



The following figures and attachments present data and information used in the Integrated Feasibility Report and Environmental Assessment (IFR-EA) for the Raymondville Drain Project. The results of and conclusions of the IFR-EA are provided in the main report. Additional data and information are presented in Attachments A-M of this appendix.

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Figure 1: National Land Cover Database Classifications for the Raymondville Drain Project study area.  
Source: US Geological Survey, 2024.

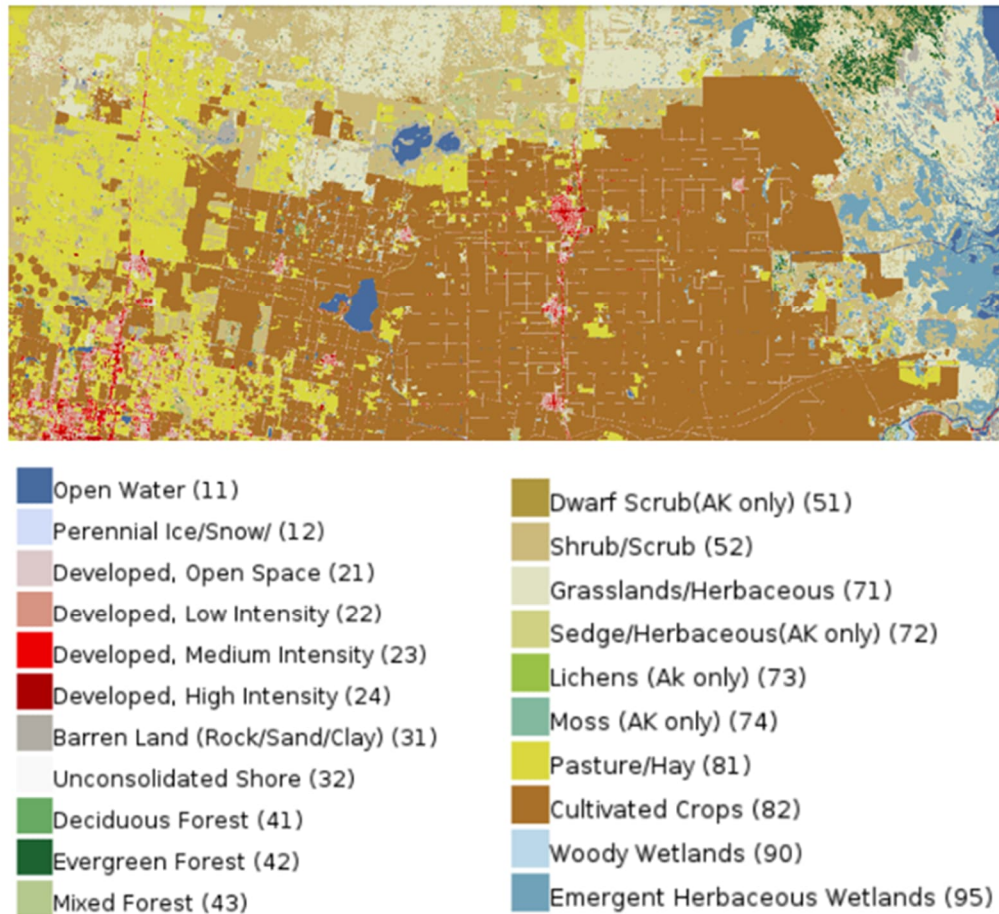


Figure 2: Bald Eagle Range in Texas. Source: US Fish and Wildlife Service, 2026.

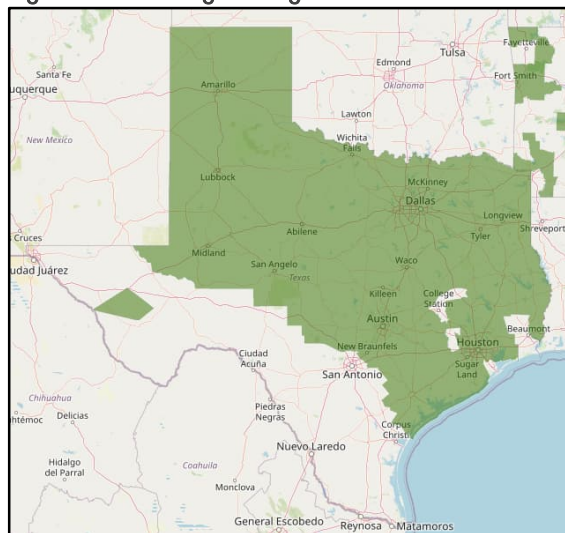


Figure 3: Map of relative sea level trends in the Gulf of Mexico. Source: NOAA, 2023.



Figure 4: Ecological Mapping Systems of Texas Data for Alternative 1

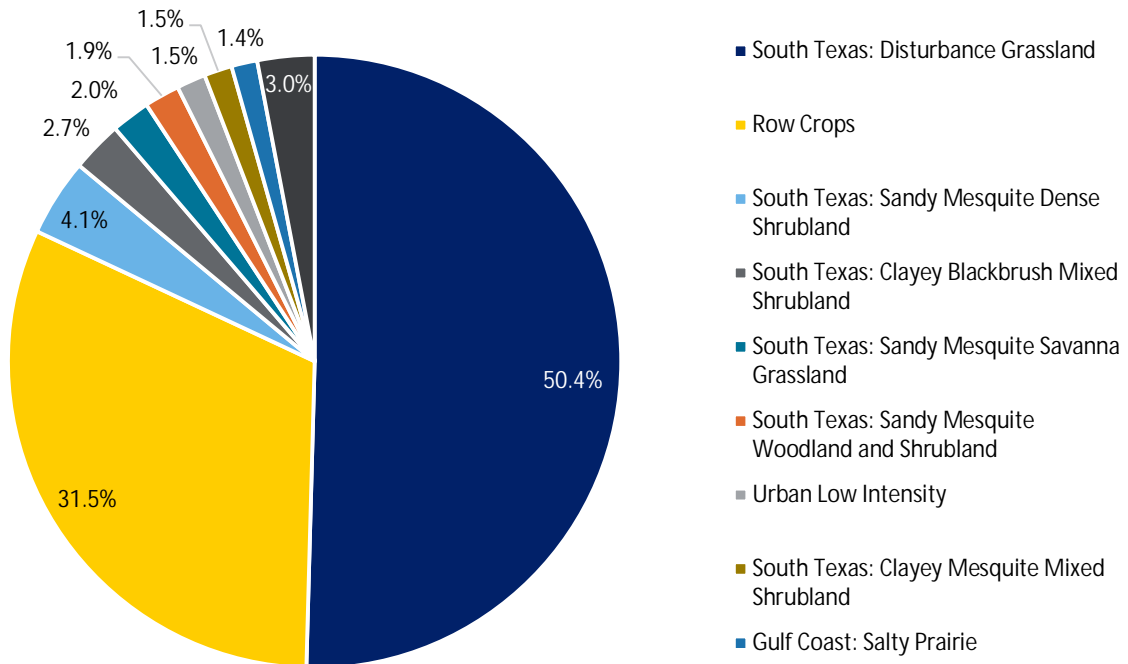


Figure 5: Ecological Mapping Systems of Texas Data for Alternative 2

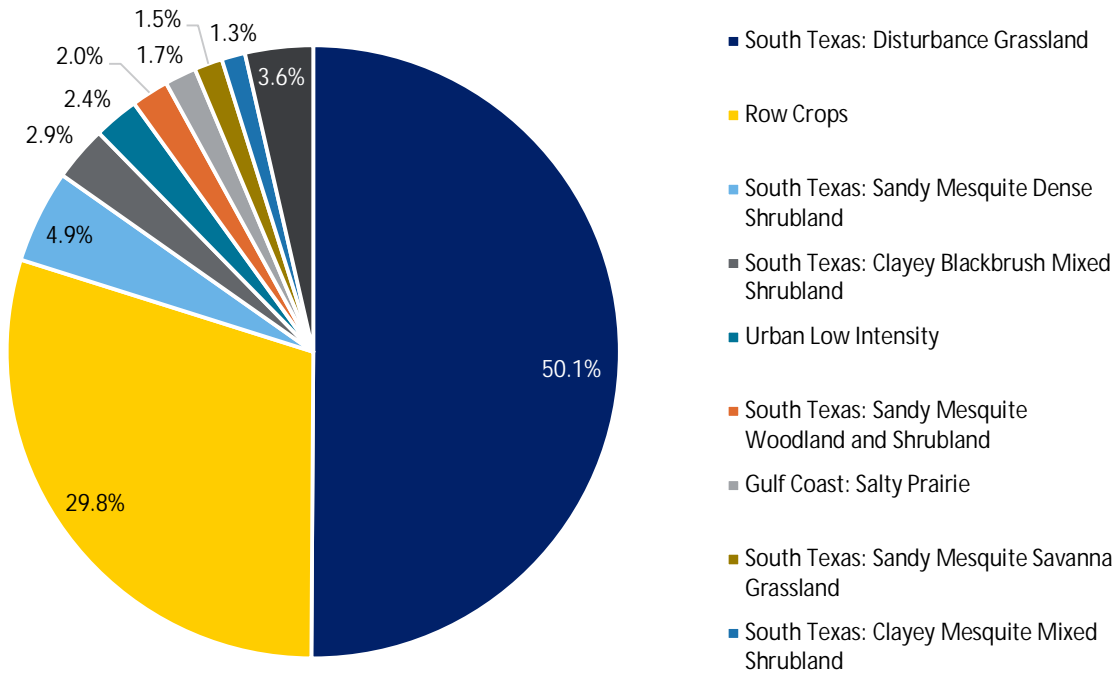


Figure 6: A wind turbine located within the Raymondville Drain Project study corridor.





Figure 7: Texas Demographic Center Population Projection for Hidalgo and Willacy Counties.

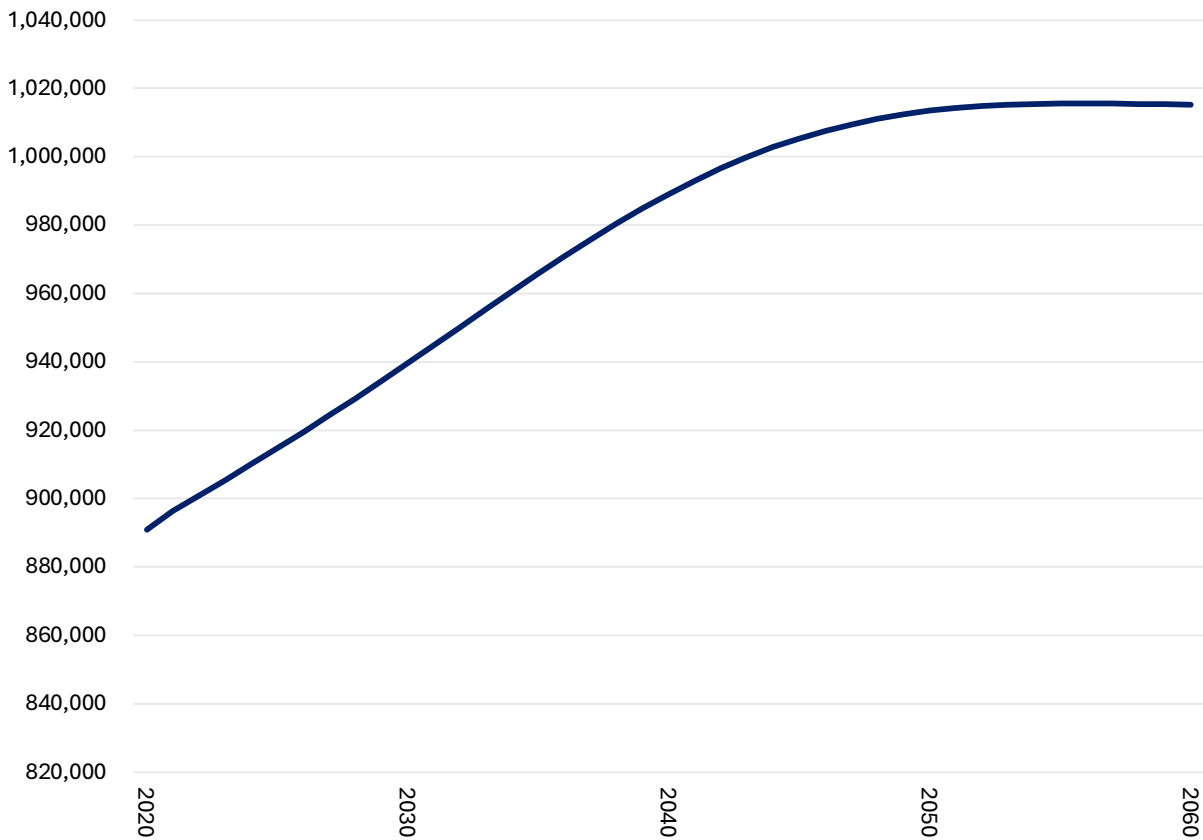




Figure 8: Proposed regional stormwater detention facility. The green polygon represents the 67.8-acre facility.



Table 1: Threatened and Endangered Species in Hidalgo and Willacy Counties

Common Name	Scientific Name	State Status	Federal Status
<b>Amphibians</b>			
black-spotted newt	<i>Notophthalmus meridionalis</i>	Threatened	Not Listed
Mexican burrowing toad	<i>Rhinophrynus dorsalis</i>	Threatened	Not Listed
Mexican treefrog	<i>Smilisca baudinii</i>	Threatened	Not Listed
sheep frog	<i>Hypopachus variolosus</i>	Threatened	Not Listed
south Texas siren (large form)	<i>Siren</i> sp.1	Threatened	Not Listed
white-lipped frog	<i>Leptodactylus fragilis</i>	Threatened	Not Listed
<b>Birds</b>			
Cactus Ferruginous Pygmy-Owl	<i>Glaucidium brasilianum cactorum</i>	Threatened	Threatened
Common Black Hawk	<i>Buteogallus anthracinus</i>	Threatened	Not Listed
Eastern Black Rail	<i>Laterallus jamaicensis jamaicensis</i>	Not Listed	Threatened
Gray Hawk	<i>Buteo plagiatus</i>	Threatened	Not Listed
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	Endangered	Endangered
Northern Beardless-Tyrannulet	<i>Comptostoma imberbe</i>	Threatened	Not Listed
Piping Plover	<i>Charadrius melodus</i>	Threatened	Threatened
Red-Crowned Parrot	<i>Amazona viridigenalis</i>	Threatened	Not Listed
Reddish Egret	<i>Egretta rufescens</i>	Threatened	Not Listed
Rufa Red Knot	<i>Calidris canutus rufa</i>	Threatened	Threatened
Rose-Throated Becard	<i>Pachyrhamphus aglaiae</i>	Threatened	Not Listed
Sooty Tern	<i>Onychoprion fuscatus</i>	Threatened	Not Listed
Swallow-Tailed Kite	<i>Elanoides forficatus</i>	Threatened	Not Listed



**Table 1: Threatened and Endangered Species in Hidalgo and Willacy Counties**

Common Name	Scientific Name	State Status	Federal Status
Texas Botteri's Sparrow	<i>Peucaea botterii texana</i>	Threatened	Not Listed
Tropical Parula	<i>Setophaga pitiayumi</i>	Threatened	Not Listed
White-Faced Ibis	<i>Plegadis chihi</i>	Threatened	Not Listed
White-Tailed Hawk	<i>Buteo albicaudatus</i>	Threatened	Not Listed
Wood Stork	<i>Mycteria americana</i>	Threatened	Not Listed
Zone-Tailed Hawk	<i>Buteo albonotatus</i>	Threatened	Not Listed
<b>Fish</b>			
oceanic whitetip shark	<i>Carcharhinus longimanus</i>	Threatened	Threatened
Rio Grande shiner	<i>Notropis jemezanus</i>	Threatened	Not listed
river goby	<i>Awaous banana</i>	Threatened	Not Listed
shortfin mako shark	<i>Isurus oxyrinchus</i>	Threatened	Not Listed
speckled chub	<i>Macrhybopsis aestivalis</i>	Threatened	Not Listed
Tamaulipas shiner	<i>Notropis braytoni</i>	Threatened	Not Listed
<b>Insects</b>			
monarch butterfly	<i>Danaus plexippus</i>	Not Listed	Candidate
<b>Mammals</b>			
blue whale	<i>Balaenoptera musculus</i>	Endangered	Endangered
Coues' rice rat	<i>Oryzomys couesi aquaticus</i>	Threatened	Not Listed
Gulf Coast jaguarundi	<i>Herpailurus yaguarondi cacomitli</i>	Not Listed	Endangered
Gulf of Mexico Bryde's whale	<i>Balaenoptera ricei</i>	Endangered	Endangered
humpback whale	<i>Megaptera novaeangliae</i>	Not Listed	Endangered
north Atlantic right whale	<i>Eubalaena glacialis</i>	Endangered	Endangered
ocelot	<i>Leopardus pardalis</i>	Endangered	Endangered
sei whale	<i>Balaenoptera borealis</i>	Endangered	Endangered
sperm whale	<i>Physeter macrocephalus</i>	Endangered	Endangered
tricolored bat	<i>Perimyotis subflavus</i>	Not Listed	Proposed Endangered
West Indian manatee	<i>Trichechus manatus</i>	Threatened	Threatened
white-nosed coati	<i>Nasua narica</i>	Threatened	Not Listed
<b>Mollusks</b>			
Mexican fawnsfoot	<i>Truncilla cognata</i>	Threatened	Proposed Endangered
salina mucket	<i>Potamilus metnecktayi</i>	Threatened	Not Listed
Texas hornshell	<i>Popenaias popeii</i>	Endangered	Endangered
<b>Reptiles</b>			
Atlantic hawksbill sea turtle	<i>Eretmochelys imbricata imbricata</i>	Endangered	Endangered
black-striped snake	<i>Coniophanes imperialis</i>	Threatened	Not Listed
green sea turtle	<i>Chelonia mydas</i>	Threatened	Threatened
hawksbill sea turtle	<i>Eretmochelys</i>	Endangered	Endangered
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	Endangered	Endangered
leatherback sea turtle	<i>Dermochelys coriacea</i>	Endangered	Endangered
loggerhead sea turtle	<i>Caretta caretta</i>	Threatened	Threatened
northern cat-eyed snake	<i>Leptodeira septentrionalis septentrionalis</i>	Threatened	Not Listed





**Table 1: Threatened and Endangered Species in Hidalgo and Willacy Counties**

Common Name	Scientific Name	State Status	Federal Status
speckled racer	<i>Drymobius margaritiferus</i>	Threatened	Not Listed
Texas horned lizard	<i>Phrynosoma cornutum</i>	Threatened	Not Listed
Texas tortoise	<i>Gopherus berlandieri</i>	Threatened	Not Listed
<b>Plants</b>			
star cactus	<i>Astrophytum asterias</i>	Endangered	Endangered
Texas ayenia	<i>Ayenia limitaris</i>	Endangered	Endangered
Walker's manioc	<i>Manihot walkerae</i>	Endangered	Endangered

Source: US Fish and Wildlife Service, Environmental Conservation Online System; Texas Parks and Wildlife Department, Annotated County Lists of Rare Species, Hidalgo County and Willacy County, September 1, 2023.

**Table 2: Potential Impacts to Threatened and Endangered Species**

Common Name	Scientific Name	Habitat Description	Habitat Present?	Effect Determination
<b>Amphibians</b>				
black-spotted newt	<i>Notophthalmus meridionalis</i>	Resacas and bodies of water with firm bottoms and little/no vegetation	Yes	May Impact
Mexican burrowing toad	<i>Rhinophrynus dorsalis</i>	Low rolling hills of sand, gravel or thin soil drained by ravines and gullies	Yes	May Impact
Mexican treefrog	<i>Smilisca baudinii</i>	The subtropical Rio Grande embayment around Brownsville	Yes	May Impact
sheep frog	<i>Hypopachus variolosus</i>	Grassland and savanna; areas with moist microclimates	Yes	May Impact
south Texas siren (large form)	<i>Siren</i> sp.1	Bodies of quiet water, with or without submergent vegetation	Yes	May Impact
white-lipped frog	<i>Leptodactylus fragilis</i>	Lowlands, grasslands, cultivated fields, roadside ditches	Yes	May Impact
<b>Birds</b>				
Botteri's Sparrow	<i>Peucaea botterii</i>	Sacahuista habitat or cordgrass flats along the lower coastline	No	No Impact
Cactus Ferruginous Pygmy-Owl	<i>Glaucidium brasilianum cactorum</i>	Riparian trees, brush, palm, and mesquite thickets	Yes	May Affect
Common Black Hawk	<i>Buteogallus anthracinus</i>	Cottonwood-lined rivers and streams; willow tree groves	No	No Impact
Eastern Black Rail	<i>Laterallus jamaicensis jamaicensis</i>	Higher elevation wetland zones with some shrubby vegetation, as well as nearby marshes	No	No Effect
Gray Hawk	<i>Buteo plagiatus</i>	Mature riparian woodlands and nearby semiarid mesquite and scrub grasslands	Yes	May Impact
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>	Open country, especially savanna and open woodland; grassy plains and valleys with scattered shrubs	Yes	May Affect
Northern Beardless-Tyrannulet	<i>Comptostoma imberbe</i>	Mesquite woodlands; cottonwood, willow, Elm, and tepeguaje near Rio Grande	Yes	May Impact
Piping Plover	<i>Charadrius melodus</i>	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands	No	No Effect
Red-Crowned Parrot	<i>Amazona viridigenalis</i>	Lush areas in arid lowlands and foothills	No	No Impact



Table 2: Potential Impacts to Threatened and Endangered Species

Common Name	Scientific Name	Habitat Description	Habitat Present?	Effect Determination
Rufa Red Knot	<i>Calidris canutus rufa</i>	Shoreline of coast and bays, also uses mudflats	No	No Effect
Reddish Egret	<i>Egretta rufescens</i>	Brackish marshes, shallow salt ponds, tidal flats	No	No Impact
Rose-Throated Becard	<i>Pachyramphus aglaiae</i>	Riparian corridors; trees, woodlands, open forest, scrub and mangroves	No	No Impact
Swallow-Tailed Kite	<i>Elanoides forficatus</i>	Lowland forested regions, especially swampy areas, ranging into open woodland and marshes	No	No Impact
Texas Botteri's Sparrow	<i>Peucaea botterii texana</i>	Grassland and short-grass plains with scattered bushes or shrubs, sagebrush, mesquite, or yucca; nests on ground of low clump of grasses	Yes	May Impact
Tropical Parula	<i>Setophaga pitiaiyumi</i>	Semi-tropical evergreen woodland along rivers and resacas; dense or open woods	No	No Impact
White-Faced Ibis	<i>Plegadis chihi</i>	Freshwater marshes, sloughs and irrigated rice fields; brackish and saltwater habitats	Yes	May Impact
White-Tailed Hawk	<i>Buteo albicaudatus</i>	Near coast on prairies, cordgrass flats, and scrub-live oak; inland on prairies, mesquite/oak savannas	Yes	May Impact
Wood Stork	<i>Mycteria americana</i>	Prefers baldcypress or red mangrove; mud flats and other wetlands	No	No Impact
Zone-Tailed Hawk	<i>Buteo albonotatus</i>	Arid open country, open woodland, mesa or mountain country near watercourses	No	No Impact
<b>Fish</b>				
oceanic whitetip shark	<i>Carcharhinus longimanus</i>	Open ocean, outer continental shelf, oceanic islands in deep water areas	No	No Effect
Rio Grande shiner	<i>Notropis jemezianus</i>	Substrate of rubble, gravel and sand, often overlain with silt	No	No Impact
river goby	<i>Awaous banana</i>	Clear, well oxygenated streams and rivers with slow to moderate current, sandy, muddy, or hard bottom, and little or no vegetation	No	No Impact
shortfin mako shark	<i>Isurus oxyrinchus</i>	Primarily oceanic waters but can also be found near the coast where the continental shelf is short	No	No Impact
speckled chub	<i>Macrhybopsis aestivalis</i>	Flowing water over coarse sand and fine gravel substrates in streams	No	No Impact
Tamaulipas shiner	<i>Notropis braytoni</i>	Large rivers and creeks associated with runs and riffles over gravel, cobble, and sand	No	No Impact
<b>Insects</b>				
monarch butterfly	<i>Danaus plexippus</i>	Fields, roadside areas, open areas, or wet areas with milkweed and flowering plants.	Yes	May Affect
<b>Mammals</b>				
blue whale	<i>Balaenoptera musculus</i>	Commonly observed at the surface in open ocean	No	No Effect
Coues' rice rat	<i>Oryzomys couesi aquaticus</i>	Cattail-bulrush marsh with shallower aquatic grasses near the shoreline	No	No Impact
Gulf Coast jaguarundi	<i>Herpailurus yagouaroundi cacomitli</i>	Broad range of open and closed habitats; in open areas it sticks to vegetative cover	Yes	May Affect
humpback whale	<i>Megaptera novaeangliae</i>	Open ocean and coastal waters, sometimes inshore areas like bays	No	No Effect



Table 2: Potential Impacts to Threatened and Endangered Species

Common Name	Scientific Name	Habitat Description	Habitat Present?	Effect Determination
ocelot	<i>Leopardus pardalis</i>	Mesquite-thorn scrub and live-oak mottes	Yes	May Affect
sei whale	<i>Balaenoptera borealis</i>	Typically observed in deeper waters far from the coastline	No	No Effect
sperm whale	<i>Physeter macrocephalus</i>	Generally occupies water at least 3,300 feet deep near ocean trenches	No	No Effect
tricolored bat	<i>Perimyotis subflavus</i>	Forest, woodland, and riparian areas; caves	Yes	May Affect
West Indian manatee	<i>Trichechus manatus</i>	In winter, natural and artificial warm-water refuges; in summer, rivers, and canals; shallow grass beds with ready access to deep channels	No	No Effect
white-nosed coati	<i>Nasua narica</i>	Woodlands, riparian corridors, and canyons	Yes	May Impact
Mollusks				
Mexican fawnsfoot	<i>Truncilla cognata</i>	Largely unknown; possibly intolerant of impoundment	No	No Effect
salina mucket	<i>Potamilus metnecktayi</i>	Lotic waters; submerged soft sediment along riverbank	No	No Impact
Texas hornshell	<i>Popenaias popelii</i>	Both ends of narrow shallow runs over bedrock	No	No Effect
Reptiles				
Atlantic hawksbill sea turtle	<i>Eretmochelys imbricata imbricata</i>	Open, pelagic ocean; closely associated with floating algae/seagrass mats; nesting high up on beach	No	No Effect
black-striped snake	<i>Coniophanes imperialis</i>	Warm, moist microhabitats and sandy soils	No	No Impact
green sea turtle	<i>Chelonia mydas</i>	Gulf and bay system; shallow water seagrass beds, barrier island beaches	No	No Effect
hawksbill sea turtle	<i>Eretmochelys</i>	Insular and mainland sandy beaches throughout the tropics and subtropics	No	No Effect
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	Gulf and bay system, within shallow waters of the Gulf of Mexico	No	No Effect
leatherback sea turtle	<i>Dermochelys</i>	Tropical, subtropical, and subpolar seas	No	No Effect
loggerhead sea turtle	<i>Caretta caretta</i>	Gulf and bay system primarily for juveniles, adults are pelagic	No	No Effect
northern cat-eyed snake	<i>Leptodeira septentrionalis septentrionalis</i>	Gulf Coastal Plain; thorn brush woodland, dense thickets by ponds and streams	Yes	May Impact
speckled racer	<i>Drymobius margaritiferus</i>	Dense thickets near water, palm groves, riparian woodlands	Yes	May Impact
Texas horned lizard	<i>Phrynosoma cornutum</i>	Open, arid and semi-arid regions with sparse vegetation	Yes	May Impact
Texas tortoise	<i>Gopherus berlandieri</i>	Open brush with a grass understory	Yes	May Impact
Plants				



Table 2: Potential Impacts to Threatened and Endangered Species

Common Name	Scientific Name	Habitat Description	Habitat Present?	Effect Determination
star cactus	<i>Astrophytum asterias</i>	Gravelly soils on gentle slopes and flats between shrub thickets	No	No Effect
Texas ayenia	<i>Ayenia limitaris</i>	Subtropical thorn woodland or tall shrubland on loamy soils	No	No Effect
Walker's manioc	<i>Manihot walkerae</i>	Periphery of native brush in sandy loam; caliche cuestas	No	No Effect

Source: US Fish and Wildlife Service, Environmental Conservation Online System; Texas Parks and Wildlife Department, Annotated County Lists of Rare Species, Hidalgo County and Willacy County, September 1, 2023.

Table 3: Soils within the Raymondville Drain Project Study Corridor

Map Unit Symbol	Map Unit Name	Prime Farmland Status
1/An	Arents, loamy	Not prime farmland
Ar	Arrada sandy clay loam, 0 to 1 percent slopes	Not prime farmland
3	Brennan fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated
4	Brennan fine sandy loam, 0 to 3 percent slopes	Prime farmland if irrigated
8	Comitas loamy fine sand, 0 to 3 percent slopes	Farmland of statewide importance
9	Delfina loamy fine sand, warm, 0 to 2 percent slopes	Prime farmland if irrigated
10/DfA	Delfina fine sandy loam, warm, 0 to 2 percent slopes	Prime farmland if irrigated
11/DfB	Delfina fine sandy loam, warm, 1 to 3 percent slopes	Prime farmland if irrigated
16/HaA	Hargill fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated
17/HaB	Hargill fine sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated
22	Hebbronville sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated
23	Hebbronville sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated
25	Hidalgo fine sandy loam, 0 to 1 percent slopes	Prime farmland if irrigated
26	Hidalgo fine sandy loam, 1 to 3 percent slopes	Prime farmland if irrigated
28/HoA	Hidalgo sandy clay loam, 0 to 1 percent slopes	Prime farmland if irrigated
Ic	Incell clay, 0 to 1 percent slopes, occasionally ponded	Not prime farmland
Ja	Jarron sandy clay loam	Not prime farmland
Le	Latina sandy clay loam, 0 to 1 percent slopes, occasionally ponded, rarely flooded	Not prime farmland
Lm	Lomalta clay, 0 to 1 percent slopes, occasionally ponded	Not prime farmland
Ln	Lozano fine sandy loam	Not prime farmland
Ly	Lyford sandy clay loam	Not prime farmland
Me	Mercedes clay	Not prime farmland
Mp	Mercedes clay, ponded	Not prime farmland
42/Nu	Nueces fine sand, 0 to 3 percent slopes	Farmland of statewide importance
45	Pits, borrow	Not prime farmland
48/Ra	Racombe sandy clay loam, 0 to 1 percent slopes	All areas are prime farmland
49/Rc	Racombe sandy clay loam, saline, 0 to 1 percent slopes	Not prime farmland
Rd	Raymondville clay loam	All areas are prime farmland
59	Rio fine sandy loam, saline, ponded	Not prime farmland
60	Rio clay loam, ponded	Prime farmland if drained
61	Rio clay loam, saline, ponded	Not prime farmland
Rg	Rio sandy clay loam, ponded	Prime farmland if drained



Table 3: Soils within the Raymondville Drain Project Study Corridor

Map Unit Symbol	Map Unit Name	Prime Farmland Status
Rs	Rio sandy clay loam, saline, ponded	Not prime farmland
67/Tc	Tiicano clay, 0 to 1 percent slopes, occasionally ponded	Not prime farmland
Uf	Ustorthents, loamy	Not prime farmland
70/WaA	Willacy fine sandy loam, 0 to 1 percent slopes	All areas are prime farmland
71/WaB	Willacy fine sandy loam, 1 to 3 percent slopes	All areas are prime farmland
Wf	Willamar fine sandy loam, 0 to 1 percent slopes	Not prime farmland
Ws	Willamar fine sandy loam, strongly saline, 0 to 1 percent slopes, occasionally ponded	Not prime farmland

Note: Map Unit Symbols for each soil series vary by county. Map Unit Symbols which consist of numbers are used in Hidalgo County; Map Unit Symbols which consist of letters are used in Willacy County.  
Source: Natural Resources Conservation Service, Web Soil Survey, 2026.

Table 4: National Ambient Air Quality Standards

Pollutant	Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)	Primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead (Pb)	Primary & Secondary	Rolling 3-month average	0.15 µg/m <sup>3</sup> <sup>(1)</sup>	Not to be exceeded
Nitrogen Dioxide (NO <sub>2</sub> )	Primary	1 hour	100 ppb	Annual 98th percentile of one-hour daily maximum concentrations, averaged over three years
	Primary & Secondary	1 year	53 ppb <sup>(2)</sup>	Annual mean
Ozone (O <sub>3</sub> )	Primary & Secondary	8 hours	0.07 ppm <sup>(3)</sup>	Annual fourth-highest daily maximum 8-hour concentration, averaged over three years
Particle Pollution (PM)	PM <sub>2.5</sub>	Primary	1 year	9.0 µg/m <sup>3</sup>
		Secondary	1 year	15.0 µg/m <sup>3</sup>
	PM <sub>10</sub>	Primary & Secondary	24 hours	35 µg/m <sup>3</sup>
		Primary & Secondary	24 hours	150 µg/m <sup>3</sup>
Sulfur Dioxide (SO <sub>2</sub> )	Primary	1 hour	75 ppb <sup>(4)</sup>	99th percentile of one-hour daily maximum concentrations, averaged over three years
	Secondary	1 year	10 ppb <sup>(5)</sup>	Annual mean, averaged over three years

<sup>(1)</sup> In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m<sup>3</sup> as a calendar quarter average) also remain in effect.

<sup>(2)</sup> The level of the annual NO<sub>2</sub> standard is 0.053 part per million (ppm). It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

<sup>(3)</sup> Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O<sub>3</sub> standards are not revoked and remain in effect for designated areas. Additionally, some areas may have certain continuing implementation obligations under the prior revoked 1-hour (1979) and 8-hour (1997) O<sub>3</sub> standards.

<sup>(4)</sup> The previous SO<sub>2</sub> standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO<sub>2</sub> standards or is not meeting the requirements of a SIP call under the previous





Table 4: National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Time	Level	Form
SO <sub>2</sub> standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its SIP to demonstrate attainment of the required NAAQS.				
<sup>(5)</sup> The 2024 rulemaking added a new annual secondary NAAQS in 40 CFR Part 50 without altering the 1971 secondary 3-hour SO <sub>2</sub> NAAQS. Note that some areas may have certain continuing implementation obligations.				
Source: EPA, <a href="https://www.epa.gov/criteria-air-pollutants/naaqs-table">https://www.epa.gov/criteria-air-pollutants/naaqs-table</a> . Last updated November 4, 2025.				

Table 5: Government Records Report Summary

Site Number	Envirosite Map ID(s)	Database Name(s)	Distance/Direction from Subject ROW	Facility Name and Location	Findings
Reported Site 1	H38	COMP HIST-TX, SWTIRE-TX	Adjacent, east	(Formerly) Quintanilla Tire Shop 1112 Cactus Lane Edinburg, TX 78541	The site is no longer active and has been converted to a single-family residential property. No history of violations was identified for this site.
Reported Site 2	K37	IND HAZ WASTE-TX	0.6 mile, south	Tennessee Gas Company/Pipeline 12702 North Highway 281 Edinburg, TX 78541	The site produces lead, chromium, cadmium, and spent non-halogenated solvents. No history of violations was identified for this site.
Reported Site 3	G52	T2-TX	0.7 mile, south	Key Energy Service 1200 East El Cibolo Road Edinburg, TX 78541	The site is a support facility for oil and gas operations. The site stores diesel fuel and calcium chloride. No history of violations was identified for this site.
Reported Site 4*	E47	FRS, RMP	0.1 mile, south	Rio Farms Gas Plant The Northeast Corner of the intersection of CR 5 and Marcedonio Road Hargill, TX 78549	Aerial photography indicates that this site is no longer active and that the gas plant has been removed. No history of violations was identified for this site.
Reported Site 5	A1, A2, A32,	COMP HIST-TX, ECHO, FRS, ICIS, INACTIVE PCS, PCS FACILITY, T2-TX	Adjacent, west & east	North Alamo Water Supply Company Lasara Reverse Osmosis WWTP	The site is permitted to discharge wastewater. No history of violations was identified for this site.
Reported Site 6*	J40, J41	T2-TX, PIPELINES-TX	0.05 mile south	Dewbre Petroleum Corporation, Cantu Facility Raymondville, TX 78580	No history of violations was identified for this site.
Reported Site 7	3, 59, 60	FEDLAND	Adjacent, northwest	Lower Rio Grande Valley National Wildlife Refuge Raymondville, TX	No history of violations was identified for this site.





Table 5: Government Records Report Summary

Site Number	Envirosearch Map ID(s)	Database Name(s)	Distance/Direction from Subject ROW	Facility Name and Location	Findings
Reported Site 8*	L48, L50	T2-TX	0.1 mile north	Suemaur Exploration & Production/Kirsch et al. Raymondville, TX	The site extracts crude petroleum and natural gas. No history of violations was identified for this site.
Reported Site 9	B53	HIST LF - TX	0.2 mile south	Raymondville Historical Landfill	The site is no longer active.

\*Not investigated in person due to lack of right-of-entry permissions from the property owner.

Note: Distance/Direction from the RDP ROW reflects the distances to the properties on which Reported Sites are located, as observed during the field investigation. The database definitions are included in Attachment I – Hazardous, Toxic, and Radioactive Waste Review, Envirosearch Corporation, Government Records Report, 2023.

Table 6: Unreported Potential Hazardous, Toxic, and Radioactive Waste Sites

Site Number	Distance/Direction from Subject ROW	Facility Description and Location	Findings
Unreported Site 1	Within study area	Discarded Gas Tanks on 12 <sup>th</sup> Street 0.3 mile east of Brushline Road	The site consists of a large pile of discarded automotive gas tanks. No gasoline was observed leaking from the tanks. No signs of contamination were observed at the site.
Unreported Site 2*	0.2 mile, south	Tank batteries, oil/gas facility FM 493	The site consists of large tank batteries and oil and gas infrastructure. The site was overgrown with vegetation and is no longer active.
Unreported Site 3	Adjacent, north	Construction Staging Area Intersection of SH 186 and County Road 15	The site consists of a construction staging area associated with ongoing maintenance of SH 186. Large piles of construction debris were observed at the site. No signs of contamination were observed at the site.
Unreported Site 4*	Adjacent, west	Dallas Petroleum Group, Oil and Gas Facility County Road 15	The site consists of an active oil and gas facility located adjacent to the RDP study corridor. An odor of gas was observed coming from the site.
Unreported Site 5	0.6 mile, southeast	Energy Transfer Company Oil and Gas Facility County Road 105	The site consists of an active oil and gas facility located along County Road 105, south of the RDP study corridor. No signs of contamination were observed at the site.
Unreported Site 6	Within study area	Illegal Dumping Area 0.4 mile west of County Road 200 (Lopez Road), north of FM 1761	The site consists of an illegal dumping site containing large piles of construction debris, and household materials. No signs of contamination were observed at the site.
Unreported Site 7*	Within study area	Farming Staging Area 0.3 mile east of County Road 345 (Amaro Road), north of FM 3450	The site contains large tankers and farming equipment. The site was observed from the RDP ROW.



**Table 6: Unreported Potential Hazardous, Toxic, and Radioactive Waste Sites**

Site Number	Distance/Direction from Subject ROW	Facility Description and Location	Findings
<p>*Not investigated in person due to lack of right-of-entry permissions from the property owner. Observations were conducted from publicly accessible roadways or the RDP ROW.</p> <p>Note: Distance/Direction from the RDP ROW reflects the distances to the properties on which Unreported Sites are located, as observed during the field investigation.</p>			

**Table 7: Known Cultural Resources within the Area of Potential Effect**

Resource Name	Description	NRHP Status	Location
41HG8	6 Catán dart points and 1 drill with a base similar to Catán (inaccessible during archeological/historic survey)	Undetermined	Within APE
41HG25	Prehistoric-age lithic scatter	Undetermined	Within APE
King Ranch	Nation Register Historic District based on criteria: Exploration/Settlement and Agriculture with periods of significance between 1850 and 1924.	Listed	Overlaps eastern APE
IF01	Isolated find consisting of glass shards and an early- to mid-20 <sup>th</sup> century bullet casing	Undetermined	Within APE
IF02	Isolated find consisting of a chert scraper	Undetermined	Within APE
Source: Texas Historical Commission, 2023; Stantec, 2025.			

**Table 8: Hispanic or Latino Populations in the Raymondville Drain Project Study Corridor**

Geography	Total Population	Hispanic or Latino Population	Percent Hispanic or Latino
Texas	30,188,424	11,991,467	39.7%
Hidalgo County	891,977	819,984	91.9%
Willacy County	20,139	17,577	87.3%
Edinburg city	104,550	90,694	86.7%
Hargill CDP	609	609	100.0%
Lasara CDP	1,467	1,446	98.6%
Raymondville city	10,185	8,863	87.0%
San Perlita city	462	443	95.9%
Census Tract (CT) 235.16, Block Group (BG) 1	926	833	90.0%
CT 235.16, BG 2	1,546	1,377	89.1%
CT 235.17, BG 2	1,769	1,623	91.7%
CT 235.17, BG 3	1,266	1,183	93.4%
CT 235.30, BG 4	4,043	3,393	83.9%
CT 243.02, BG 1	2,553	2,486	97.4%
CT 9503, BG 1	1,108	922	83.2%
CT 9504, BG 1	3,817	2,795	73.2%
CT 9507, BG 1	890	567	63.7%
CT 9507, BG 2	1,632	1,580	96.8%
Source: US Census Bureau; 2024 American Community Survey (ACS) 5-Year Estimates, Table B03002: Hispanic or Latino Origin by Race			



**Table 9: Poverty Status in the Raymondville Drain Project Study Corridor**

Geography	Total Population	Population below Poverty Threshold	Percent of Population in Poverty Status
Texas	29,554,954	4,074,940	13.8%
Hidalgo County	883,207	235,512	26.7%
Willacy County	18,332	4,393	24.0%
Edinburg city	100,147	26,022	26.0%
Hargill CDP	609	404	66.3%
Lasara CDP	1,467	242	16.5%
Raymondville city	8,511	2,641	31.0%
San Perlita city	462	91	19.7%
CT 235.16, BG 1	926	219	23.7%
CT 235.16, BG 2	1,546	441	28.5%
CT 235.17, BG 2	1,769	303	17.1%
CT 235.17, BG 3	1,263	469	37.1%
CT 235.30, BG 4	1,032	170	16.5%
CT 243.02, BG 1	2,528	834	33.0%
CT 9503, BG 1	1,108	0	0.0%
CT 9504, BG 1	2,196	407	18.5%
CT 9507, BG 1	874	122	14.0%
CT 9507, BG 2	1,632	273	16.7%

Source: US Census Bureau 2024 ACS 5-Year Estimates, Table B17021: Poverty Status of Individuals in the Past 12 Months by Living Arrangement

**Table 10: Limited English Proficiency Households in the Raymondville Drain Project Study Corridor**

Geography	Total Households	LEP Households	Percent LEP
Texas	10,992,816	747,734	6.8%
Hidalgo County	270,210	49,090	18.2%
Willacy County	5,691	768	13.5%
Edinburg city	306	107	35.0%
Hargill CDP	566	103	18.2%
Lasara CDP	471	73	15.5%
Raymondville city	379	97	25.6%
San Perlita city	369	177	48.0%
CT 235.16, BG 1	774	135	17.4%
CT 235.16, BG 2	388	0	0.0%
CT 235.17, BG 2	700	89	12.7%
CT 235.17, BG 3	305	3	1.0%
CT 235.30, BG 4	484	111	22.9%
CT 243.02, BG 1	35,680	4,156	11.6%
CT 9503, BG 1	266	53	19.9%
CT 9504, BG 1	384	111	28.9%
CT 9507, BG 1	2,573	383	14.9%
CT 9507, BG 2	110	3	2.7%

Source: US Census Bureau 2024 ACS 5-Year Estimates, Table C16002: Household Language by Household Limited English Speaking Status



NWI Designation	Description	Acres	
		Alternative 1	Alternative 2
L1UBHh	Lacustrine (L), Limnetic (1), Unconsolidated Bottom (UB), Permanently Flooded (H), Diked/Impounded (h)	---	57.7
PEM1/SS1A	Palustrine (P), Emergent (EM), Persistent (1), Scrub-Shrub (SS), Broad-Leaved Deciduous (1), Temporary Flooded (A)	2.5	2.5
PEM1A	Palustrine (P), Emergent (EM), Persistent (1), Temporary Flooded (A) wetlands	54.6	12.2
PEM1Ad	Palustrine (P), Emergent (EM), Persistent (1), Temporary Flooded (A), Partially drained/ ditched (d) wetlands	1.1	---
PEM1C	Palustrine (P), Emergent (EM), Persistent (1), Seasonal (C) wetlands	21.5	12.5
PEM1Cx	Palustrine (P), Emergent (EM), Persistent (1), Seasonal (C), Excavated (x) wetlands	1.0	0.8
PEM1Fh	Palustrine (P), Emergent (EM), Persistent (1), Semi-permanently Flooded (F), Diked/Impounded (h)	---	0.8
PSS1A	Palustrine (P), Scrub-Shrub (SS), Broad-Leaved Deciduous (1), Temporary Flooded (A) wetlands	12.8	9.1
PSS1Cx	Palustrine (P), Scrub-Shrub (SS), Broad-Leaved Deciduous (1), Seasonally Flooded (C), Excavated (x)	---	0.10
PSS1J	Palustrine (P), Emergent (EM), Persistent (1), Intermittently Flooded (J) wetlands	1.1	1.1
PUBFh	Palustrine (P), Unconsolidated Bottom (UB), Semi-Permanently Flooded (F), Diked/ Impounded (h) wetlands	0.2	---
PUBHx	Palustrine (P), Unconsolidated Bottom (UB), Permanently Flooded (H), Excavated (x) wetlands	2.7	2.7
PUSCx	Palustrine (P), Unconsolidated Shore (US), Seasonally Flooded (C), Excavated (x) wetlands	0.4	0.4
PUSJ	Palustrine (P), Unconsolidated Shore (US), Intermittently Flooded (J) wetlands	2.5	---
PUSJx	Palustrine (P), Unconsolidated Shore (US), Intermittently Flooded (J), Excavated (x) wetlands	1.8	1.8
R2USCx	Riverine (R), Lower Perennial (2), Unconsolidated Shore (US), Seasonally Flooded (C), Excavated (x) wetlands	0.2	0.2
R5UBFx	Riverine (R), Unknown Perennial (5), Unconsolidated Bottom (UB), Semi-Permanently Flooded (F), Excavated (x) wetlands	9.5	8.9
R5UBH	Riverine (R), Unknown Perennial (5), Unconsolidated Bottom (UB), Permanently Flooded (H), wetlands	0.2	0.01
<b>Total Acres</b>		<b>112</b>	<b>111</b>

Source: US Fish and Wildlife Service, National Wetlands Inventory, 2023

EMST Classification	Acres	Percentage of Total
South Texas: Disturbance Grassland	3,026.31	50.4%
Row Crops	1,891.95	31.5%
South Texas: Sandy Mesquite Dense Shrubland	245.95	4.1%
South Texas: Clayey Blackbrush Mixed Shrubland	160.17	2.7%



**Table 12: Ecological Mapping Systems of Texas Classifications within the Alternative 1 Study Corridor**

EMST Classification	Acres	Percentage of Total
South Texas: Sandy Mesquite Savanna Grassland	122.79	2.0%
South Texas: Sandy Mesquite Woodland and Shrubland	111.26	1.9%
Urban Low Intensity	91.47	1.5%
South Texas: Clayey Mesquite Mixed Shrubland	88.77	1.5%
Gulf Coast: Salty Prairie	83.03	1.4%
Other	178.92	3.0%
<b>Total</b>	<b>6,000.62</b>	<b>100%</b>

Source: Texas Parks and Wildlife Department, Ecological Mapping Systems of Texas, September 2023.

**Table 13: Ecological Mapping Systems of Texas Classifications within the Alternative 2 Study Corridor**

EMST Classification	Acres	Percentage of Total
South Texas: Disturbance Grassland	2,497.97	50.1%
Row Crops	1,484.98	29.8%
South Texas: Sandy Mesquite Dense Shrubland	244.13	4.9%
South Texas: Clayey Blackbrush Mixed Shrubland	145.06	2.9%
Urban Low Intensity	118.62	2.4%
South Texas: Sandy Mesquite Woodland and Shrubland	97.47	2.0%
Gulf Coast: Salty Prairie	83.03	1.7%
South Texas: Sandy Mesquite Savanna Grassland	73.99	1.5%
South Texas: Clayey Mesquite Mixed Shrubland	62.41	1.3%
Other	178.74	3.6%
<b>Total</b>	<b>4,986.39</b>	<b>100%</b>

Source: Texas Parks and Wildlife Department, Ecological Mapping Systems of Texas, September 2023.

**Table 14: Comparison of Cumulative Habitat Units**

Species	Alternative 1 (Recommended Plan)			Alternative 2		
	FWOP	FWP	Difference	FWOP	FWP	Difference
Eastern Cottontail	165,985	138,187	-27,798	137,352	114,644	-22,708
White-Tailed Deer	94,629	74,627	-20,002	77,201	61,547	-15,654
Ferruginous Hawk	51,366	58,812	7,446	42,514	48,815	6,301
Channel Catfish	462	27,153	26,691	503	22,602	22,099
<b>Total</b>	<b>312,442</b>	<b>298,779</b>	<b>-13,663</b>	<b>257,570</b>	<b>247,608</b>	<b>-9,962</b>

Source: RRP Consulting Engineers, 2023. FWOP = Future Without Project; FWP = Future With Project

**Table 15: Potential Soil Impacts in the Raymondville Drain Project Study Corridor**

Alternative	Prime Farmland (Acres)	Farmland of Statewide Importance (Acres)	Total Acres within Study Corridor
Alternative 1	3,286.5	90.9	4,770.2
Alternative 2	3,340.4	90.9	4,584.6



**Table 15: Potential Soil Impacts in the Raymondville Drain Project Study Corridor**

Alternative	Prime Farmland (Acres)	Farmland of Statewide Importance (Acres)	Total Acres within Study Corridor
Source: Natural Resources Conservation Service, 2023.			

**Table 16: FWOP and FWP Flow Rates (CFS) at the Eastern Project Terminus, Alternative 1**

Condition	FWOP 2034	FWOP 2084	FWP 2034	FWP 2084
Normal	88	88	88	88
5-Year Flood	1,935	2,504	3,201	4,321
10-Year Flood	2,701	3,582	4,560	6,156
25-Year Flood	3,758	5,078	6,017	8,123
50-Year Flood	4,859	6,456	7,230	9,761
100-Year Flood	5,957	7,869	8,227	11,106
Source: RRP Consulting Engineers, 2023. FWOP = Future Without Project; FWP = Future With Project				

**Table 17: FWOP and FWP Flow Rates (CFS) at the Eastern Project Terminus, Alternative 2**

Condition	FWOP 2034	FWOP 2084	FWP 2034	FWP 2084
Normal	88	88	88	88
5-Year Flood	1,935	2,504	3,213	4,338
10-Year Flood	2,701	3,582	4,566	6,163
25-Year Flood	3,758	5,078	6,002	8,103
50-Year Flood	4,859	6,456	7,376	9,958
100-Year Flood	5,957	7,869	8,836	11,928
Source: RRP Consulting Engineers, 2023. FWOP = Future Without Project; FWP = Future With Project				