

Appendix A2:
Protected Species Desktop Assessment Report for the
Spring Creek Dam Feasibility Study



Spring Creek Watershed Flood Control Dams Conceptual Engineering Feasibility Study

Protected Species Desktop Assessment Report for the Spring Creek Dam Feasibility Study

Flood Infrastructure Fund Category 1

Project ID 21-0016

Prepared for:

Texas Water Development Board

Prepared by:

Halff

Richard Howard, P.W.S.

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Appendix A2-3: Threatened and Endangered Species Assessment

1 Introduction

At the request of the San Jacinto River Authority, Halff Associates (Halff) conducted a desktop assessment of federally and state protected species (threatened and endangered species, migratory birds, and bald and golden eagle) for the Spring Creek Dam Feasibility Study (proposed project). The proposed project includes construction alternatives for detention basins within the Spring Creek watershed near Magnolia, Texas (project area) to reduce flooding in The Woodlands and other areas downstream to the confluence of the San Jacinto River (**Figure 1, Appendix A2-1**). The project area contains two potential dam alignments within the sub-watersheds of Walnut Creek and Birch Creek. The dam alignment within the Walnut Creek sub-watershed is situated between Farm-to-market (FM) 1488 and Riley Road. The dam alignment within the Birch Creek sub-watershed is situated between FM 1488, Ranch Crest Drive, and FM 1774. Both potential projects are in the Spring watershed as defined by U.S. Geological Survey (USGS) hydrologic unit code (HUC) 12040102. Halff conducted this desktop assessment to determine what, if any, protected species are associated with the potential work areas and identify what permitting tasks may be required for the project.

2 Background information

2.1 Endangered Species Act

U.S. Fish and Wildlife Service (USFWS) has authority under the Endangered Species Act (ESA) to list and monitor the status of species whose populations are considered imperiled. USFWS regulations implementing the ESA are codified and regularly updated in 50 Code of Federal Regulations Part 17. The federal process identifies potential candidates based on the species' biological vulnerability. The vulnerability decision is based upon many factors affecting the species within its range and is linked to the best scientific data available to the USFWS at the time. Species listed as threatened or endangered by the USFWS are provided full protection under the ESA including a prohibition of indirect take such as destruction of known critical habitat (i.e., areas formally designated by USFWS in the Federal Register).

USFWS proposes one of three recommended determinations of effect on federally listed endangered and threatened species, species proposed to be listed, and their habitat: “no effect,” “may affect, not likely to adversely affect,” or “may affect, likely to adversely affect.” These three possible determinations are described below.

1. No effect – A “no effect” determination means that there are absolutely no effects from the proposed action, positive or negative, to listed species. A “no effect” determination does not include effects that are insignificant (small in size), discountable (extremely unlikely to occur), or beneficial.
2. May affect, not likely to adversely affect – A “may affect, not likely to adversely affect” determination may be reached for a proposed action where all effects are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the effects and should not reach the scale where take occurs. Discountable effects are those that are extremely unlikely to occur. This conclusion is usually reached through the informal consultation process, and written concurrence from the USFWS exempts the proposed action from formal consultation. The federal action agency's written request for USFWS concurrence should accompany the biological assessment/biological evaluation.
3. May affect, likely to adversely affect – A “may affect, likely to adversely affect” determination means that all adverse effects cannot be avoided. A combination of beneficial and adverse effects is still “likely to adversely affect” even if the net effect is neutral or positive. Section 7 of the ESA requires that the federal action agency request initiation of formal consultation with the USFWS when a “may affect, likely to adversely affect” determination is made. A written request for formal consultation should accompany the biological assessment/biological evaluation. Formal consultation results in the USFWS issuing a biological opinion as to whether the action, as proposed, will jeopardize the continued existence of any listed species.

These effects determinations are based on the potential for the species or their habitat to occur and the planned construction activities within the project area. Because the project's construction activities are undefined, this report is limited to the potential to occur.

2.2 Texas Parks and Wildlife Code

The 1973 Texas endangered species legislation and subsequent amendments have established a state regulatory program for the management and protection of endangered species (i.e., species in danger of extinction) and threatened species (i.e., likely to become endangered within the foreseeable future). Chapters 67 and 68 of the Texas Parks and Wildlife Code authorize the TPWD to formulate lists of threatened and endangered fish and wildlife species and to regulate the taking or possession of the species. Under this statutory authority, the TPWD regulates the taking, possession, transport, export, processing, selling or offering for sale, or shipping of threatened or endangered species of fish and wildlife.

2.3 Migratory Bird Treaty Act

Passed in 1918, Migratory Bird Treaty Act (MBTA) utilizes treaties between the United States, Canada, Mexico, and Russia to protect migratory bird species populations. Under federal regulation, the MBTA makes it unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg of any such bird without a USFWS-issued permit.

2.4 Bald and Golden Eagle Act

Enacted in 1940, the Bald and Golden Eagle Protection Act (BGEPA) has since undergone various amendments and ultimately aids in the federal protection and management of bald eagles and golden eagles. The BGEPA prohibits the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export, or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit.

3 Methods

Halff completed a desktop review of the study area utilizing information and data from the following resources:

- Mussels of Texas Project Database
- National Hydrography Dataset (NHD)
- National Wetland Inventory (NWI)
- TPWD Ecological Mapping Systems of Texas (EMST) and Rare, Threatened, and Endangered Species of Texas (RTEST) list
- USFWS IPaC and Environmental Conservation Online System (ECOS)
- United States Department of Agriculture (USDA) National Resource Conservation Service (NRCS) Web Soil Survey
- U.S. Geological Survey (USGS) Texas Geologic Database.

Habitat conditions within the study area were characterized using USGS Texas Geologic Map Database, NRCS Web Soil Survey, and EMST. The USFWS IPaC is an online tool that provides information on federally managed resources to streamline the environmental review process. Through the USFWS IPaC, a local USFWS office can generate an official species list based on the location in which the project occurs. The official species list identifies federally listed threatened and endangered species, proposed to be listed species, candidate species, and designated critical habitat that may occur within the boundary of the study area and/or may be affected by the project. Under Section 7 of the ESA, this information is used to evaluate suitable habitat within the study area and potential environmental impacts that may result from the proposed project.

The TPWD RTEST by County is an online tool that generates information regarding potential occurrence of federally- and state-protected species and Species of Greatest Conservation Need (SGCN) on a county level. Species designated as a SGCN are generally those that are declining or rare and in need of attention to recover or to prevent the need to list under state or federal regulation. Species designated as SGCN do not have regulatory protection and will not be discussed further. Historically, the TPWD county species lists have been overly inclusive when compared to USFWS lists and may list species known to be extirpated from the area. Furthermore, TPWD only regulates intentional direct harms to the state listed species. The TPWD RTEST species list for Waller County, which was last updated on September 1, 2023, was used to evaluate potential impacts to protected species based on the presence of suitable habitat within the study area for each state listed species.

The above resources identify listed species whose known ranges could extend into the study area, provide requisite habitat descriptions, and identify if USFWS-designated critical habitat exists within the vicinity. Potential for the proposed project to affect species listed by the USFWS under the ESA was evaluated by comparing USFWS's IPaC, TPWD's RTEST species lists, TPWD TXNDD data, and the study area's habitat conditions.

4 Habitat assessment

4.1 Terrestrial habitats

4.1.1 *Ecoregion*

According to the Level III Ecoregions created by the Environmental Protection Agency, the study area is located within the South Central Plains ecoregion near its intersection with Texas Blackland Prairie and East Central Texas Plains (**Figure 2, Appendix A2-1**). The South Central Plains ecoregion constitutes much of the east Texas piney woods on the western edge of the southern coniferous forest belt. Although the ecoregion historically consisted of a mix of pine and hardwood forests, loblolly and shortleaf pine plantations now dominate much of the region. Soils throughout the ecoregion are generally acidic sands and sandy loams. Croplands are generally sparse throughout the region, with roughly two-thirds of the region dominated by forests and woodland. Lumber, pulpwood, oil, and gas production are major economic activities in the ecoregion.

Furthermore, the study area is within the Southern Tertiary Uplands Level IV Ecoregion. Mesic sites are dominated by mixed hardwood pine forests with a variety of species components. Although, some sandstone outcrops have distinctive barrens or glades, seeps in sand hills support acid bog species, similar to those found in the Flatwoods. The region is relatively hilly and dissected with soils that are generally better drained over the more permeable sediments. Today, the region is more pine forest than the oak-pine and pastureland cover with large parts of the region consisting of National Forests.

4.1.2 *Geology*

The only geologic unit within the study area is the Willis Formation (Qwc) (**Figure 3, Appendix A2-1**). Major constituents within Qwc consist of clay, silt, sand, and siliceous gravel of granule to pebble size, including some petrified wood, with coarser sands in younger rocks. The soils are noncalcareous and cemented by iron oxide locally. Iron oxide concretions are abundant throughout, especially in the western portions. Scarps (bluffs) may form on the landward portions of this formation. This geologic unit dates to the Pleistocene.

4.1.3 *Soils*

Eight soil units occur within the study area (**Figure 4, Appendix A2-1**). Characteristics of each soil unit are summarized in Table 4-1.

Table 4-1 Summary of Soil Units

Map Unit Name (Symbol)	Hydric Soil Map Unit	Hydric Component Characteristics			Acreage	Percent of Study Area
		Unit Name (Percent)	Landform	Hydric Criteria		
Annona fine sandy loam, 1 to 5 percent slopes (AnC)	No	NA	NA	NA	31.7	1.2
Conroe loamy fine sand, 1 to 5 percent slopes (CoC)	No	NA	NA	NA	279.6	10.2
Conroe soils, graded, 1 to 5 percent slopes Yes (CpC)	Yes	Waller (5%)	Flats	2	26.1	1.0
Depcor loamy fine sand, 1 to 5 percent slopes (DeC)	No	NA	NA	NA	1,107.8	40.3
Hatliff-Pluck-Kian complex, 0 to 1 percent slopes, frequently flooded (HatA)	Yes	Pluck (35%) Kian (24%) Simelake (2%) Cowmarsh (1%)	Flood plains Flood plains Flats Oxbows	2 2 4 2, 3, 4	364.6	13.3
Landman loamy fine sand, 1 to 5 percent slopes (LdC)	No	NA	NA	NA	368.8	13.4
Landman-Larue complex, 3-12 percent slopes (LIE)	No	NA	NA	NA	512.9	18.7
Splendora fine sandy loam, 0 to 2 percent slopes (PsB)	No	NA	NA	NA	56.1	2.0

Source: USDA NRCS Web Soil Survey

4.1.4 Vegetation

The TPWD EMST database is a 398 class, ten-meter spatial resolution land classification map for Texas. According to the EMST data, the study area contains nine vegetation types (**Figure 5, Appendix A2-1**). The most common vegetation types within the study area are all various subclasses of Pineywoods, which collectively make up approximately 98% (approximately 2,689 acres) of the study area. The EMST classifications indicate that the communities are generally dominated by loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), post oak (*Q. stellata*), sugarberry (*Celtis laevigata*), American elm (*Ulmus americana*), cedar elm (*U. crassifolia*), and green ash (*Fraxinus pennsylvanica*). Where these are absent, herbaceous communities are dominated by Bermudagrass (*Cynodon dactylon*), bahia grass (*Paspalum notatum*), and perennial ryegrass (*Lolium perenne*). Table 4-2 summarizes all EMST vegetation types associated with the study area.

Table 4-2 Predominant Vegetation Communities within the Project Area

EMST Vegetation Types – Common Name	Dominant Plant Species	Acreage	Percent of Study Area
Pine Plantation > 3 Meters Tall	<i>Pinus taeda</i> , <i>Pinus echinata</i> , <i>Liquidambar styraciflua</i> , <i>Quercus nigra</i> , <i>Nyssa sylvatica</i> , <i>Quercus falcata</i> , <i>Quercus stellata</i> , and <i>Quercus alba</i>	57.31	2.09
Pineywoods: Disturbance or Tame Grasslands	Non-native grasses (<i>Cynodon dactylon</i> , <i>Paspalum notatum</i> , <i>Lolium perenne</i> , <i>Schedonorus phoenix</i> , <i>Bromus catharticus</i>) and native grasses (e.g., <i>Andropogon virginicus</i> , <i>Schizachyrium scoparium</i>)	1.22	0.04
Pineywoods: Pine-Hardwood Forest or Plantation	<i>Pinus taeda</i> with co-dominant hardwood species	645.82	23.50
Pineywoods: Pine Forest or Plantation	<i>Pinus taeda</i> and other pines	782.43	28.48
Pineywoods: Small Stream and Riparian Temporarily Flooded Hardwood Forest	<i>Liquidambar styraciflua</i> , <i>Quercus nigra</i> , <i>Celtis laevigata</i> , <i>Ulmus crassifolia</i> , and <i>Fraxinus pennsylvanica</i> .	266.07	9.68
Pineywoods: Small Stream and Riparian Temporarily Flooded Mixed Forest	<i>Pinus taeda</i> , <i>Pinus elliotii</i> , and/or <i>Juniperus virginiana</i> with mixed deciduous species sharing in the canopy	34.75	1.26
Pineywoods: Southern Mesic Pine-Hardwood Forest	<i>Fagus grandifolia</i> , <i>Magnolia grandiflora</i> , <i>Pinus taeda</i> , and <i>Pinus echinata</i>	0.29	0.01
Pineywoods: Upland Hardwood Forest	A wide variety of hardwoods (<i>Quercus</i> sp., <i>Liquidambar styraciflua</i> , <i>Ulmus</i> sp., often including <i>Pinus taeda</i>)	958.06	34.87
Urban Low Intensity	Built up lands with little, if any, vegetation	1.80	0.07

4.2 Aquatic habitats

Based on the USGS topographic maps, Halff identified two named streams (Walnut Creek and Birch Creek) and several tributaries within the project area. The NHD and NWI databases were reviewed to identify potential aquatic resources within the study area (**Figure 6, Appendix A2-1**). Based on the NWI, Halff identified 65 NWI features totaling approximately 155 acres within the project area, three of which intersect the proposed alignment of the Walnut Creek detention basin and two of which intersect the alignment of the Birch Creek detention basin. The potentially impacted wetlands measure 3.54 and 0.85 acres for the Walnut Creek detention basin and Birch Creek detention basin, respectively. The proposed alignment for the Walnut Creek detention basin dam may impact Walnut Creek and the proposed alignment for the Birch Creek detention basin dam may impact Birch Creek. Collectively, the project area includes approximately 28,060 linear feet of stream channel (15,296 associated with the Walnut Creek detention basin and 12,764 associated with the Birch Creek detention basin) within 500-year floodplain upstream of the proposed detention basin. Halff identified 35 NHD features within the project area.

5 Results

5.1 Federally listed species

On January 17, 2024, Halff received an official species list (**Appendix A2-2**) from the Texas Coastal Ecological Services Field Office, which identified five species that are listed as threatened, endangered, proposed to be listed, or candidate species that may occur within the study area. A table summarizing the federally listed species, suitable habitat descriptions, and effect determinations is included in **Appendix A2-3**. It is important to note that the occurrence data provided in the official species list are not based on field assessments. Field surveys and project plans will be required to make formal assessments of the effects the project may have to threatened and endangered species.

5.2 State listed species

The TXNDD database does not identify any known occurrence of threatened or endangered species within one mile of the project area. **Figure 7, Appendix A2-1** illustrates this and the nearest recorded protected species: Heller's marbleseed (*Onosmodium helleri*) and eastern box turtle (*Terrapene carolina carolina*).

Halff acquired a list of rare, threatened, and endangered species whose geographic range may include the project area. Review of the TPWD RTEST indicated a total of eleven federally protected species and nineteen state listed species in Waller County that are listed as threatened or endangered by TPWD. A table summarizing the state listed species, suitable habitat descriptions, and impact determinations is included in **Appendix A2-3**.

5.3 Migratory birds

The IPaC report (**Appendix A2-2**) indicates that the project area may support five species protected statutorily under the Migratory Bird Treaty Act. Specifically, these include the American kestrel (*Falco sparverius paulus*), bald eagle (*Haliaeetus leucocephalus*), brown-headed nuthatch (*Sitta pusilla*), Kentucky warbler (*Oporornis formosus*), and red-headed woodpecker (*Melanerpes erythrocephalus*). Field surveys and project plans will be required to make formal assessments of the effects the project may have to these species.

5.4 Bald and golden eagles

In Texas, preferred bald eagle winter nesting habitat is located along or within one to two miles of large bodies of water, such as coasts, bays, lakes, swamps, or marshes. This species typically nests in tall trees and cliffs. Field surveys and project plans will be required to make formal assessments of the effects the project may have to bald eagles.

The golden eagle is typically found in open to semi-open areas composed of native vegetation. This raptor is known to avoid developed areas including agricultural fields as well as heavily forested areas. The golden eagle usually nests in mountains, cliffs, and bluffs from January to September. They have also been known to nest in tall trees, on the ground, or in human-made structures like electric towers and windmills. These habitats are absent from the project area. The

study area lacks suitable golden eagle nesting sites, such as mountains, cliffs, bluffs, and tall trees, and is surrounded by agricultural disturbances and development.

Due to the lack of suitable habitat, it is unlikely that the bald or golden eagle would occur within the study area; however, field surveys and project plans will be required to make formal assessments of the effects the project may have to these species.

6 Conclusion

Based on our desktop assessment of the study area, publicly available data, and suitable habitat descriptions, USFWS identifies five species that are listed as threatened, endangered, proposed to be listed, or candidate species that may occur within the study area. TPWD's RTEST provides a more liberal species assessment that includes the potential for eleven federally protected species in addition to nineteen state listed species. In addition, several migratory birds were identified for the project area.

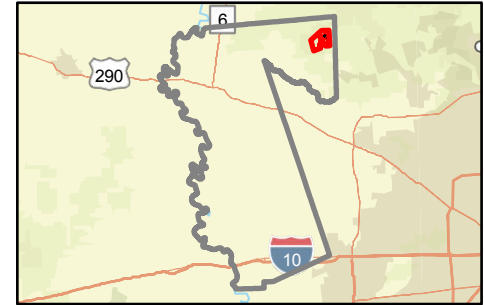
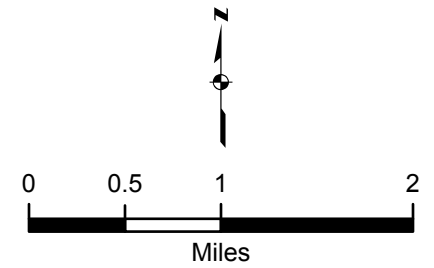
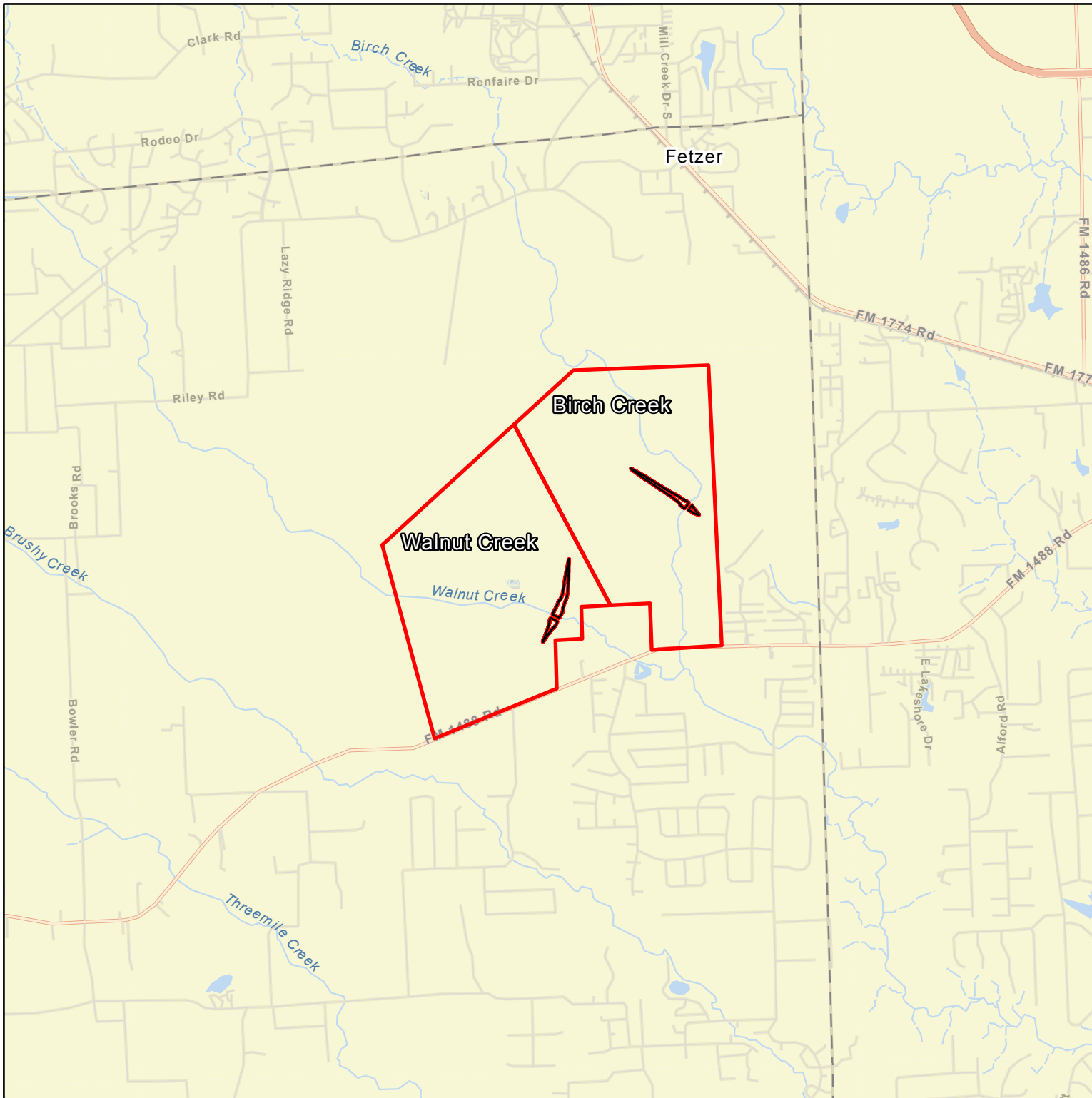
Because the project is conceptual at this point, this assessment provides a preliminary planning tool to aid in identifying potential threatened and endangered species constraints for the project. Depending on project location, design, configuration, and operation, impacts to these species may be reduced or eliminated entirely. Therefore, Halff recommends recommencing these assessments during the formal design process to reduce impacts to species that may be present.

The assessments in **Appendix A2-3** are based on occurrence probability at the time of this report. Depending on when project construction commences, the species lists may alter substantially due to listings and de-listings by TPWD and USFWS. Field surveys and design specifics would need to be evaluated fully to produce a species assessment suitable for permit coordination with USACE and/or USFWS. Coordination with TPWD would only be required if the project will intentionally lead to the death of state listed species.

7 References

- Cornell Lab of Ornithology. 2024. “eBird.” *eBird*. The Cornell Lab. <https://ebird.org/home>.
- Stoeser, D. B., Shock, N., Green, G. N., Dumonceaux, G. M., & Heran W. D. 2005. “Geologic Map Database of Texas.” *U.S. Geological Survey*, ds170, no. 170. doi:10.3133/ds170.
- TPWD. 2014. Ecological Mapping Systems of Texas. Descriptions of Systems, Mapping Subsystems, and Vegetation Types for Texas. Accessed May 2024.
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- USFWS. 2024. USFWS Official Species List. Houston, TX: Texas Coastal Ecological Services Field Office. October 12, 2023.

Appendix A2-1: Figures



Legend

- Study Area
- Dam Alignments

Notes:

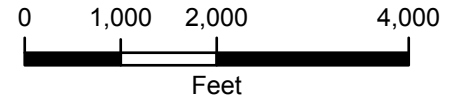
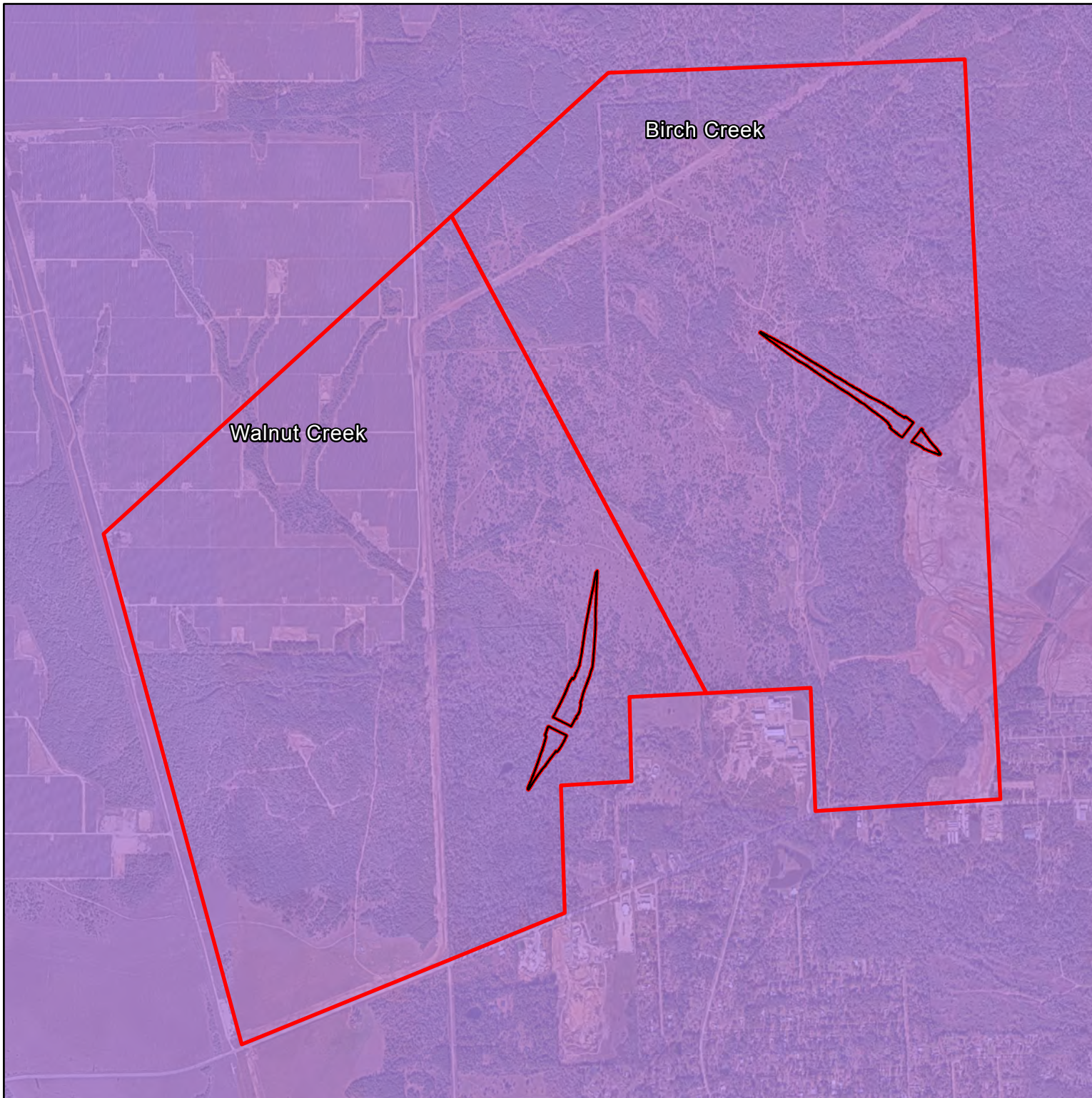
1. Map Center: 95.83634°W 30.2001°N
2. Service Layer Credits: World Street Map: Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS

World Street Map: Baylor University, Texas Parks & Wildlife, CONANP, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS



Spring Creek Dam Feasibility Study
Magnolia, Waller County, Texas
T&E Desktop Assessment
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Figure 1
Location Map






Legend

-  Study Area
-  Dam Alignments

Ecoregion

-  South Central Plains

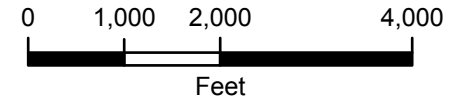
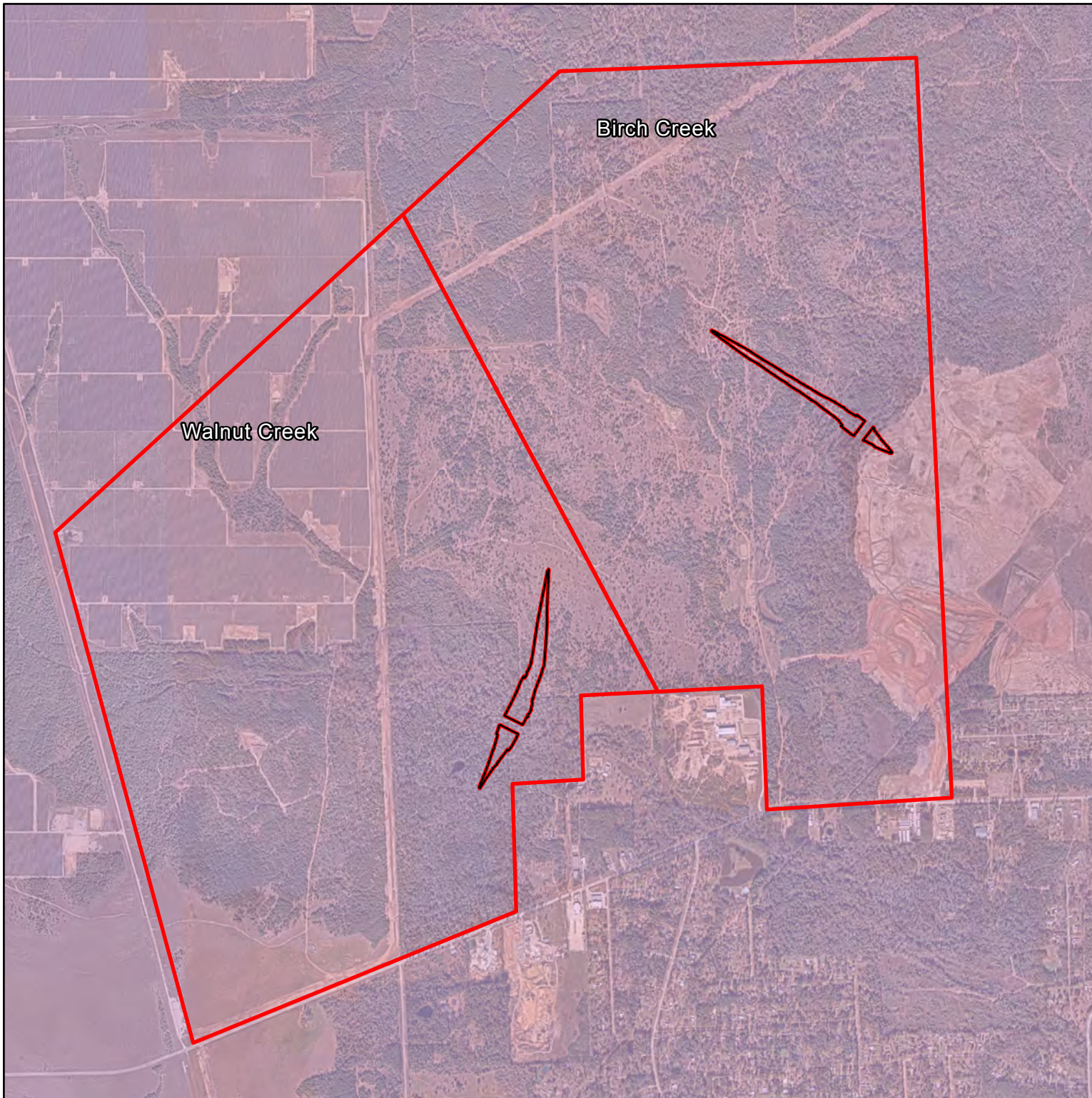
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1. Map Center: 95.83634°W 30.2001°N
2. Nearmap WMS Server: 2025
3. EPA Level III Ecoregions



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Figure 2
Ecoregion Map






Legend

-  Study Area
-  Dam Alignments

Geologic Unit

-  Pow: Willis Formation

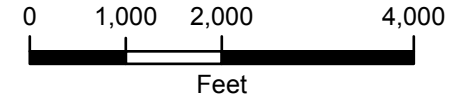
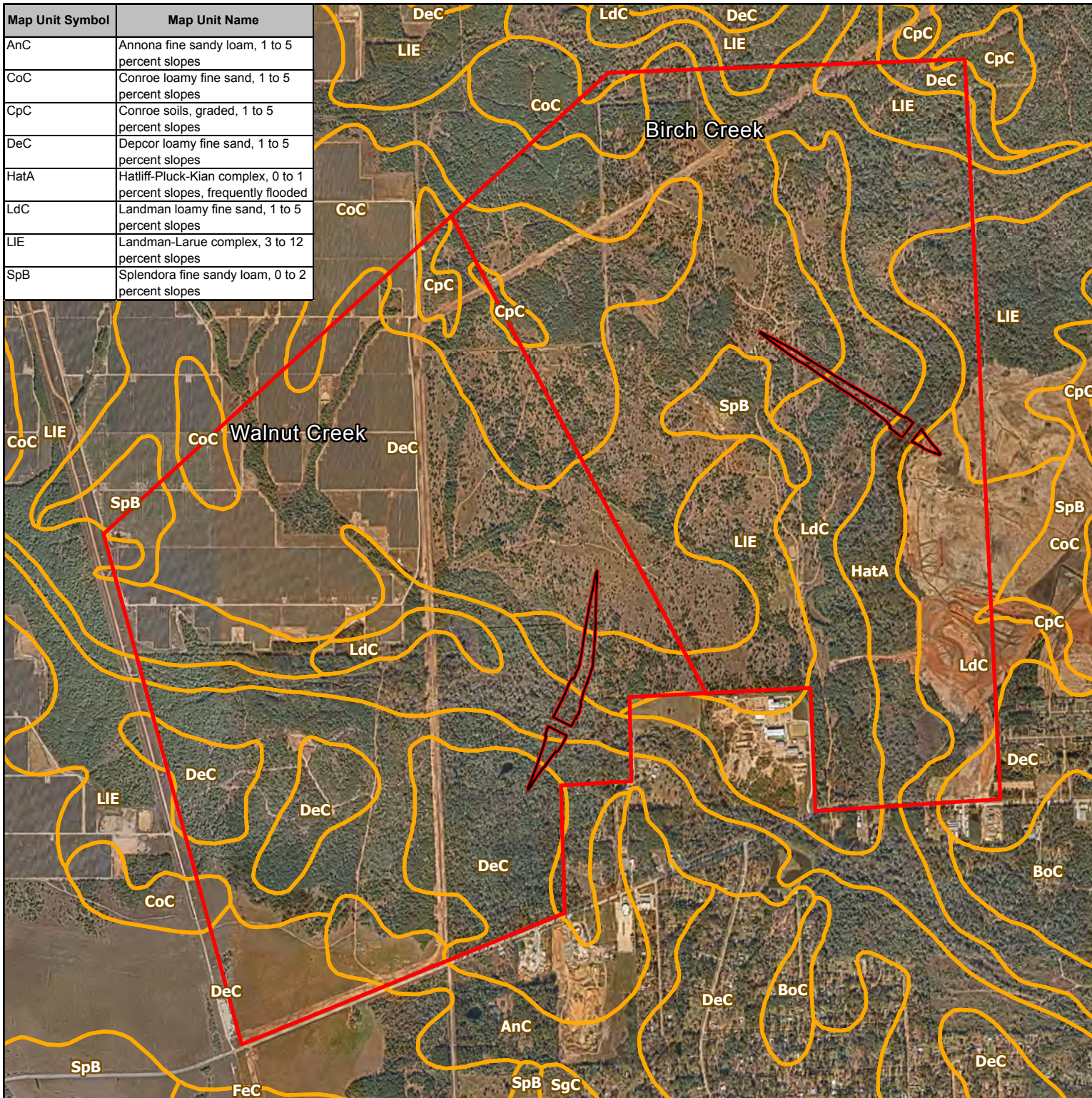
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2. Nearmap WMS Server: 20253.
3. USGS Geologic Formations Database

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Figure 3
Geology Map



Map Unit Symbol	Map Unit Name
AnC	Annona fine sandy loam, 1 to 5 percent slopes
CoC	Conroe loamy fine sand, 1 to 5 percent slopes
CpC	Conroe soils, graded, 1 to 5 percent slopes
DeC	Depcor loamy fine sand, 1 to 5 percent slopes
HatA	Hatloff-Pluck-Kian complex, 0 to 1 percent slopes, frequently flooded
LdC	Landman loamy fine sand, 1 to 5 percent slopes
LIE	Landman-Larue complex, 3 to 12 percent slopes
SpB	Splendora fine sandy loam, 0 to 2 percent slopes



Legend

- Study Area
- Dam Alignments
- SSURGO Soil Unit

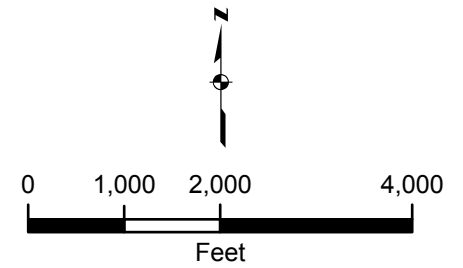
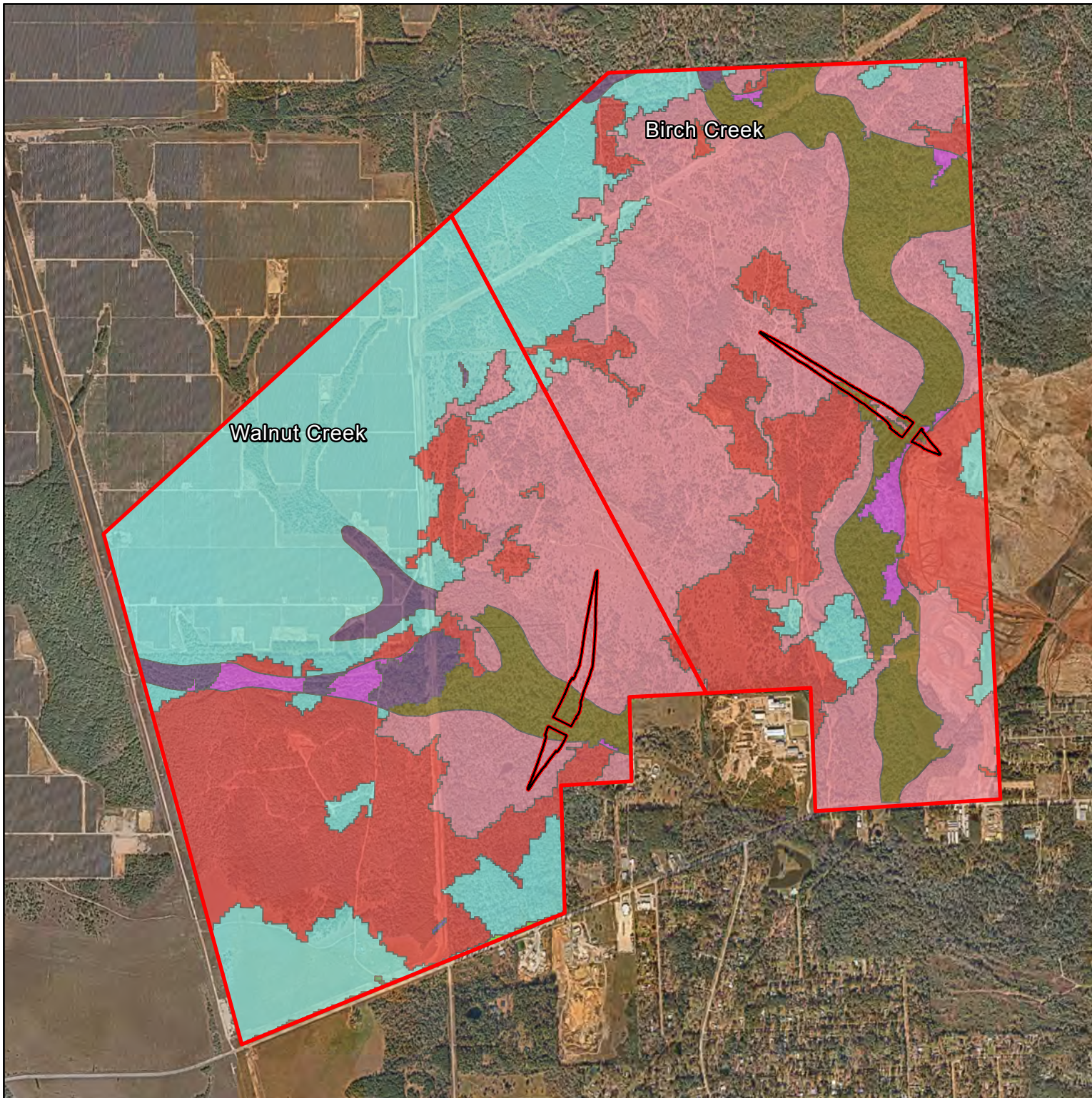
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1. Map Center: 95.83634°W 30.2001°N
2. Nearmap WMS Server: 2025
3. USDA NRCS Web Soil Survey

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**Figure 4
 Soil Map**





Legend

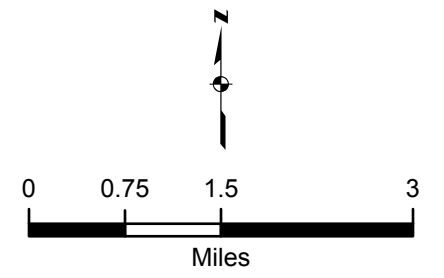
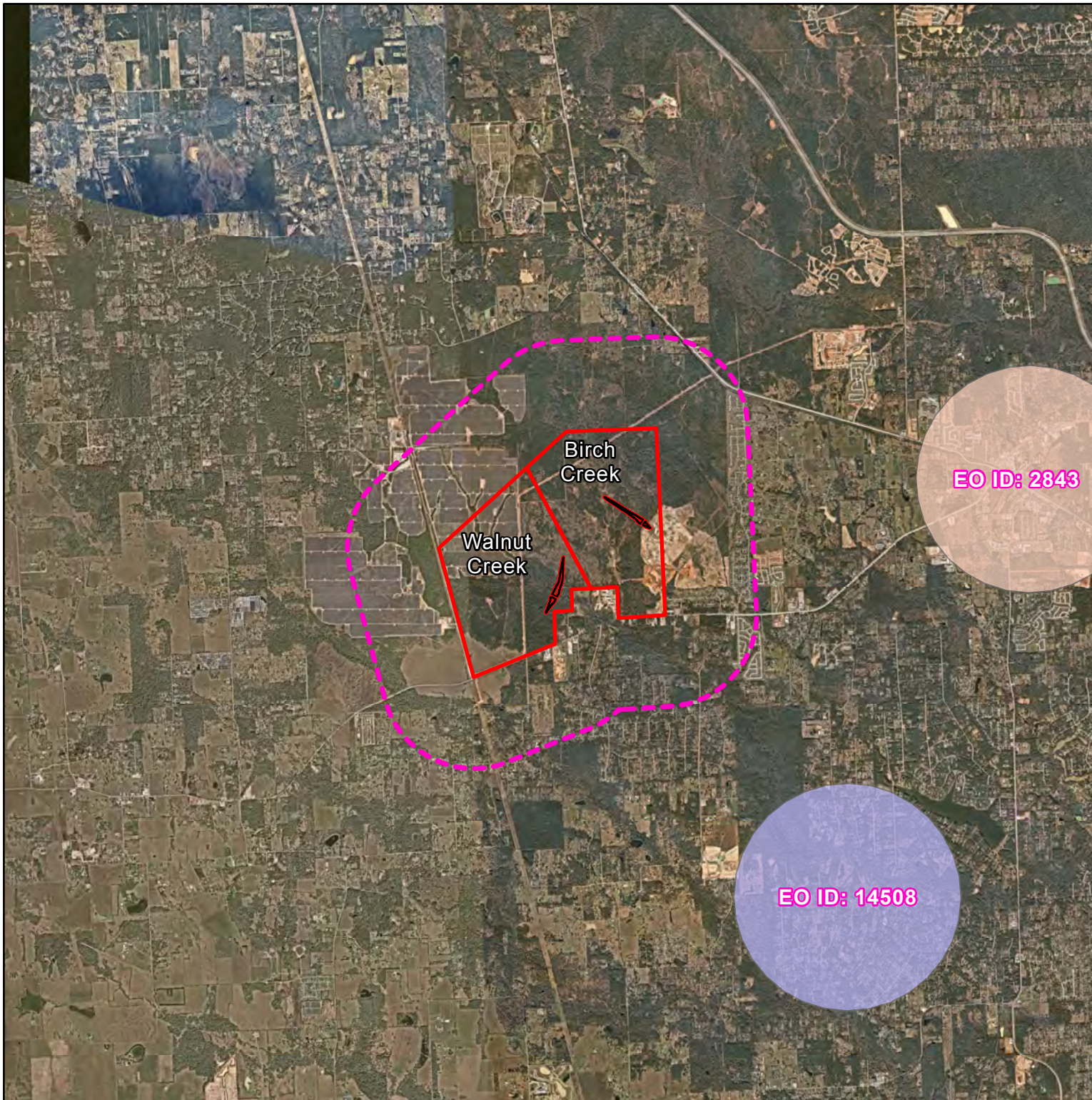
Study Area	Pineywoods: Small Stream and Riparian
Dam Alignments	Temporarily Flooded Hardwood Forest
EMST Type	
Pine Plantation > 3 meters tall	Pineywoods: Small Stream and Riparian
Pineywoods: Disturbance or Tame Grassland	Temporarily Flooded Mixed Forest
Pineywoods: Pine - Hardwood Forest or Plantation	Pineywoods: Southern Mesic Pine - Hardwood Forest
Pineywoods: Pine Forest or Plantation	Pineywoods: Upland Hardwood Forest
	Urban Low Intensity

Notes:
 1. Map Center: 95.83634°W 30.2001°N
 2. Nearmap WMS Server: 2025
 3. TPWD Ecological Mapping Systems

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Figure 5
EMST Map





Legend

- Study Area
- Dam Alignments
- 1-Mile Buffer

Species Common Name

- Heller's marbleseed
- eastern box turtle

Notes:

1. Map Center: 95.83634°W 30.2001°N
2. Nearmap WMS Server: 2025
3. TPWD Texas Natural Diversity Database

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Figure 7
TXNDD Map



Appendix A2-2: USFWS IPaC Report



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Texas Coastal & Central Plains Eso
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
Phone: (281) 286-8282 Fax: (281) 488-5882

In Reply Refer To:
Project Code: 2024-0037289
Project Name: Spring Creek Detention Dam

January 17, 2024

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The U.S. Fish and Wildlife Service (Service) field offices in Clear Lake, Corpus Christi, and Alamo, Texas, have combined administratively to form the Texas Coastal Ecological Services Field Office. All project related correspondence should be sent to the field office address listed below responsible for the county in which your project occurs:

Project Leader; U.S. Fish and Wildlife Service; 17629 El Camino Real Ste. 211; Houston, Texas 77058

Angelina, Austin, Brazoria, Brazos, Chambers, Colorado, Fayette, Fort Bend, Freestone, Galveston, Grimes, Hardin, Harris, Houston, Jasper, Jefferson, Leon, Liberty, Limestone, Madison, Matagorda, Montgomery, Newton, Orange, Polk, Robertson, Sabine, San Augustine, San Jacinto, Trinity, Tyler, Walker, Waller, and Wharton.

Assistant Field Supervisor, U.S. Fish and Wildlife Service; 4444 Corona Drive, Ste 215; Corpus Christi, Texas 78411

Aransas, Atascosa, Bee, Brooks, Calhoun, De Witt, Dimmit, Duval, Frio, Goliad, Gonzales, Hidalgo, Jackson, Jim Hogg, Jim Wells, Karnes, Kenedy, Kleberg, La Salle, Lavaca, Live Oak, Maverick, McMullen, Nueces, Refugio, San Patricio, Victoria, and Wilson.

U.S. Fish and Wildlife Service; Santa Ana National Wildlife Refuge; Attn: Texas Ecological Services Sub-Office; 3325 Green Jay Road, Alamo, Texas 78516

Cameron, Hidalgo, Starr, Webb, Willacy, and Zapata.

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as

amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <http://www.fws.gov/media/endangered-species-consultation-handbook>.

Non-Federal entities may consult under Sections 9 and 10 of the Act. Section 9 and Federal regulations prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined (50 CFR § 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR § 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Should the proposed project

have the potential to take listed species, the Service recommends that the applicant develop a Habitat Conservation Plan and obtain a section 10(a)(1)(B) permit. The Habitat Conservation Planning Handbook is available at: <https://www.fws.gov/library/collections/habitat-conservation-planning-handbook>.

Migratory Birds:

In addition to responsibilities to protect threatened and endangered species under the Act, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts visit: <https://www.fws.gov/program/migratory-birds>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable National Environmental Policy Act (NEPA) documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Texas Coastal & Central Plains Eso

17629 El Camino Real, Suite 211

Houston, TX 77058-3051

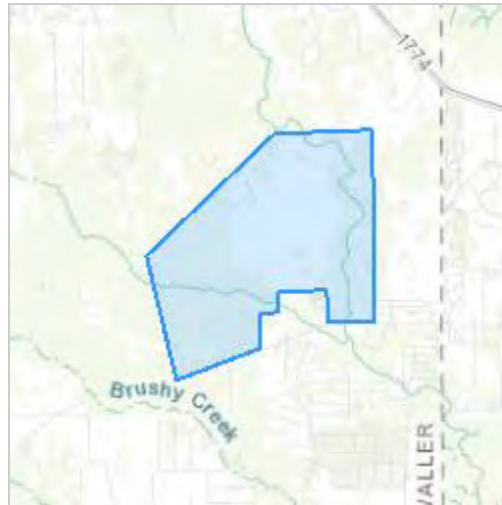
(281) 286-8282

PROJECT SUMMARY

Project Code: 2024-0037289
Project Name: Spring Creek Detention Dam
Project Type: Dam - New Construction
Project Description: Potential dams to retard floodwater in an effort to reduce downstream flooding.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@30.20916005,-95.83076731626113,14z>



Counties: Waller County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Wind related projects within migratory route. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Wind related projects within migratory route. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

REPTILES

NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

BALD & GOLDEN EAGLES

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](#)".

-
1. The [Bald and Golden Eagle Protection Act](#) of 1940.
 2. The [Migratory Birds Treaty Act](#) of 1918.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

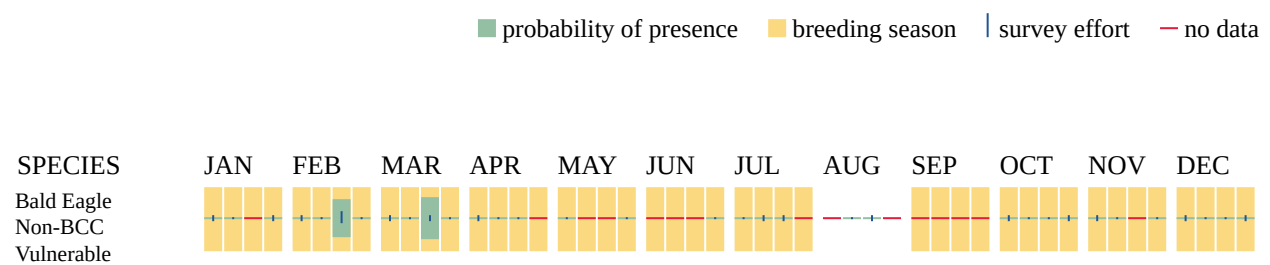
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>

- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "[Supplemental Information on Migratory Birds and Eagles](https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action)".

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Brown-headed Nuthatch <i>Sitta pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9427	Breeds Mar 1 to Jul 15
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20

NAME	BREEDING SEASON
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)

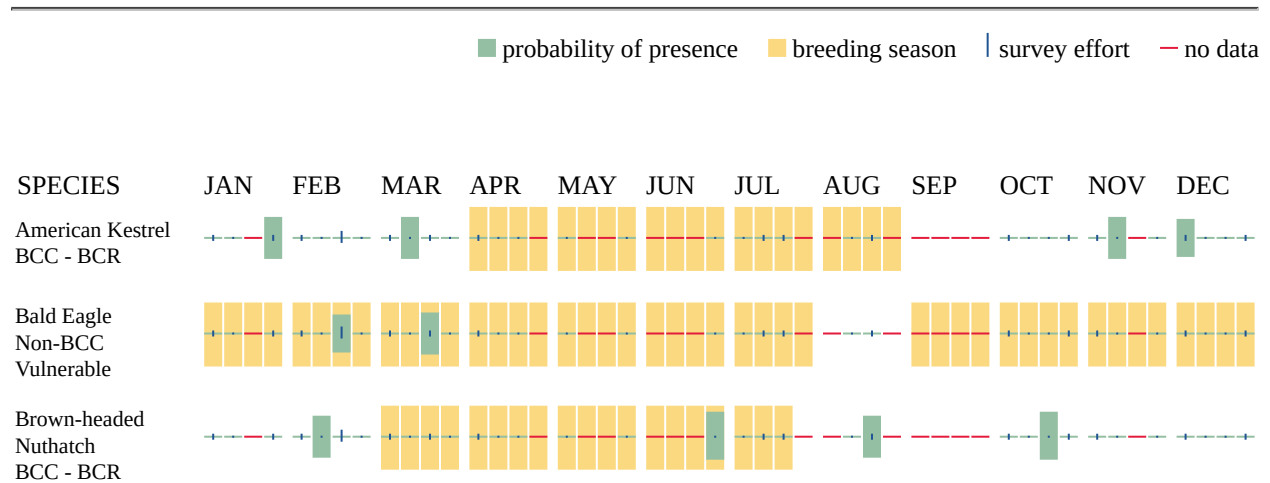
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

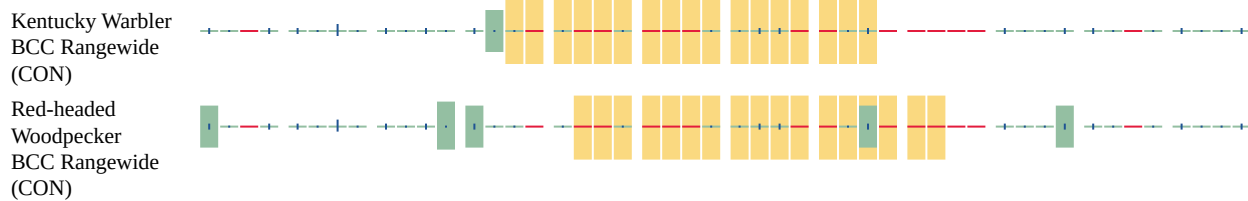
Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (—)

A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PSS1C
- PFO1/4A
- PFO1F
- PFO1A

FRESHWATER POND

- PUBHx
- PUBHh

FRESHWATER EMERGENT WETLAND

- PEM1F
- PEM1C

RIVERINE

- R5UBH
- R4SBC

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Rick Howard
Address: 14800 Saint Mary's Lane Ste 160
Address Line 2: Houston, TX 77079
City: Houston
State: TX
Zip: 72830
Email: rhoward@halff.com
Phone: 7135882453

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

Appendix A2-3: Threatened and Endangered Species Assessment

Species	Status (Federal/State)	Suitable Habitat	Probability of Occurrence
Plants			
Navasota ladies' tresses (<i>Spiranthes parksii</i>)	E / E	Openings in post oak woodlands in sandy loams along upland drainages or intermittent streams, often in areas with suitable hydrologic factors, such as a perched water table associated with the underlying claypan; flowering populations fluctuate widely from year to year. Individual plants may not flower every year. Flowering is between late October and December.	Unlikely to occur. This species is typically found in deep, sandy soils that are well drained. The riparian corridors associated with the project area provide little, if any, habitat of value.
Insects			
Monarch butterfly (<i>Danaus plexippus</i>)	C / --	Species consists of migratory and non-migratory populations that feed on the nectar of a wide range of wildflowers. Eggs are typically laid on any of a number of species of milkweeds with larvae feeding on the leaves and stems of these plants until pupating. Currently considered a candidate for listing as a protected species due to population declines.	May occur. Milkweeds are common throughout southeast Texas but are relatively rare in densely forested areas.
Mollusks			
Brazos heelsplitter (<i>Potamilus streckeri</i>)	-- / T	Reported from streams (but not far into the headwaters), large rivers, and some reservoirs. In riverine systems it often occurs in nearshore habitats (banks and backwater pools) but occasionally in main channel habitats such as riffles. Typically found in standing to slow-flowing water in soft substrates consisting of silt, mud, or sand but occasionally in moderate flows with gravel and cobble substrates.	Does not occur. The Mussels of Texas database indicates that this species is absent from the San Jacinto River watershed.
Texas fawnsfoot (<i>Truncilla macrodon</i>)	PT / T	Occurs in large rivers but may also be found in medium-sized streams. Is found in protected near shore areas (banks and backwaters) but also riffles and point bar habitats with low to moderate water velocities. Typically occurs in substrates of mud, sandy mud, gravel, and cobble. Considered intolerant of reservoirs.	Unlikely to occur. This species is known to occur within the San Jacinto River watershed; however, the streams in the project area appear to be insufficient to support the species.
Fishes			
Western creek chubsucker (<i>Erimyzon claviformis</i>)	-- / T	Eastern Texas streams from the Red River to the San Jacinto drainage. Habitat includes silt-, sand-, and gravel-bottomed pools of clear headwaters, creeks, and small rivers; often near vegetation; occasionally in lakes. Spawning occurs in river mouths or pools, riffles, lake outlets, or upstream creeks. Prefers headwaters, but seldom occurs in springs.	Unlikely to occur. This species is known to occur within the San Jacinto River watershed; however, the streams in the project area appear to be insufficient to support the species.
Paddlefish (<i>Polyodon spathula</i>)	-- / T	Species occurred in every major river drainage from the Trinity Basin eastward, but its numbers and range had been substantially reduced by the 1950s; recently reintroduced into Big Cypress drainage upstream of Caddo Lake. Prefers large, free-flowing rivers but will frequent impoundments with access to spawning sites.	Does not occur. The species is not known to be in the San Jacinto watershed. Furthermore, the streams in the project area appear to be too small to support the species.
Amphibians			
Houston toad (<i>Anaxyrus houstonensis</i>)	E / E	Primary terrestrial habitat is forests with deep sandy soils. Juveniles and adults are presumed to move through areas of less suitable soils using riparian corridors. Aquatic habitats can include any water body from a tire rut to a large lake.	Unlikely to occur. Although the soil types that are associated with the species are present, there are no records of occurrence in Waller County.

Reptiles

Alligator snapping turtle (<i>Macrochelys temminckii</i>)	PT / T	Perennial water bodies; rivers, canals, lakes, and oxbows; also swamps, bayous, and ponds near running water; sometimes enters brackish coastal waters. Females emerge to lay eggs close to the water's edge.	May occur. The species is documented in many streams associated with southeast Texas. Deep water areas in the streams may support populations.
Texas horned lizard (<i>Phrynosoma cornutum</i>)	-- / T	Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush, or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6,000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.	Unlikely to occur. The species is not typically associated with riparian corridors.

Birds

White-tailed hawk (<i>Buteo albicaudatus</i>)	-- / T	Near coast on prairies, cordgrass flats, and scrub-live oak; further inland on prairies, mesquite and oak savannas, and mixed savanna-chaparral. Breeds between March and May.	May occur; however, unlikely to be harmed by the project.
Rufa red knot (<i>Calidris canutus rufa</i>)	T / T	Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats, and salt marshes.	May occur; however, unlikely to be harmed by the project.
Piping plover (<i>Charadrius melodus</i>)	T / T	Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992, Section 6 Job No. 9.1, algal flats appear to be the highest quality habitat. Sand flats often appear to be preferred over algal flats when both are available, but sand flats along the Texas coast are often only available during very low tides and are often completely. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes.	Unlikely to occur. Necessary migratory habitat is not present. Therefore, unlikely to be harmed by the project.
Red-cockaded woodpecker (<i>Dryobates borealis</i>)	E / E	Nests in cavities in older (60+ years) pine trees. Forages in younger (30+ years) pines. Species prefers longleaf, shortleaf, and loblolly pines.	Unlikely to occur. Species is generally associated with old-growth forests, which appear to be absent from the project area.
Swallow-tailed kite (<i>Elanoides forficatus</i>)	-- / T	Typical habitat includes lowland forested regions especially swampy areas ranging to open woodland, marshes, along rivers, lakes, and ponds. Nests high in tall trees in clearing or on forest woodland edges, usually using pine, cypress, or various deciduous trees.	May occur; however, unlikely to be harmed by the project.
Whooping crane (<i>Grus americana</i>)	E / E	Habitat includes small ponds, marshes, and flooded grain fields for both roosting and foraging during migration. Potential migrant via plains throughout most of Texas. Winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	May occur; however, unlikely to be harmed by the project.
Black rail (<i>Laterallus jamaicensis</i>)	T / T	Habitat includes salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps. Nests in or along marsh edges, sometimes on damp ground, but usually on mat of previous years dead grasses. Nests are usually hidden in marsh grass or at base of <i>Salicornia</i> .	May occur; however, unlikely to be harmed by the project.
Wood stork (<i>Mycteria americana</i>)	-- / T	Prefers to nest in large tracts of baldcypress (<i>Taxodium distichum</i>) or red mangrove (<i>Rhizophora mangle</i>). Forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including	Unlikely to occur. Preferred habitat is absent.

		salt-water. Typically roosts communally in tall snags, sometimes in association with other wading birds. Breeds in Mexico but traverses the Gulf in search of mud flats and other wetlands. No breeding records in Texas since 1960.	
White-faced ibis (<i>Plegadis chihi</i>)	-- / T	Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats. Currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.	Unlikely to occur. Preferred habitat is absent.
Mammals			
Rafinesque's big-eared bat (<i>Corynorhinus rafinesquii</i>)	-- / T	Historically, lowland pine and hardwood forests with large hollow trees. Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures	May occur. Project specifics would be needed to determine impact.
Tricolored bat (<i>Perimyotis subflavus</i>)	PE / --	The once common species is wide ranging across portions of southern Canada, eastern and central United States, Mexico, and Central America. During the winter, tricolored bats are found in caves and mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts. During the spring, summer and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. White-nose syndrome has led to 90 to 100% declines in tricolored bat winter colony abundance at sites impacted by the disease.	May occur. Project specifics would be needed to determine impact.
Louisiana black bear (<i>Ursus americanus luteolus</i>)	-- / T	Bottomland hardwoods, floodplain forests, upland hardwoods with mixed pine, and marsh. Possible as transient. Generally associated with bottomland hardwoods and large tracts of inaccessible forested areas.	Does not occur. Core habitat required the species are absent from the project area.