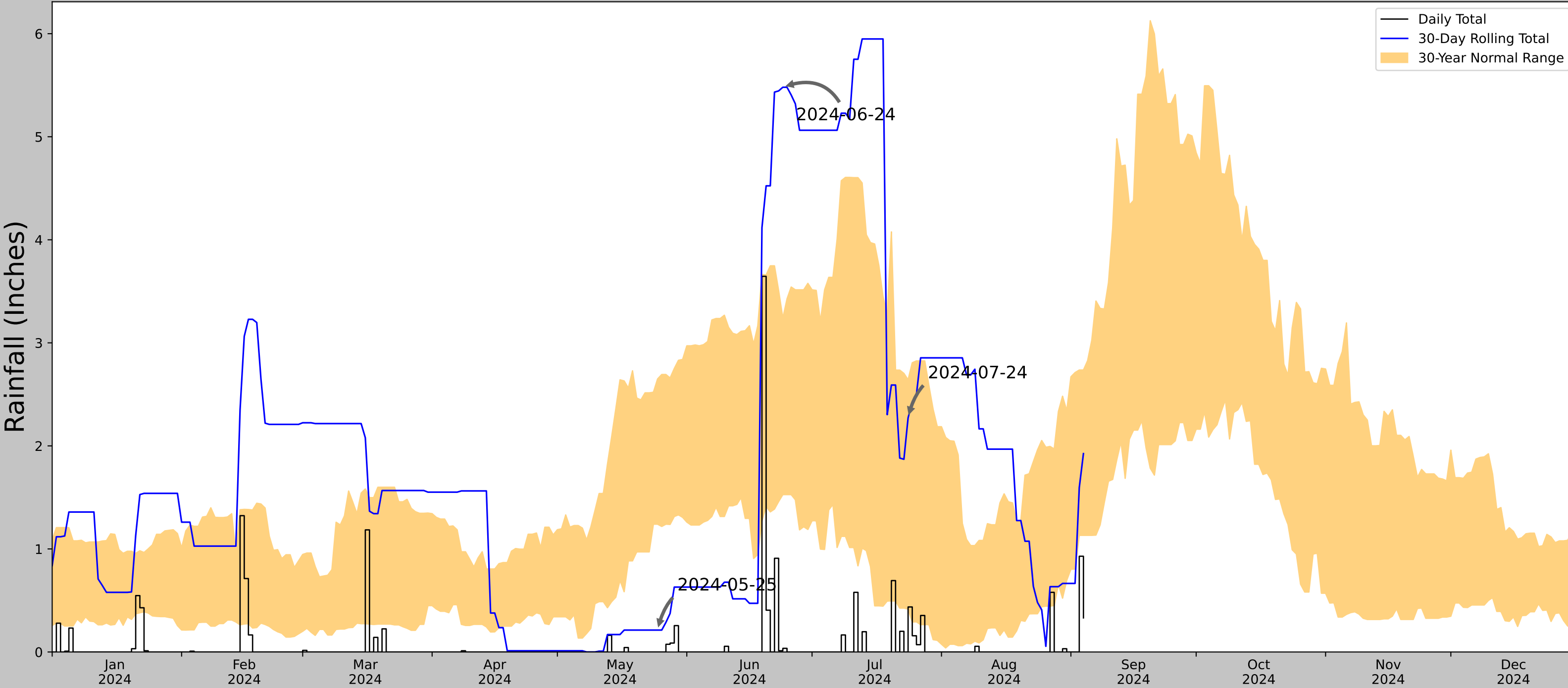
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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.4504262, -98.0325035
Observation Date	2024-07-24
Elevation (ft)	58.795
Drought Index (PDSI)	Mild wetness
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-07-24	0.416535	2.641732	2.271654	Normal	2	3	6
2024-06-24	1.527165	3.238583	5.480315	Wet	3	2	6
2024-05-25	1.240158	2.649606	0.212598	Dry	1	1	1
Result							Normal Conditions - 13



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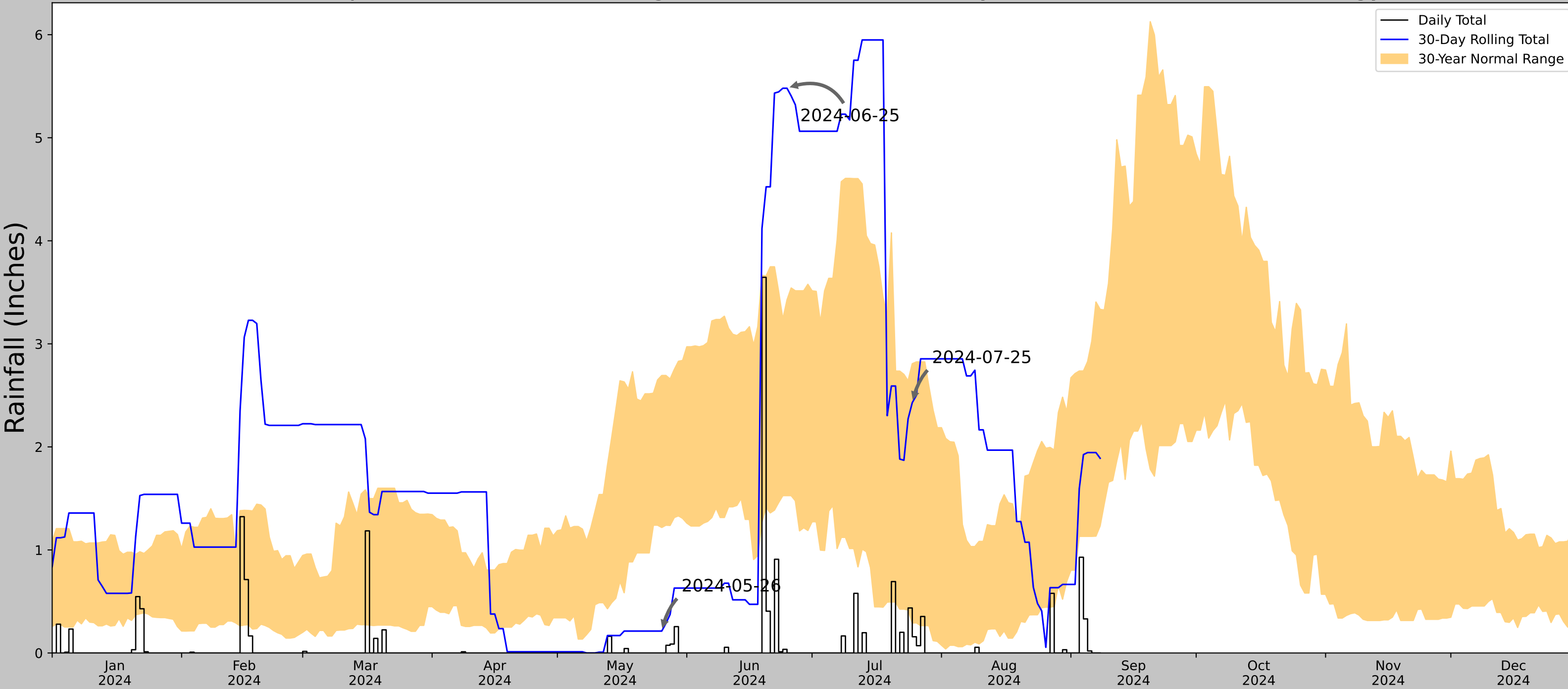
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EDINBURG 17 NNE	26.5258, -98.0633	63.976	5.545	5.181	2.524	7102	90
SAN MANUEL	26.565, -98.1189	75.131	4.376	11.155	2.018	51	0
MCCOOK	26.565, -98.1236	220.144	4.607	156.168	2.793	4088	0
LINN 8.4 WNW	26.6064, -98.2488	125.0	12.745	61.024	6.513	6	0
RAYMONDVILLE	26.4644, -97.7847	30.84	17.742	33.136	8.572	97	0
SANTA ROSA 3 WNW	26.2656, -97.8714	49.869	21.547	14.107	10.0	8	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.428078, -98.135535
Observation Date	2024-07-25
Elevation (ft)	78.957
Drought Index (PDSI)	Mild wetness
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-07-25	0.291339	2.807087	2.429134	Normal	2	3	6
2024-06-25	1.527165	3.426378	5.480315	Wet	3	2	6
2024-05-26	1.21811	2.692913	0.212598	Dry	1	1	1
Result							Normal Conditions - 13



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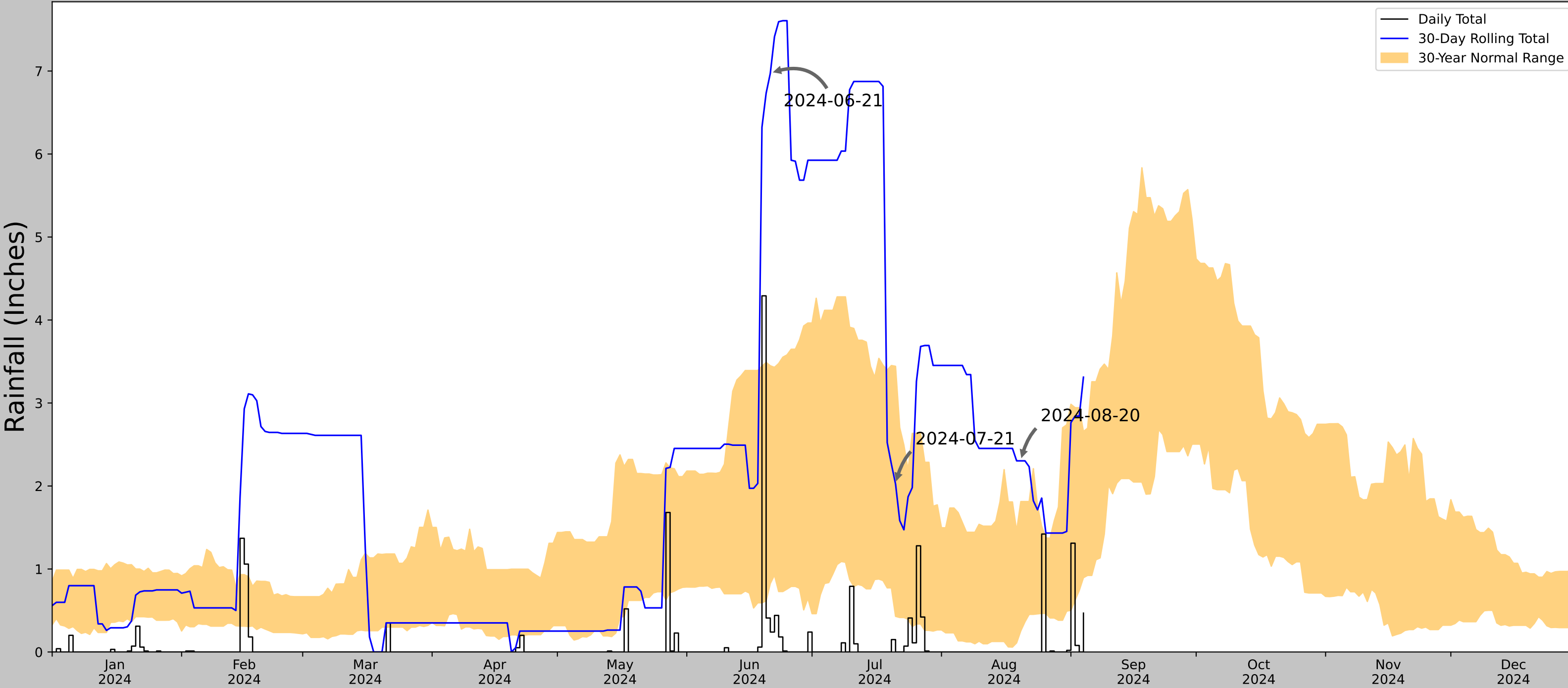
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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EDINBURG 17 NNE	26.5258, -98.0633	63.976	8.096	14.981	3.765	7102	90
SAN MANUEL	26.565, -98.1189	75.131	4.376	11.155	2.018	51	0
MCCOOK	26.565, -98.1236	220.144	4.607	156.168	2.793	4088	0
LINN 8.4 WNW	26.6064, -98.2488	125.0	12.745	61.024	6.513	6	0
RAYMONDVILLE	26.4644, -97.7847	30.84	17.742	33.136	8.572	97	0
SANTA ROSA 3 WNW	26.2656, -97.8714	49.869	21.547	14.107	10.0	8	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.3864904, -98.1539520
Observation Date	2024-08-20
Elevation (ft)	78.996
Drought Index (PDSI)	Mild wetness (2024-07)
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-20	0.254724	1.812992	2.30315	Wet	3	3	9
2024-07-21	0.429134	3.44252	2.023622	Normal	2	2	4
2024-06-21	0.824803	3.448819	6.972441	Wet	3	1	3
Result							Wetter than Normal - 16



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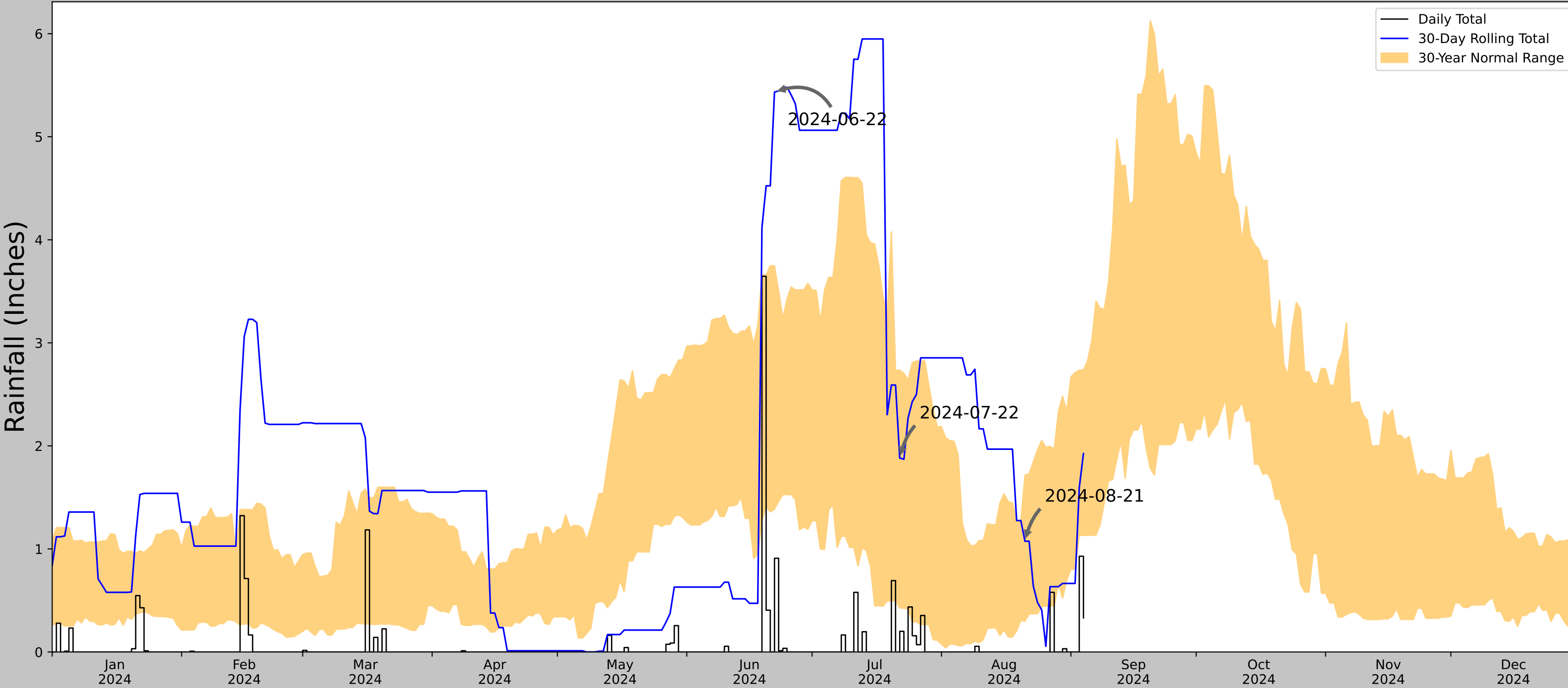


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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
MCALLEN MILLER INTL AP	26.1792, -98.2444	99.081	15.379	20.085	7.23	10768	90
MCALLEN	26.1922, -98.2503	109.908	0.97	10.827	0.447	572	0
MISSION 1.9 ENE	26.2224, -98.2881	138.123	4.031	39.042	1.971	5	0
MCALLEN 2.7 NNE	26.2527, -98.2252	115.157	5.216	16.076	2.431	1	0
MISSION 4 W	26.2167, -98.4	132.874	9.988	33.793	4.832	2	0
LA JOYA	26.3233, -98.3233	212.927	11.092	113.846	6.254	4	0



Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	26.4204812, -98.1497231
Observation Date	2024-08-21
Elevation (ft)	81.546
Drought Index (PDSI)	Mild wetness (2024-07)
WebWIMP H <sub>2</sub> O Balance	Dry Season

30 Days Ending	30 <sup>th</sup> %ile (in)	70 <sup>th</sup> %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-21	0.298032	1.716142	1.074803	Normal	2	3	6
2024-07-22	0.425984	2.735433	1.88189	Normal	2	2	4
2024-06-22	1.386614	3.747638	5.433071	Wet	3	1	3
Result							Normal Conditions - 13



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Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
EDINBURG 17 NNE	26.5258, -98.0633	63.976	9.029	17.57	4.222	7102	90
SAN MANUEL	26.565, -98.1189	75.131	4.376	11.155	2.018	51	0
MCCOOK	26.565, -98.1236	220.144	4.607	156.168	2.793	4088	0
LINN 8.4 WNW	26.6064, -98.2488	125.0	12.745	61.024	6.513	6	0
RAYMONDVILLE	26.4644, -97.7847	30.84	17.742	33.136	8.572	97	0
SANTA ROSA 3 WNW	26.2656, -97.8714	49.869	21.547	14.107	10.0	8	0