Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Cattle Fever Tick Eradication Program Fence Deterrent in Cameron and Willacy Counties, Texas

Final Supplemental Environmental Assessment

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1 Introduction and Purpose and Need

The United States Department of Agriculture, Animal and Plant Health Inspection Service (USDA APHIS), Veterinary Services (VS) is responsible for (1) protecting and improving the health, quality, and marketability of U.S. animals by eliminating animal diseases, and (2) monitoring and promoting animal health and productivity. The Animal Health Protection Act of 2002, as amended (7 United States Code (U.S.C.) § 8301-8317), provides broad authority for USDA APHIS to prevent the introduction into or dissemination within the United States of any pest or disease of livestock (§ 8303-8305). The Act authorizes prohibition and restriction of the importation, exportation, and interstate movement of animals moving in trade and strays, as well as exportation, inspection, disinfection, seizure, quarantine, destruction, and disposal of animals and conveyances (§ 8303-8308). This includes the ability to "carry out operations and measures to detect, control, or eradicate any pest or disease of livestock" and identifies specific cooperative programs as one way to achieve these actions (§ 8308).

Cattle fever ticks are agricultural pests of concern for U.S. livestock because they can cause devastating economic losses. These ticks reduce animal wellness by feeding on blood and inducing anemia. Ticks also spread protozoan parasites that cause disease. USDA APHIS established the Cattle Fever Tick Eradication Program (CFTEP) in 1906 as a cooperative state-federal cattle fever eradication effort, which shared program costs and cooperation between the Federal government, States, local governments, and individual livestock producers. By 1943, the United States was declared free of cattle fever ticks (CFTs) (*Rhipicephalus* (*Boophilus*) *annulatus* and *R. (B.) microplus*), except in the Permanent Tick Quarantine Zone (PTQZ) in South Texas that extends more than 500 miles from Del Rio, Texas to the Gulf of America.

To ensure U.S. animal health continues to be unaffected by CFTs and associated diseases (such as bovine babesiosis), the CFTEP works to prevent their establishment in the United States. Ongoing CFTEP efforts in Southern Texas include surveillance and patrolling for stray or smuggled tick-infested livestock, livestock movement quarantines, treatment of tick-infested animals, and vacating of tick-infested pastures and premises. Although these methods are effective, the free movement of wildlife CFT hosts—such as white-tailed deer (*Odocoileus virginianus*) and other hoofed animals—and stray livestock across unfenced properties, along with a rise in the white-tailed deer population, have contributed to increased CFT infestations in South Texas in recent years. CFT infestations cause lengthy quarantine restrictions on cattle herds and increased herd management efforts and expenses to cattle producers in the tick-free zone in South Texas. When tick-infested animals enter pastures, they compromise the effectiveness of ongoing tick eradication measures, such as vacating pastures and systematically treating cattle for ticks.

Game fencing can provide an additional tool toward CFT eradication and prevention efforts by serving as a deterrent to the tick spread by white-tailed deer and nilgai antelope (*Boselaphus tragocamelus*) from Mexico, thereby reducing or preventing tick outbreaks in the tick-free area. Eight-foot-high game fencing can serve as a deterrent to the unrestricted movement of tick hosts, and, in this way, enhance ongoing CFT eradication activities. Installing high game fencing could also support the program's efforts by reducing the need for chemical treatments for tick-infested cattle, thereby lowering associated animal production costs.

In response to increasing tick infestations, USDA APHIS has installed 8-foot-high game fencing at selected locations in Cameron and Willacy Counties, Texas, with the landowner's consent and agreement:

In 2021, USDA APHIS conducted an Environmental Assessment (EA) titled *Cattle Fever Tick Eradication Program Fence Deterrent in Cameron and Willacy Counties, Texas* (USDA APHIS, 2021), which evaluated the potential effects of the proposed fencing on the human environment. The assessment examined the high game fencing installations at the following locations: (1) Port Mansfield, (2) El Sauz Section 1, (3) Floodway, (4) Floodway-El Toro, and (5) Laguna Atascosa National Wildlife Refuge (LANWR) Unit 4 (Figure 1). LANWR is a 110,000-acre wildlife refuge managed by the U.S. Fish and Wildlife Service (USFWS) and was described in the 2018 CFTEP EA, *Cattle Fever Tick Eradication on Laguna Atascosa and Lower Rio Grande Valley National Wildlife Refuges* (USDA APHIS, 2018). As described in the 2021 EA, the high game fencing proposed for LANWR Unit 4 would be placed on USFWS refuge property and private property, without obstructing Arroyo or any waterway.

In 2022, USDA APHIS evaluated an alternative high game fencing route for LANWR Unit 4 in the event landowner consent and agreement could not be obtained to place fencing on the privately owned land segment that was part of the originally proposed LANWR Unit 4 fence route (Figure 2). The potential environmental effects associated with installing the modified fencing on LANWR Unit 4 were assessed in a Supplemental Environmental Assessment (SEA), *Cattle Fever Tick Eradication Program Fence Deterrent in Cameron and Willacy Counties, Texas* (USDA APHIS, 2022).

The CFTEP recently (2023-2024) built a 4-mile fence on LANWR Unit 4, a portion of the 6.75-mile fence that was approved in 2021 (USDA APHIS, 2021) and 2022 (USDA APHIS, 2022), with the eastern end of the fencing stopping at the Lower Laguna Madre estuary. In 2024, the Texas Animal Health Commission (TAHC) observed that during drought conditions, areas of the Laguna Madre become dry, allowing nilgai to move around the high-game fencing (Figure 1). To address this issue, USDA APHIS is proposing a 0.23-mile eastward extension of the 6.75-mile existing high-game fence on LANWR Unit 4 approved in 2021 (USDA APHIS, 2021) and 2022 (USDA APHIS, 2022), toward Laguna Madre. The resulting 6.98 mile-fencing would be more effective in

controlling nilgai movements along the shore during low tides. This proposed extension is expected to increase the efficiency of the CFTEP fencing installed on LANWR Unit 4 (Figure 2 and Figure 3).

The potential environmental effects of this fence extension are evaluated in this supplemental assessment, which incorporates, by reference, the information from the 2021 Final EA and the 2022 Final SEA. Only new or updated information is included here, with cross-references to relevant sections in the above-mentioned previous assessments for the reader's convenience.

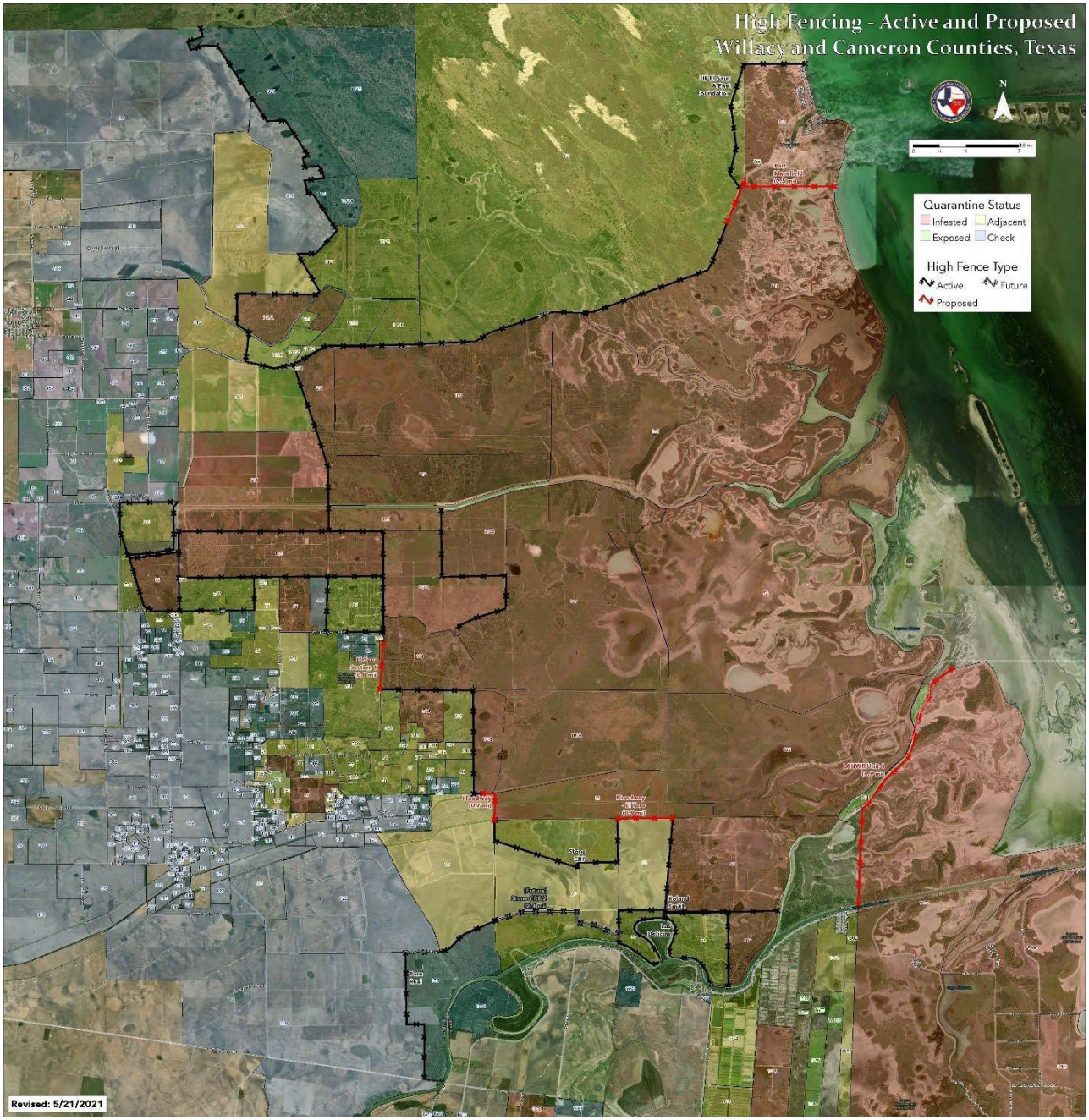

Figure 1. Proposed Fencing in Cameron and Willacy Counties, Texas, in FY21

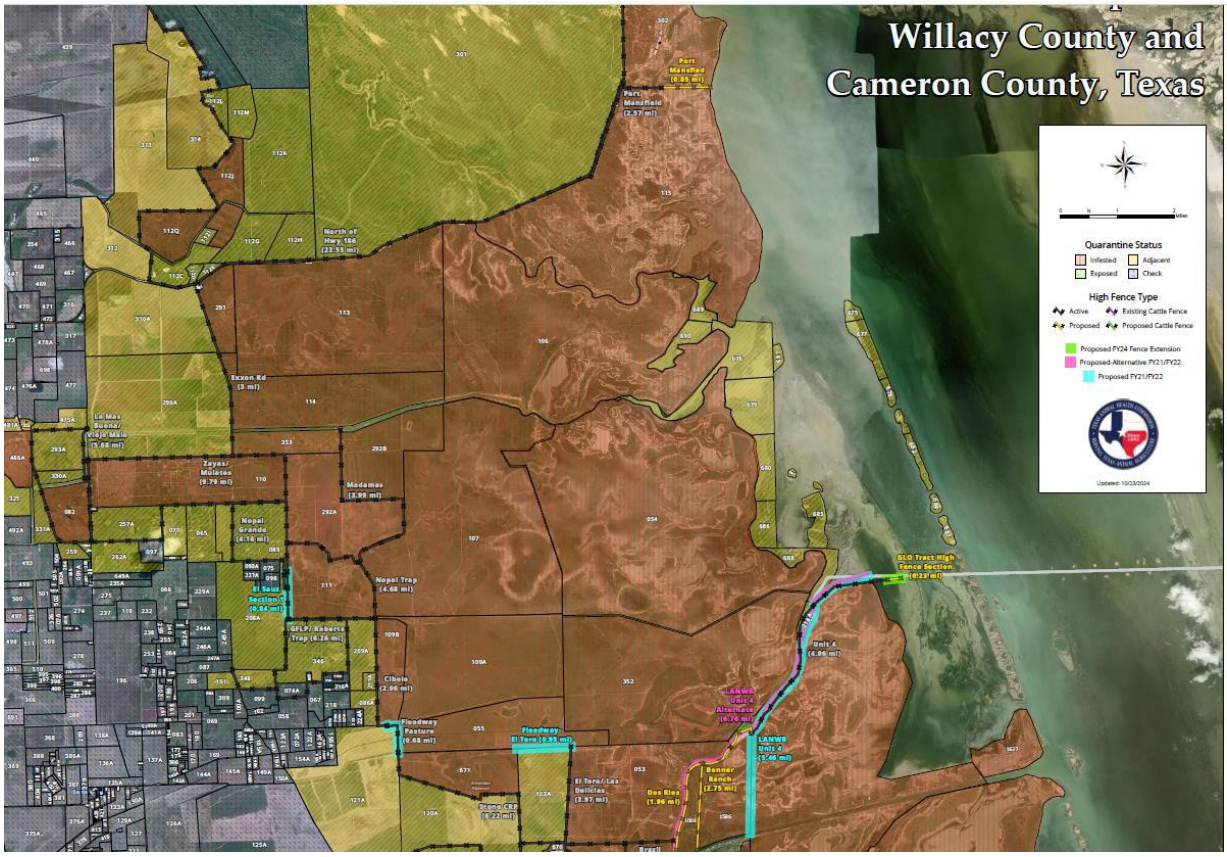

Figure 2. Proposed Fencing (blue) and Alternative (pink) in FY21/FY22, and Proposed Fence Extension (green) in FY25 in Cameron and Willacy Counties, Texas

Figure 3. Existing LANWR Unit 4 Fencing (yellow) and Proposed Fence Extension (blue)

This document is consistent with requirements in the National Environmental Policy Act of 1969 as amended (NEPA; 42 U.S.C. § 4321 et seq.), NEPA regulations promulgated by the Council on Environmental Quality (40 Code of Federal Regulations (C.F.R.) § 1500-1508) and APHIS implementing procedures at 7 C.F.R. part 372.

2 Alternatives

This SEA evaluates two alternatives: a no action alternative and a proposed action alternative.

Under the no action alternative, USDA APHIS would not fund the high-game fence extension on LANWR Unit 4. This no action alternative would allow Nilgai to continue moving along the existing high fence to areas of the Laguna Madre that are dry under drought conditions and go around to the other side of the fencing. Nilgai have recently adapted to this path, compromising the effectiveness of CFTEP in this area. In other words, the no action alternative would leave a gap between the endpoint of the existing LANWR Unit 4 fence and Laguna Madre, allowing Nilgai to pass through and potentially spread cattle fever ticks as wildlife hosts in the region (USDA APHIS, 2018).

Under the preferred action alternative, USDA APHIS would fund a 0.23-mile extension of the high-game fence on LANWR Unit 4, which would help prevent nilgai from moving around the current fencing where dry land occurs during drought conditions. This proposed action supports the ongoing CFT eradication efforts by closing the gap that currently allows Nilgai to bypass the fence. The high game fence extension, designed as a continuation of the 6.75-mile section approved in 2021 and 2022, would run from GPS coordinates (26.4104558, -97.3735279) to GPS coordinates (26.4107707, -97.3704173), extending from west to east (Figure 2 and Figure 3).

The proposed high-game fencing would maintain the same specifications as those outlined in the 2021 Final EA (USDA APHIS, 2021) and 2022 Final SEA (USDA APHIS, 2022), including its characteristics and installation, to effectively deter both the movements of targeted wildlife and burrowing animals attempting to dig under the fence skirting. TAHC would be responsible for erecting and maintaining the fence. Potential environmental effects associated with the fence extension are analyzed in this Supplemental EA, which also incorporates, by reference, the information from the above-mentioned 2021 EA and 2022 SEA on the LANWR Unit 4 fencing.

USDA APHIS also considered, but dismissed, other alternatives. For instance, the option of fencing with underground skirting was dismissed due to the material cost, labor and maintenance cost, and the short lifespan of the skirt in saline ground conditions. So, the cost of skirting would have exceeded the approved fence project budget.

USDA APHIS aims to use the best available and cost-effective technologies in its programming activities. Additional fencing locations were also considered but excluded, as USDA APHIS prioritized locations where fencing could be installed effectively within budget constraints and where it would be most effective in reducing CFT host movements.

3 Affected Environment

This chapter provides an overview of the physical environment of the LANWR Unit 4 area, where the proposed fence extension would be constructed. The environmental resources covered in this section include soil, vegetation, agriculture and livestock, wildlife, water quality, air quality, and the human and socioeconomic environment. The information on these resources is available in the 2021 Final EA (USDA APHIS, 2021) and is incorporated here by reference. Only new or updated information is presented in this chapter. When referencing the information from the 2021 Final EA, specific sections are cited for easy cross-referencing.

3.1 Soil

Soil types in Cameron and Willacy Counties were detailed in Section 3.1 of the 2021 Final EA (USDA APHIS, 2021), and this information is incorporated in this SEA by reference. Figure B-1 (Appendix B) provides a map of soil types at the proposed fence location and the surrounding areas.

The soils on LANWR Unit 4 are primarily classified as Group C/D and Group D. Group C/D soils have a naturally slow infiltration rate due to a high-water table, which improves slightly if drained. Group D soils are characterized by slow infiltration rates and high runoff potential (Figure B- 1).

3.2 Vegetation

Vegetation types within Cameron and Willacy Counties are described in Section 3.2 of the 2021 Final EA and are incorporated in this SEA by reference. Figure D-1 (Appendix D) presents the vegetation types at the proposed fence location on LANWR Unit 4 and Figure 4 provides an aerial view of vegetation types found along the Arroyo Colorado and LANWR Unit 4. The vegetative cover along the proposed fence line primarily consists of emergent herbaceous wetlands and shrub/scrub habitats. Main species of marine grasses include widgeon grass, manatee grass, shoal grass, and halophila. Additionally, several species of marine algae are present in the waters of Laguna Madre (NPS, 2016).

As noted in the 2021 Final EA, the TAHC inspected the vegetation along the entire length of the existing fences on LANWR Unit 4 and did not observe any native brush habitat or native thorn shrubs. However, TAHC did identify overgrown grasses and mesquite tree branches along the proposed fencing route.

Figure 4. General View of Vegetation Types Along Arroyo Colorado and Near LANWR Unit 4

(Source: TAHC)

3.3 Agriculture and Livestock

The agricultural landscape, land use, and products of Cameron and Willacy Counties are described in Section 3.3 of the 2021 Final EA (USDA APHIS, 2021), which is incorporated here by reference. The proposed fence extension is located on LANWR refuge property and does not intersect with any farmland with livestock.

3.4 Wildlife

The wildlife in Cameron and Willacy Counties, as detailed in Section 3.4 of the 2021 Final EA, is also incorporated here by reference. The proposed fence extension lies within LANWR Unit 4, where critical habitats for threatened and endangered species, as identified by the USFWS's IPaC report (generated on 10/4/2024), may be present. These species include:

- Mammals: Gulf Coast jaguarundi (*Puma yagouaroundi cacomitli*), ocelot (*Leopardus pardalis*), and West Indian manatee (*Trichechus manatus*).

- Birds: cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*), eastern black rail (*Laterallus jamaicensis jamaicensis*), northern aplomado falcon (*Falco femoralis septentrionalis*), piping plover (*Charadrius melodus*) and its critical habitat, and rufa red knot (*Calidris canutus rufa*).

- Reptiles: green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), hawksbill sea turtle (*Eretmochelys imbricata*), and loggerhead sea turtle (*Caretta caretta*).
- Additional species include certain clams, insects, and plants (see Section 4.4 for more on Endangered Species Act considerations).

3.5 Water Quality

LANWR Unit 4 is located within the Upper Pilot Channel-Laguna Madre Watershed (TPWD, 2022). The proposed fencing is an extension of an existing barrier on LANWR Unit 4 (Figure 2), located near the Arroyo Colorado River, which serves as the boundary between Cameron and Willacy Counties.

Figure C-1 (in Appendix C) illustrates water resources near the proposed fence. The Arroyo Colorado watershed primarily supports agriculture, including row crops, sugar cane, and citrus; however, rapid urbanization has led to water quality issues in the tidal segment (Segment 2201), which is listed by the Texas Commission on Environmental Quality (TCEQ) as impaired due to low dissolved oxygen (DO) concentrations, largely from dredging activities near the Port of Harlingen, and high bacteria levels that exceed state standards. Detailed information on water quality in Cameron and Willacy Counties is provided in Section 3.5 of the 2021 Final EA and is incorporated here by reference.

3.6 Air Quality

The Clean Air Act (CAA) regulates air emissions from various sources to protect the health and the well-being of the public. Air quality in Cameron and Willacy Counties is extensively discussed in Section 3.6 of the 2021 Final EA, and that information is included here by reference.

As of October 31, 2024, Cameron and Willacy Counties are not classified as nonattainment areas for any criteria pollutants (EPA, undated), meaning the Air Quality Index (AQI) in both counties falls in the "good" category (0–50) as defined by the U.S. Environmental Protection Agency (EPA).

3.7 Tribal and Historical Properties

According to the Bureau of Indian Affairs (BIA), there are no federally recognized active tribes or ceded lands in Cameron and Willacy Counties, Texas (HUD, 2023a,b).

Using HUD's Tribal Directory Assessment Tool (TDAT), USDA APHIS identified a few historical properties within Cameron and Willacy Counties, none of which are near the program area. Both USDA APHIS and the Texas Historic Commission (THC)/State Historic Preservation Office

(SHPO) concluded that the proposed action would have no effect on historic properties. Letters of concurrence from THC/SHPO with Tracking #202101612 (dated 10/30/2020) and tracking #202108832 (dated 05/03/2021) are on file. This information is detailed in Section 3.7 of the 2021 Final EA and is incorporated into this SEA by reference.

3.8 Human Health and Socioeconomics

The proposed fence extension is on refuge land, away from residential areas. General descriptions of the human and socioeconomic environments in Cameron and Willacy Counties are available in Section 3.8 of the 2021 Final EA (USDA APHIS, 2021) and are incorporated here by reference.

4 Potential Environmental Consequences

This chapter examines the potential environmental effects of the no action alternative and the preferred alternative.

Under the no action alternative, USDA APHIS would not fund the eastern extension of the existing high game fence on LANWR Unit 4. Instead, the program would continue its non-fencing operations to prevent the spread of CFTs, as outlined in Chapter 1. The existing fence on LANWR property would remain. However, receding water levels in Laguna Madre from recent drought conditions have resulted in dry land being exposed between the fence and Laguna Madre, allowing the Nilgai populations to move freely around the barrier. Without the proposed fence extension, tick- infected Nilgai and other wildlife such as white-tailed deer could move more freely northward through the existing fence gap spreading CFTs.

Under the preferred alternative, USDA APHIS would fund a 0.23-mile extension of the high game fence on LANWR Unit 4 to cover the new dry land gap and prevent Nilgai and wildlife movement north of the current fence line into Willacy County. This extension would be better to contain wildlife movement within the LANWR Unit 4 property, supporting ongoing CFT eradication efforts. Although wildlife movement across unfenced areas could continue to contribute to CFT spread, USDA APHIS would evaluate other areas for additional fencing to improve containment.

The following sections analyze the environmental consequences of each alternative concerning soil, vegetation, agriculture and livestock, wildlife, water quality, air quality, and human and socioeconomic environments.

4.1 Soil

Under the no action alternative, the existing high game fencing on LANWR Unit 4 would not be extended; as a result, no soil effects would result.

Under the preferred alternative, the existing high game fencing on LANWR Unit 4 would be extended; the installation activities for the fence extension may cause minor, temporary soil disturbances along the proposed segment. The equipment use may cause a short-term soil compaction limited to the installation zone. Soil erosion effects would also be temporary, and berms may be installed to manage erosion near the fence. Since fencing is permeable to water, it would not affect flooding risks in the Laguna Madre area. As vegetation regrows post-installation, soil stability would return to preinstallation conditions.

4.2 Vegetation

Under the no action alternative, no vegetation effects would occur as no additional fencing would be installed. Routine vegetation control around the existing fence would continue as described in the 2021 Final EA.

Under the preferred alternative, installing the additional fence segment would require clearing and leveling a 5- to 20-foot-wide strip, affecting less than 0.7 acres. Vegetation removal may temporarily alter soil moisture, affecting local microflora. However, as vegetation regrows, these effects would subside. Routine control may involve manual vegetation removal along the fence to maintain its integrity, with preference for physical over chemical methods to limit the environmental effect.

4.3 Agriculture and Livestock

Under the no action alternative, the existing fence would not be extended, and no direct effects on agriculture or livestock are expected, as the area is a wildlife refuge rather than farmland. However, stray livestock and Nilgai could still move through the dry land gap created by drought conditions, potentially spreading CFTs.

Under the preferred alternative, extending the fence would further restrict the potential CFT-host wildlife from moving north into Willacy County from LANWR Unit 4, likely reducing the CFT spread to surrounding agricultural areas. This containment may improve livestock health by reducing tick transmission risks.

4.4 Wildlife

Under the no action alternative, the current fence configuration may not effectively limit CFT host wildlife movement, particularly during droughts when dry land is exposed between the end of the current fence and the Laguna Madre. Nilgai and other wildlife can follow the high game fencing and go around the end to move north into Willacy County and continue spreading CFTs.

Under the preferred alternative, the proposed fence extension would further restrict larger animals such as nilgai and deer, thereby reducing the CFT spread. The fencing design allows small animals to pass through, preserving connectivity for ocelots, jaguarundi, and tortoises while limiting effects on medium-sized animals. The fence's openings (7x12 inches) permit the passage of wildlife like coyotes, badgers, and various small mammals. However, temporary loss of ground cover may affect some species, although this would subside as vegetation recovers.

Endangered Species Act

Section 7 of the Endangered Species Act (ESA) and ESA's implementing regulations require Federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered species or result in the destruction or adverse modification of critical habitats.

A report generated from the USFWS' Information for Planning and Consultation (IPaC) tool provides the threatened and endangered species, species proposed for listing, candidate species, and designated and proposed critical habitats in the proposed fencing area. These species include:

- Mammals: Gulf Coast jaguarundi (*Puma yagouaroundi cacomitli*), ocelot (*Leopardus pardalis*), and West Indian manatee (*Trichechus manatus*).
- Birds: cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*), eastern black rail (*Laterallus jamaicensis* ssp. *jamaicensis*), northern aplomado falcon (*Falco femoralis septentrionalis*), piping plover (*Charadrius melodus*) and its critical habitat; and rufa red knot (*Calidris canutus rufa*) and its proposed critical habitat.
- Reptiles: green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), hawksbill sea turtle (*Eretmochelys imbricata*), and loggerhead sea turtle (*Caretta caretta*).
- Mussels: Salina mucket (*Potamilus metnecktayi)*.
- Insects: monarch (*Danaus plexippus*).
- Plants: Texas ayenia (*Ayenia limitaris*) and South Texas ambrosia (*Ambrosia cheiranthifolia*).

The USFWS conducted an intra-service Section 7 consultation for the proposed fence extension on the LANWR. The USFWS, Texas Coastal and Central Plains Ecological Services Field Office concurred with the determination that, with the implementation of certain conservation measures, the proposed fence extension is not likely to adversely affect the Gulf Coast jaguarundi, ocelot, cactus ferruginous pygmy-owl, northern aplomado falcon, piping plover and its critical habitat, rufa red knot and its proposed critical habitat, eastern black rail, South Texas ambrosia, and Texas ayenia, and is not likely to jeopardize the continued existence of the monarch, in a document dated December 5, 2024 (USFWS, 2024).

Bald and Golden Eagle Protection Act

LANWR Unit 4 lies over 150 miles from known eagle breeding areas, significantly reducing potential effects on these species. While sightings of bald eagles have been recorded in the region, their distance from the project area implies minimal risk.

Golden eagles are rare in Texas, especially in the eastern region, including Cameron and Willacy counties. Sightings are more common in western Texas (Texas A&M, undated), making it unlikely for golden eagles to be present in Cameron and Willacy counties.

Fencing installation could potentially disturb nests of bald or golden eagles; however, neither species is known to nest in the project area, so no nest disturbance is expected. Non-breeding eagles are also unlikely to be found in these counties, minimizing the chance of disruption. If an eagle or nest is identified in the area, proposed fencing activities would be adjusted to minimize any effect, and program personnel would coordinate with the State Wildlife Service to follow eagle management protocols (TPWD, undated).

Migratory Bird Treaty Act

The 1918 Migratory Bird Treaty Act (16 U.S.C. 703–712) and related details on the Central Flyway and migratory birds are discussed in the 2021 Final EA and are incorporated by reference (USDA APHIS, 2021).

Migratory birds face various threats, including habitat loss, human disturbance, predation by domestic cats, exotic bird introductions, and collisions with tall structures, especially at night or in fog (Shackelford *et al*., 2005). Installation of the proposed fence extension may temporarily disturb migratory birds and some nesting sites if vegetation is removed. To mitigate such an effect, USDA APHIS will conduct migratory bird surveys before clearing vegetation between March 15 and September 15, as recommended by USFWS. Vegetation buffers (≥100 feet for songbirds and 500 feet for other species) would be established around potential detected nests until fledging or abandonment (USFWS, 2022).

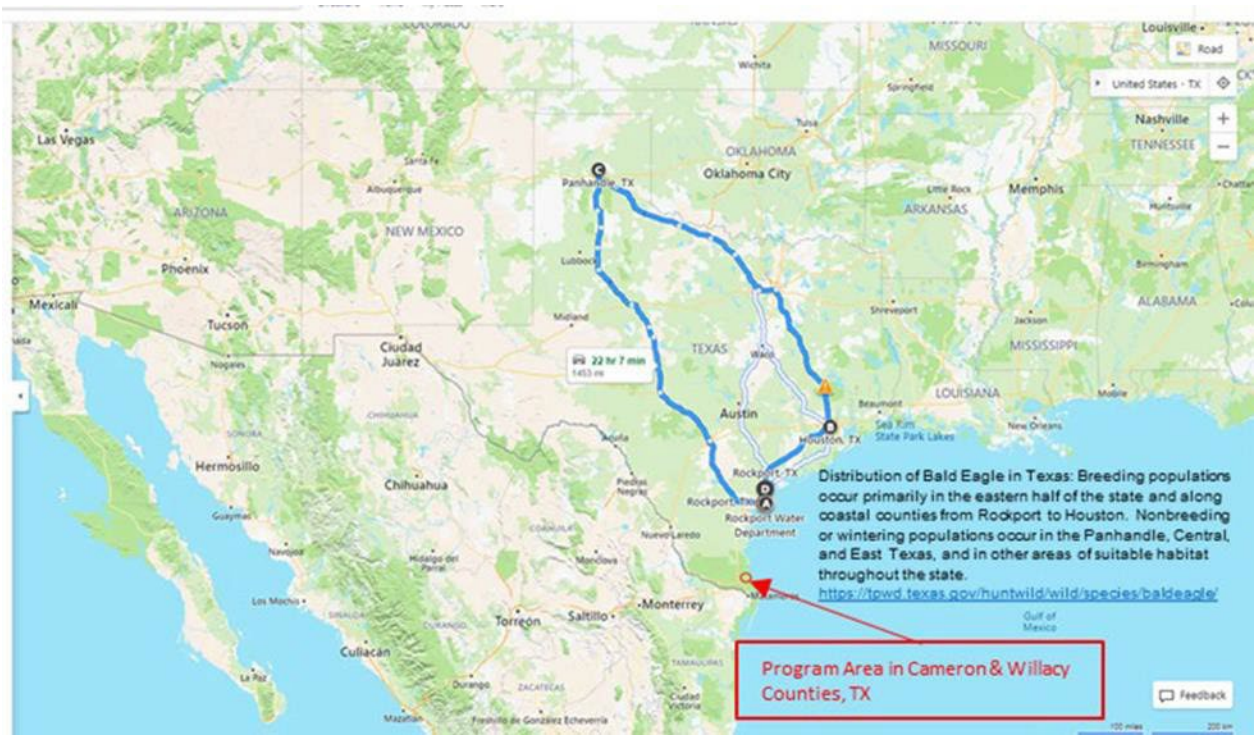

Figure 5. Approximate distribution of Bald Eagles in Southern Texas (blue polygon).

4.5 Water Quality

Under the no action alternative, current fencing and maintenance practices would continue as described in the 2021 Final EA (USDA APHIS, 2021), with no anticipated change to water quality. Seasonal vegetation removal will not significantly disturb soil, so substantial erosion affecting water quality is unlikely.

Under the preferred alternative, extending the fence on LANWR Unit 4 may increase surface runoff until vegetation regrows, but the fence's permeability to stormwater and the corrosion-resistant design will prevent long-term water quality effects. The fencing extension will not span any waterways. USDA APHIS consulted the International Boundary Water Commission, which confirmed there were no concerns if the fence does not cross water (USDA APHIS, 2022).

USDA APHIS adheres to best practices to minimize effects on water bodies, such as locating fence lines away from water bodies, using water-permeable fence, minimizing disturbance to existing vegetation and allowing plants to regenerate in the cleared area after fence installation, conducting regular inspections to control potential erosion and sedimentation during fencing activities, and eventually applying earthen diversion berms in some locations to prevent erosion beneath the fence (USDA APHIS, 2018).

4.6 Air Quality

Air pollution during fencing installation and maintenance may release dust and other materials in the air. However, USDA APHIS will minimize vehicle trips to reduce such dust and pollutant emissions, and by using best practices including preserving low-growing vegetation, mulching, and spraying water on exposed soil. Given the small scale of CFTEP projects, airborne pollutants are expected to remain low, temporary, and quickly dissipate, resulting in no long-term air quality effect under either alternative.

4.7 Tribal and Historical Properties

The proposed high game fencing activities will not affect any Tribal or historic properties in Cameron and Willacy counties. USDA APHIS previously verified this with the HUD Tribal Directory Assessment Tool, and the SHPO concurred (BIA, undated; USDA APHIS, 2021).

USDA APHIS found no historic property within a 0.5-mile radius of the proposed program area (USFS, 2024). So, the agency's proposed action would not alter, change (restore or rehabilitate), modify, relocate, abandon, or destroy any historic buildings, edifices, or nearby infrastructure. USDA APHIS program activities would not directly or indirectly alter the characteristics of any listed historic property that makes it eligible for listing in the National Register of Historic Properties. USDA APHIS activities would not use heavy equipment that could create noise levels requiring auditory protection. Any visual, atmospheric, or auditory effects during the installation of high- game fencing would be limited in duration, intensity, and area.

4.8 Human Health and Socioeconomics

Cattle fever ticks pose no direct public health risk. The proposed program area on LANWR Unit 4 is uninhabited by humans; it is part of the Laguna Madre. The 2021 Final EA discusses the human health and socioeconomic effects in Cameron and Willacy Counties (USDA APHIS, 2021), and that information is incorporated in this supplemental EA by reference.

The no action alternative may affect humans across the region by allowing unrestricted tick entry and dissemination to occur with concurrent increased risks to human health as humans can serve as hosts to a wide variety of other ticks that carry diseases (USDA APHIS, 2018).

The proposed action alternative may affect workers, but risks for such effects are unlikely because workers are trained personnel who wear proper personal protection equipment during fencing activities (USDA APHIS, 2018). This alternative provides beneficial effects associated with the fencing, including (a) reducing tick spread and disease transmission, (b) reducing human health risk of other pests and/or diseases from excluded wildlife and livestock, (c) leading to more productive animal husbandry, and (d) eventually reducing costs of meat and animal products to U.S. human

populations. Also, hunters in areas with game fencing are likely to take tick-free healthier deer (USDA APHIS, 2018).

4.9 Executive Orders Compliance

USDA APHIS complies with Executive Orders (EOs) addressing issues relevant to this EA including child safety risk and the limitation to access the information by non-English speakers.

Data from the U.S. Census Bureau (USCB, 2023) indicates that children under 5 years represent 5.7% of the population of Willacy County and 7.0% of the population of Cameron County, and that youth under 18 years represent 23.3% and 28.2% of the populations of those counties, respectively. USDA APHIS complies with EO 13045, “Protection of Children from Environmental Health Risks and Safety Risks,” by ensuring child safety and considering the likelihood and consequences of exposure to its proposed action.

Likewise, persons aged 5 years and over speaking language other than English at home represent 61.0% of the population of Willacy County and 70.9% of the population of Cameron County. USDA APHIS complies with EO 13166, "Improving Access to Services for Persons with Limited English Proficiency,” by involving Spanish language speakers and other non-English speakers in its program decision-making.

The preferred alternative would not negatively affect the communities’ standard of living, social behavior, or local needs. Since the proposed fence extension sits on LANWR Unit 4 within a wildlife refuge, its likelihood of interfering with human socioeconomic activities in residential or agricultural areas is null or minimal. Overall, USDA APHIS does not anticipate any adverse effects on children and non-English speakers, these communities will benefit from the preferred alternative, with minimal exposure to potential effects associated with the LANWR Unit 4 fencing extension.

5 Reasonably Foreseeable Effects

NEPA 42 U.S.C. § 4321 et seq. requires that agencies consider reasonably foreseeable environmental effects of the proposed agency action. Such reasonably foreseeable effects may include effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Such effects can also result from actions with individually minor but collectively substantial effects taking place over a period.

USDA APHIS has several ongoing and historical programs in southern Texas, primarily focused on plant health and vertebrate pest control. For example, Figure 6 highlights USDA APHIS programs such as CFTEP and Fruit Fly Eradication Program in southern Texas, including Cameron and Willacy Counties. It should be noted that this map does not display all previous USDA APHIS pest eradication initiatives in the region (e.g., the boll weevil eradication program, imported fire ant quarantine program, vertebrate pest control efforts, etc.). These programs, occurring across time and space, can present environmental challenges.

To address challenges posed by aggregate effects, USDA APHIS relies on the best available scientific research to guide program decisions. For instance, upon detecting pests like boll weevil, imported fire ants, or Mexican fruit flies, chemical treatments are applied only to specific locations or to quarantined products bound for non-quarantine areas. Such treatments are both targeted and infrequent, and they use environmentally safe products registered by the USEPA, suited for a wide range of agricultural and non-agricultural uses.

CFTEP's use of fencing as a tick deterrent also helps reduce the need for chemical applications, which can accumulate in soil over time. This decrease in chemical use indirectly benefits workers by reducing their exposure and associated health risks. Additionally, it supports the livestock industry by lowering the likelihood of cattle fever ticks developing resistance to chemical treatments (USDA APHIS, 2021).

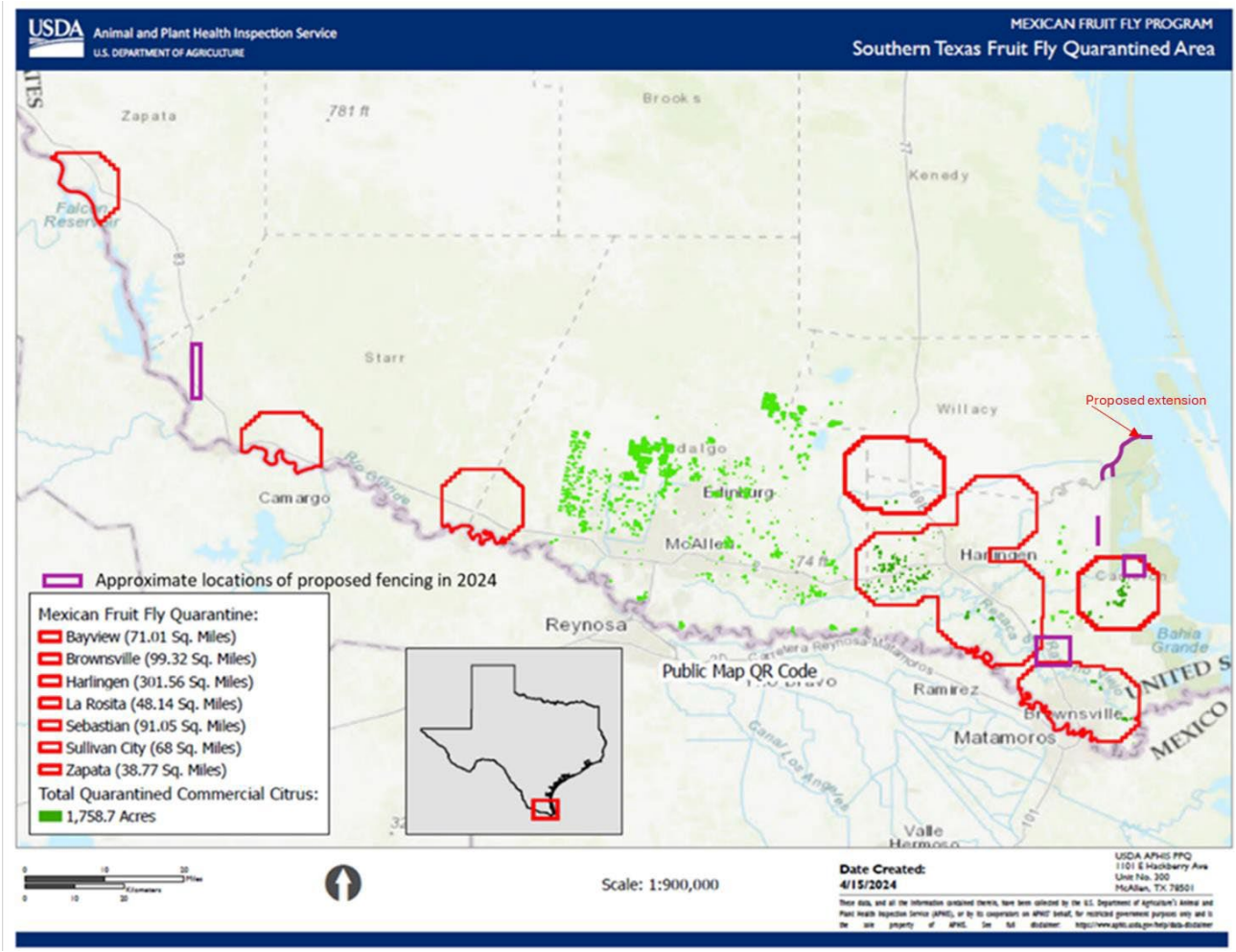

Figure 6. Potential aggregate effects of CFTEP (purple) and Mexican Fruit Fly Program (red).

Chemical use in the CFTEP, fruit fly program and other pest control initiatives is carefully regulated to minimize effects on non-target fish and wildlife species. As a result, the chemicals employed in these USDA APHIS programs pose minimal to no risk to most non-target populations. Since around 1938, trails established to support CFTEP surveillance of cattle and wildlife moving across the Rio Grande from Mexico have led to the loss of some native habitats. These paths require periodic clearing on private and public lands, but the associated habitat loss remains relatively minor compared to the economic benefits gained in the affected counties. Trail lengths are expected to remain stable, and maintenance activities are typically coordinated with private landowners and public agency managers to minimize ecological effects.

The aggregate effects of USDA APHIS activities, including the actions evaluated in this supplemental EA, are minimal relative to the effects of other ongoing and future activities in Cameron and Willacy Counties, such as agriculture, energy production, highway maintenance and

builders, and property development. When assessed against the current environmental baseline and other past, present, and near future activities, these aggregate effects amount to a small, incremental, and generally transient change to the human environment, making them negligible. Additionally, some of these aggregate effects may be beneficial, including reduced CFT population and tick-borne diseases (e.g., babesiosis), and increased economic advantages to the cattle industry and local communities.

Persons and Agencies Consulted

CFTEP operates as a collaborative initiative involving the Federal government, the State of Texas, local governments, and individual livestock producers, all of whom share the program's costs. To compile, share, and review information for this Environmental Assessment, USDA APHIS consulted several individuals and agencies, including:

Texas Animal Health Commission
Field Operations Office
25833 Zinnia County Road
Raymondville, Texas 78580

U.S. Department of Agriculture, Animal and Plant Health Inspection Service
Policy and Program Development, Environmental Risk and Analysis Services
4700 River Road, Unit 149
Riverdale, MD 20737

U.S. Department of Agriculture, **Animal and Plant Health Inspection Service**
Veterinary Services Strategy and Policy, National Cattle Fever Tick Eradication Program
Natural Resources Research Center
Bldg. B, 3E89
2150 Centre Avenue
Fort Collins, CO 80526-8117

U.S. Fish and Wildlife Service
Ecological Services, Alamo Sub-Office
3325 Green Jay Rd
Alamo, Texas 78516

Appendix A. References

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Appendix B. Soil Types Surrounding the Proposed Fencing Location

The seven classes of hydrologic soil groups, along with their definitions, are as follows:

Group A: These soils are deep, well-drained sands or gravelly sands, characterized by high infiltration and low runoff rates.

Group B: Group B soils are deep and well-drained with a moderately fine to moderately coarse texture, exhibiting a moderate rate of infiltration and runoff.

Group C: This group includes soils that either have a layer that impedes the downward movement of water or are fine-textured, resulting in slow infiltration rates.

Group D: Group D consists of soils with slow infiltration rates and high runoff potential. This category includes clays with high shrink-swell potential, soils with a high water table, soils with a clay pan or layer near the surface, and soils that are shallow over nearly impervious materials.

Group A/D: These soils naturally have a slow infiltration rate due to a high water table, but if drained, they will have high infiltration and low runoff rates.

Group B/D: Soils in this category have a naturally slow infiltration rate due to a high-water table, but if drained, they will have a moderate infiltration and runoff rate.

Group C/D: Group C/D soils naturally have a slow infiltration rate due to a high-water table, but when drained, they exhibit a slow rate of infiltration.

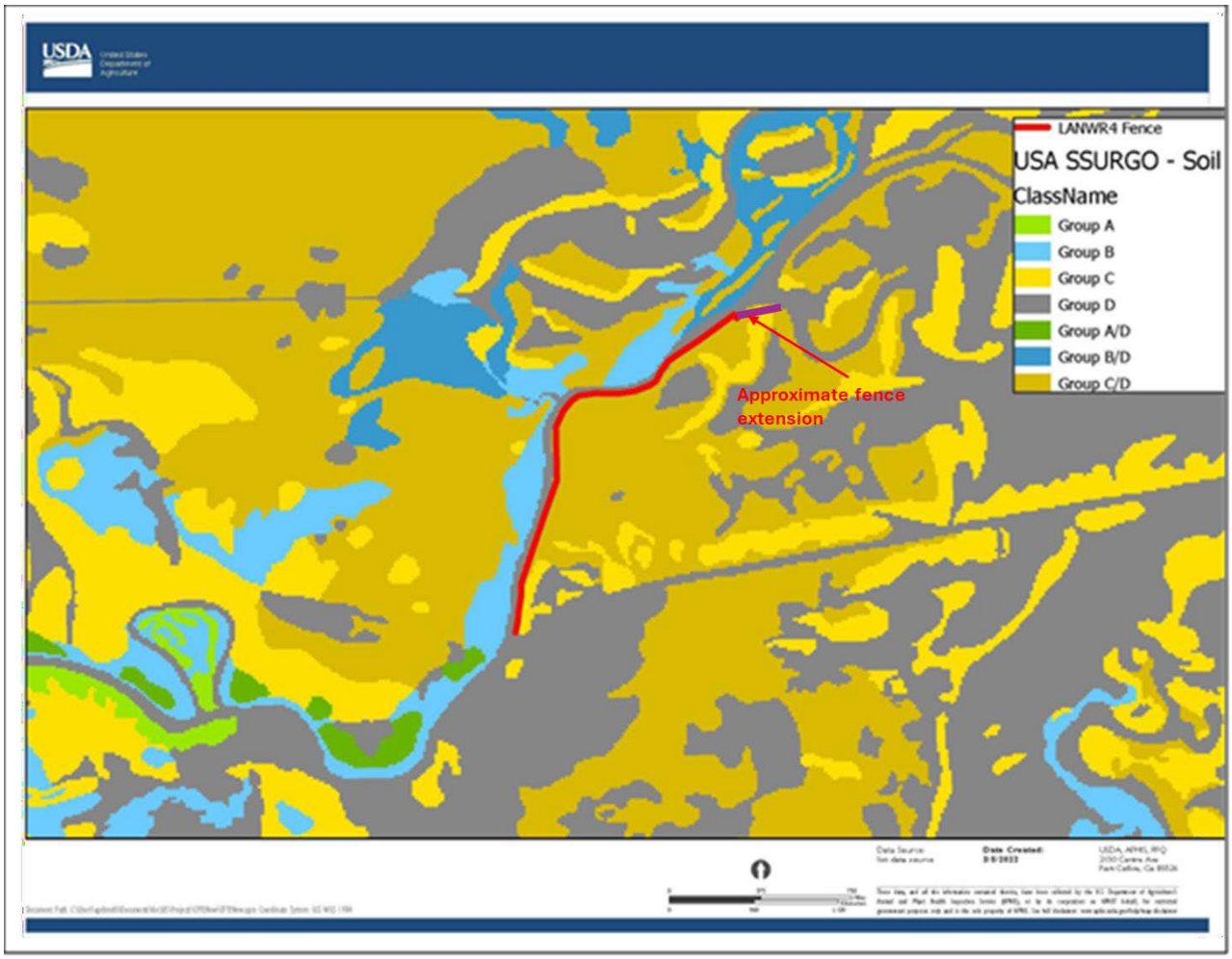

Figure B-1. Soil Types at Proposed Fencing Location on LANWR Unit 4 and Surroundings

Appendix C. Water Resources Surrounding the Proposed Fencing Location

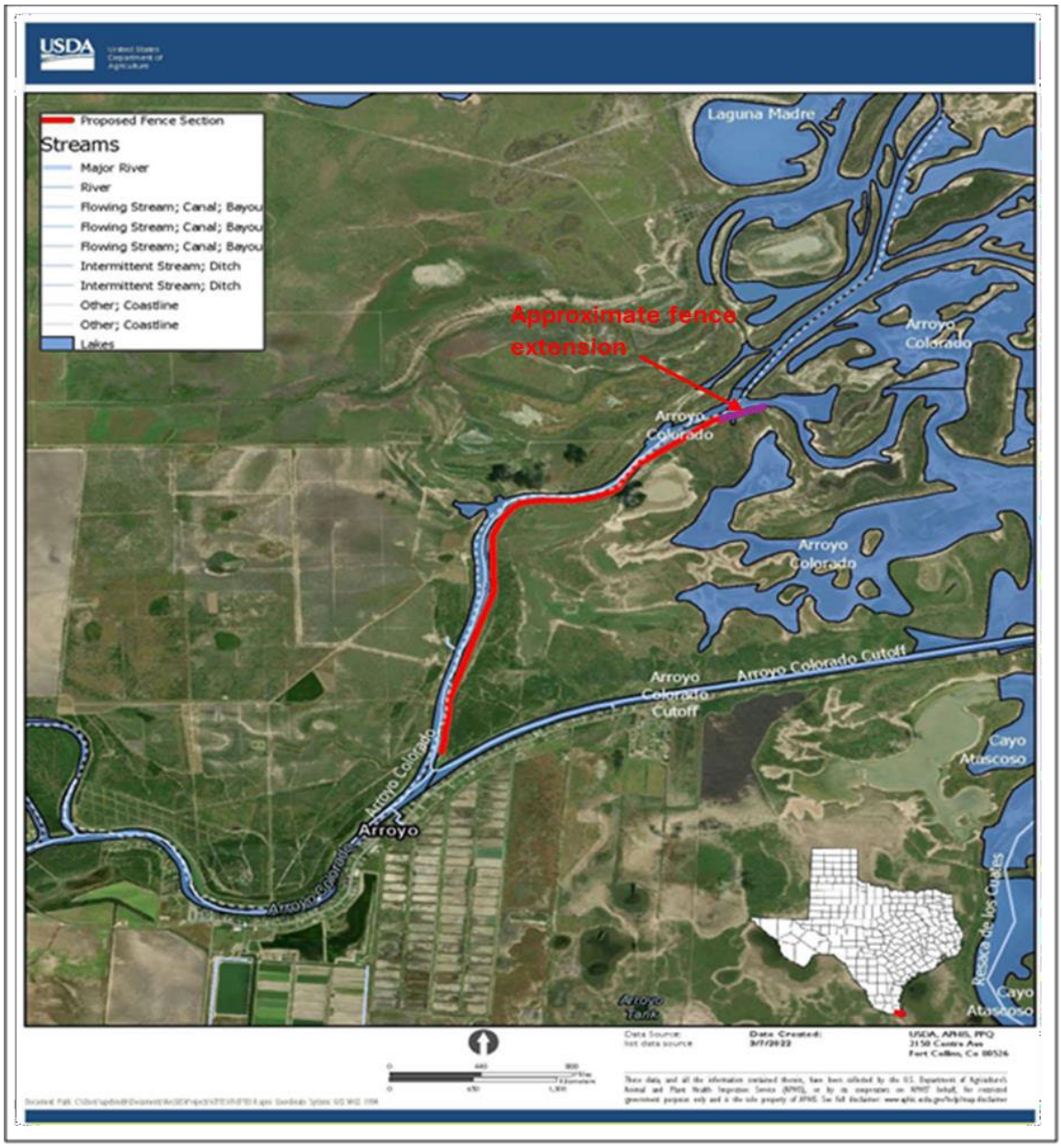

Figure C-1. Water resources located around LANWR Unit 4.

Waterbody and distance from LANWR Unit	
Arroyo Colorado	0 miles
Arroyo Colorado Cutoff	1.17 miles
Cayo Atascoso	2.69 miles
Laguna Madre	3.00 miles

Appendix D. Vegetation Types at LANWR Unit 4

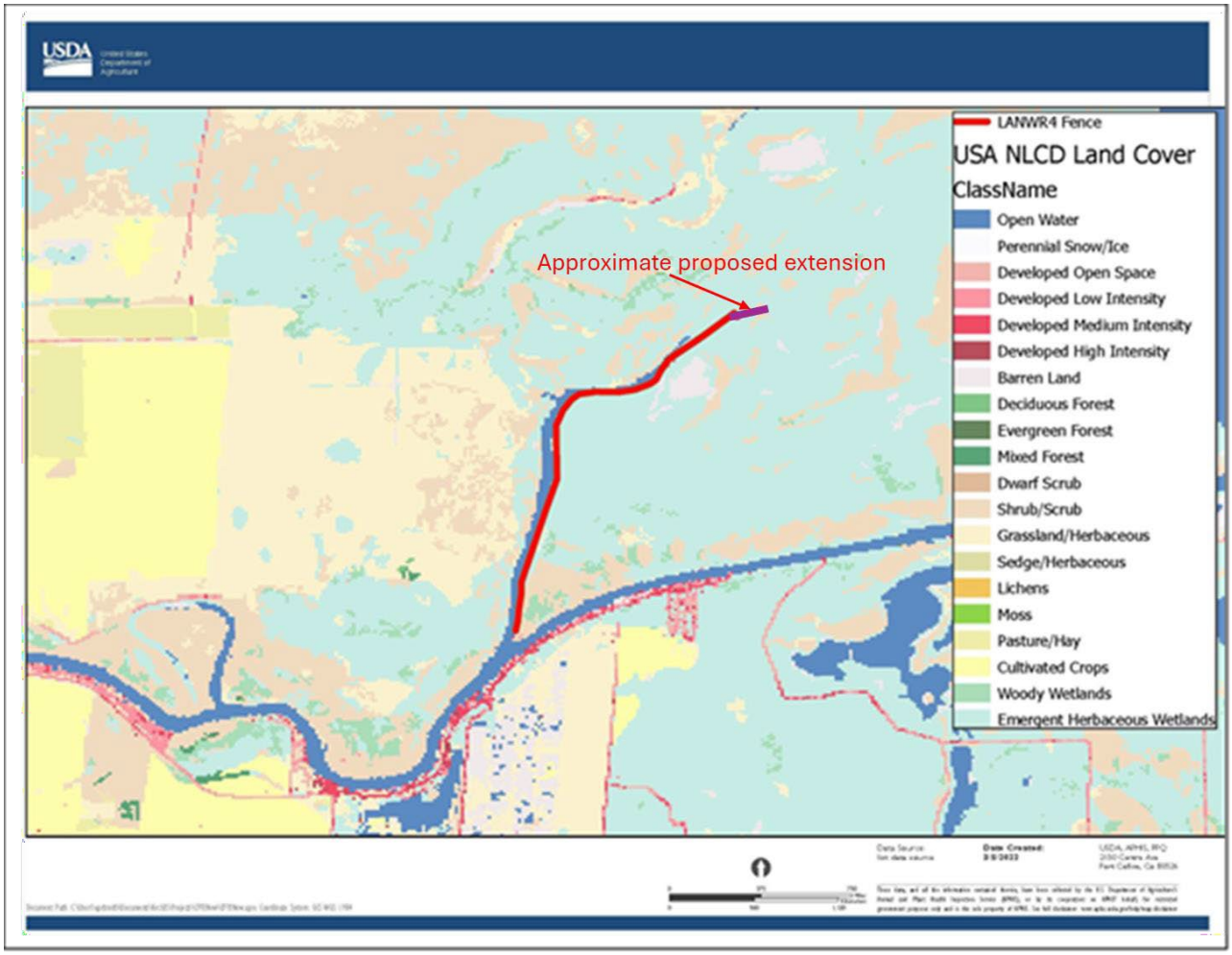

Figure D-1. Vegetation Types at the Proposed Fencing Location on LANWR Unit 4