

REVISED FINAL DRAFT

ENVIRONMENTAL REPORT
GATEWAY MASTER PLAN PROJECT

WEBB COUNTY, TEXAS

Prepared for

Kraus Land Development

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Table of Contents

1.0	INTRODUCTION.....	1
2.0	PROJECT AREA DESCRIPTION	1
3.0	LAND USE/LAND COVER	2
4.0	WATER RESOURCES	2
4.1	APPLICABLE REGULATORY PROGRAMS.....	2
4.1.1	Section 404 of the Clean Water Act.....	3
4.1.1.1	Nationwide Permits	4
4.1.2	Section 10 of the Rivers and Harbors Act	4
4.1.3	Section 401 of the Clean Water Act: State Water Quality Certification	4
4.2	METHODS FOR IDENTIFYING POTENTIAL WOTUS.....	4
4.3	RESULTS	5
4.3.1	Ephemeral Streams	6
4.3.2	Ponds.....	7
5.0	THREATENED AND ENDANGERED SPECIES	7
5.1	Federal — U.S. Fish and Wildlife Service (USFWS)	7
5.2	Species Descriptions and Potential to Occur in Project Area	8
5.2.1	Federally Listed Species	8
5.2.2	Bald and Golden Eagles	10
5.2.3	General Avian Species	11
6.0	CONCLUSIONS AND RECOMMENDATIONS.....	11
7.0	REFERENCES	12

Appendices

Appendix A	Figures
	Figure 1. Project Location
	Figure 2. Water Resources
	Figures 3.1 through 3.7. Potential Waters of the U.S.
Appendix B	Site Photographs
Appendix C	Wetland Determination Data Forms

Tables

Table 1. Water Features Mapped at the Gateway Master Plan Project	6
Table 2. Federally Protected Species with Potential to Occur in Webb County	8

1.0 INTRODUCTION

Blanton and Associates (B&A) conducted an environmental review and assessment, including a site investigation, of Kraus Land Development's proposed Gateway Master Plan Project (the project) in February 2021. The proposed project includes the development of commercial and industrial tracts to be situated on approximately 3,316 acres in Webb County, Texas (**Figure 1** in **Appendix A**).

This analysis is based on a review of literature, remote sensing data, and field investigation, and focuses on potential constraints associated with the following statutes:

- Sections 404 and 401 of the Clean Water Act (CWA)
- Endangered Species Act (ESA) and state-level endangered species legislation
- Bald and Golden Eagle Protection Act (BGEPA)
- Migratory Bird Treaty Act (MBTA)

2.0 PROJECT AREA DESCRIPTION

The project area is located in the Southern Texas Plains region of Texas. More specifically, the project is located in the Texas-Tamaulipan Thornscrub ecoregion, composed primarily of irregular or gently rolling plains dissected by arroyos and streams (Griffith 2007). The vegetation of rural Webb County is characterized by thornshrub and grassland communities of varying species composition, habitat, and density based on topography, hydrology, and soil conditions, as well as past and current land use practices. The vegetation conditions of the project area generally agree with the description of the South Texas Plains vegetational area as described by Gould (1975).

The project area is located approximately five miles north of Botines, Texas (**Figure 1**). It comprises approximately 3,316 acres of private land, which is currently used for livestock grazing. The major drainage feature within the general area is Carrizitos Creek located 0.3 miles south of the project area (U.S. Geological Survey [USGS] 2022a).

Ranching and hunting leases dominate land use not only in portions of the project area but also across the Texas-Tamaulipan Thornscrub ecoregion. Heavy grazing, fire suppression, and drought have contributed to the decline in grasses and the spread of brush (Griffith 2007). The dominant land cover in the project area is dense thorn shrub/scrub. Observed vegetation includes spiny hackberry (*Celtis pallida*), huisache (*Vachellia farnesiana*), blackbrush (*Vachellia rigidula*), honey mesquite (*Prosopis glandulosa*), Jerusalem thorn (*Parkinsonia aculeata*), Texas persimmon (*Disopyros texana*), lime pricklyash (*Zanthoxylum fagara*), bluewood condalia (*Condalia hookeri*), coyotillo (*Karwinskia humboldtiana*), lotebush (*Ziziphus obtusifolia*), goatbush (*Castela erecta*), cenizo (*Leucophyllum frutescens*), Texas hog plum (*Colubrina texensis*), wolfberry (*Lycium berlandieri*), desert yaupon (*Shaefferia cuneifolia*), allthorn (*Koberlina spinosa*), whitebrush (*Aloysia gratissima*), blackbrush (*Coleogyne ramosissima*), guayacan (*Guaiacum angustifolium*), leatherstem (*Jatropha dioica*), catclaw acacia (*Senegalia greggii*), spiny aster (*Chloracantha spinosa*), clapweed (*Ephedra antisiphilitica*), gumhead (*Gymnosperma glutinosum*), pitaya (*Echinocereus enneacanthus*), Engelmann's prickly pear (*Opuntia engelmannii*), pencil cactus

(*Cylindropuntia leptocaulis*), turkey tangle frogfruit (*Phyla nodiflora*), old man's beard (*Clematis drummondii*), windmill grass (*Chloris cucullata*), buffelgrass (*Cenchrus ciliare*), yellow bluestem (*Bothriochloa ischaemum*), Bermudagrass (*Cynodon dactylon*), red grama (*Bouteloua trifida*), buffalo grass (*Bouteloua dactyloides*), hairy grama (*Bouteloua hirsuta*), purple threeawn (*Aristida purpurea*), and whorled dropseed (*Sporobolus pyramidatus*).

3.0 LAND USE/LAND COVER

Land cover data provided by the 2019 National Land Cover Database (NLCD) was reviewed to estimate the type and extent of land use and land cover within the project area (Dewitz 2021). According to these data, the project area is largely dominated by shrub/scrub (greater than 90 percent of the project area) with smaller percentages of grassland/herbaceous. Field visits confirmed that the project area is heavily dominated by dense thornshrub vegetation with dirt roads and cleared pipeline corridors fragmenting the landscape. The entire project area is located in the Eagle Ford Shale oil & gas play and exhibits a history of oil & gas exploration and production related uses including well pads, pipeline corridors, waters supply ponds and associated access roads (EIA 2022). At the time of survey, the eastern tract of the project was actively being cleared for development.

4.0 WATER RESOURCES

The project area is located within the Carrizitos Creek watershed (Hydrologic Unit Code [HUC] 1211010504). According to Federal Emergency Management Agency (FEMA 2022), approximately 479 acres (14 percent of the project area) are within the 100-year floodplain (**Figure 2**). Floodplains within the project area occur along unnamed tributaries in the northern and eastern tract of the project area. Construction within a FEMA floodplain may require prior coordination and a permit or Letter of Map Revision (for impacts to 100-year or special flood hazard zones based upon the Federal Emergency Management Agency (FEMA) proposed Preliminary Digital Flood Insurance Rate Map (DFIRM) for the area as administered by the Webb County floodplain administrator (Webb County, 2022). No named streams occur within the project area. The National Hydrography Dataset (NHD) flowlines (USGS 2022a) shown within the project area are drainages or potential headstream tributaries of Carrizitos Creek. The portion of Carrizitos Creek that is closest to the project area is approximately 0.3 miles to the south; however, the majority of the stream features shown on **Figure 2** are outside the project area and join with Carrizitos Creek east of the project area at distances greater than eight miles away (**Figure 2**).

Carrizitos Creek flows northeast approximately 20 miles where it converges with Los Olmos Creek. Los Olmos Creek flows approximately 12 miles northeast and converges with the Nueces River which flows approximately 100 miles east emptying into Corpus Christi Bay in the Gulf of Mexico (USGS 2022b).

4.1 APPLICABLE REGULATORY PROGRAMS

The primary regulation applicable to water resources in the project area is the CWA. Section 404 of the CWA regulates the discharge of dredged and fill material into Waters of the U.S. (WOTUS). Other water-related regulatory programs that could be applicable to the proposed project include Section 401 of the

CWA and Section 10 of the Rivers and Harbors Act (RHA). The following paragraphs provide a summary of each regulatory program.

4.1.1 Section 404 of the Clean Water Act

Section 404 of the CWA establishes programs to regulate the discharge of dredged or fill material and other work in WOTUS, including wetlands and other special aquatic sites. The CWA is administered by the U.S. Army Corps of Engineers (USACE), with U.S. Environmental Protection Agency (EPA) oversight. The Project is within the USACE Fort Worth District and project activities fall under their regulatory jurisdiction. Under Section 404 of the CWA, regulated WOTUS are broadly categorized to include the territorial seas, tidal waters, and non-tidal WOTUS, as well as all Section 10 waters and numerous additional inland features such as intrastate lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds (Title 33 Code of Federal Regulations (CFR) §323 and 328).

Discharges of dredged or fill material, as defined in 40 CFR §232.2, may be permanent or temporary. Permanent discharges include those that will permanently affect a WOTUS by filling, flooding, excavation, or drainage. Permanent effects to WOTUS are considered a “loss of WOTUS” if the discharges change an aquatic area to dry land, increase the bottom elevation of a WOTUS, or change the use of a water body. In addition to losses of physical areas of WOTUS as a result of discharges, the USACE regulates the loss of functions or values of WOTUS in some circumstances when actual permanent discharges are not involved, such as clearing a forested wetland or changing the hydrology of a WOTUS upstream or downstream of a permitted activity.

Examples of temporary discharges include the placement of fill within WOTUS for temporary project components such as cofferdams or temporary access roads where the fill will be removed in its entirety and the area will be restored to its pre-construction contours upon project completion. Note that, in some cases, the USACE considers temporary project components as causing a permanent loss of WOTUS. An example is when fill for a temporary access road will remain within a wetland for such a long period of time that it impacts the potential for the wetland to reestablish after the fill is removed.

There has been significant changes in regulatory definitions of WOTUS within the past few years; however the most recent definition of WOTUS, is consistent with pre-2015 rules and guidance, which states that the USACE and EPA will assert CWA jurisdiction over: (1) traditional navigable waters (TNW) and all wetlands adjacent to TNWs; (2) relatively permanent waters (RPW), which include non-navigable tributaries of TNWs that typically flow year-round or have continuous flow at least seasonally, and all abutting wetlands to RPWs; and (3) other waterbodies (such as non-RPWs, wetlands adjacent to non-RPWs, and wetlands adjacent to but not directly abutting an RPW) that are assessed and determined to have a significant nexus with a TNW. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a TNW.

On December 7, 2021, the USACE and EPA published for public comment a proposed rule re-defining the scope of waters protected under the CWA (86 Federal Register [FR] 69372). The proposed rule re-

establishes the pre-2015 definition of WOTUS and updates it to reflect consideration of Supreme Court decisions. The comment period for the proposed rule closed on February 7, 2022.

4.1.1.1 Nationwide Permits

Discharges of dredged or fill material and other work in waters subject to regulation under Section 404 or Section 10 typically require permit authorization before it occurs, unless the activity is exempt from regulation. Section 404 and Section 10 permits that are commonly issued by the USACE include Standard Individual Permits and General Permits (including Nationwide Permits [NWP] and Regional General Permits). NWPs are a type of general permit designed to regulate, with little to no delay or paperwork, certain activities having minimal impacts. The NWPs are periodically proposed, issued, modified, reissued (extended), and revoked, however all potentially applicable NWPs have been recently reissued within the past 13 months and will not expire until March 14, 2026 (86 FR 73522 and 86 FR 2744)

When using NWPs, the need for review and approval of WOTUS impacts by the USACE (i.e., a Pre-Construction Notification [PCN]) depends on a number of factors, including but not limited to the proposed activity type, anticipated impacts, the individual NWP(s) used, applicable NWP general conditions, the USACE District with jurisdiction over the activity area (in this instance Fort Worth District), and that USACE District's regional conditions for the NWPs.

4.1.2 Section 10 of the Rivers and Harbors Act

Section 10 of the RHA regulates work within “navigable” waters, which are defined in the RHA as those waters that are subject to the ebb and flow of the tides and/or are presently used, have been used in the past or may be susceptible for use to transport interstate or foreign commerce (33 U.S.C. 401 et seq. §329.4). The USACE Fort Worth District maintains a list of navigable waters within the state of Texas (USACE 2011). Based on this list, no waterbody within the project area is a Section 10 Navigable Water.

4.1.3 Section 401 of the Clean Water Act: State Water Quality Certification

Section 401 of the CWA requires a state-level review by the Texas Commission on Environmental Quality (TCEQ) of crossings of WOTUS that are authorized by a USACE Section 404 permit to ensure water quality is not diminished. TCEQ requires developers, subject to a federal license or permit (e.g., CWA Section 404 permit), to obtain a 401 Water Quality Certification or waiver if the project may result in any discharge into WOTUS. TCEQ issued certifications to the USACE to permit activities under NWPs so long as the applicant complies with the conditions outlined in the Water Quality Certification letter for each NWP (TCEQ 2022).

4.2 METHODS FOR IDENTIFYING POTENTIAL WOTUS

B&A conducted a desktop review to identify potential water resources occurring in the project area. Data sources reviewed included, but were not limited to:

- U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle for Callaghan Ranch South, Texas;

- USGS National Hydrography Dataset (USGS 2022a);
- USFWS National Wetland Inventory (NWI) data (USFWS 2022a);
- FEMA floodplain maps (FEMA 2022);
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey data for Webb County, Texas (USDA-NRCS 2022);
- Aerial photographs between the years 1985 and 2020 (Google Earth Pro 2022);
- National Oceanic and Atmospheric Administration (NOAA) 1991-2020 (30-year) Monthly Precipitation Normals (NOAA 2022);
- USACE Antecedent Precipitation Tool (APT) (USACE 2022).

Field investigations were conducted February 8 through February 10, 2022, to identify and map WOTUS, including wetlands, potentially affected by the project. B&A conducted a field survey of the project area to map all water resources. For each identified water feature, wetland scientists assessed its potential jurisdictional status under Section 404 of the CWA (under *Rapans*) and Section 10 of the RHA, as described above. Delineation of wetlands was conducted based on guidance provided in the 1987 Manual and the 2010 Regional Supplement, which relies on the occurrence of wetland hydrology, hydrophytic vegetation, and hydric soils to determine if a wetland is present. B&A established representative Observation Points (OPs) in the project area to ascertain approximate upland/wetland boundaries based on the three-parameter approach. Representative photographs of water features and OPs are presented in **Appendix B**, and wetland determination data forms completed for the project are presented in **Appendix C**.

For water features that require a significant nexus assessment, there is often little available data to objectively assess significant nexus, so a subjective assessment must be made. As a result, B&A made an estimation of potential jurisdictional status based on experience and best professional judgement. Only the USACE and EPA can make an official jurisdictional determination. The project area is within the USACE Fort Worth district and project activities fall under their regulatory jurisdiction.

4.3 **RESULTS**

Based on B&A's assessment, water features mapped in the project area include seven ephemeral stream segments and 10 ponds (**Figures 3.1** through **3.7**). No wetland features were identified as a result of field investigations. The water features mapped during field investigations are expected to be non-jurisdictional waters under the *current* guidance as they did not exhibit a significant nexus to a TNW. The following sections describe the mapped water features within the project area. Representative photos of water features and OP locations are included in **Appendix B**, and wetland determination data forms are provided in **Appendix C**. **Table 1** below lists the mapped water features within the project area by potential WOTUS type.

Table 1. Water Features Mapped at the Gateway Master Plan Project

ID	Type	Length of Stream within Project Area (ft)	Average OHWM Width (ft)	Area within Project Area (ac)
S-1	Ephemeral Stream	179	3	0.01
S-2	Ephemeral Stream	2,202	2	0.10
S-3	Ephemeral Stream	6982	2	0.03
S-4.1	Ephemeral Stream	865	1	0.02
S-4.2	Ephemeral Stream	560	3	0.04
S-5	Ephemeral Stream	53	1	<0.01
S-6	Ephemeral Stream	770	2	0.04
S-7	Ephemeral Stream	451	2	0.02
P-1	Pond	-	-	0.36
P-2	Pond	-	-	0.03
P-3	Pond	-	-	7.86
P-4	Pond	-	-	0.39
P-5	Pond	-	-	0.13
P-6	Pond	-	-	0.44
P-7	Pond	-	-	0.06
P-8	Pond	-	-	0.11
P-9	Pond	-	-	0.25
P-10	Pond	-	-	0.08

4.3.1 Ephemeral Streams

Seven ephemeral stream segments were mapped within the project area (**Table 3; Figures 3.1 through 3.7**). These stream segments were dry and exhibited narrow channels with OHWM ranging from 1 to 3 feet. The substrate was most frequently composed of silt and sand. The bank slopes of the majority of the ephemeral streams were gradual to moderate and less than three feet in height. One stream, S-3, exhibited bank heights of up to 10 feet that were highly eroded along portions of the mapped segment.

Additionally, some of the ephemeral streams were interrupted by road clearings, ROWs, or excavated ponds frequently resulting in the end of the stream segment. Of note, stream S-2 exhibited defined bed and banks up to the road clearing at the eastern project boundary (**Figure 3.2**). Although no access was granted for the adjacent property, field investigators documented that the stream did not continue past the project boundary where it was characterized as a densely vegetated swale within an upland pasture. Further desktop review of lidar data showed a discontinuous channel and two impoundments that did not appear to have a hydrological connection (USGS 2022b). Lack of evidence suggesting a significant nexus between ephemeral stream segments resulted in the feature being excluded from consideration as a WOTUS.

The vegetation along ephemeral streams within the project area was similar to that described for the project area above. Streams were often associated with the wooded portions of the project area. These wooded corridors were composed of honey mesquite, whitebrush, huisache, blackbrush, Engelmann's prickly pear, Texas persimmon, lime pricklyash, and Bermudagrass, and buffelgrass.

The hydrological and ecological characteristics of each ephemeral stream were assessed to identify potentially jurisdictional WOTUS. The ephemeral streams mapped in the project area were discontinuous and lacked evidence of a significant nexus; therefore, they are not considered WOTUS under Section 404 of the CWA as they are not thought to significantly affect the chemical, physical, and biological integrity of downstream TNWs. The mapped stream features in the project area are listed in **Table 1** above and shown in **Figures 3.1** through **3.7**.

4.3.2 Ponds

Ten ponds were mapped within the project area (**Table 1, Figures 3.1** through **3.7**). These ponds are excavated in uplands or were in-channel impoundments. Pond banks generally had a gradual slope to allow for livestock access and as a result, the pond fringes exhibited signs of disturbance from cattle. All ponds appeared to have lower than average water levels. Pond P-2 was recently cleared and its banks were heavily disturbed from clearing activity. Pond P-3 is a large fenced in-channel impoundment with an industrial pond liner. The hydrology of the area up and downstream of pond P-3 has been disturbed as result of its construction and stream S-2 and S-3 do not connect directly to the feature. Except for pond P-2, ponds in the project area had similar surrounding herbaceous vegetation consisting of Bermudagrass, buffelgrass, spiny aster, turkey tangle frogfruit, and Engelmann's prickly pear. The woody vegetation surrounding these ponds was similar to those listed for the ephemeral streams above with the addition of Jerusalem thorn which tended to be more common along the banks of ponds.

The ponds mapped in the project area are considered hydrologically isolated without a significant nexus to a TNW and as a result, are expected to be non-jurisdictional waters under current guidance.

5.0 THREATENED AND ENDANGERED SPECIES

This section discusses the threatened and endangered species with potential to occurrence in the project area, and provides an assessment of the potential impacts of the project on listed species and applicable regulatory requirements. B&A biologists conducted background research and an on-site habitat assessment of the project area, during which vegetation communities and aquatic resources within the project area were investigated for the presence of potential habitat for federally protected species with the potential to occur in Webb County.

5.1 Federal — U.S. Fish and Wildlife Service (USFWS)

The USFWS has legislative authority for the protection of threatened and endangered species under the Endangered Species Act (ESA) of 1973 and The regulations found in 50 CFR . § 17.11 and 17.12 (USFWS 1993). Species listed as endangered or threatened by the USFWS are provided full protection. This protection not only prohibits the direct take of a protected species but also includes a prohibition of indirect take such as destruction of designated critical habitat. A review of the USFWS Critical Habitat Mapper indicated no designated critical habitat is present within or adjacent to the project area (USFWS 2022b).

5.2 Species Descriptions and Potential to Occur in Project Area

As identified in **Table 2**, the federally protected species of potential occurrence in Webb County include five federally listed threatened or endangered species as defined in the ESA. Two species, the piping plover (*Charadrius melodus*) and the red knot (*Calidris anutus rufa*) should only be considered for wind energy projects which this project is not and as a result, have been excluded from detailed discussion below. Additionally, one insect species, the monarch butterfly (*Danaus plexippus*), is a candidate for listing under the ESA. Candidate and proposed species are not afforded regulatory protection under the ESA, and as such, this species is acknowledged but excluded from **Table 2** and further discussion. The bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) are protected by the Bald and Golden Eagle Protection Act (BGEPA) and are discussed separately in the **Bald and Golden Eagles** section below.

A search of the Texas Natural Diversity Database (TXNDD), iNaturalist, and eBird databases was conducted to identify any documented occurrences of federally listed species within the project and a 1-mile buffer of the project boundary (TPWD 2022b, iNaturalist 2022, eBird 2022). No recorded observations were identified within the project area or a 1-mile buffer. Additionally, no designated critical habitat exists within the project area (USFWS 2022b).

Table 2. Federally Protected Species with Potential to Occur in Webb County

Species		Conservation Status ¹		Potential to Occur in Project Area	
Common Name	Scientific Name	Federal	State	Habitat	Species
MAMMALS					
Ocelot	<i>Leopardus pardalis</i>	E ²	E	Yes	Unlikely
BIRDS					
Bald Eagle	<i>Haliaeetus leucocephalus</i>	DL; BGEPA	—	Foraging	Unlikely
Piping Plover ³	<i>Charadrius melodus</i>	T	T	None	Unlikely
Red Knot ³	<i>Calidris canutus rufa</i>	T	T	None	Unlikely
Golden Eagle	<i>Aquila chrysaetos</i>	BGEPA	—	Foraging	Unlikely
PLANTS					
Ashy Dogweed	<i>Thymophylla tephroleuca</i>	E	E	Yes	Unlikely
MOLLUSKS					
Texas Hornshell	<i>Popenaias popeii</i>	E	E	None	None

¹ E = Endangered; T = Threatened; DL = Delisted; BGEPA = Protected under the Bald and Golden Eagle Protection Act; — = Not listed

² Listed by TPWD as federally threatened/endangered in Webb County, but not by USFWS

³ Species only needs to be considered for wind related projects

Source: USFWS 2022c, 2022d, TPWD 2022a

5.2.1 Federally Listed Species

The following paragraphs provide a brief review of the ecological requirements and known distributions of the federally listed species and candidates for federal listing of potential occurrence in Webb County relative to the proposed project.

Ocelot

The ocelot is a medium-sized, spotted cat similar in size to the bobcat (*Lynx rufus*), about 30 to 41 inches in length and weighing from 15 to 30 pounds (Campbell 2003). Its pelage is grayish or buffy and is heavily marked with black spots, small rings, blotches, and short bars (Davis and Schmidly 1994). Unlike the bobcat, the ocelot has a long tail that is ringed or marked with dark bars on the upper surface, parallel stripes running down the nape of the neck (Campbell 2003), much larger spots, and a shorter pelage (Schmidly 2004).

The ocelot is widely distributed from Texas to South America and prefer dense thornscrub and rocky areas typical of the Tamaulipan Biotic Province (USFWS 1990). The U.S. population of ocelots is largely represented by the Texas population. In Texas, the ocelot population has been estimated to consist of approximately 80 to 120 individuals (Cambell 2003). One of two significant subpopulations of ocelots occurs on the Laguna Atascosa National Wildlife Refuge (LANWR), consisting of 30 to 35 individuals (Cambell 2003).

The project area is largely composed by second growth thornscrub that does not exhibit the density or species diversity typical of ocelot habitat. However, a few portions of the project area may provide marginal habitat for the species that may act as corridors for ocelots to travel between locations of higher quality habitat outside the project area. No ocelots have been recorded in or near the project area (TPWD 2022b), and no critical habitat for the ocelot exists in the general area (USFWS 2022b). In the absence of recorded observations and limited suitable habitat, it is the professional opinion of B&A that it is unlikely the project will impact this species.

Ashy Dogweed

Ashy dogweed is a spreading to erect tap-rooted perennial of the Asteraceae family that grows up to 12 inches tall. It is woody near the base, several stemmed, and covered with soft, wooly, white to ashy gray hairs. The bloom period for ashy dogweed is from February to November, subject to local conditions. The habitat for this species is characterized as open areas of shrubby grasslands in deep sandy pockets on fine sandy loam soils (Poole 2007).

No incidental observations of ashy dogweed were documented during the February 2022 field visit. Potentially suitable soils within open shrubby grasslands exist in the project area. However, grasslands in the project area are largely dominated by large stands of non-native invasive grasses such as Bermudagrass and buffelgrass that reduce the habitat suitability. The closest known population of ashy dogweed is located in Rio Bravo approximately 30 miles south of the project area. Despite this, presence of the species in the project area cannot be definitively ruled out, though its occurrence is considered unlikely. No critical habitat has been designated by the USFWS for this species. Unlike federally listed threatened and endangered animals, plant species are not protected under the ESA on private property that does not have a federal nexus..

Texas Hornshell

The Texas hornshell is a medium sized freshwater mussel with an elongate, laterally compressed shell that can reach lengths in excess of 110 millimeters (USFWS 2018). Adults and juveniles occur in riverine

crevices with small-grained substrates such as clay, silt and sand. Similar to most freshwater mussels, metamorphosis into juvenile mussels requires accessibility to the water column and host fish (USFWS 2018). The Texas hornshell historically occurred in New Mexico, Texas, and Mexico, but has declined notably throughout its range. The species is now only confirmed in the Black River in New Mexico and in the Bid Bend reach of the Rio Grande in Texas (New Mexico Game and Fish 2022).

Proposed critical habitat for the Texas hornshell can be found 16 miles southwest of the project area in the Rio Grande River (USFWS 2022b). However, the project will not impact the Texas hornshell due to the absence of required aquatic habitat on site.

5.2.2 Bald and Golden Eagles

The BGEPA (16 U.S.C. §§ 668-668d) prohibits the take of bald and golden. The BGEPA defines the take of an eagle to include a broad range of actions, including to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb. Based on regulations found at 50 CFR 22.3, the term “disturb” means to “agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

Take of an eagle without a permit is a strict liability violation under the BGEPA. Bald and golden eagles are not expected to be present in the project area. However, the most likely source of eagle take in the context of the proposed project would be construction activities, power line electrocution, and power line strike. Following the Avian Protection Plan (APP) Guidelines (APLIC and USFWS 2005) and Suggested Practices for Avian Protection on Power Lines (APLIC 2012) would minimize potential impacts or take should an eagle be present.

Bald Eagle

The bald eagle is a widespread species, ranging over much of the U.S. and Canada. This eagle is primarily a fishing species that prefers habitats associated with large bodies of water (USFWS 1989). Wintering and nesting activity occurs mainly near large freshwater impoundments with standing timber located in or around the water (Mabie 1989). However, bald eagles are also known to forage away from their preferred aquatic habitats to utilize available prey such as birds and small mammals (NPS 2003). Bald eagles could occasionally forage for small mammals or carrion in the project area (Farrand 1988) but, are no more likely to forage in the project area than in other similar areas.

A search of the TXNDD and eBird (2022) found no records of a bald eagle sighting within or near the project site (TPWD 2022b). Based on the on-site habitat assessment, the project area does not provide potential bald eagle nesting habitat. During the February 2022 field investigation, no bald eagles or bald eagle nests were observed in the project area. The project area itself does not contain major water bodies nor smaller aquatic features that may provide potential foraging habitat for this species. Therefore, it is considered possible but unlikely that a bald eagle would occur in the project area.

Golden Eagle

The golden eagle occupies a variety of habitats in western North America ranging from arctic to desert. It is found primarily in mountains up to 12,000 feet, canyonlands, rimrock terrain, and riverside cliffs and bluffs, but is also found in flat open spaces where it forages near cliffs that provide nesting or overwintering sites. Golden eagles nest on cliffs and steep escarpments in grassland, chaparral, shrubland, and forest. This species subsists primarily on rabbits, hares, ground squirrels, and prairie dogs, though they are capable of taking much larger prey such as cranes, wild ungulates, and domestic livestock (Farrand 1988, Kochert et al. 2002).

Based on their range and habitat requirements, golden eagles have the potential to occur as transients or foragers within the project area. A search of the TXNDD and eBird (2022) found no records of a golden eagle sighting within or near the project site (TPWD 2022b). Therefore, it is considered unlikely that a golden eagle would occur in the project area.

5.2.3 General Avian Species

Most native bird species occurring in the wild in the U.S. are protected under the Migratory Bird Treaty Act (MBTA), except for upland game birds such as turkey, dove and quail, that are not considered migratory. In addition, the MBTA does not protect some non-native species such as the house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), rock pigeon (*Columba livia*), and any recently listed unprotected species in the Federal Register (85 FR 21282, May 18, 2020). The MBTA prohibits the taking, killing, possession, transportation, import, and export of migratory birds, their eggs, parts, and nests without a USFWS permit or other regulatory authorization. Under the MBTA, construction activities should avoid intentionally destroying active nests; avoidance of construction during nesting season may be prudent to avoid destroying active nests.

Under the most recently published regulatory rule (October 2021; 86 FR 54642), the MBTA would not prohibit incidental take of migratory birds resulting from the construction or operation of the proposed project in a manner which adopts standard best management practices which avoid intentional destruction of nest or birds, and minimizes clearing during nesting season; since its purpose is not to take birds.

6.0 CONCLUSIONS AND RECOMMENDATIONS

B&A conducted an assessment of potential WOTUS and habitat for federally protected species within the project area in February 2022. The purpose of this assessment was to identify areas suitable for development within the project boundary that would avoid and/or minimize impacts to WOTUS and federally protected species. As discussed in detail in the resource specific sections above, only the USACE or EPA can make official jurisdictional determinations of WOTUS. Likewise, only the USFWS determines level of impact or take on listed or protected species and their habitat. The habitat assessment was based on a preliminary review of literature, databases, and site visit and focused on potential development constraints associated with the ESA, BGEPA, and MBTA. Therefore, the recommendations made in this report are based on best professional judgment following current regulatory guidelines and orders.

Conclusions are as follows:

1. No wetlands were identified;
2. Seven ephemeral (only flow when it rains) streams and 10 ponds were identified, none are considered jurisdictional WOTUS;
3. No federally listed ESA species are likely to occur on the project area;
4. Bald eagles may occur in the project area, but are unlikely to nest in the project area and impacts due to project activities are not anticipated;
5. No migratory bird species or their nests are intended to be taken during this project.

Recommendation:

1. Implementation of best management practices during construction to avoid incidental take of Migratory Birds identified in the MBTA and bald or golden eagles.

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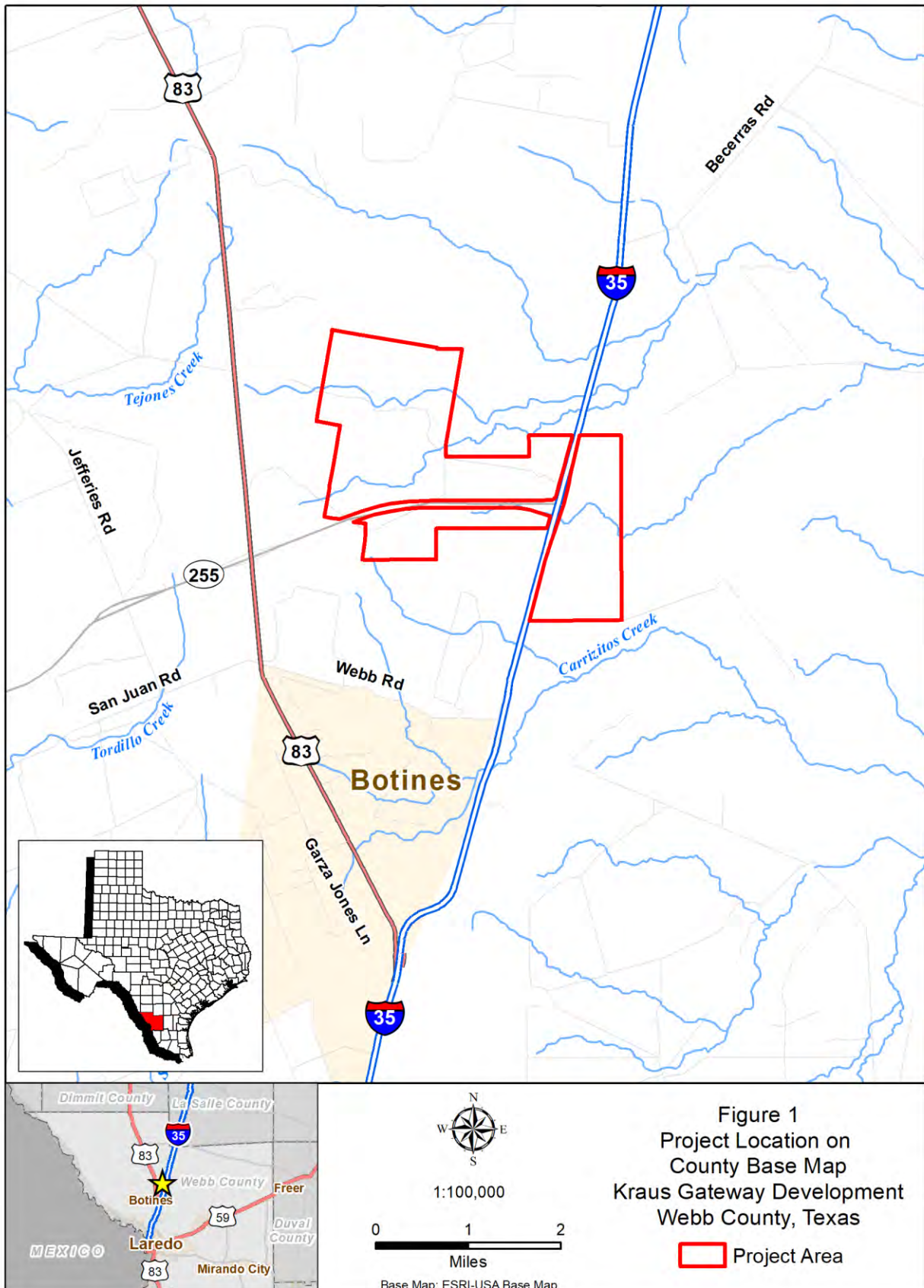
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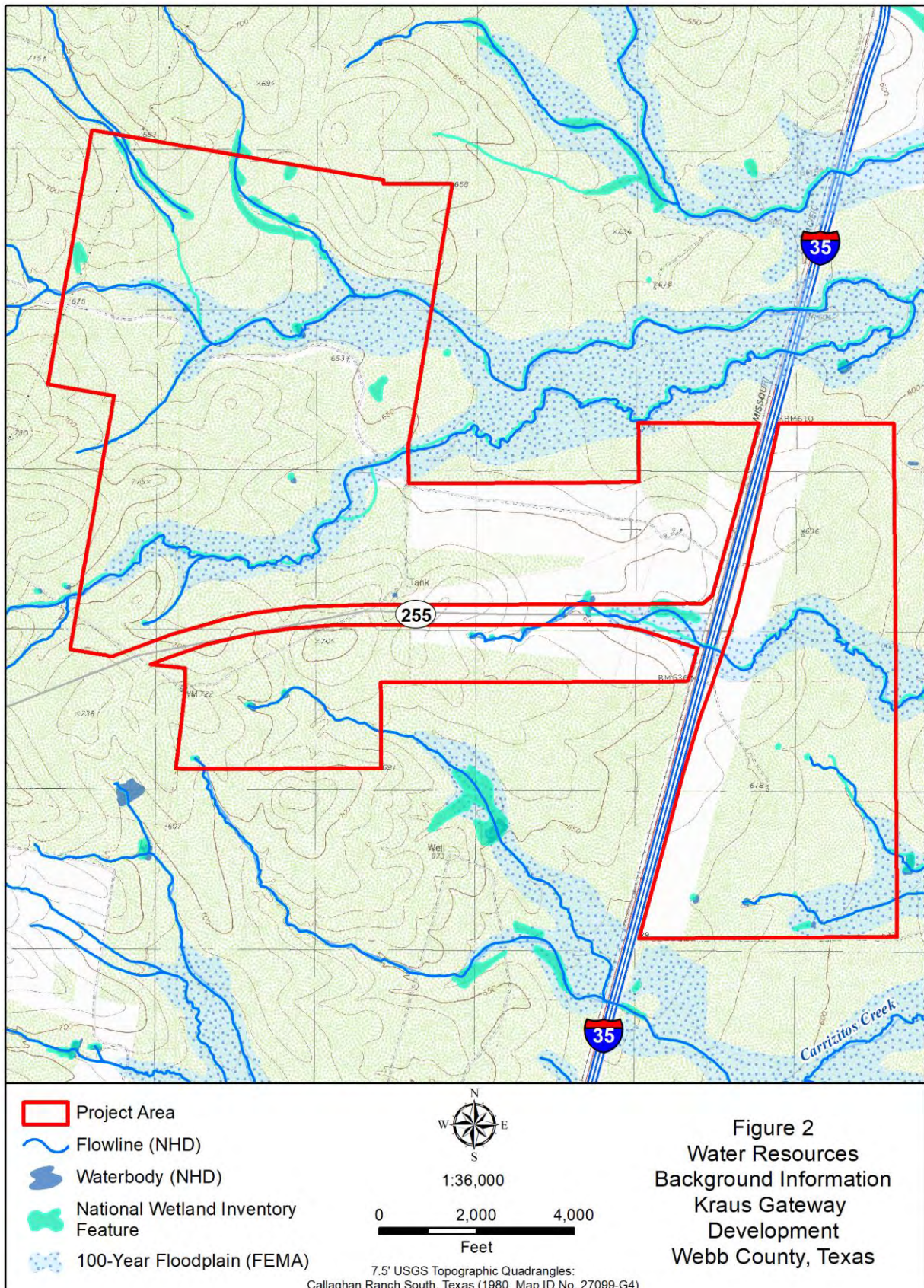
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Appendix A

Figures

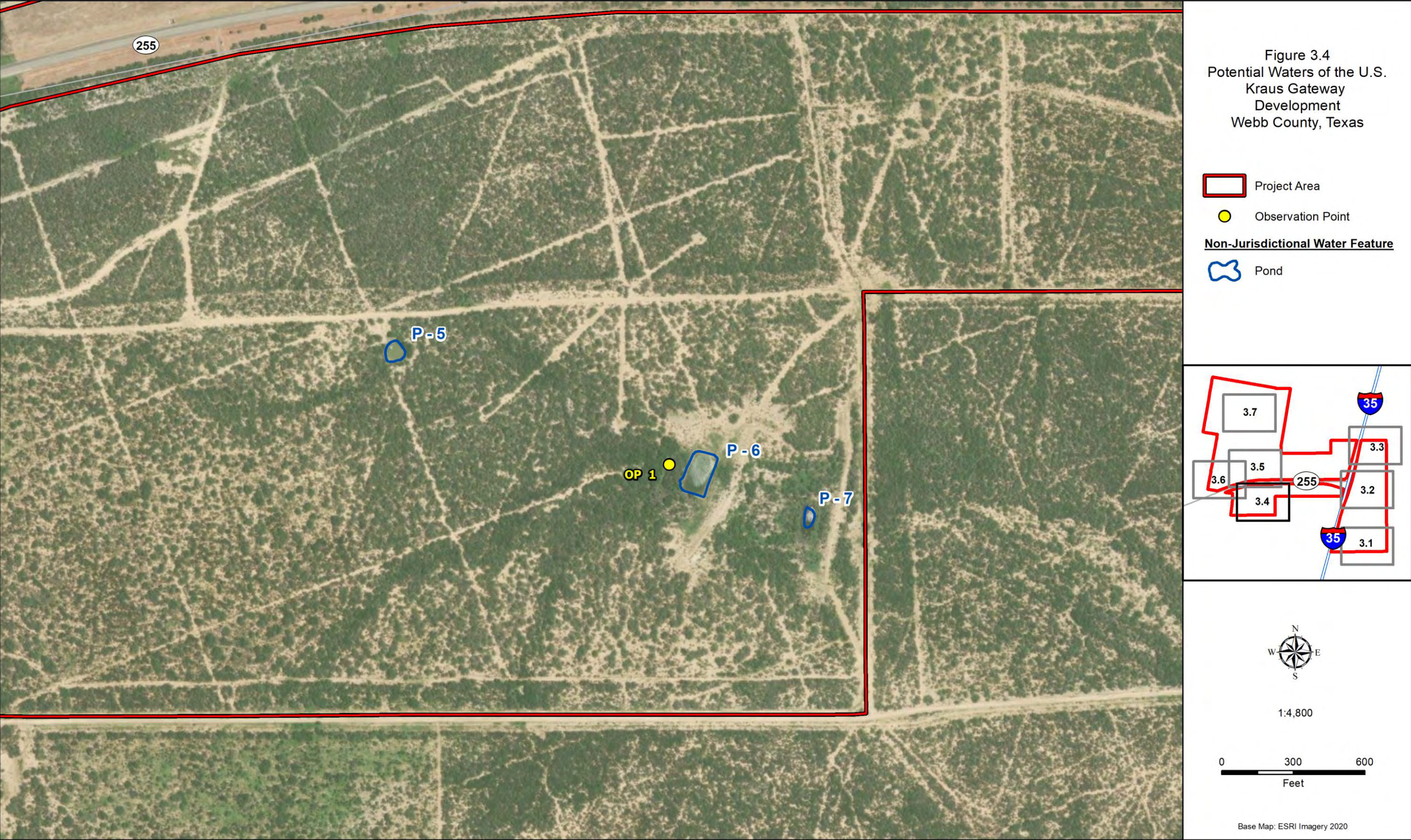


















Appendix B

Representative Photographs



Photo 1. Representative view of the dominant habitat type, thornshrub/scrub



Photo 2. Representative photo of open thornshrub habitat



Photo 3. Representative photo of road clearing along property boundaries



Photo 4. Representative photo of dry depressions within thornshrub habitat



Photo 5. View of S-2, ephemeral stream, facing east



Photo 6. View of S-4, ephemeral stream, facing west



Photo 7. View of S-6, ephemeral stream, facing west



Photo 8. View of S-7, ephemeral stream, facing southeast



Photo 9. View of P-2, an excavated pond recently cleared of vegetation, facing west



Photo 10. View of P-3, an impoundment, facing east



Photo 11. View of P-7, an excavated pond, facing south



Photo 12. View of P-8, an excavated pond, facing east



Photo 13. View of OP 01, an upland point in a depression, facing south



Photo 14. View of OP 02, an upland point in a depression, facing east

Appendix C

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Kraus Gateway City/County: Webb County Sampling Date: 9-Feb-22
 Applicant/Owner: Kraus Land Development State: Texas Sampling Point: OP 01
 Investigator(s): K. Pérez & S.Rudokas Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3-5%
 Subregion (LRR): I Lat: 27.822855 Long: -99.435345 Datum: WGS84
 Soil Map Unit Name: Tela sandy clay loam, 0 to 1 percent slopes, frequently flooded NWI Classification: None
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No (If no, explain in remarks)
 Are vegetation No, soil No, or hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are vegetation No, soil No, or hydrology No 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>	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> </u>	No <u>X</u>	
Remarks: Does not meet the three criteria for a wetland.			

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30-ft R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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%</u> (A/B)
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
		<u>0</u> = Total Cover			Prevalence Index Worksheet Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals <u> </u> (A) <u> </u> (B) Prevalence Index = B/A : <u> </u>
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>			
Sapling/Shrub Stratum		(Plot size: <u>15-ft R</u>)			
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
5. <u> </u>					
		<u>0</u> = Total Cover			Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) <u> </u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>			
Herb Stratum		(Plot size: <u>5-ft R</u>)			
1. <u>Oenothera laciniata</u>		<u>40</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Chloracantha spinosa</u>		<u>20</u>	<u>Yes</u>	<u>FACW</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			Hydrophytic Vegetation Present Yes <u> </u> No <u>X</u>
50% of total cover: <u>30</u>		20% of total cover: <u>12</u>			
Woody Vine Stratum		(Plot size: <u>30-ft R</u>)			
1. <u> </u>					
2. <u> </u>					
		<u>0</u> = Total Cover			
50% of total cover: <u>0</u>		20% of total cover: <u>0</u>			
% Bare Ground in Herb Stratum <u>40</u>					
Remarks: Does not meet the criteria for hydrophytic vegetation.					

SOIL

Sampling Point: OP 01

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

Depth (Inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0 to 4	2.5Y 4/2	100					Clay	
4 to 6	2.5Y 6/4	100					Clay Loam	

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.²Location: PL = Pore Lining, M = Matrix

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

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)
☐ Stratified Layers (A5) (LRR F)	☐ Loamy Gleyed Matrix (F2)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)
☐ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Highly Compacted Clay

Depth (inches): 6

Hydric Soil Present? Yes ☐ No ☒

Remarks: Does not meet the criteria for hydric soil.

Shovel refusal at six inches due to hard clay pan.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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
☐ Drift Deposits (B3)	☐ (C3) (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
(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: Does not meet the criteria for wetland hydrology.

Saturation visible on Google Earth 2015 aerial imagery.

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Kraus Gateway City/County: Webb County Sampling Date: 10-Feb-22
 Applicant/Owner: Kraus Land Development State: Texas Sampling Point: OP 02
 Investigator(s): K. Pérez & S.Rudokas Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1-2%
 Subregion (LRR): I Lat: 27.831463 Long: -99.439586 Datum: WGS84
 Soil Map Unit Name: Maverick-Catarina complex, gently rolling NWI Classification: None
 Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No (If no, explain in remarks)
 Are vegetation No, soil No, or hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are vegetation No, soil No, or hydrology No 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>	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> </u>	No <u>X</u>	
Remarks: Does not meet the three criteria for a wetland.			

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30-ft R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC (excluding 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%</u> (A/B)
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
		<u>0</u> = Total Cover			
50% of total cover:		<u>0</u>	20% of total cover:	<u>0</u>	
Sapling/Shrub Stratum	(Plot size: <u>15-ft R</u>)				Prevalence Index Worksheet Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals <u> </u> (A) <u> </u> (B)
1. <u> </u>					
2. <u> </u>					
3. <u> </u>					
4. <u> </u>					
		<u>0</u> = Total Cover			
50% of total cover:		<u>0</u>	20% of total cover:	<u>0</u>	
Herb Stratum	(Plot size: <u>5-ft R</u>)				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1. <u>Eleocharis palustris</u>		<u>40</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Oenothera laciniata</u>		<u>30</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Cyperus elegans</u>		<u>10</u>	<u>No</u>	<u>FACW</u>	
4. <u> </u>					
5. <u> </u>					
6. <u> </u>					
7. <u> </u>					
8. <u> </u>					
9. <u> </u>					
		<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-ft R</u>)				Hydrophytic Vegetation Present Yes <u> </u> No <u>X</u>
1. <u> </u>					
2. <u> </u>					
		<u>0</u> = Total Cover			
50% of total cover:		<u>0</u>	20% of total cover:	<u>0</u>	
% Bare Ground in Herb Stratum <u>30</u>					
Remarks: Does not meet the criteria for hydrophytic vegetation.					

SOIL

Sampling Point: OP 02

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

Depth (Inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0 to 16	10YR 3/1	100					Clay	

¹Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains.²Location: PL = Pore Lining, M = Matrix

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

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Loamy Mucky Mineral (F1)
☐ Stratified Layers (A5) (LRR F)	☐ Loamy Gleyed Matrix (F2)
☐ 1 cm Muck (A9) (LRR F, G, H)	☐ Depleted Matrix (F3)
☐ Depleted Below Dark Surface (A11)	☐ Redox Dark Surface (F6)
☐ Thick Dark Surface (A12)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)	☐ High Plains Depressions (F16)
☐ 5 cm Mucky Peat or Peat (S3) (LRR F)	(MLRA 72 & 73 of LRR H)

Indicators for Problematic Hydric Soils³:

☐ 1 cm Muck (A9) (LRR I, J)
☐ Coast Prairie Redox (A16) (LRR F, G, H)
☐ Dark Surface (S7) (LRR G)
☐ High Plains Depressions (F16)
(LRR H outside of MLRA 72 & 73)
☐ Reduced Vertic (F18)
☐ Red Parent Material (TF2)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks: Does not meet the criteria for hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one 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
☐ Drift Deposits (B3)	☐ (C3) (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
(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: Does not meet the criteria for wetland hydrology.

None