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

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

Final Environmental Assessment

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1 Purpose and Need

The U.S. 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 (*Rhipicephalus* (*Boophilus*) *annulatus* and *R. (B.) microplus*) are species of ticks that can carry parasites such as *Babesia bigemina* or *B. bovis* that cause the protozoan disease babesiosis commonly called cattle fever or tick fever. Cattle fever ticks (CFTs) are a growing concern for livestock producers, property owners, and wildlife managers. Their presence on United States properties, livestock, and wildlife subject owners and managers to quarantine and treatments to eliminate ticks in the prevention of cattle fever or bovine babesiosis.

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) 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 Mexico (Figure 1).

With the increasing U.S. trade and animal movement between the U.S.-Mexico border, the risk of CFTs entry and establishment in the United States may rise. These ticks attach to host livestock animals such as cattle and horses, and wildlife species including white-tailed deer (*Odocoileus virginianus*), nilgai antelope (*Boselaphus tragocamelus*), and red deer (*Cervus elaphus*), which all serve as hosts of CFTs (TAHC, 2021). To protect the U.S. cattle industry and ensure a continuous animal health nationwide, it is essential to prevent CFTs establishment in the United States. To achieve this goal, USDA-APHIS will continue to inspect imported animals at all ports of entry.

The USDA-APHIS Veterinary Services and the Texas Animal Health Commission (TAHC) are responsible for overseeing regulations preventing and eliminating CFTs under the statutes of the State of Texas. In the current assessment, USDA-APHIS is proposing to fund the installation of

high game fencing at specific locations in Cameron and Zapata Counties, Texas, to limit the spread CFTs by free-ranging animals into the tick-free area.

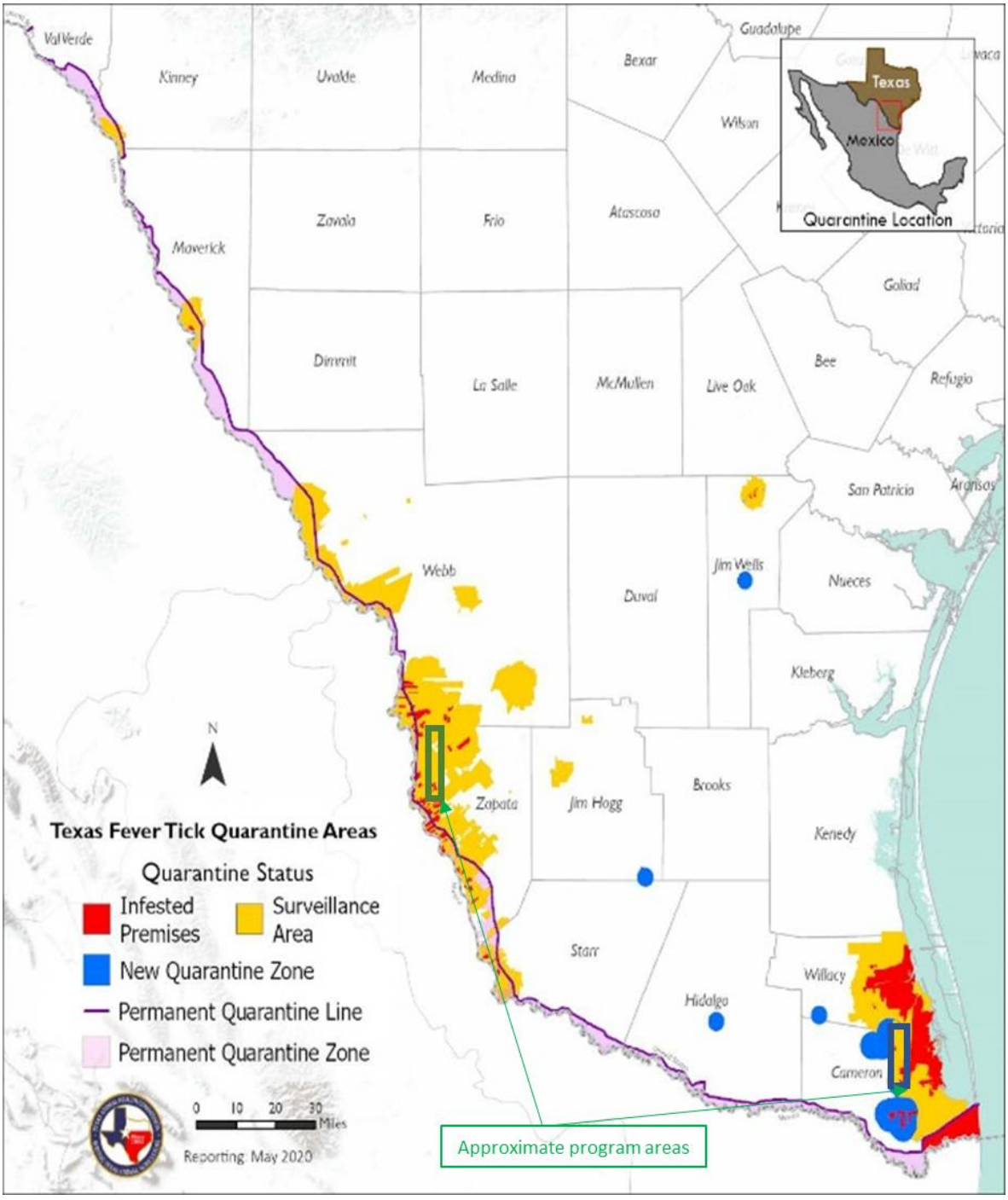

Figure 1. Texas fever tick quarantine areas
Source: (TAMU, 2020) www.tahc.texas.gov/news/2020/2020-05-15_FeverTicksSpread.pdf

By preventing the establishment of CFTs in the United States, the program simultaneously eliminates the often-fatal bovine disease (babesiosis) from the U.S. cattle populations. In South Texas, the main protozoan[1] pathogens that cause babesiosis are *Babesia bovis*, *B. bigemina*, and *B. divergens*. Typically, acute bovine babesiosis is characterized by fever, anemia, hemoglobinuria[2], and high mortality in sick animals. Surviving animals remain persistently infected and become reservoirs for parasite transmission (He *et al*, 2021). There are no vaccines or drugs available to prevent or control the disease, and there are no pesticides approved for treating CFTs-infested pastures (TAMU, 2018).

Without the presence of CFT, there is no biological transmission of these *Babesia* organisms. CFTs infected with the protozoa feed on cattle and release the protozoa into the bloodstream. The protozoa break down the cellular membrane of red blood cells leading to anemia, jaundice, and the infected animal may die. Infected cattle exhibit neurological disturbances characterized by incoordination, seizures, muscle tremors, hyperexcitability, aggressiveness, blindness, head pressing, and coma.

The life cycle of CFTs consists of four stages: egg, larva, nymph, and adult (USDA-APHIS, 2018a). They are a one-host tick, meaning that they feed on only one host during their life cycle. A blood-engorged female tick releases 1,000 to 2,000 eggs into the surrounding environment after detaching from the host and before dying on the ground. This starts the life cycle again, and new hosts are sought by the larva after the eggs hatch. Many adult ticks are olive green while others are mottled yellow or olive brown in appearance (Figure 2).

Humans can also be infected and develop babesiosis. The first case of human babesiosis was reported in the 1950's, and the disease sporadically occurred in both North America and Europe in the subsequent decades. In the last decade, human babesiosis also appeared in Asia, South America, and Africa. Yang *et al.* (2021) report that over 20,000 cases of this disease have been reported in North America alone. In the United States, human babesiosis occurs primarily in the Northeastern and Midwest regions, and it is caused by *B. microti* (Ord and Lobo, 2015). While the disease is relatively rare it is significant because most cases present life-threatening infections in sick patients (Hildebrandt *et al*, 2021).

Additional information on CFT biology, history, concerns, and previous program activities are in the USDA-APHIS documents entitled *"Cattle Fever Tick Eradication Program Fence Deterrent in Cameron and Willacy Counties, Texas, Final Supplemental Environmental Assessment – April 2022"* (CFTEP Final SEA) (USDA-APHIS, 2022);*"Cattle Fever Tick Eradication Program Fence Deterrent in Cameron and Willacy Counties, Texas, Final Environmental Assessment – July 2021"* (CFTEP Final EA) (USDA-APHIS, 2021); "*Cattle Fever Tick Eradication Program – Tick Control Barrier, Maverick, Starr, Webb, and Zapata Counties, Texas, Final Environmental Impact Statement – May 2018*" (CFTEP FEIS) (USDA-APHIS 2018a); -"*Cattle Fever Tick Eradication on Laguna Atascosa and Lower Rio Grande Valley National Wildlife Refuges - February 2018*" (Final EA) (USDA-APHIS, 2018b),; and "*Cattle Fever Tick*

[1] Protozoan: single-celled microscopic organism in the Protista kingdom, such as an amoeba, flagellate, ciliate, or sporozoan.

[2] Hemoglobinuria is a condition in which the oxygen transport protein hemoglobin is found in abnormally high concentrations in the urine

Eradication Program Use of Ivermectin – January 2017" (Final EA) (USDA-APHIS, 2017), which are all incorporated in this EA by reference.

Figure 2. Cattle fever tick life stages, from left to right: larva, nymph, and adult engorged female
Photo credit: (USDA-APHIS, 2018a and TAMU, 2018)

Once TAHC and USDA-APHIS Veterinary Services determine that an area is infested by CFTs, a quarantine is imposed (Figure 1). Cattle on infested premises are then required to be treated with products that have been evaluated and approved for CFT eradication on a specific schedule according to the following three options (TAMU, 2018):

- Treat all cattle at 14-day intervals for 6-9 months in a dipping vat (or spray dip machine) with coumaphos;
- Treat all cattle with injectable doramectin at 25–28-day intervals for 6–9 months; or
- Vacate all CFT-infested pastures, which requires two consecutive dipping and inspections without finding ticks and moving these animals to non-infested premises. Vacating pastures is intended to eliminate ticks by removing the hosts. This option can be complicated when wildlife is involved. The TAHC or USDA will work with producers to develop a plan of action based upon their assessment of each situation.

Given that quarantine and treatment alone are not enough to eradicate CFTs in South Texas, high game fencing to deter the movement of wildlife hosts could be an additional measure. The purpose for providing funding toward the installation of high game fencing at specific locations in Cameron and Zapata Counties, Texas is to limit the spread of CFTs by wildlife hosts and other free-ranging animals. Some CFT hosts (such as white-tailed deer) easily jump over existing 4-foot-high fencing to forage in animal ranches. Thus, the proposed 8-foot-high game fencing

would deter the unrestricted movement of these animals and should enhance ongoing CFT eradication activities. The proposed game fencing is needed given the increasing number of CFT-infested premises observed outside of the Tick Permanent Quarantine Zone in southern Texas in recent years (Figure 3) and given the potential for CFTs and babesiosis to spread throughout the region including Cameron and Zapata Counties.

By limiting the movement of tick hosts (such as white-tailed deer and nilgai), the high game fence would help the CFTEP with quarantine efforts, reduce the need for acaricide (chemical) treatment of tick-infested animals, and decrease animal production costs in the areas of concern. Also, employees of TAHC and CFTEP, who are responsible for protecting animal health, may experience reduced workloads (USDA-APHIS, 2018a).

This environmental assessment (EA) 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. In this EA, USDA-APHIS analyzes the potential impacts on the human environment associated with the installation of high game fencing in certain locations in Cameron and Zapata Counties, Texas.

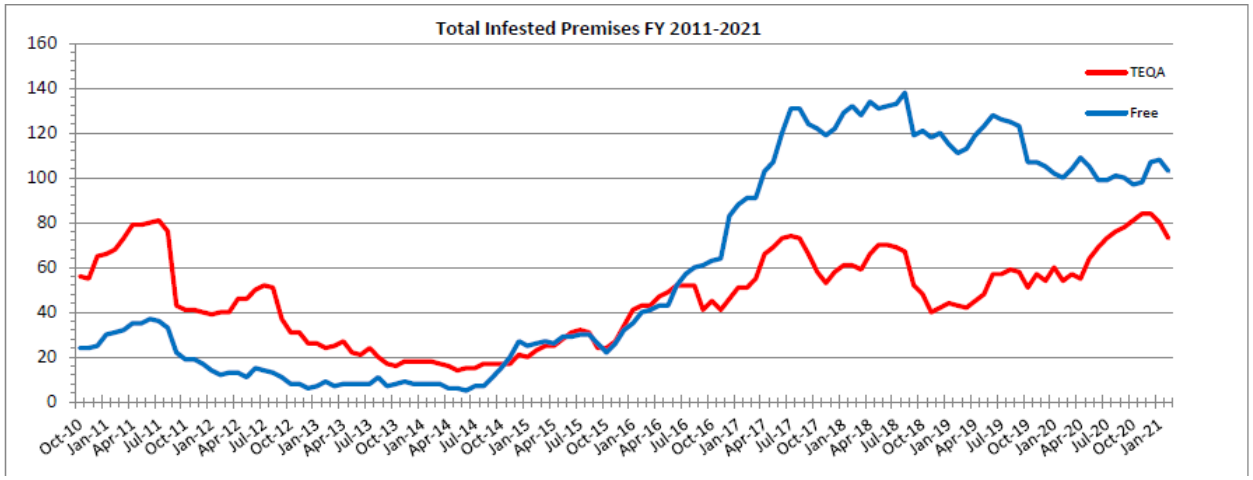

Figure 3. Infested premises in the Tick Eradication Quarantine Area (TEQA) and outside of the Tick Permanent Quarantine Zone (Tick Free Zone) from Fiscal Year (FY) 2011-2021
Source: (USDA-APHIS, 2021b)

2 Alternatives

This EA considers two alternatives, the no action alternative, and the proposed action alternative.

Under the no action alternative, USDA-APHIS would not provide any funding toward the installation of 8-foot-high game fencing in Cameron and Zapata Counties, Texas. A lack of physical barriers would allow the continued spread of CFT by infested wildlife hosts (USDA-APHIS, 2018a).

Under the proposed action alternative, USDA-APHIS would fund the installation of 8-foot-high game fencing at certain locations in Cameron and Zapata Counties, Texas. These locations are open natural areas often used by wildlife hosts, and/or cattle ranches, where low fences (4-foot high) currently exist. Figure 4 and Appendix B identify the locations of the proposed high game fences.

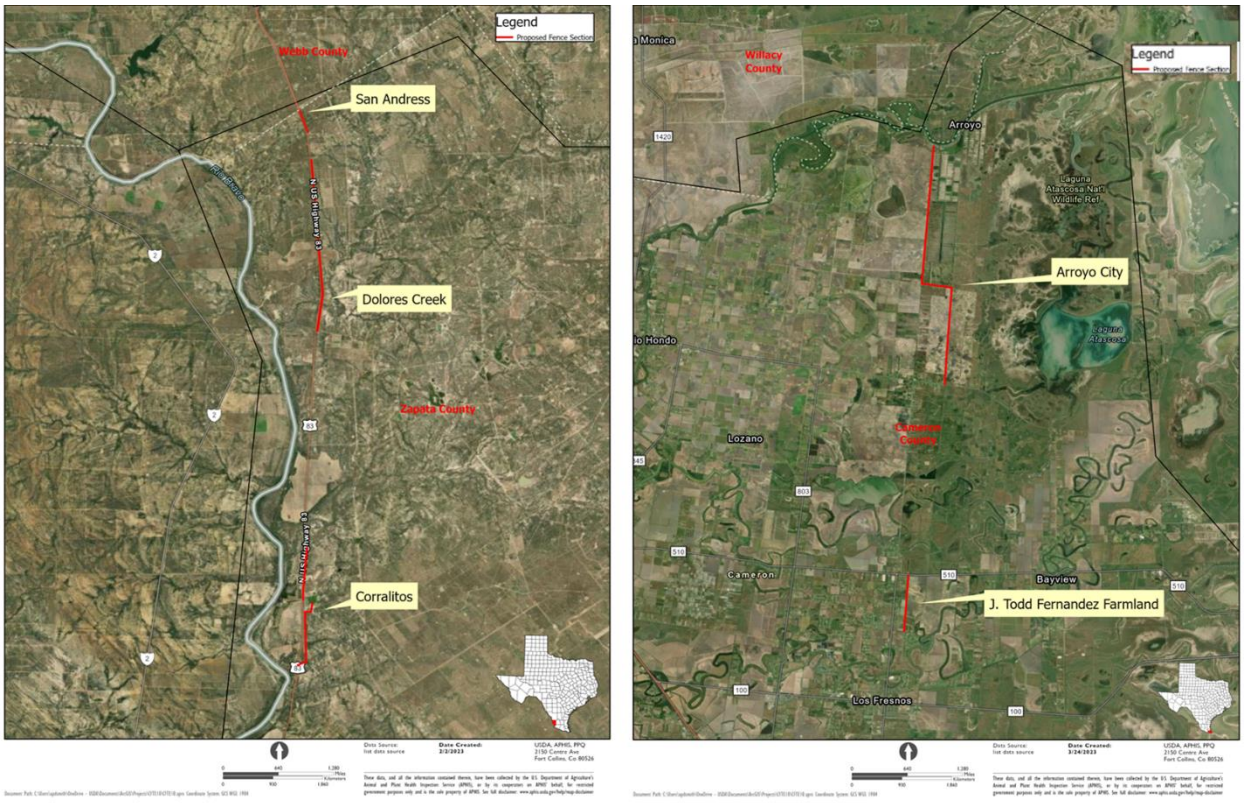

Figure 4. Aerial view of the proposed high game fencing in Cameron and Zapata Counties, TX.

The characteristics of the proposed game fencing and relevant information regarding its installation are described as follows:

- The design type of the fence is StaTite50 [2096-12-330'']), made of high-carbon galvanized steel ends, braces, angles, line posts (T-posts), and clips and 2 3/8-inch line pipe. The fencing design also may include other special needs, in some locations, to

prevent animals from being injured or to allow small wildlife species to pass through. The fence height is eight feet above ground, and segment lengths vary (Appendix B).

- Each segment would have rectangular openings (7 inches by 12 inches wide) in the galvanized[3] wire mesh, and the openings would apply to the entire length of fencing to allow the continuous movements of ocelot (*Leopardus pardalis*), jaguarundi (*Herpailurus yagouaroundi cacomitli*), and Texas tortoises (*Gopherus berlandieri*) across the region, which could then enable the genetic exchange between neighboring populations.
- A 2- to 3-foot-wide wire skirt of the game fence placed perpendicularly (90-degree angle) to its vertical segments and buried underground to limit the potential passage of nontarget species underneath. A single H-brace would be installed approximately every ¼-mile as stretch braces and would be set approximately 2 1/2 feet deep in concrete. Excavated soil would be scattered around each post. Earthen diversion berms may be required in some locations to prevent erosion beneath the fence. T-posts would be spaced at a maximum of 20-feet apart.
- The fixed-knot fencing would be made with a minimum of 12.5-gauge net wiring (17/96), class 3 (galvanized) material (Figure 5). Line and brace posts would include a rust-inhibited coating, primer, and green paint to prevent rusting.
- Staging sites for the installation of the high game fencing would occur in previously cleared areas, roads, or driveways to comply with environmental laws and other environmental review considerations. They would not impact federally listed threatened or endangered species or migratory birds. The staging sites would depend upon the location of the fencing and upon an agreement between USDA-APHIS and the concurring landowner.
- At the discretion of a landowner, if an existing lower fence is present in the area where game fencing is agreed to be installed, the game fencing either could replace an existing low or four-wire fence, or it could be constructed by adding to the existing low fence if it could support a higher fence extension.
- A crawler tractor would be used where needed to clear the vegetation and prepare the surface of the ground receiving the fencing.
- Landowners will periodically remove or mow vegetation adjacent to fences they are responsible for, while TAHC will assist with repairing and maintaining damaged fences. CFTEP Mounted Patrol Inspectors conducting routine surveillance along the Permanent Tick Quarantine Line would notify landowners and TAHC of potential fence repairs and maintenance needs.

Under the preferred alternative, USDA-APHIS will support the cost of materials for the high fencing, and TAHC will install and maintain the fence.

[3] Galvanized wires are usually coated steel materials with a layer of zinc that protects the steel from rust.

Figure 5. Example of wire-knot game fencing
(Photo credit: USDA, USDA-APHIS, 2018a)

3 Affected Environment

This chapter describes the physical environment in Cameron and Zapata Counties that could be potentially affected by both alternatives presented in Chapter 2. These counties are a part of the Gulf Coastal Plain of Southern Texas, in a region generally referred to as the Lower Rio Grande Valley or the Delta of the Rio Grande. Specific resources described in this chapter are soil, vegetation, agriculture and livestock, wildlife, water quality, climate, air quality, Tribal and historic properties, and the human and socioeconomic environment.

3.1 Soil

The portal of the University of North Texas (UNT, undated) presents the general soil map of South Texas (Figure 6), showing several soil types and associations with fine to coarse texture, that are well-drained, and that range from alkaline to slightly acidic clays and clay loams.

In Cameron County, the proposed fencing will be built on a ground dominated by Cameron clay (Cc), Lomalta loam (L), Laredo clay (La), Laredo silty clay loam (Lsc), Victoria loam (Vl), and Victoria fine sandy loam (Vs) soils.

In Zapata County, the proposed fencing would lay on a ground dominated by Brennan fine sandy loan (B), Gravelly soils (Gs), and Laredo silt loam (Li) soils (Figure 6).

3.2 Vegetation

According to the Texas Almanac (undated) the flora of Texas is divided into 10 vegetation areas, of which two (South Texas Plains, and the Gulf Prairies and Marsh) overlap with Cameron County and one (South Texas Plains) overlaps with Zapata County (Figure 7). Those vegetation types are further described in detail by Garza and Long (2021) and Texas Parks and Wildlife Department (TPWD, undated) as follows:

The flora of the South Texas Plains area includes vegetation types such as thorny shrubs, grasses, mesquite, acacia, cacti, prickly pear mixed with areas of grassland. The high plains region is primarily a short-grass prairie, known for its shrubby mesquites, juniper, cottonwood, and agricultural crops.

The Gulf Prairies area includes vegetation types such as marsh and salt grasses immediately at the tidewater; bluestems and tall grasses growing farther inland; and oaks, elm, and other hardwoods growing to some extent along streams. Invasive plants of the prairies affecting the productive grasslands include oak underbrush, Macartney rose, huisache, mesquite, prickly pear, ragweed, bitter sneezeweed, and broomweed. Most marsh areas are covered with sedges, bullrush, beakrush, smooth cordgrass, hay cordgrass, marsh millet, and maiden cane. Overall, the Gulf Prairies are fertile farmland, suitable for cattle grazing. Heavy grazing of these prairies changed the native vegetation into predominantly less desirable grazing vegetation, grasses such as broomsedge bluestem, smutgrass, threeawns, and tumblegrass. Between 41 and 50 percent of Cameron County is considered prime farmland and less than 1 percent of Zapata County is considered prime farmland. USDA-APHIS' proposed high game fencing will be installed on

grounds covered by one of several of the plant species found in the abovementioned vegetation areas.

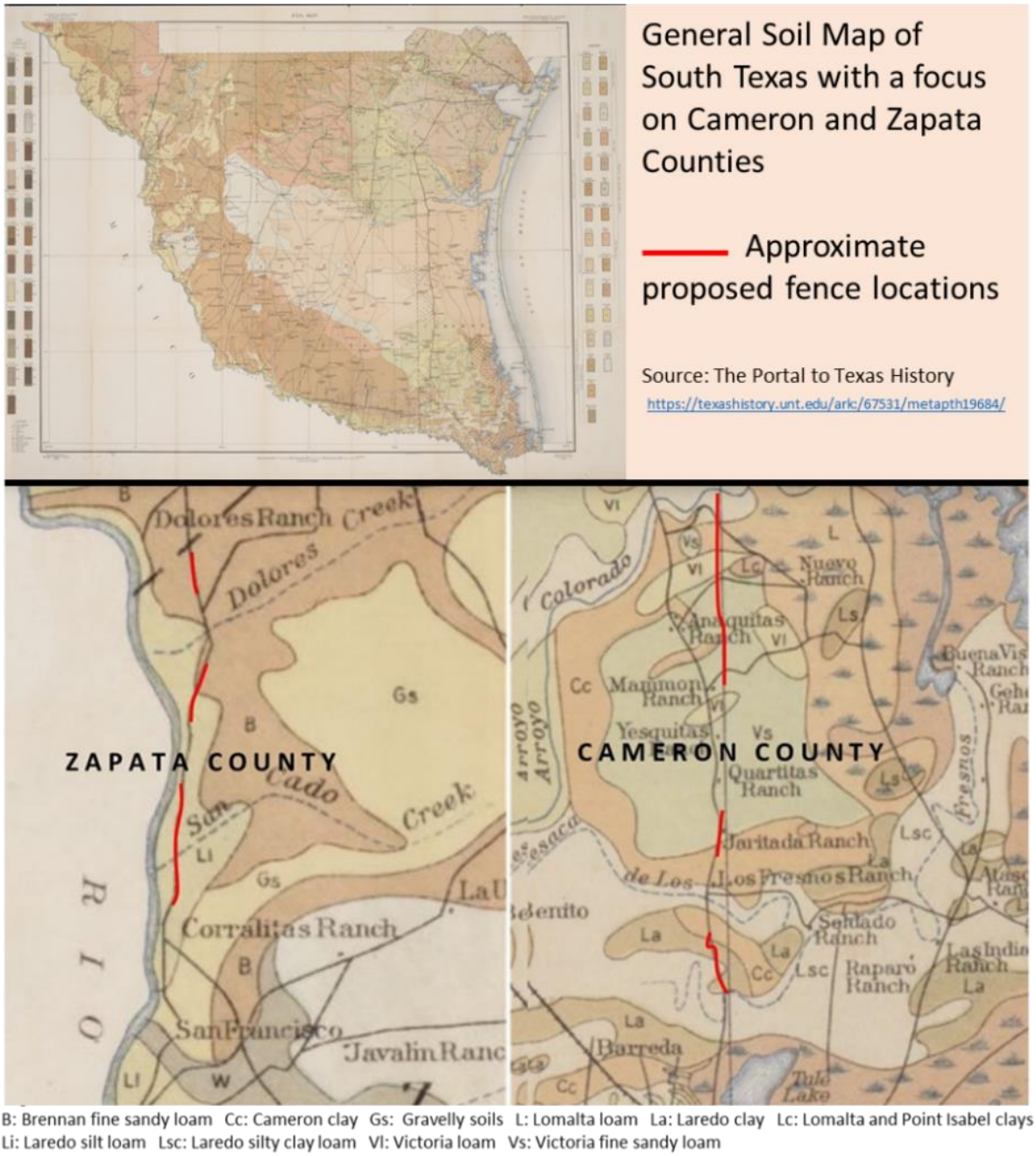

Figure 6. General soil map of south texas with a focus on cameron and zapata counties
(Source: UNT, undated, https://texashistory.unt.edu/ark:/67531/metapth19684/

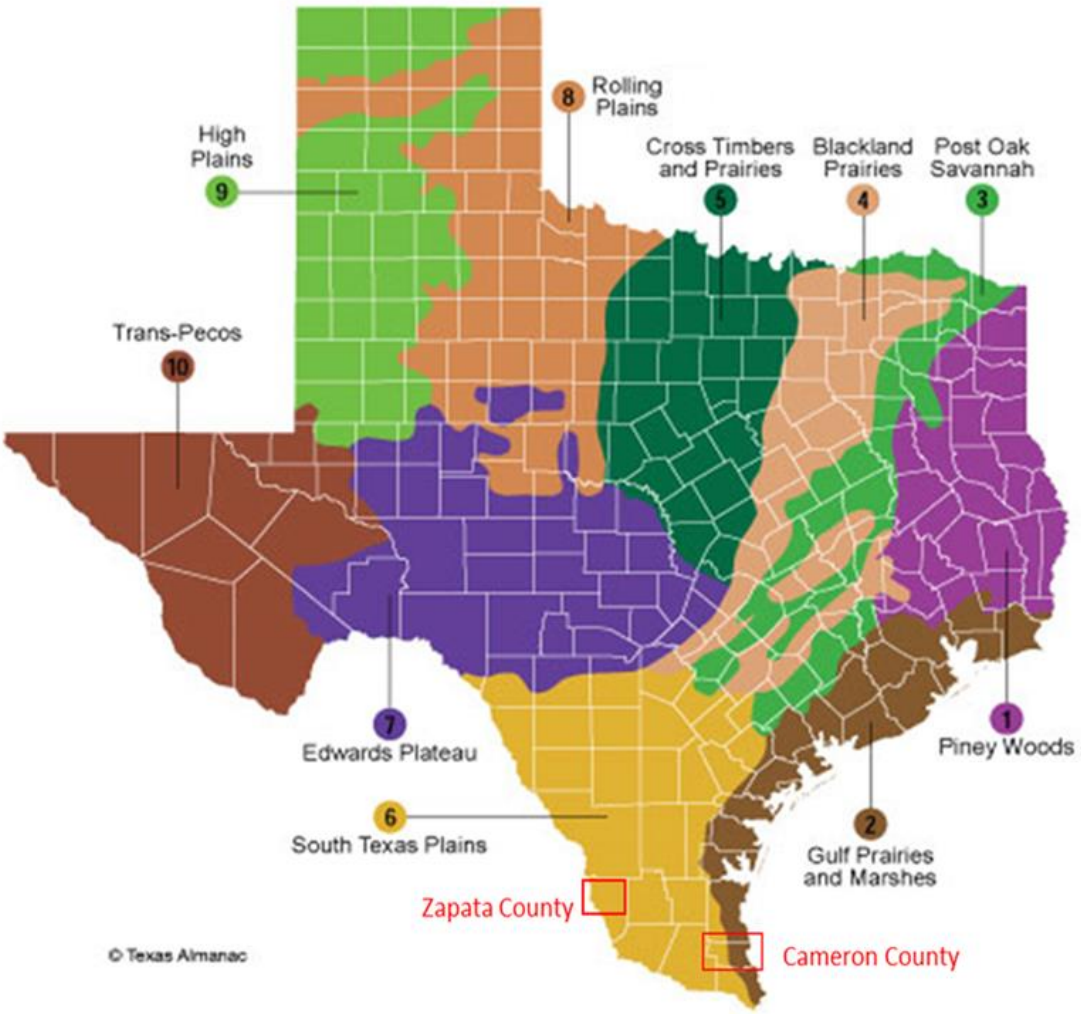

Figure 7. Vegetation Areas of South Texas
(Source : www.texasalmanac.com/articles/texas-plant-life)

TAHC recently inspected the specific vegetation types in the program area and did not observe any native brush habitat/native thorn shrub along the existing fence lines; however, TAHC noted overgrown grass and mesquite tree branches on all six proposed high game fence segments (Figure 8). Based on visual assessments, the dimensions of overgrown mesquite trees could vary from approximately 50–70 feet in length and 5–10 feet wide at various location of the proposed high fencing. The exact measurements of overgrown vegetation could not be obtained due to accessibility issues because of adverse weather limiting access.

Figure 8. General views of existing cattle fencing and vegetation types in the program area
(Picture credit: TAHC, 2022)

3.3 Agriculture and Livestock

The agricultural profile of Cameron County shows land use estimated as 78 percent farmland, 17 percent pastureland, 3 percent woodland, and 2 percent else (USDA-NASS, 2017). The total farmland area was estimated at 271,500 acres with about 1,420 farms, and more than 100,000 acres were irrigated (USDA-NASS, 2017). In 2017, the market value of agricultural products sold in Cameron County was approximately $122.5 million (USDA-NASS, 2017). This included market value for crops ($117,845,000), such as grains, oilseeds, dry beans, dry peas, tobacco, cotton and cottonseed, melons, potatoes, sweet potatoes, tree nuts, berries, and hay, along with nursery, greenhouse, floriculture, sod, cultivated Christmas trees, and short rotation woody crops. Livestock market value ($4,700,000) was primarily for cattle and calves, but also poultry and eggs, hogs and pigs, sheep, goats, wool, mohair, horses, ponies, mules, burros, and donkeys totaled less than one-tenth of the cattle and calves market value (USDA-NASS, 2017).

The agricultural profile of Zapata County shows land use estimated as 4 percent farmland, 89 percent pastureland, 4 percent woodland, and 2 percent as other land uses (USDA-NASS, 2017). The total farmland area was estimated as 437,918 acres in about 412 farms, and there were about 1,480 irrigated acres (USDA-NASS, 2017). Main crops and animals produced are like those listed for Cameron County (grains, oilseeds, dry beans, dry peas; tobacco, cotton and cottonseed; vegetables, melons, potatoes, sweet potatoes; fruits, tree nuts, berries; nursery, greenhouse, floriculture; cultivated Christmas trees, short rotation woody crops; and other crops and hay). In 2017, the market value of agricultural products sold in Zapata County was over $6 million, of which livestock, poultry, and livestock products accounted for about $5.9 million and $436,000 for crops (USDA-NASS, 2017).

Most crops are grown under irrigation and may include cotton, corn, cantaloupe, watermelon, onion, tomato, bell pepper, cabbage, spinach, various herbs, and sorghum. Raising beef cattle is a major agricultural enterprise in the county, involving careful management of available rangeland, pastureland, and hayland. Rangeland or native grassland, unlike pasture or hayland, receives no regular cultural treatment, such as irrigation, fertilizer, weed control, or tillage (Garza and Long, 2021).

3.4 Wildlife

Texas native wildlife and bird species are rich and varied. The mammals and bird species listed in this section are unlikely to be all found in the program area. According to the Texas Parks and Wildlife Department (TPWD, undated) there are 142 species of wild animals in Texas, including "extremely rare species". Some common wild animal species include white-tailed deer (*O. virginianus*), nilgai antelope (*B. tragocamelus*), jaguar *(Felis onca),* mountain lion *(F. concolor),* Virginia opossum *(Didelphis virginiana),* yellow-haired porcupine *(Erethizon dorsatum),* ocelot *(Leopardus pardalis),* javelina or collared peccary *(Tayassu tajacu),* common raccoon (*Procyon lotor*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), jaguarundi *(Herpailurus yaguarondi)*; striped skunk (*Mephitis mephitis*), nine-banded armadillo (*Dasypus novemcinctus*), free-tailed bat *(Tadarida brasiliensis);* black-tailed jackrabbit (*Lepus californicus*), Mexican ground squirrel *(Spermophilus mexicanus);* eastern cottontail (*Sylvilagus floridanus*), American beaver (*Castor canadensis*), gray fox (*Urocyon cinereoargenteus*), gray-footed

chipmunk *(Tamias canipes),* black bear *(Ursus americanus),* American bison *(Bos bison),* and American badger (*Taxidea taxus*) (Texas Almanac, 2021).

There are more than 540 species of birds in Texas representing about three fourths of all different species found in the United States, including the endangered red-cockaded woodpecker *(Leuconotopicus borealis*), swallow-tailed kite (*Elanoides forficatus*), purple martin (*Progne subis*), various species of warblers (in the order of Passeriformes), bluebirds (*Sialia* spp.), bald eagle (*Haliaeetus leucocephalus*), etc. (TPWD, undated).

In the 2022 - 2023 hunting seasons (TPWD, 2022), most animals targeted by hunters included alligators (*Alligator mississippiensis*), plain chachalacas *(Ortalis vetula),* doves (*Columbidae* spp.), ducks (*Anatidae* spp.), Canada geese (*Branta canadensis*), javelinas (*T. tajacu*), common quail (*Coturnix coturnix*), rails (*Rallidae* spp.), common gallinules *(Gallinula galeata),* common moorhens (*Gallinula chloropus*), sandhill cranes (*Antigone canadensis*), teals (*Anas crecca carolinensis*), wild turkeys (*Meleagris gallopavo*), white-tailed deer (*O. virginianus*), Wilson's snipes (*Gallinago delicata*), and woodcock (*Scolopax rusticola*).

In South Texas, a few mammal species are listed by the U.S. Fish and Wildlife Service (FWS) as endangered, including the ocelot (*Leopardus pardalis*) and Gulf Coast jaguarundi (*Herpailurus yagouaroundi cacomitli*). Chapter 4 of this assessment discusses potential Endangered Species Act issues in Cameron and Zapata Counties, Texas.

3.5 Water Quality

Under Section 303d of the Clean Water Act (CWA), states, territories and authorized tribes are required to develop lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes. In Texas, the Texas Commission on Environmental Quality (TCEQ)'s Surface Water Quality Monitoring (SWQM) Program monitors and evaluates physical, chemical, and biological characteristics of aquatic systems as a basis for effective policy.

Cameron and Zapata Counties overlap some major water bodies including Arroyo Colorado River and Laguna Madre (Cameron County) and Falcon Reservoir, which is adjacent to Rio Grande (Zapata County).

The Arroyo Colorado River flows mostly eastward some 90 miles (143.2 km) from Lake Llano Grande into the hyper-saline lagoon (Laguna Madre) crossing Hidalgo, Cameron, and Zapata Counties. The Arroyo Colorado River is connected to three floodways (Raymondville Drain, the Zapata Main, and the North Floodway) that run into the Lower Laguna Madre collecting urban storm water and agricultural non-point source pollutants (Mahmoud, 2019). The Arroyo Colorado watershed (Figure 9), is mostly used for agricultural production, including row crops, sugar cane, and citrus fruit; however, rapid urbanization and population growth contribute to water quality problems in the tidal segment (Segment 2201). This segment is impaired by a depressed dissolved oxygen (DO) concentration generally caused by dredging near the Port of Harlingen; it is also impaired by high levels of bacteria that exceed the State's standard (TCEQ, 2013).

Falcon International Reservoir (Falcon Lake or Dam) is located about forty miles southeast of Laredo in Zapata County, on the Rio Grande (TWDB, undated). Water from this reservoir is used for conservation, flood control, hydroelectric energy, and recreation. The Rio Grande and associated reservoirs supply water for various uses, including residential, wildlife, recreational, and agricultural needs. Excessive ammonia is the main cause of the toxicity of the Rio Grande waters, particularly its tidal segment 2304 (USDA-APHIS, 2018a and IBWC, 2019).

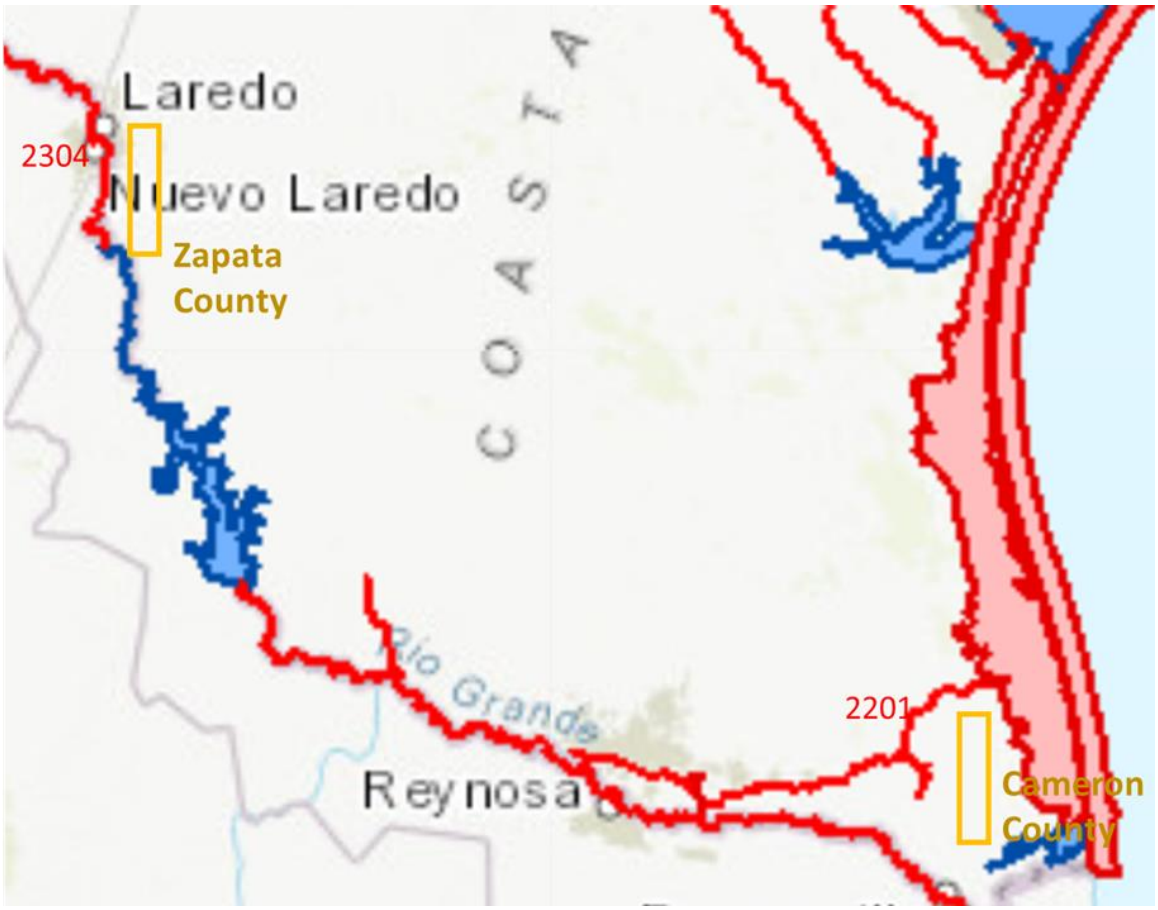

Figure 9. Surface waters in Southern Texas Showing Approximate Program Areas (rectangles) and Impaired Water Segment 2201 of Arroyo Colorado (Cameron County) and Segment 2304 of Rio Grande (Zapata County)
Source: (TCEQ, 2013 and TCEQ Map Viewer, last modified 2022-01-14).

3.6. Climate

The National Climatic Data Center divides Texas into 10 climate divisions. The climate in the program area in Zapata County (Division 9 or South Texas Plains) and Cameron County (Division 10 or Lower Rio Grande Valley) is considered subtropical, with a steppe or semi-arid brushland climate type (Zapata County) and sub-humid marine climate type (Cameron County) (TWDB, 2012). In these areas, temperatures in the summer are hot, with averages near 100 °F. Along the coast the climate is generally very humid though at times it is arid, depending on the

flow of the tropical moisture from the Gulf, the Pacific, and high-pressure systems, causing long droughts that occur every few years. Winter weather is mild, with averages near 45 °F. Precipitation averages 20 inches annually, with more precipitation in the summer than in the winter. Temperatures reach freezing only a few times in the winter and snowfall is rare, usually three inches or less, as a strong front comes in, occasionally causing snow at sea level. Rain in the coastal region is more abundant than in the inland region (generally from March to May and another one from late August to October). Inland, where it is drier, ranches dominate the landscape, characterized by thick, spiny brush and grasslands. The winters in the inland region are cooler and drier, as Arctic air can make it into the region. While tornadoes can occur in South Texas a southerly wind is the predominant wind condition in the region, with average wind speeds of 7 to 15 miles per hour (USDA-APHIS, 2018a).

3.6 Air Quality

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources (42 U.S.C. §7401 et seq. (1970). It protects the Nation's air quality for the purposes of public health and welfare. Among other things, this law authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants. These pollutants, known as criteria pollutants, include ozone, particulate matter, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. The CAA identifies two types of national ambient air quality standards (primary and secondary). The primary standards provide public health protection, including protecting the health of sensitive populations (e.g., asthmatics, children, and the elderly), and the secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. The status of air pollution in any area is based upon whether that area is in attainment (compliance) or nonattainment (noncompliance) with the NAAQS.

To enforce requirements under the CAA, the EPA delegated responsibility for ensuring compliance of the NAAQS to local authorities. In Texas, TCEQ monitors and regulates air quality. As of October 31, 2022, Cameron and Zapata Counties are not on the Texas Nonattainment for All Criteria Pollutants (EPA, 2022), meaning their respective air quality indexes (AQIs) are in the "good air quality" category as defined by the EPA. In general, places where carbon dioxide is released continually (such as major city roads, highways, and petroleum production fields) are often associated with higher levels of monitored air pollutants.

3.7 Tribal and Historical Properties

According to the Bureau of Indian Affairs (BIA, 2016), there are no Federally recognized Tribal lands in Cameron and Zapata Counties, Texas. However, based on results from the U.S. Department of Housing and Urban Development (HUD)'s Tribal Directory Assessment Tool (TDAT) tool, there are several Tribes with an ancestral interest in the area being examined for this EA. These Tribes include Apache Tribe of Oklahoma, Tonkawa Tribe of Indians of Oklahoma, Comanche Nation of Oklahoma, Wichita and Affiliated Tribes, and Mescalero

Apache Tribe of the Mescalero Reservation. These Tribes will be solicited for their comments and any concerns they may have (HUD, 2022).

USDA-APHIS identified 36 historic properties in Cameron County and six historic properties in Zapata County (Appendix C). These historic properties are old buildings (houses, depots, church, warehouse, lighthouse, courthouse, and jail) and green places (such as cemetery, plantation, pasture, yard, ranch, park, fort, and battlefields) for potential effects.

In Cameron County, historical properties are several miles away from the proposed program, except Kings Ranch Historic District (about 0.33 mile away). None of the proposed high game fences will be installed on a historical site.

In Zapata County historical properties are several miles away from the proposed program, except two, Corralitos Ranch (about 0.55 mile away) and San Francisco Ranch (about 1.2 mile away). None of the proposed high game fences will be installed on a historical site.

USDA-APHIS considers historic properties during its CFTEP activities, as required by Section 106 consultation, and outlined in 36 CFR Part 800, to determine whether its proposed action is an undertaking, and if so, whether its program activities could affect historic properties.

In December 2022, USDA-APHIS assessed national historic properties in Cameron and Zapata Counties and analyzed potential effects of its proposed action on these properties. The agency requested a State Historic Preservation Office (SHPO) consultation on Section 106 of the National Historic Preservation Act (NHPA) and the Antiquities Code of Texas (ACT) by submitting both its analyses and associated maps to SHPO / Texas Historic Commission (THC) for review and concurrence.

3.8 Human Health and Socioeconomics

A general description of the human and socioeconomic environment in Cameron and Zapata Counties is provided below as follows (CIP, 2020; USCB, 2020; and Garza and Long, 2021):

Cameron County

- Total area is 1,276.4 square miles (891.7 mi^2 for lands and 384.8 mi^2 for waters)
- Cameron County is 91.58 percent urban and 8.42 percent rural.
- The three largest communities are Brownsville City (182,781 residents), Harlingen City (65,022), and San Benito City (24,243), all located miles away from the proposed high game fencing.
- Much of the county's nonfarm income comes from processing fruits and vegetables, fishing, seafood processing, and light manufacturing. The county is also a producer of oil and natural gas.
- In 2019, the population was 423,163, of which 89.8 percent were Hispanic and 10.2 percent non-Hispanic.
- Residents aged 17 and under were 29.9 percent.

- Education-wise, residents aged 25 and over with high school diplomas were 67.9 percent and those with graduate degrees represent 17.3 percent.
- The average annual salary was $34,689, and the annual unemployment rate was 5.5 percent.
- Percent of population in poverty was 35.0 percent.
- Cameron County remains a tourist destination with many attractions such as Palo Alto Battlefield National Historic Site, Resaca de la Palma Site State Park, Port Isabel Lighthouse State Historic Structure, Brazos Island State Scenic Park, Immaculate Conception Cathedral, the Old Brulay Plantation, and the García Pasture.
- In May 2022, the county's total number of barrels of oil equivalent (BOE) for gas production was 1,968 and that of the condensate production was 3,285 (RRCT, 2022)
- No human community is established in or nearby the proposed program area in Cameron County.

Zapata County

- Total area is 1,058 square miles (998.4 mi^2 for lands and 59.6 mi^2 for waters)
- Zapata County is 76.47 percent urban and 23.53 percent rural.
- Major communities in Zapata County include Zapata (5,383), Medina (3,953), Falcons (1,485), Siesta Shores (1,450), Falcon Lake Estates (962), and San Ygnacio (504).
- In 2021 about 13,908 people lived in Zapata County, of which about 95.1 percent were Hispanic and 4.9 percent non-Hispanic.
- In terms of race, White alone represent 98.3 percent and other races 1.7 percent.
- Residents aged 17 and under were 32.7 percent, while older residents represented 67.3 percent of the population.
- The per capita income was $33,288 and the average annual salary in 2021 was $51,131
- The unemployment rate in 2021 was 12.1 percent.
- The percent of population in poverty was 24.6 percent.
- The percent of high school graduate and higher age 25 and over was 64.7 and that of bachelor's degree or higher age 25 and over was 12.2.
- Elements of the local economy are agriculture and agribusiness (cattle and goats, onions, cantaloupes, and melons), minerals (natural gas, oil, caliche, etc.), and tourism (parks and recreation).
- In May 2022, the county's total number of barrels of oil equivalent (BOE) for gas production was 4,689,610; crude oil production, 2,369; and condensate production, 3,285 (RRCT, 2022).
- No human community is established in or nearby the proposed program area in Zapata County.

4 Potential Environmental Consequences

This chapter analyzes the potential environmental consequences associated with the no action and preferred action alternatives. The analysis focuses on soil, vegetation, agriculture and livestock, wildlife, water quality, climate, air quality, Tribal and historic properties, and the human and socioeconomic environment.

Under the no action alternative, USDA-APHIS would not fund the installation of high game fencing in Cameron and Zapata Counties, Texas. In this case, wildlife may continue spreading ticks from tick-infested zones to additional areas during their movements despite current (non-fencing) eradication program efforts (USDA-APHIS, 2018a).

Under the preferred alternative, USDA-APHIS would fund the installation of high game fencing on privately-owned ranch properties in Cameron and Zapata Counties, based on agreements with landowners. The proposed high game fencing would not obstruct public or private access roads, or driveways; it would not be installed through township areas either. The intent of installing high game fencing is to reduce the spread of CFTs across the region by host animals, including white-tailed deer and nilgai antelope.

4.1 Soil

Under the no action alternative, high game fences will not be installed. Any soil disturbance to soil surfaces would be that is associated with routine border patrol surveillance for stray or smuggled livestock, and with the maintenance of existing cattle fences. The continued low-intensity foot, horse, and aboard-vehicle surveillance activities would cause relatively minimal soil erosion.

Under the preferred alternative, the installation of high game fencing would temporarily expose soil and potentially increase localized erosion. There is likely to be temporary soil compaction along the fence lines during fencing activities. The installation of the underground skirting of fences is not expected to appreciably increase the total footprint of the fence installation. The effects from soil disturbance during fence construction activities will be short-term and minimal. The weight associated with high game fences is not expected to be substantially higher than that of the existing low fences, which means effects to soil structure, layering or profile would be unlikely in the fenced areas. Given that TAHC and landowners would continue to maintain the fenced areas and the vegetation would continue to grow along fence lines, erosion (if any) would decrease, and the soil structure expected to return to normal (preconstruction) state.

The effects to soil associated with high game fencing activities, including the movements of service vehicles, would depend on the weight of those vehicles and the number of trips through the program area. USDA-APHIS anticipates using light-duty vehicles that do not create appreciable amounts of fugitive dust. To maximize program efficiency, USDA-APHIS minimizes the number of trips during the installation and maintenance activities. While vehicles may move mud, the amount moved depends on how recent the rain event occurred and how much rain fell. Mud (if any) or dust associated with service vehicle movements is not expected to be significant when using light-duty vehicles and limited number of trips during fencing activities.

Under the preferred alternative, airborne particles arising from soil disturbance may occur, but they would quickly settle because USDA-APHIS would minimize the potential for dust emissions during the fencing activities by using best-management practices including (a) preserving grass and low-growing bush cover as much as possible, (b) mulching cleared vegetation and spreading it out over the easement, (c) periodically spraying water onto exposed soil to reduce the likelihood of traffic-raising dust during construction, (d) using pre-determined staging areas to store fencing materials, and (e) replanting areas with native grasses to the extent necessary to reduce erosion.

Overall, there would be minimal impacts to soil associated with construction and maintenance activities, and these effects would rapidly dissipate.

Galvanized fence materials often used by the CFTEP are usually coated with a layer of zinc that protects steel from rusting and corrosion. Depending on the environment, galvanized wire can last for decades without any impact on soil (DOD, 2019). The program does not expect galvanized materials of the proposed game fencing to leach or impact soil attributes (i.e., pH and salinity) from zinc coating because these materials are inert and resistant to rust and corrosion (USDA-APHIS, 2018a). Galvanized wires are widely used for roofing, siding, gutters, telephone pole hardware, guardrails and storage, fencing, etc. (DOD, 2019). For these reasons, USDA-APHIS finds the preferred alternative does not have long-term, direct effects, or indirect effects on soil.

4.2 Vegetation

Under the no action alternative, the existing vegetative cover consisting of overgrown grasses and mesquite trees would continue to grow in the areas unless a weather event (hurricane, tornado, etc.) destroyed it. Weeds and invasive plants would continue to spread by wind, water, wildlife, and service vehicles maintaining the existing 4-foot fencing.

Under the preferred alternative, installation of the high game fencing would require temporary removal of vegetation along the fence line, particularly where posts and underground skirting are to be installed. The holes in the wire mesh skirting would be too large to stop underground seeds from germinating and would be ineffective at stopping overgrowth from nearby plants.

A crawler tractor used for preparing the land prior to fencing could clear an estimated 18.4 to 24.6 acres (as a result of a 6- to 8-foot wide of vegetation strip removed by the tractor for a total fence length of 25.35 miles). However, this estimate could be less if areas of existing low fences that do not require vegetation clearance are used by the program. Vegetation at such locations (e.g., existing ranch fences and nearby highways or rights-of-way) may be trimmed or removed to allow access to the existing fence for height extension (USDA-APHIS, 2018a)

High game fencing installation may temporarily alter soil moisture in the ecosystem, which may temporarily disturb the balance of microflora along the fence line. These short-term effects would end as the vegetation regrows. Routine fence maintenance may involve physical removal of vegetation that grows onto the high game fencing, interfering with fence integrity.

4.3 Agriculture and Livestock

Under the no action alternative, movement of stray livestock (e.g., cattle and horses) across non-fenced or ineffectively fenced properties would continue. Such unrestricted movements can contribute to the increase of the number of CFT infestations like those observed in South Texas in recent years (Figure 3). If this trend continues, cattle producers and government agencies may respond by increasing acaricide (pesticide) treatment of livestock which may result in disease resistance and/or vacating pastures more often (Thomas and Duhaime, 2022). Also, under the no action alternative, open corridors in cattle ranches are used by wildlife hosts (e.g., white-tailed deer and nilgai) searching for forage, shelter, and water resources and are likely to increase the spread of CFTs in cattle ranches. CFT-infested wildlife would then continue to enter or traverse ranch areas through open corridors, and comingle with livestock, which may increase babesiosis outbreaks in U.S. cattle populations.

Under the preferred alternative, high game fencing would restrict the movement of wildlife hosts by requiring them to search for a break where they can cross. USDA-APHIS expects reduced transport and spread of CFTs by wildlife beyond tick-free areas in Cameron and Zapata Counties. Under the preferred alternative, animal health is likely to improve because of the potential for fewer contacts between tick-infested wildlife and healthy livestock.

4.4 Wildlife

Regardless of the height of fencing (existing low fencing or proposed high game fencing), there can be negative effects of fencing on wildlife populations. For example, there may be accidental collisions into fencing by ungulates with poor depth perception when chased by predators. Fencing may be used by predators as a hunting perch. Animals may become entangled in woven wire fences made with strands of barbed wire. Although USDA-APHIS does not propose to use barbed wire in its game fences, fences overall can restrict wildlife access to forage and water resources, and this could be critical during seasonal migrations or prolonged droughts (USDA APHIS, 2018a). USDA-APHIS uses the best available science to inform its decisions about fence design, materials, and sites. The design features of the high game fencing in the preferred alternative limit the potential for entanglement and allow passage of species. These 7- by 12-inch openings will apply to the entire length of the high game fencing and will allow the movements of ocelots (*L. pardalis*), jaguarundi (*H. yagouaroundi cacomitli*), and Texas tortoises (*Gopherus berlandieri*) across to northern ranches, thereby, enabling genetic exchange between neighboring populations (USDA-APHIS, 2020a).

Under the no action alternative, wildlife would continue to move in different areas searching for water, forage, and shelter resources. If these areas become infested with CFTs, then infested hosts could increase the spread of ticks and the risk of disease outbreaks in South Texas. Osbrink *et al*. (2020) noted that infested hosts (such as white-tailed deer and nilgai) traveling into Texas from Mexico are the pathway for tick outbreak populations.

Under the preferred alternative, the movement of wildlife would be minimally deterred by the high fencing. These fence segments are deliberately insufficient to stop all animal movement based on small animals being able to crawl through fence holes, or larger animals being able to find and traverse both horizontal and vertical breaks in the fencing. Examples of these larger

animals are coyotes (*Canis latrans*) and foxes (Canidae), which can navigate the 7- by 12- inch openings. However, these species are not preferred CFT hosts in comparison to nilgai antelope. The free movement of smaller to medium-sized animals such as American badger (*T. taxus*), desert cottontail (*S. audubonii*), Mexican ground squirrel (*Ictidomys mexicanus*), desert shrew (*Notiosorex crawfordi),* and southern plains woodrat (*Neotoma micropus*) is not likely to be impacted by the high game fencing because they can pass through fence openings. Also, under the preferred alternative, corridor connectivity for ground-dwelling birds (such as wild turkey (*M. gallopavo*) and northern bobwhite quail (*Colinus virginianus*) may be temporarily lost due to reduced ground-cover vegetation during the fence installation (Stromberg, 1990). Nonetheless, this temporary effect would cease as groundcover vegetation regrows.

4.4.1 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 (T&E) species or result in the destruction or adverse modification of critical habitats.

USDA-APHIS determined that the proposed action will have no effect on the following T&E species or their designated or proposed critical habitats: West Indian manatee (*Trichechus manatus*), eastern black rail (*Laterallus jamaicensis* spp. *jamaicensis*), piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), hawksbill sea turtle (*Eretmochelys imbricata*), Texas hornshell (*Popenaias popeii*) and South texas ambrosia (*Ambrosia* cheiranthifolia), or Texas ayenia (*Ayenia limitaris*).

USDA-APHIS determined that the proposed action may affect, but is not likely to adversely affect, the Gulf Coast jaguarundi (*Puma yagouaroundi cacomitli*), ocelot (*Leopardus pardalis*), northern aplomado falcon (*Falco femoralis*), ashy dogweed (*Thymophylla tephroleuca*), prostrate milkweed (*Asclepias prostrata*) and its critical habitat, and Zapata bladderpod (*Physaria thamnophila*) and its critical habitat. USDA-APHIS prepared and submitted a biological assessment to the FWS, Ecological Services, Alamo Sub-office requesting their concurrence with these determinations. APHIS received concurrence with these determinations in a letter from FWS dated March 23, 2023 (FWS, 2023).

4.4.2 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668–668c) prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

The bald eagle (*Haliaeetus leucocephalus*) is present in the lower 48 States and Alaska. Although it was officially removed from the List of Endangered and Threatened Species as of

August 8, 2007, due to recovery after near disappearance decades ago, bald eagles continue to be protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA).

The bald eagle's preferred habitats are undisturbed forests with tall canopies near water bodies. Nest sites typically include at least one perch with a clear view of water bodies or areas where the eagles usually forage (FWS, undated). According to the Texas Parks and Wildlife Department (TPWD, undated) and Texas Department of Transportation (TxDOT, 2020), bald eagles are present year-round throughout Texas as spring and fall migrants, breeders, or winter residents. There are two populations in this State: breeding population and nonbreeding or wintering population. The breeding populations occur primarily in the eastern half of the State and along coastal counties from Rockport (Aransas County) to Houston (Harris County), while the nonbreeding or wintering populations are located primarily in the Panhandle, Central, and East Texas, and in other areas of suitable habitat throughout the State. There is no evidence that bald eagles occur in Cameron and Zapata Counties, Texas. The impact of the proposed action on potential bald eagle nests at the game fencing locations is unlikely because the proposed fencing locations are cattle ranches, refuge lands, and along highways (e.g., US 83 and Tx 550), not "undisturbed forests with tall canopies near water bodies" (bald eagle preferred habitat). Moreover, based on the bald eagle distribution (Figure 10), the program area in Cameron and Zapata Counties is more than 150 miles away from the breeding population area (between Rockport, Aransas County and Houston, Harris County), and several hundreds of miles away from the nonbreeding or wintering population areas (Panhandle, Carson County; Central and East regions of Texas).

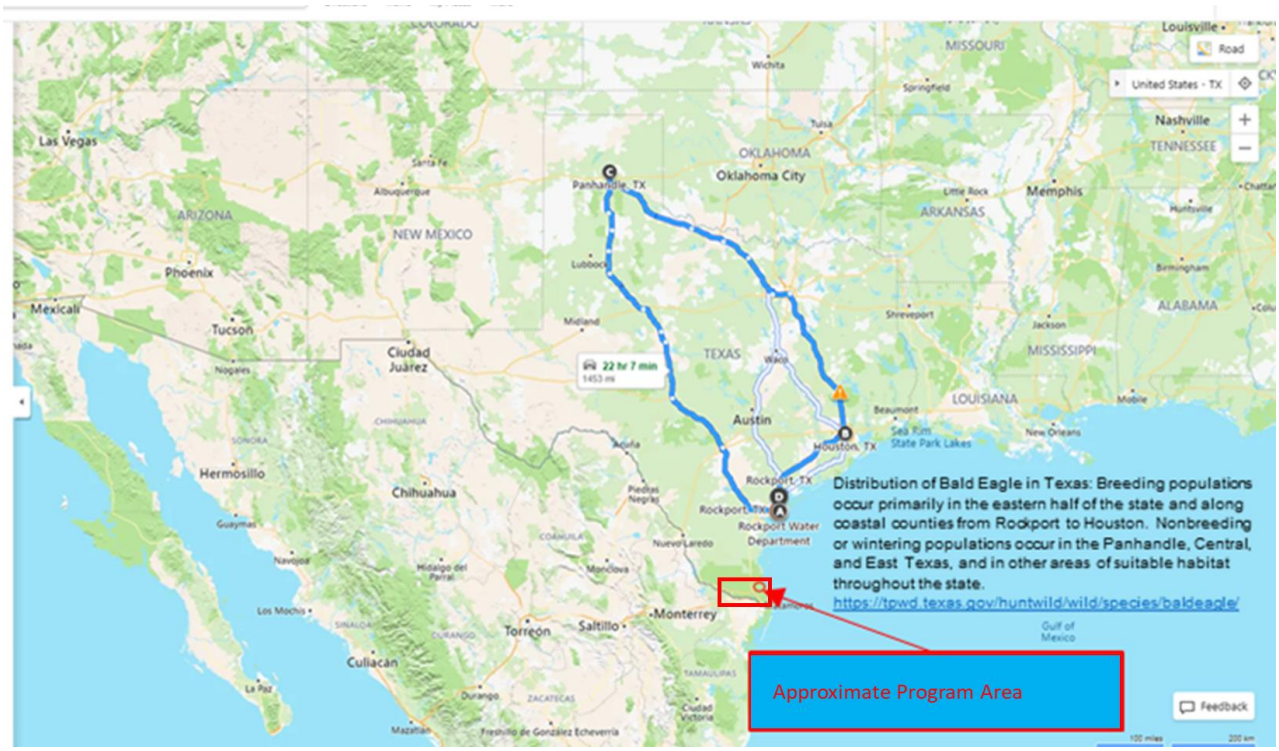

Figure 10. Approximative Location of the Program Area and Bald Eagle Distribution in Southern Texas (blue polygon)
Source: (TPWD, undated and TxDOT, 2022)

As for the golden eagle (*Aquila chrysaetos*), the North America migratory populations of this species breed in Alaska and across Canada while resident populations are found in southwest Canada and the western United States east to the western Great Plains and south to northern Baja California and through the highlands of Mexico south to the central volcanic belt (TAMU, undated). Migrants winter throughout the resident area, in scattered locations of the United States east of the breeding area and in northwest Mexico (TAMU, undated). There is no evidence of the existence of golden eagle in the program area in Cameron and Zapata Counties, where the proposed high game fencing would be installed (Figure 11).

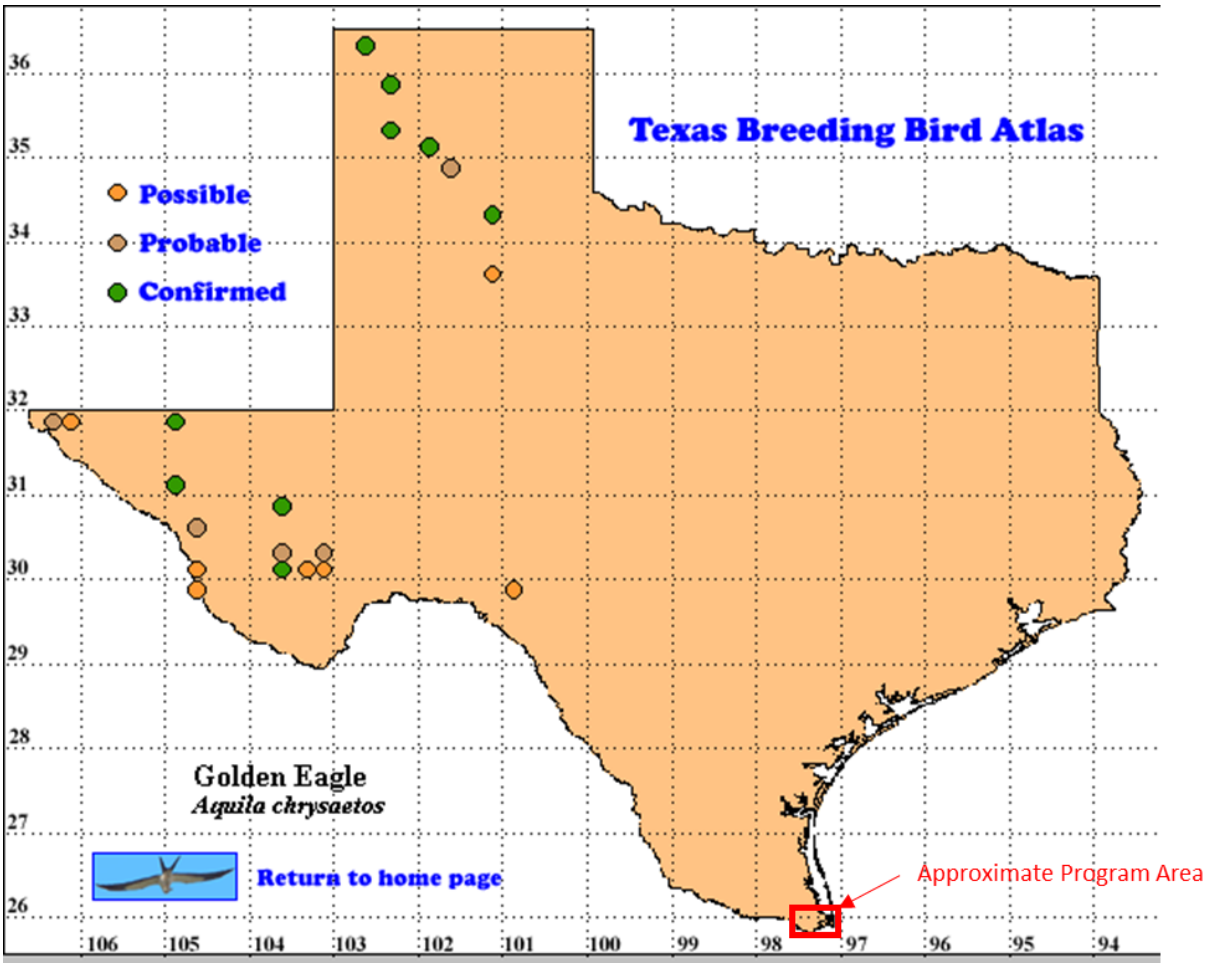

Figure 11. Approximative Location of the Program Area and Golden Eagle Distribution in Texas

Source: (TAMU, undated)

If bald or golden eagles are observed eating live prey or scavenging on dead animals in or nearby the proposed fencing locations, chances that the eagles would be harmed during or after construction of game fencing are very unlikely because these locations have always been used for cattle ranching and/or as a wildlife refuge; and they will continue to serve the same purposes after the USDA-APHIS fencing activities. Potential disturbance of eagles would be limited in time and scope. In any case, if the program personnel discover the presence of any eagle or nest in the project locations, the program would report this information to the State Wildlife Service, which would assist USDA-APHIS program personnel in minimizing potential impacts to the eagle or nest of concern following the National Bald Eagle Management guidelines (FWS, 2007). FWS usually recommends buffer zones around active nests, and USDA-APHIS program personnel would carefully follow such recommendations as much as possible.

4.4.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (16 U.S.C. 703–712) established a Federal prohibition, unless permitted by regulations, to intentionally pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment,

ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird or any part, nest, or egg of any such bird.

FWS and its partners manage migratory birds and their habitats based largely on routes the birds follow as they migrate between nesting and wintering areas. There are four Migratory Flyways including Atlantic, Mississippi, Central and Pacific Flyways (Figure 12). In the United States, Texas is covered by the Central Flyway along with Alaska, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Utah, and Wyoming. Examples of migratory birds using the Central Flyway include American golden-plover (*Pluvialis dominica*), chimney swift (*Chaetura pelagica*), ruby-throated hummingbird (*Archilochus colubris*), purple Martin (*Progne subis*), northern parula (*Setophaga americana*), black-throated green warbler (*S. virens*), yellow-throated warbler (*S. dominica*), black-and-white warbler (*Mniotilta varia*), Hudsonian godwit (*Limosa haemastica*), buff-breasted sandpiper (*Calidris subruficollis*), olive-sided flycatcher (*Contopus cooperi),* eastern wood-pewee (*C. virens*), willow flycatcher (*Empidonax traillii*), Alder flycatcher (*E. alnorum*), magnolia warbler (*S. magnolia),* blackburnian warbler (*S. fusca*), barn swallow (*Hirundo rustica*), yellow-billed cuckoo (*Coccyzus americanus*), golden-winged warbler (*Vermivora chrysoptera*), cerulean warbler (*S. cerulea*), and bay-breasted warbler (*S. castanea*) (TPWD, 2005).

According to TPWD (2005; undated), some threats to migratory birds include (a) habitat loss (such as food and shelter degradation by clearing of forestland and grassland), (b) human disturbances, (c) pet cats (which are serious threats to fledglings, roosting, and nesting birds), and (d) lighthouses, skyscrapers, and other tall structures (such as electronic towers and cables for radio, television, and cellular phones by causing deadly collisions in the night or fog).

Under the no action alternative, migratory birds would continue to use the Central Flyway, which overlaps the State of Texas including ranch lands. Existing cattle fences in ranches are not known to cause any harm to migratory birds during bird migration stops.

Likewise, under the preferred action alternative it is unlikely that the high game fencing would cause any harm to migratory birds either during or after its installation. USDA-APHIS and FWS personnel would minimize impacts to migratory birds or nests, as necessary. To avoid or minimize impacts to birds protected by the Migratory Bird Treaty Act, the FWS recommends conducting bird surveys no more than five days prior to ground disturbing activities or mechanical clearing of brush and trees between March 15 and September 15. Surveys should include searches for birds, nests, and eggs. The Service recommends leaving a buffer of vegetation (≥100 feet (30.5 meters) around songbird nests detected until young have fledged or the nest is abandoned. Surveys should be conducted within a responsible time frame prior to construction to ensure valid results. Other species such as water birds or raptors require larger buffer distances of 500 feet or more. (FWS, 2023).

USDA-APHIS does not anticipate significant impacts to migratory birds. Noise disturbance during fence construction is temporary and of short duration. Removal of vegetation around the

fence line would temporarily reduce available cover and food sources (seeds, berries, insects); however, the birds would likely find these resources nearby.

4.5 Water Quality

Under the no action alternative, USDA-APHIS would install no game fencing, and there would be no effects to water quality because the current situation would remain the same (no fencing).

Under the preferred alternative, there would be no effects to waterways because the proposed high game fencing would not be installed in or near the hydrologic systems in Cameron and Zapata Counties. Fence construction activities may cause a temporary, localized increase of the surface water runoff; however, this disturbance would end when the vegetation regrows. The fencing installation would not alter the ground permeability to the stormwater, nor would it release any chemical particulates into the groundwater. Galvanized wire of the fencing is normally designed to be inert, resist rust and corrosion, and last for decades (DoD, 2019). The underground skirting of the fence is not of sufficient size to alter the usual water flow pattern in an area. After the installation of the high game fencing, erosion from water flow through the fence's wire grid and underground skirting is expected to continue at pre-fencing or prior levels. USDA-APHIS does not anticipate any chemicals (such as chlorine, zinc, and heavy metals), or any substantial particulate levels to enter runoff water either during or after fence construction based on the small footprint of activity at each fence-post location and based on the limited duration of fencing construction activities.

Figure 12. Migratory Birds Flyways
Source: (FWS, undated)

4.6 Climate

Changes in macro and micro-climatic extremes can directly impact the CFT (and their tick-borne diseases) range along the southern border of the United States (Giles *et al.*, 2014). According to Osbrink *et al*. (2022) such climate change would impact the eradication of cattle fever ticks in the South Texas.

Several authors referenced in USDA-APHIS (2018a) indicate that (a) tick prevalence and range increase with adequate habitat conditions, including shrub cover or mesquite, due to microclimate effects of shade and humidity; (b) tick survival is greater in areas infested with giant reed *(Arundo donax*, a woody, non-native invasive grass) than in open pastures and closed canopy native forests; and (c) zones close to optimum habitat conditions that experience sudden

changes outside of these limits are expected to show the highest enzootic (affecting animals of a specific geographic area) instability. These authors also indicate that tick populations decrease when habitat suitability is poor, temperatures are constantly over 77 °F and there is less grazing. Such unsuitable habitats could be uncanopied buffelgrass (that does not support ticks laying eggs and is an inhospitable microclimate for eggs that are laid) and areas where there is encroachment by this invasive grass (USDA-APHIS, 2018a). Based on the observations above, it could be anticipated that tick populations that establish in the United States may experience warming cycles. USDA-APHIS records also indicate that a lag occurs after hurricane events before tick populations rise to the level of detection, and that additional rainfall would be a trigger for an increase in tick populations (USDA-APHIS, 2018a).

Prediction models for CFT by Giles *et al* (2014) show high habitat suitability near TEQA and across the southern United States. This model projects the areas of highest suitability to shift north and east by 2050, under similar climate scenarios. It is likely that future models exhibit shift from arid/desert steppe climate toward "seasonal" temperate region that extends through the southern United States (Giles *et al.*, 2014).

Beyond temperature extremes, changes in seasonal precipitation regimes impact tick life cycles via changes in vegetation-based micro-climate that provide stable seasonal and diurnal humidity at egg-laying and larval development sites.

Under the No Action Alternative, no high fencing would be installed; therefore, tick populations could spread throughout their current ranges in Southern Texas, and changes in climate and weather patterns could lead to localized effects as tick populations quickly respond to open/dry versus closed canopy/moist conditions throughout their range of establishment (USDA-APHIS, 2018a). So, in the absence of fencing, the distribution of ticks capable of infecting livestock may shift north because of the unrestricted movement of an increasing population of white-tailed deer and other hosts as habitats with optimal conditions for tick population survival expand.

Under the Proposed Alternative, high fencing would be installed in specific locations in Cameron and Zapata Counties. As in most places in South Texas, these counties have plains vegetation, and much of the proposed fence would be along highways and rights-of-ways where vegetation is already controlled; so, very few forested areas would be affected under this alternative, and more tick-favorable microclimates near fencing could lead to increased tick populations if the ticks were not precluded and the vegetation was not controlled near the fence (USDA-APHIS, 2018a).

4.7 Air Quality

Under the no action alternative, there would be no (or negligible) effects to air quality because the current air situation would not change relative to existing cattle fences or the non-existence of high game fencing. There is no indication that existing (low) fences release pollutants into the air, and this situation is expected to remain unchanged. Air pollutant emissions associated with existing fences would be those from service vehicles during trips from and to ranches to maintain cattle fences.

Under the preferred alternative, the high game fencing itself would not emit air pollutants into the human environment either. In fact, regardless of the alternative selected, service vehicles would emit some CO_2 and other particulates into the air during trips from and to the program area for fence installation and maintenance. However, these emissions would be negligible relative to the steel production at industrial sites. The release of air pollutants is in general associated with (a) manufacturing of fence materials, (b) installation activities, and (c) vehicular travel. While USDA-APHIS has no control of pollutant emissions associated with the manufacturing of fence materials, the agency would minimize the number of service vehicle trips to reduce CO_2 emissions. Thus, based on the overall small scale of USDA-APHIS fencing projects, any pollutant emissions into the human environment would be low in volume and temporary in duration because these emissions would likely quickly dissipate below detectable levels.

USDA-APHIS usually reports its air emissions at the agency level annually. The estimated emissions for travel during maintenance activities for the current fencing could be used as a baseline for comparison between both alternatives. Maintenance needs usually arise from people cutting or climbing on the fence, accidental vehicle incursions, crossing by wild animals (feral swine [*Sus scrofa*], javelina [*Tayassu tajacu*], or coyote [*Canis latrans*]) digging under the fence, and eventually weather conditions that may deteriorate the fence over time.

For the above-mentioned reasons, USDA-APHIS believes the preferred alternative would not create any long-term or cumulative effects to air quality.

4.8 Tribal and Historic Properties

CFTEP activities are not expected to adversely affect Tribal entities. As reviewed in this EA, there are no significant risks to human health and welfare associated with this project (see Section 4.8, Risks to Human Health).

USDA-APHIS recognizes the importance of protecting and preserving national historic sites in Texas. In accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966 and its implementing regulations, USDA-APHIS assessed the historic properties within Cameron and Zapata Counties and determined that its undertaking would have no potential to cause effects to historic properties in these counties or in nearby Willacy County (where Kings Ranch Historic District is about 0.33 mile away from the Arroyo City fence in Cameron County). The USDA-APHIS 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 qualifies it for inclusion 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 impacts during the installation of high game fencing would be limited geographically in duration and intensity.

In December 2022, USDA-APHIS requested a SHPO consultation on Section 106 of NHPA and/or the Antiquities Code of Texas (ACT) for the above-mentioned quarantined counties.

SHPO/THC concurred with USDA-APHIS's finding of no effect of the proposed action on historic properties (concurrence letter Tracking #202304029 on file).

4.9 Human Health and Socioeconomics

Cattle fever ticks do not pose a direct risk to public health in the United States. There are no direct human health impacts expected from uncontrolled CFT populations. Tick-borne diseases have rapidly become a serious and growing threat to public health in the U.S. The most common of these tick-borne diseases is Lyme disease caused by the deer (or blacklegged) tick (*Ixodes scapularis*) and not the cattle fever tick (HHS, 2018).

While human babesiosis is relatively rare in the United States, it is significant because most cases present life-threatening infections in sick patients (Hildebrandt *et al*, 2021), and it occurs primarily in the Northeastern and Midwest regions of the United States (Ord and Lobo, 2015).

Under the no action alternative, the continued spread of CFTs in Cameron and Zapata Counties is likely to impact livestock producers and ranching communities. In fact, CFTs can spread bovine babesiosis, a fatal disease with a mortality rate from 70 to 90 percent (TFB, 2019). Without CFT control, the cattle industry across the southern tier of the country could lose more than a billion dollars annually (TFB, 2019). Such losses are likely to increase unemployment and poverty levels, particularly in local Hispanic and immigrant communities that rely on local ranching employment opportunities.

The preferred alternative would limit the spread of CFTs across the region and improve the cattle health and socioeconomic benefits to ranchers residing in Cameron and Zapata Counties. Beneficial effects associated with the fencing are expected to include: (a) reduced CFT spread and disease transmission to cattle, (b) reduced likelihood of human exposures to CFT and diseases from wildlife sources (e.g., hunters in game fenced areas are likely to take CFT-free, healthier deer and nilgai), (c) more productive animal husbandry in the area, and (d) reductions in the costs of animal products.

Under the preferred alternative, the materials and design features of the fencing do not pose risks to health and safety because they are inert and resist rust and corrosion. The high game fencing materials do not contain any chemicals that pose risks to ranchers and workers installing the fencing.

The public and nearby ranchers also are unlikely to be exposed to the limited amounts of dust and noise associated with fence construction and maintenance activities because dust and vehicle emissions would be minimal in scope and duration. An upgrade to cattle fencing may socioeconomically impact landowners if their property taxes increase due to perceived added value. Fencing upgrades and decreased access to ranch properties by wildlife may reduce the amount of bushmeat available to members of local communities.

USDA-APHIS complies with Executive Order (EO) 13045, "Protection of Children from Environmental Health Risks and Safety Risks" by considering the likelihood and consequences

of exposure to the proposed action. Residents aged 17 and younger represent less than 35 percent of the population in either county (29.9 percent in Cameron County or 32.7 percent in Zapata County). Under both alternatives, children are highly unlikely to live in or near locations with fencing. The CFTEP would not install high game fencing on public places or facilities where children typically use (such as parks, playgrounds, schools, sport fields, or outdoor community centers).

Federal agencies are also required to comply with EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" and EO 13985 "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government" by identifying and addressing equity for underserved communities. In comparison to the rest of the United States, the proposed affected counties (Cameron and Zapata) appear to be poorer (35 percent and about 25 percent, respectively, versus 11.4 percent nationwide), with larger minority populations (e.g., about 90 percent of Hispanic residents of Cameron County and over 95 percent of Hispanic residents of Zapata County (CIP, 2020)). USDA-APHIS' proposed program may provide some socioeconomic benefits to local populations including underserved communities (such as temporary or permanent employment for building or maintaining fences, additional income, etc.) The program is not expected to negatively impact local major communities (Brownsville, Harlingen, San Benito, Raymondville, Lyford, Sebastian, San Perlita, and Port Mansfield cities), which are many miles away from the fencing locations (the closest city may be Rio Hondo, several miles to the closest fence segment). Based on distances, it is highly unlikely the public would be exposed to effects associated with high fence construction and maintenance. Members of the local communities are highly unlikely to be aware of the CFTEP fence activities.

The locations of the proposed high game fencing do not overlap with any land used for crop or oil production, which are central elements of the local economy in Cameron and Zapata Counties. The preferred alternative would not negatively affect the standard of lifestyle, social behavior patterns, or the needs of local communities.

USDA-APHIS does not expect the proposed action to pose any disproportionately high and adverse effects to minorities or members of low-income communities because they will share in the benefits of the preferred alternative and are highly unlikely to be exposed to effects associated with fence construction and maintenance.

4.10 Cumulative Impacts

A cumulative impact is defined as an impact on the environment that results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future action regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period (40 CFR 1508.7). They are the overall, net effects on a resource that arise from multiple actions. These effects can "accumulate" spatially (when different actions affect different areas of the same resource) or over the course of time (from actions in the past, the present, and the future).

USDA-APHIS expects, as time goes, its program area be affected by multiple Federal activities related to agriculture (crop and animal production, pasture management, etc.), environment and natural resources (soil, water, climate, air, vegetation, wildlife, etc.), transportation (e.g., roads and highways), energy production (e.g., oil and gas), etc.

USDA-APHIS' proposed action alternative would occur near or along pre-existing highways or adjacent rights-of-ways; wildlife refuges; and private lands developed for agriculture, ranching, or other uses such as energy production. The affected environment covered in Chapter 3 describes the baseline conditions to be considered prior to potential cumulative impacts analyzed in this assessment. USDA-APHIS' past, ongoing, and future program activities in Cameron and Zapata Counties would be primarily related to plant and animal pest controls. Examples of such control programs are CFTEP (USDA-APHIS, 2022; 2021; 2018a, b), fruit fly control programs (USDA-APHIS, 2011a), wildlife damage control programs (USDA-APHIS, 2016), plant pest control programs addressing genetically engineered crops issues (USDA-APHIS, 2011b), and citrus greening and Asian citrus psyllid quarantine programs (USDA-APHIS, 2007). Other USDA-APHIS' recent and/or ongoing programs in Cameron and Zapata Counties include Vertebrate Pest Control program, Imported Fire Ant Quarantine program, Boll Weevil Eradication Program, and Mexican Fruit Fly Quarantine Program. USDA-APHIS usually implements its vertebrate control program on a need basis, and its chemical control to specific locations where imported fire ants, boll weevils, or Mexican fruit flies have been found, or to quarantined articles to be shipped to non-quarantined areas. These treatments are infrequent and usually made in crop fields or nurseries using products that are registered by the U.S. Environmental Protection Agency (EPA) for agricultural and nonagricultural uses.

Regarding the CFTEP, the proposed high game fencing would reduce the probability that tick-infected cattle and wildlife hosts from Mexico would enter tick-free areas in the U.S. Some environmental consequences associated with the Proposed Action Alternative (such as noise and air pollution from service vehicles, soil, water quality, vegetation, and wildlife disturbances) were analyzed in Chapter 4; those impacts are expected to be short-term, limited or cease when the fencing installation is complete; and they also would be minor compared to other potential non-USDA heavy activities in the area (such as road constructions, energy production, etc.). A positive cumulative impact from the additional high game fencing as part of an integrated tick control strategy would be a reduction in interactions between the tick-infested wildlife and the U.S. cattle populations. The reduction in ticks and associated diseases would provide economic benefits to the U.S. livestock industry by enabling some economic stability and competitive leverage in an evolving market time (Miller *et al*., 2013; Pérez de León *et al*., 2012). This may result in economic benefits to taxpayers by decreasing costs to maintain the CFTEP as well as costs to consumers given the reduced production cost.

Other CFTEP aspects USDA-APHIS considers in its cumulative impacts analysis are chemical control measures and trail maintenance. Trails for patrolling and surveillance of cattle and wildlife coming from Mexico to the U.S. have been in existence since approximately 1938 and have resulted in the loss of some native habitats probably because maintenance of these trails requires periodic clearing on private and public properties. In general, the loss of habitat would

be minor relative to the economic gains in counties subjected to CFT damages. Landowners and local public land managers oversee the maintenance of trails to ensure ecological impacts to natural resources are minimum.

The fencing installation is expected to limit the movements of wildlife hosts and the spread of ticks, which could also lead to the reduction of chemical use (e.g., acaricide use) and possibly avoid the risk of chemical resistance by CFTs over time (Perez de Leon *et al*., 2012). Chemical uses by the program are applied in such a way to avoid nontarget fish and wildlife impacts, or to pose no (or very low) risk to most nontarget populations including workers and the general human populations (limited exposure and subsequent risks).

In terms of the environmental quality, cumulative impacts to soil, water, and air quality are not expected to be significant for either No Action or the Proposed Action alternatives. Current and future activities related to urbanization, highway construction, maintenance, and increased road traffic appear more likely to significantly impact environmental quality than the additional high game fencing. The impacts from the actions proposed in this EA are expected to be only minor or transient impacts, therefore, any increase in cumulative impacts would be negligible. For instance, soil disturbance relative to high fencing installation would be short-term and isolated. Although the maintenance of high game fencing could result in some soil erosion due to vegetation removal and soil erosions from water and wind, the amount of these erosions, however, would be minor relative to the erosion potential from current and future farming and energy extraction activities. Fencing would not be constructed or maintained within proximity to aquatic resources, so there is an incrementally minor potential for cumulative impacts from sedimentation, which would be the greatest threat to water quality from fence construction and maintenance. Waterways currently listed as impaired or maintaining designated uses under the CWA (33 U.S.C. §§ 1251-1387) would be expected to continue under the No Action or Proposed Action alternatives as it relates to high game fencing installation. Future landowner agricultural changes, energy-extraction activities, and expanded highway uses, however, are more likely to impact these designations than the alternatives considered in this EA. Regulations regarding non-point source pollution from these types of activities, as well as State and Federal programs designed to assist landowners in reducing impacts to soil and water, would help reduce the potential for soil and water impacts (TSSWCB, 2013).

Like cumulative impacts to soil and water, the potential for cumulative impacts to climate and air quality are anticipated to be incrementally minor and transient under both No Action and Proposed Action alternatives. Emissions during the construction and maintenance of the fence would be minor relative to the ongoing and future emissions from urbanization, highway traffic, agricultural production, and energy extraction activities occurring within Cameron and Zapata Counties. Ambient air quality criteria (for attainment zones and mobile source air toxins, 40 CFR part 50) would not be reached by the Proposed Action Alternative. The high game fencing installation would eventually only result in incrementally minor and transient increases in air quality pollutants that would cease once the high game fencing is installed. Air pollutants emitted in Cameron and Zapata Counties from mobile road and non-road sources would be significantly higher in amount than the amount of air pollutants associated with the Proposed

Action in this EA, that is, the contribution from the proposed alternative would remain minor to the overall emissions for the program area. Emissions related to oil and gas explorations and productions would be likely substantially larger on a daily, monthly, and annual basis when compared to the potential emissions associated with the Proposed Action (e.g., in May 2022, Cameron County produced 1,968 barrels of oil and Zapata County 4,689,610 barrels (RRCT, 2022).

In addition to the USDA, other Federal agencies may have programs in Cameron and Zapata Counties that are worth considered as potential contributors to cumulative impacts to nontarget resources in the program area. One example would be the Department of Transportation's Road Maintenance program. In fact, the maintenance of Highway 83 and other roads designed to provide access to residential, agriculture, and energy production areas may pose a threat to mammals that also could be impacted by additional fencing. Current and future road and highway activities are expected to increase vehicular trafficking and related environmental and ecological impacts. For instance, these activities could result in a greater probability of car strikes to animals that cross these areas while moving between areas of suitable habitat.

Another program unrelated to USDA-APHIS activities that may contribute to the cumulative impacts in the program area is the Fish and Wildlife Service (FWS)'s Migratory Bird Control programs. In 2010, FWS published its Final Rule on Migratory Bird Permits for the control of Muscovy duck (*Cairina moschata*) that occurs naturally only in southern Texas. The introduction of this bird species to other locations, where it is considered invasive and a source of problems through competition with native species, damage to property, and transmission of disease led to a FWS amendment allowing the removal of these ducks from the U.S. mainland and territories where they do not occur naturally.

Overall, the cumulative impacts to the human environment from the Proposed Action in this EA are not expected to contribute significantly when compared to the impacts from current and future activities occurring in Cameron and Zapata Counties, including other existing fencing, agriculture, energy production, highway maintenance and construction, and property development. The cumulative impacts from the preferred alternative when assessed in relation to the current baseline and past, present, and future activities constitute a small incremental or transient change to the human environment, and any incremental cumulative impacts would be negligible.

Persons and Agencies Consulted

The CFTEP is a cooperative effort between Federal government, State of Texas, local governments, and individual livestock producers, who share program costs. USDA-APHIS has consulted with several people and agencies to gather, exchange, and/or review the information included in this Environmental Assessment. These individuals and agencies are:

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Appendix B. GPS Coordinates of the Proposed Fencing

County	Game Fence Section Name – Location	Start Point (Lat Lon)	End Point (Lat Lon)	Mileage
Cameron	Arroyo City Fence	26.322437, -97.454019	26.21975, -97.449081	9.1
Cameron	J. Todd Fernandes farmland Fence	26.1289, -97.4657	26.1035, -97.4676	1.952
Zapata	San Andress Fence	27.2836, -99.424967	27.276396, -99.422107	0.6
Zapata	Dolores Creek Fence	27.26679, -99.421023	27.210086, -99.419119	4.5
Zapata	Corralitos Fence	27.136486 -99.422345 27.096816 -99.425248 27.098468 -99.422768 27.114979 -99.422839 27.115014 -99.420865	27.119067 -99.423612 27.098468 -99.422768 27.114979 -99.422839 27.115014 -99.420865 27.117854 -99.420417	3.1

Appendix C. List of Historic Properties in Cameron and Zapata Counties, Texas

CAMERON COUNTY

Name of Historic Place or Property	Reference Number	Date Listed	Address
Baxter Building	2100003420	3/6/2019	106 South A Street, Harlingen
Brazos Santiago Depot	2071000923	7/14/1971	Port Isabel
Brooks, Samuel Wallace, House	2088002530	11/22/1988	623 E. St. Charles St., Brownsville
Browne-Wagner House	2077001430	8/29/1977	245 E. St. Charles St., Brownsville
Brownsville City Cemetery and Hebrew Cemetery	2010000143	3/31/2010	Bounded by E. 5th Street, Madison Street, E. 2nd Street, and Town Resaca, Brownsville
Brownsville City Hall and Market House	2100004474	9/30/2019	1150 Market Square, Brownsville
Brownsville Freight Depot & Warehouse District	2100002266	3/26/2018	Roughly bounded by East Fronton Street, East 4th Street, and East 9th Street, Brownsville
Cameron County Courthouse	2080004084	9/27/1980	1150 E. Madison St., Brownsville
Cameron County Jail, Old	2094001594	1/24/1995	1201 E. Van Buren, Brownsville
Celaya, Augustine, House	2086000726	4/11/1986	504 E. Saint Francis St., Brownsville
Celaya-Creager House	2088000523	5/5/1988	441 E. Washington St., Brownsville
Central Brownsville Historic District	2100004008	5/31/2019	Roughly bounded by East Levee, East 10th, East Monroe, and East 15th/East 14th Streets, Brownsville
Cleta Friedman and Harry W. Hollowell House	2100003533	3/25/2019	622 East Saint Charles Street, Brownsville
Fernandez, Miguel, Hide Yard	2090001485	10/1/1990	1101-1121 E. Adams St., Brownsville
Fernandez and Laiseca Building	2100002433	5/11/2018	1142-1154 East Madison Street, Brownsville
Fort Brown	2066000811	10/15/1966	S edge of Brownsville off International Blvd., Brownsville
Garcia Pasture Site	2072001355	2/23/1972	Address Restricted, Port Isabel

Name of Historic Place or Property	Reference Number	Date Listed	Address
Hicks-Gregg House	2009000486	7/1/2009	1249 West Washington Street, Brownsville
Immaculate Conception Church	2080004085	3/26/1980	1218 E. Jefferson St., Brownsville
La Madrilena	2088002384	11/17/1988	1002 E. Madison, Brownsville
La Nueva Libertad	2084001628	6/14/1984	1301 E. Madison St., Brownsville
Lillian Essey and George K. Aziz House	2100006889	9/8/2021	1205 West Elizabeth Street, Brownsville
M. E. Garcia and Estela Cueto House	2100001038	6/5/2017	155 Calle Anacua, Brownsville
Manautou House	2083003130	7/14/1983	5 E. Elizabeth St., Brownsville
McNair House	2015000836	11/24/2015	39 Sunset Drive, Brownsville
Morris-Browne House	2006000955	10/25/2006	204 E. Levee Street, Brownsville
Old Brulay Plantation	2075001961	10/10/1975	E of Brownsville off TX 4, Brownsville
Palmito Ranch Battlefield	2093000266	6/23/1993	Between TX 4 (Boca Chica Hwy.) and the Rio Grande, approximately 12 mi. E of Brownsville, Brownsville
Palmville	2100007077	10/20/2021	1400 North Reagan Street, San Benito
Palo Alto Battlefield	2066000812	10/15/1966	6.3 mi. N of Brownsville at jct. of FR 1847 and 511, Brownsville
Point Isabel Lighthouse	2076002014	4/30/1976	Off TX 100, Port Isabel
Resaca de la Palma Battlefield	2066000813	10/15/1966	N edge of Brownsville on Parades Line Rd., Brownsville
Rio Grande Valley Gas Company Building	2100007983	8/8/2022	355 West Elizabeth Street, Brownsville
Southern Pacific Railroad Passenger Depot	2078002903	11/17/1978	601 E. Madison St., Brownsville
Stillman, Charles, House	2079003448	11/19/1979	1305 E. Washington St., Brownsville
The Gem	2091000852	6/28/1991	400 E. 13th St., Brownsville

ZAPATA COUNTY

Name of Historic Place or Property	Reference Number	Date Listed	Address
Corralitos Ranch	2077001483	8/2/1977	2 mi. N of San Ygnacio off U.S. 83
Dolores Nuevo	2073001986	11/27/1973	Laredo, Address Restricted
Dolores Viejo	2073001987	8/17/1973	San Ygnacio, Address Restricted
San Francisco Ranch	2077001484	3/25/1977	San Ygnacio, Address Restricted

Name of Historic Place or Property	Reference Number	Date Listed	Address
San Ygnacio Historic District	2073001988	7/16/1973	Town of San Ygnacio
Trevino-Uribe Rancho	2073002342	7/16/1973	San Ygnacio, Jct. of Uribe and Trevino Sts.

Source: https://thc.texas.gov (last visited 12/14/22)

Appendix D. Public Comments and Program's Responses

USDA APHIS VS published a draft EA for a 30-day public comment period on February 8th, 2023, online at https://www.regulations.gov (Docket **ID APHIS-2023-0014**) and announced the document availability and comment period in South Texas newspapers. A total of one (1) comment was made, and it was addressed by the program as follows:

Public comment:

"I recommend we eradicate the cattle from public lands. Cattle introduce invasive plant species to range and forest lands, emit methane gas a danger to the climate, compete against big game for habitat and browse, cause erosion, are unhealthy as a food source because of the vaccines, and antibiotics, and pollute the water supply. A better alternative to grazing cattle on public lands is lab grown cultivated meat. We should transition as fast as possible to consuming this protein source. Do not delay remove cattle from public lands."

Program's response:

"USDA APHIS thanks the commentor for this thoughtful comment. The current Environmental Assessment posted for comment addresses building wildlife fencing to reduce the spread of cattle fever ticks on wild hosts. This project does not specifically involve grazing cattle on public lands."