



Monday 9th, 2023

POSTED
8:05 A.M. P.M.
JAN 09 2023
GWINDA JONES, COUNTY CLERK
ERATH COUNTY, TEXAS
By CW Deputy

NOTICE OF SPECIAL COMMISSIONERS COURT MEETING

Notice is hereby given that the Erath County Commissioners Court will meet in **SPECIAL SESSION** on Wednesday January 11th, 2023 at 9:00 a.m. in the 2nd floor Commissioner Court Room at the Erath County Courthouse, Stephenville, Texas to consider the following agenda items for discussion and possible action:

1. Solar farms workshop
2. Closed Executive Session in Accordance with the Open Meeting Act, *Tex. Govt. Code 551.071 through 551.086*, to discuss:
 - a. Personnel
 - b. Legal Matter
 - c. Real Estate
 - d. Reconvene
3. Discuss any new business.
4. Adjourn.

COUNTY JUDGE
ERATH COUNTY, TEXAS



For Public Comments:

A Public Participation Form must be presented to the County Clerk prior to the time that the agenda item (or items) you wish to address are discussed before the Court. Speakers will be limited to 3 minutes and only 6 speakers will be allowed to speak on any given agenda item. Members of the public are reminded that the Erath County Commissioners Court is a Constitutional Court, with both judicial and legislative powers, created under Article V, Section 1 and Section 18 of the Texas Constitution. As a Constitutional Court, the Erath County Commissioners Court also possesses the power to issue a Contempt of Court Citation under Section 81.024 of the Texas Local Government Code. Accordingly, members of the public in attendance at any Regular, Special and/or Emergency Meeting of the Court shall conduct themselves with proper respect and decorum in speaking to, and/or addressing the Court; in participating in public discussions before the Court; and in all actions in the presence of the Court.

Erath County Reserves the right to adjourn into Executive Session at any time during the course of this meeting to discuss any of the matters listed, as authorized by the Texas Government Code, §551.071 (Consultation with Attorney), subsection 551.071(2) (Consultation with Attorney on legal matters that are not related to litigation), §551.072 (Deliberations regarding Real Property), §551.073 (Deliberations about Gifts and Donations), §551.074 (Personnel Matters), §551.076 (Deliberations about Security Personnel or Devices), §551.087 (Economic Development), §551.088 (Deliberation regarding Test Item), and 551.089 (Deliberation regarding Security Devices or Security Audits).

Commissioner's Court
Special Meeting
July 11, 2023
9:00 a.m.
Courthouse – County Courtroom

Present:

Commissioner Precinct #1 – Dee Stephens - Present

Commissioner Precinct #2 – Albert Ray - Present

Commissioner Precinct #3 – Joe Brown - Present

Commissioner Precinct #4 – Jim Buck - Absent

County Judge, Brandon Huckabee – Absent, Commissioner Brown presided over meeting.

County Clerk, Gwinda Jones

Others present in the courtroom: See attached roster

Agenda Item #1 Solar Farm Workshop

- See attached sheets listing those who had questions for NextEra Energy

Agenda Item #2 Closed Executive Session in Accordance with the Open Meeting Act, *Tex. Govt. Code* 551.071 through, to discuss:

- a. Personnel
- b. Legal Matter
- c. Real Estate
- d. Reconvene

- Closed meeting not needed

Agenda Item #3 Discuss any new business.

- No new business presented

Motion To Adjourn:

Made By: Commissioner Ray

Second By: Commissioner Stephens

All Ayes Meeting Adjourned At 10:25 a.m.

STATE OF TEXAS

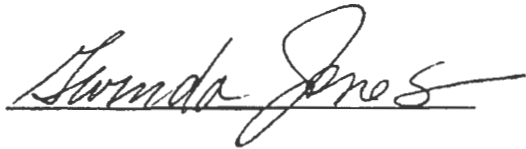
COUNTY OF ERATH

The above and foregoing is a true and complete copy of the minutes taken in my capacity as County Clerk of the Commissioners Court of Erath County, Texas, at the time and place heretofore set forth.

DATED at Stephenville, Texas, this 11th day of January, 2023.

ATTESTED BY:

GWINDA JONES, Erath County Clerk

A handwritten signature in cursive script, reading "Gwinda Jones", written over a horizontal line.



ERATH COUNTY COMMISSIONER'S COURT

100 W Washington,
2nd Floor Courtroom, Erath County Courthouse
Stephenville TX 76401

Attendees on Meeting Date: Jan 11, 2023

Printed Name	Signature	Email	Phone
Kim Baker	Kim Baker		
Whitney Bramblett	Whitney Bramblett		
Rick Baker	RICK BAKER		
Bonnie Crumley	Bonnie Crumley		
Ed Dominguez	Ed Dominguez		
Brad Barron	Brad Barron		
MARY TREWILL	Mary Trewill		
Michelle Aduddell	Michelle Aduddell		
Georgia Scott	Georgia Scott		
Camille Eckersley	Camille Eckersley		
Dub Crumley	crumley@aciglobal.com		
JOANNA FRISBELE			
DAVID DILKINSON (NATANA)			
Jennifer Carey	Jennifer Carey		
Cathy Valko	Cathy Valko		
Richard Darr	Richard Darr		

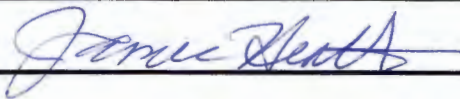
Attendees on Meeting Date: _____, 2022 (Page 2)

VINCENT PARRO



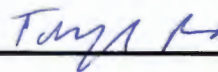
PATRICIA PARRO

JAMES HEATH



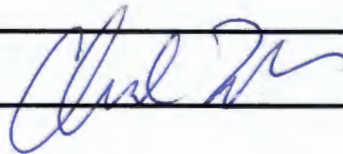
MARY JO HEATH

Taylor Bliss



Casey Valdes

Phillip Chad Taylor



Harrison Yu

Kim Münch

Carla Drussell

Colby Pack

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

ERATH COUNTY COMMISSIONER'S COURT

Public Participation Form

Instructions: Fill out all appropriate blanks. Please print or write legibly.

NAME: JOANNA FRIEBELE

HOMEADDRESS: 21375 S. FM 219
DUBUEN TX 76446

HOME TELEPHONE: _____

PLACE OF EMPLOYMENT: _____

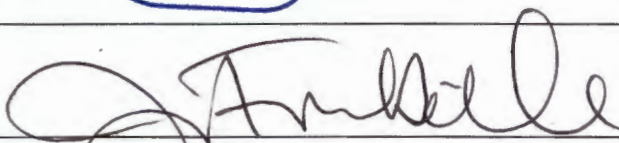
EMPLOYMENT TELEPHONE: _____

Do you represent any particular group or organization? _____

If you do represent a group or organization, please state the name, address and telephone number of such group or organization.

Which agenda item (or items) do you wish to address? _____

In general, are you for or against such agenda item (or items)?

Signature: 

NOTE: This Public Participation Form must be presented to the County Clerk prior to the time that the agenda item (or items) you wish to address are discussed before the Court. Speakers will be limited to 3 minutes and only 6 speakers will be allowed to speak on any given agenda item.

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ERATH COUNTY COMMISSIONER'S COURT

Public Participation Form

Instructions: Fill out all appropriate blanks. Please print or write legibly.

NAME: Richard Daerr

HOMEADDRESS: 2707 CR 247
Hico TX 76457

HOME TELEPHONE: 254 764 4337

PLACE OF EMPLOYMENT: Retired

EMPLOYMENT TELEPHONE: _____

Do you represent any particular group or organization? yes

If you do represent a group or organization, please state the name, address and telephone number of such group or organization.

The Texas Coalition for Environmentally
Safe Solar

Which agenda item (or items) do you wish to address? Environmentally Safe
Solar incl water, setback, fire lanes, disposal of
damaged solar panels, terracing for runoff

In general, are you for or against such agenda item (or items)?
for

Signature: Richard Daerr

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ERATH COUNTY COMMISSIONER'S COURT

Public Participation Form

Instructions: Fill out all appropriate blanks. Please print or write legibly.

NAME: Chad Taylor

HOMEADDRESS: 15639 Fm 914

HOME TELEPHONE: 817-253-6345

PLACE OF EMPLOYMENT: Bell Helicopter Textron

EMPLOYMENT TELEPHONE: Same

Do you represent any particular group or organization? no

If you do represent a group or organization, please state the name, address and telephone number of such group or organization.

Which agenda item (or items) do you wish to address? Heavy metals

In general, are you for or against such agenda item (or items)?

Signature: Chad Taylor

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ERATH COUNTY COMMISSIONER'S COURT

Public Participation Form

Instructions: Fill out all appropriate blanks. Please print or write legibly.

NAME: Ed DOMINGUEZ

HOMEADDRESS: 1040 CR 247

Hico, TX

HOME TELEPHONE: 702-540-6036

PLACE OF EMPLOYMENT: —

EMPLOYMENT TELEPHONE: —

Do you represent any particular group or organization? SELF / ~~ITSA~~

If you do represent a group or organization, please state the name, address and telephone number of such group or organization.

Which agenda item (or items) do you wish to address? Solar

In general, are you for or against such agenda item (or items)?

Signature: Ed Dominguez

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ERATH COUNTY COMMISSIONER'S COURT

Public Participation Form

Instructions: Fill out all appropriate blanks. Please print or write legibly.

NAME: Michelle Audubert

HOMEADDRESS: 715 PR 1636
Dublin TX 76446

HOME TELEPHONE: 806 # 333-4031

PLACE OF EMPLOYMENT: Self

EMPLOYMENT TELEPHONE: _____

Do you represent any particular group or organization? _____

If you do represent a group or organization, please state the name, address and telephone number of such group or organization.

Which agenda item (or items) do you wish to address? Solar Sites

In general, are you for or against such agenda item (or items)?

Signature Michelle Audubert

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ERATH COUNTY COMMISSIONER'S COURT

Public Participation Form

Instructions: Fill out all appropriate blanks. Please print or write legibly.

NAME: Dub Crumley

HOMEADDRESS: 6290 CR 246

Stephenville, Tex 76401

HOME TELEPHONE: 254-764-4328 - 254-927-4775

PLACE OF EMPLOYMENT: Farm & Ranch

EMPLOYMENT TELEPHONE: SAME

Do you represent any particular group or organization? _____

If you do represent a group or organization, please state the name, address and telephone number of such group or organization.

Which agenda item (or items) do you wish to address? _____

In general, are you for or against such agenda item (or items)?

Signature: W.T. "Dub" Crumley

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ERATH COUNTY COMMISSIONER'S COURT

Public Participation Form

Instructions: Fill out all appropriate blanks. Please print or write legibly.

NAME: Bonnie Crumley

HOMEADDRESS: 6290 CR 246

Stephenville, Tx 76401

HOME TELEPHONE: 254-764-4378

PLACE OF EMPLOYMENT: self

EMPLOYMENT TELEPHONE: _____

Do you represent any particular group or organization? _____

If you do represent a group or organization, please state the name, address and telephone number of such group or organization.

Which agenda item (or items) do you wish to address? _____

In general, are you for or against such agenda item (or items)?

Signature: Bonnie Crumley

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Critical Issues Analysis for the Erath Solar Energy Project, Erath County, Texas

JANUARY 2023

PREPARED FOR

NextEra Energy Resources, LLC

PREPARED BY

SWCA Environmental Consultants

CRITICAL ISSUES ANALYSIS FOR THE ERATH SOLAR ENERGY PROJECT, ERATH COUNTY, TEXAS

Prepared for

NextEra Energy Resources, LLC
700 Universe Boulevard
Juno Beach, Florida 33408
Attn: Gabe Valdes

Prepared by

SWCA Environmental Consultants
4407 Monterey Oaks Boulevard
Building 1, Suite 110
Austin, Texas 78749
(512) 476-0891
www.swca.com

SWCA Project No. 69735

January 2023

EXECUTIVE SUMMARY

On behalf of NextEra Energy Resources, LLC, SWCA Environmental Consultants conducted a desktop-level critical issues analysis (CIA) of aquatic, biological, and cultural resources, and a review of regulatory and permitting considerations for the proposed Erath Solar Energy Project (project) located in northeastern Erath County, Texas. The project is proposed for construction on approximately 2,472 acres of privately owned land (project area). This CIA provides a broad, yet comprehensive, overview of key environmental resources identified during preliminary project planning, including a review of publicly available background information and regulatory constraints and risks.

The CIA results indicate that the environmental criteria reviewed may pose low risk of constraints, depending on the criteria. The project is a proposed private action with a low risk to adversely affect the human or natural environment.

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1 INTRODUCTION

NextEra Energy Resources, LLC (NextEra), is evaluating private lands for the construction of the proposed Erath Solar Energy Project (project). The land evaluated for the project totals approximately 2,472 acres of private lands for the development of a solar energy facility (project area). The project area is located approximately 3 miles northeast of Alexander, Texas, within southern Erath County, is intersected by County Road (CR) 246 and Farm-to-Market (FM) 914, and partially bounded by CR 457 to the west and CR 245 to the north and east (Figure 1).

On behalf of Erath Solar, SWCA Environmental Consultants (SWCA) conducted a desktop-level environmental critical issues analysis (CIA) of aquatic and biological resources. The purpose of this CIA is to determine potential development constraints and risks from environmental critical issues.

2 METHODOLOGY

This CIA relies solely on publicly and readily available data, such as published literature; online resources; SWCA's in-house sources; information from regulatory agencies, reports, maps, aerial photography, databases, public records, and geographic information system (GIS) data sets. SWCA also reviewed the findings from a separate aquatic resources delineation conducted by SWCA from October 19–22, 2021 (SWCA 2021). The publicly available data sources are described further in Sections 2.1 and 2.2. The aquatic resources delineation methods are described in SWCA's *Aquatic Resources Delineation Report for the Erath Solar Project, Erath County, Texas* (SWCA 2021). The results from the aquatic resources delineation are summarized in Section 4.1.3 of this CIA; however, for detailed information, see the associated report (SWCA 2021). At this initial planning stage, this CIA does not address project features, such as access roads or other ancillary facilities, that may occur outside of the project area defined above and depicted in Figure 1.

2.1 Site Characterization

SWCA conducted a site characterization review of the project area using the following sources: the National Land Cover Database (Multi-Resolution Land Characteristics Consortium 2019), Ecoregions of Texas (Griffith et al. 2007), the U.S. Geological Survey (USGS) Protected Areas Database of the United States (USGS 2022a), the Texas Ecological Mapping Systems (Texas Parks and Wildlife Department [TPWD] 2022a), current well and pipeline location data from the Railroad Commission of Texas (2022), the Texas Geology Web Map viewer (USGS 2022b), aerial imagery (Google Earth 2022), and the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2022).

2.2 Natural Resources

During the desktop-level CIA for natural resources, SWCA utilized publicly available information to determine the potential for aquatic resources, biological resources, and ecologically significant/public lands to be present within the project area.

The biological resources review focused on species, plant communities, and lands potentially subject to protection under the Endangered Species Act of 1973, as amended (ESA); the Texas Parks and Wildlife Code; the Bald and Golden Eagle Protection Act of 1940, as amended (BGEPA); or the Migratory Bird Treaty Act of 1918, as amended (MBTA). Sources for biological data included USFWS (2022b) and Texas Parks and Wildlife Department (TPWD 2022b) threatened and endangered species county lists (Appendix A), GIS data obtained from the Texas Natural Diversity Database (TXNDD) (2022), and the USFWS Critical Habitat Mapper (USFWS 2022c). Although the USFWS (2022b) identifies the federally

threatened red knot (*Calidris canutus rufa*) and piping plover (*Charadrius melodus*) as having the potential to occur in Erath County, the USFWS (2022b) also states that these species in Erath County need only to be evaluated for wind energy projects; therefore, these species are not addressed in this document.

SWCA also reviewed the National Audubon Society's Christmas Bird Count (CBC) database (National Audubon Society 2022a), the USGS's North American Breeding Bird Survey (BBS) database (USGS 2019), the Cornell Lab of Ornithology and National Audubon Society's eBird database (eBird 2022), and iNaturalist (2022a and 2022b). The CBC locations reviewed for this CIA are the Crawford CBC (2000–2020) (National Audubon Society 2022a), which are conducted in 15-mile-diameter circles. The Crawford CBC, located approximately 53 miles southeast of the project area, is the closest survey that occurs within the same Level IV ecoregion and appears to contain similar habitats to the project area. The BBS route reviewed for this CIA is the Selden route located approximately 4 miles southeast of the project area. The Selden BBS route is the closest route located within the same Level IV ecoregion as the project area. SWCA also reviewed iNaturalist (2022a) to determine whether the non-avian threatened or endangered species identified in this CIA have been recorded in the vicinity of the project area.



3 SITE CHARACTERIZATION

The project area lies within the Limestone Cut Plain (ecoregion 29e) subdivision of the Cross Timbers Level IV ecoregion. The Limestone Cut Plain ecoregion is characterized by a stairstep topography with capped mesas and flat valleys. The ecoregion has mostly clayey soils that supports oak savannas and a mixture of tall, medium, and short grass prairies. Streams generally start in narrow canyons and flow down into the broader valleys (Griffith et al. 2007).

3.1 Vegetation and Land Cover

According to Griffith et al. (2007), the historical vegetation within the Limestone Cut Plain was mostly oak savanna and a mixture of tall to short grasslands. Dominant species in the grasslands include sand dropseed (*Sporobolus cryptandrus*), Johnsongrass (*Sorghum halepense*), little bluestem (*Schizachyrium scoparium*), Virginia creeper (*Parthenocissus quinquefolia*), soft rush (*Juncus effusus*), sumpweed (*Iva annua*), gray golden-aster (*Heterotheca canescens*), and tufted lovegrass (*Eragrostis pectinacea*) (SWCA 2021). Overstory species include black willow (*Salix nigra*), sugarberry (*Celtis laevigata*), honey mesquite (*Prosopis glandulosa*), hackberry (*C. occidentalis*), and pecan (*Carya illinoensis*) (SWCA 2021).

The National Land Cover Database categorizes land cover types within the project area primarily as herbaceous (71%) and shrub/scrub (25%) with the remaining 4% composed of open water, evergreen forest, deciduous forest, cultivated crops, woody wetlands, barren land, and developed land use types (see Figure 2) (Multi-Resolution Land Characteristics Consortium 2019). Similarly, the Texas Ecological Systems Classification Project has mapped the majority of the project area as savanna grassland (84%), with the remaining 16% classified as forest, woodland, shrubland, row crops, urban low intensity, and open water (TPWD 2022a).

During the aquatic resources delineation, SWCA confirmed that most of the land cover within the project area was herbaceous in the form of either hay production or livestock grazing pasture. Additional vegetation communities observed during the field reconnaissance included scrub/shrub upland, forested upland, emergent wetland, scrub shrub wetland, and forested wetland. Dominant species in each vegetation community are described in greater detail in the project's aquatic resources delineation report (SWCA 2021).

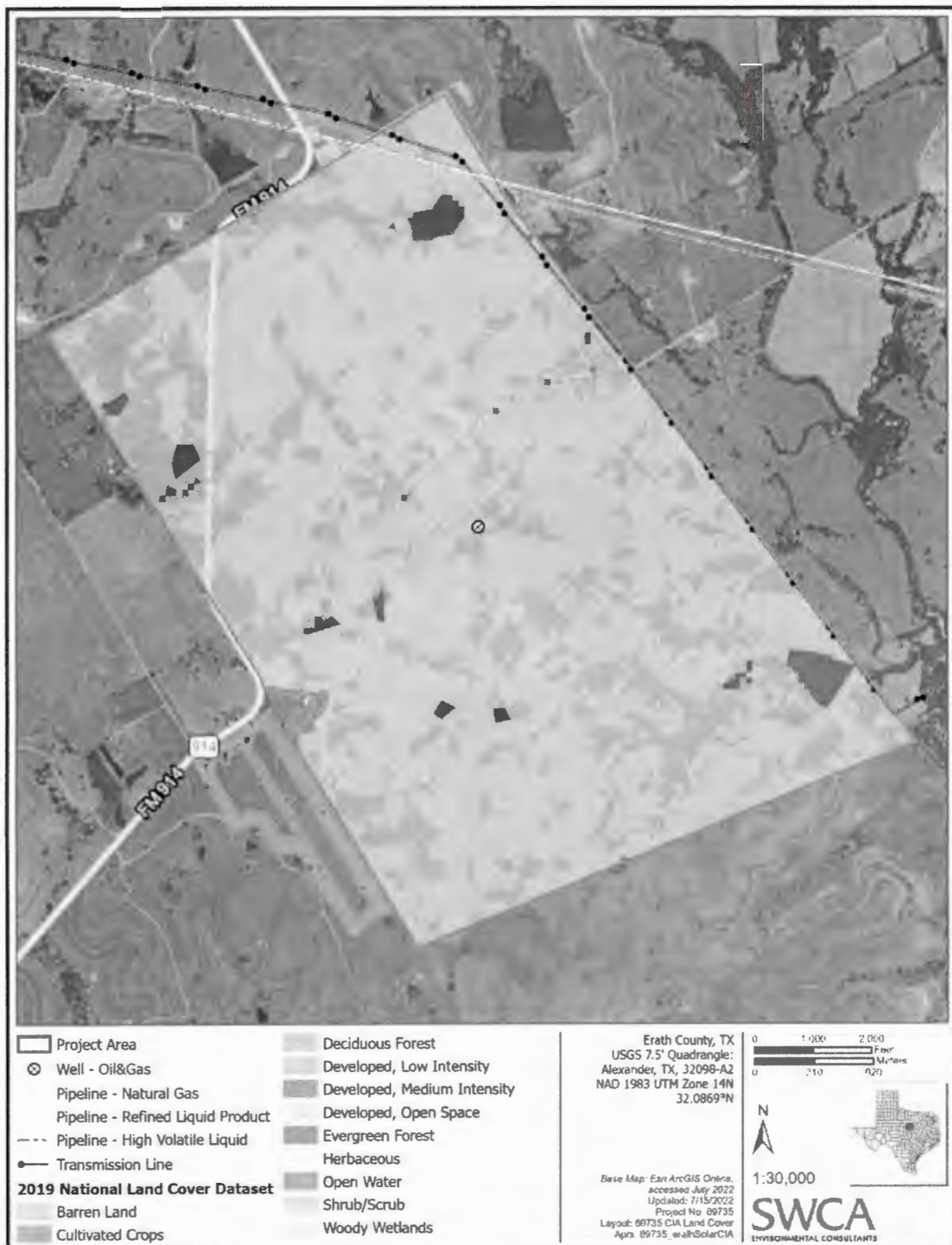


Figure 2. Site characterization map.

3.2 Soil and Geology

The majority of the project area overlies the Glen Rose Formation (Kgr) with portions of the northwest and northeast region overlying the Paluxy Formation (Kpa) and Alluvium (Qal), respectively. A very small area in the southeast region of the project area overlies Fluvial terrace deposits (Qt) (USGS 2022b). The Glen Rose Formation is primarily clay and sand with alternating limestone and claystone with marine megafossils. Paluxy Formation is mostly made up of quartz sandstone with interbedded claystone and siltstone. Alluvium is made up a mixture of gravel, sand, silt, silty clay, and organic matter that occurs from flood-plain deposits. Fluvial terrace deposits are made up of gravel, sand, and silt (USGS 2022b).

According to the NRCS (2022), the project area contains 17 soil map units. Most of the mapped soil units within the project area are composed of clayey and loamy soils. None of the 17 soil map units within the project area are classified as hydric by the NRCS, however, two soil map units are classified as having minor soil components that could potentially meet hydric criteria (NRCS 2022). Table 1 summarizes the mapped soil units within the project area.

Table 1. Soil Map Units Within the Project Area

Soil Map Unit Name	Soil Description	Hydric Soil*	Acres within Project Area	Percentage of Project Area
Purves-Dugout-Malotierre complex, 1 to 20 percent slopes	Clayey and loamy residuum weathered from limestone and siltstone, occurring on ridges.	No	1,177.7	47.6%
Denton silty clay, 1 to 3 percent slopes	Clayey slope alluvium and/or residuum over calcareous residuum weathered from limestone, occurring on ridges.	No	402.2	16.3%
Frio silty clay, 0 to 1 percent slopes, occasionally flooded	Loamy alluvium derived from limestone and shale, occurring in floodplains.	No	222.9	9.0%
Brackett-Purves complex	Loamy and clayey residuum weathered from limestone, occurring on ridges.	No	213.3	8.6%
Purves clay, 3 to 5 percent slopes	Clayey residuum weathered from limestone, occurring on ridges.	No	171.0	6.9%
Topsey loam, 1 to 3 percent slopes	Loamy residuum weathered from shale and siltstone, occurring on ridges.	No	68.6	2.8%
Lewisville clay loam, 3 to 5 percent slopes	Calcareous loamy alluvium and/or slope alluvium derived from limestone and shale, occurring on hillslopes and stream terraces.	No	52.1	2.1%
Altoga-Lewisville clay loams, 5 to 8 percent slopes, eroded	Calcareous loamy slope alluvium derived from limestone, sandstone, and shale, occurring on ridges.	No	41.1	1.7%
Bolar-Denton complex 3 to 5 percent slopes	Loamy and clayey residuum weathered from limestone, occurring on ridges.	No	28.8	1.2%
May fine sandy loam, 1 to 3 percent slopes	Loamy alluvium, occurring on stream terraces	No*	27.3	1.1%
Lewisville clay loam, 1 to 3 percent slopes	Calcareous loamy alluvium and/or slope alluvium derived from limestone and shale, occurring on hillslopes and stream terraces	No	21.0	0.9%
Bunyan fine sandy loam, occasionally flooded	Loamy alluvium, occurring in floodplains.	No*	16.3	0.7%
Duffau loamy fine sand, 1 to 5 percent slopes	Sandy and/or loamy residuum weathered from sandstone and/or claystone, occurring on ridges	No	14.0	0.6%

Soil Map Unit Name	Soil Description	Hydric Soil*	Acres within Project Area	Percentage of Project Area
Purves clay, 1 to 3 percent slopes	Clayey residuum weathered from limestone, occurring on ridges.	No	10.6	0.4%
Nimrod fine sand, 0 to 5 percent slopes	Locally reworked eolian sands over residuum weathered from sandstone and siltstone, occurring on ridges.	No	4.7	0.2%
Fairy-Hico complex, 1 to 5 percent slopes, moderately eroded	Loamy slope alluvium derived from sandstone and siltstone over loamy residuum weathered from limestone, siltstone, and sandstone, occurring on ridges.	No	0.2	<0.1%
Hico and Windthorst sandy clay loams, 1 to 8 percent slopes, severely eroded	Residuum weathered from sandstone and siltstone, occurring on ridges	No	<0.1	<0.1%
Total			2,471.8	100.0

Source: NRCS (2022).

* Minor components of soil map unit are considered hydric.

4 NATURAL RESOURCES

4.1 Aquatic Resources

The project area is located within the Green Creek-North Bosque River watershed of the Brazos River Basin (TPWD 2022b). Surface water in the project area generally flows southeast into multiple unnamed waterways towards Bosque River, which flows north-southeast approximately 0.5 mile east of the project area (Figure 3).

4.1.1 Wetlands, Waterways, and Waterbodies

According to NHD data (USGS 2018), 37 segments of NHD flowlines (29 intermittent waterways, including one named feature [Live Oak Creek], and eight artificial pathways) and ten perennial lake/pond features are mapped within the project area (see Figure 3; Table 2). According to the U.S. Environmental Protection Agency (EPA, 2016), the term *intermittent* means surface water is flowing continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts), while the term *perennial* means a waterway has flowing water year-round during a typical year due to the water table being located above the streambed for most of the year. According to the NHD (USGS 2018), artificial paths are surrogates for general flow direction and are located in NHD polygons such as waterbodies; therefore, the NHD-mapped artificial path segments identified within the project area are not expected to be jurisdictional and are not discussed further. In the experience of SWCA, channels mapped as intermittent by the NHD are sometimes determined to be ephemeral during on-site investigations. Ephemeral waterways generally flow only for brief periods immediately after precipitation events (EPA 2016).

According to NWI data, nine freshwater ponds, 20 riverine features, two freshwater forested/shrub wetlands, and one freshwater emergent wetland are mapped within the project area (see Figure 3 and Table 2) (U.S. Fish and Wildlife Service [USFWS] 2022a). The 20 riverine features are mapped in the same locations and extents as the 29 NHD-mapped flowlines. All nine freshwater ponds overlap NHD-mapped lake/pond features.

Due to the overlap between many of the NHD and NWI features, the lengths/acreages in Table 2 may be duplicated for those locations within the project area. Table 2 also summarizes the potential regulatory/jurisdictional status¹ for these aquatic resources.

No USACE levees or impaired waters were identified within the project area (EPA 2022; USACE 2022).

Table 2. National Hydrography Dataset- and National Wetlands Inventory-Mapped Aquatic Resources Within the Project Area

Aquatic Resource	Number of Features within Project Area	Length (feet) in Project Area	Area (acres) in Project Area	Potentially Jurisdictional under 2008 Guidance (Yes/No)
NHD Waterway				
Intermittent waterway	29	64,622.7	N/A	Yes
NHD Waterbody				
Perennial lake/pond	10	N/A	40.9	Some*
NWI Features				
Freshwater pond	9	N/A	31.6	Some*
Riverine	20	N/A	27.6	Yes
Freshwater Forested/Shrub Wetland	2	N/A	0.8	Yes
Freshwater Emergent Wetland	1	N/A	0.2	Yes

Sources: USGS (2018); USFWS (2022a).

Note: N/A = not applicable.

* Isolated wetlands and ponds constructed completely in uplands would likely not be WOTUS under 2008 Guidance. Only 1 PEM is potentially non-jurisdictional.

¹ The potential jurisdictional status of each aquatic resource represents SWCA's professional opinion on whether the aquatic resource would be regulated by the USACE under 2008 guidance. This opinion is based on our knowledge and experience with the USACE, including its regulatory guidance documents and manuals. Only the USACE can issue AJDs, and only the USACE and EPA have authority in determining the status and presence of WOTUS and the extent of their boundaries.

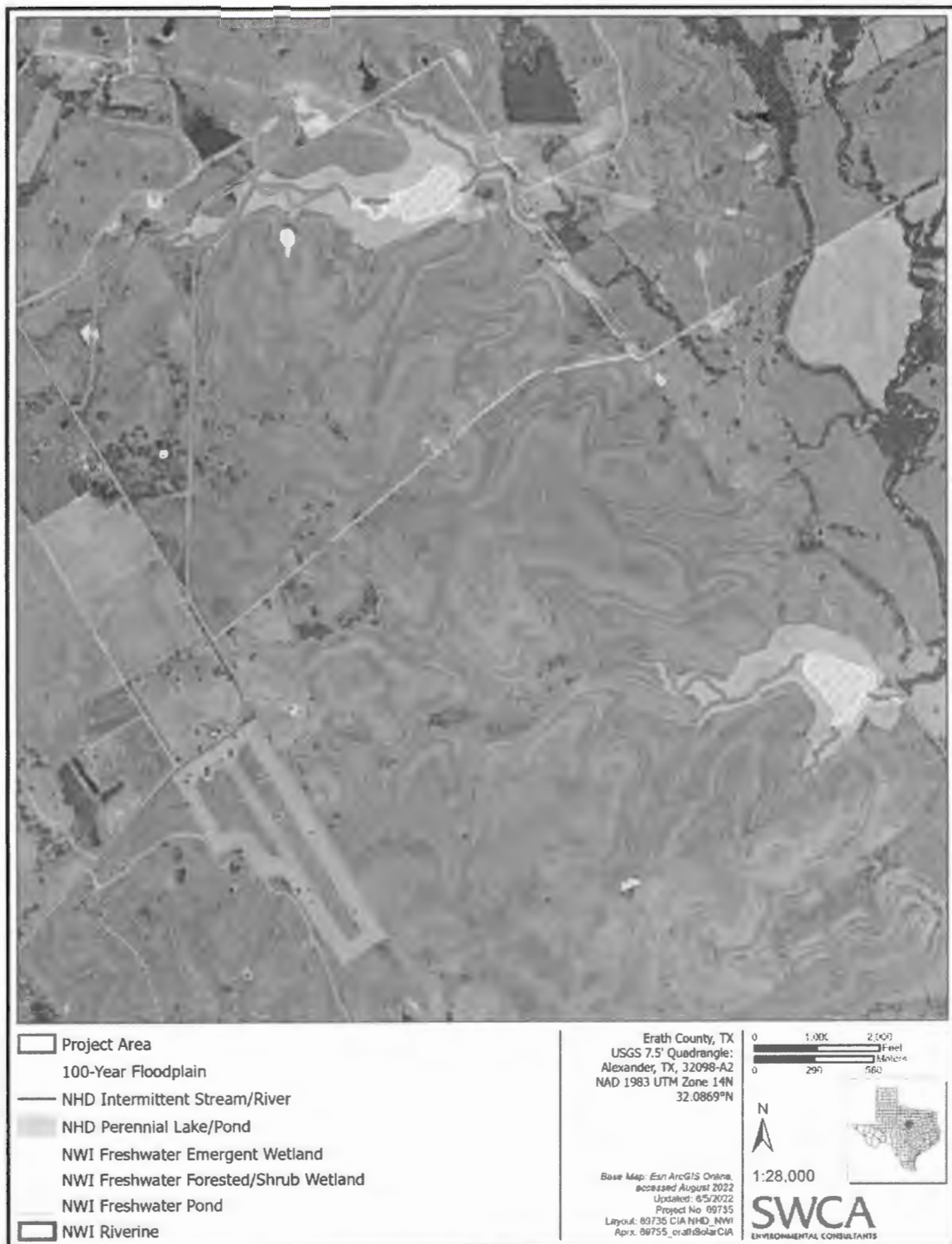


Figure 3. Publicly available aquatic resources data.

4.1.2 Floodplains

According to the digital Federal Emergency Management Agency (FEMA) National Flood Insurance Rate Map panel for this region (48143C0575D), approximately 188.8 acres of the project area, along Live Oak Creek, are designated as Zone A (FEMA 2022a). The remainder of the project area is designated as Zone X. Areas designated as Zone A occur within the 100-year floodplain (see Figure 3), and areas designated as Zone X are categorized as having minimal flood hazard (FEMA 2022c). FEMA's estimated base flood elevation data is in progress and is currently not completed or not available for this project area (FEMA 2022b).

4.1.3 Aquatic Resources Delineation Results

During the aquatic resources delineation, SWCA identified 42 waterways (41 ephemeral waterways and one intermittent waterway), seven impoundments, and 13 wetlands (nine palustrine emergent wetlands, two palustrine forested wetlands, and two palustrine scrub-shrub wetlands) within the project area. Table 3 summarizes the waterways within the project area, including their potential WOTUS status (SWCA 2021). Figure 4 depicts an overview of the delineated aquatic resources' distribution within the project area.

Table 3. SWCA-Mapped Aquatic Resources Within the Project Area

Aquatic Resource	Features within Project Area	Length (feet) in Project Area	Area (acres) in Project Area	Potentially Jurisdictional under 2008 Guidance (Yes/No/Some)
Waterways				
Ephemeral Waterways	41	77,987.26	7.13	Yes
Intermittent Waterways	1	2,369.84	0.27	Yes
Waterbodies				
Impoundments	7	N/A	32.66	Yes
Wetlands				
Palustrine Emergent Wetlands (PEM)	9	N/A	2.78	Yes*
Palustrine Scrub-Shrub Wetlands (PSS)	2	N/A	3.3	Yes
Palustrine Forested Wetlands (PFO)	2	N/A	4.11	Yes

Sources: SWCA 2021

Note: N/A = not applicable.

* Isolated wetlands and ponds constructed completely in uplands would likely not be WOTUS under 2008 Guidance. Only 1 PEM is potentially non-jurisdictional.

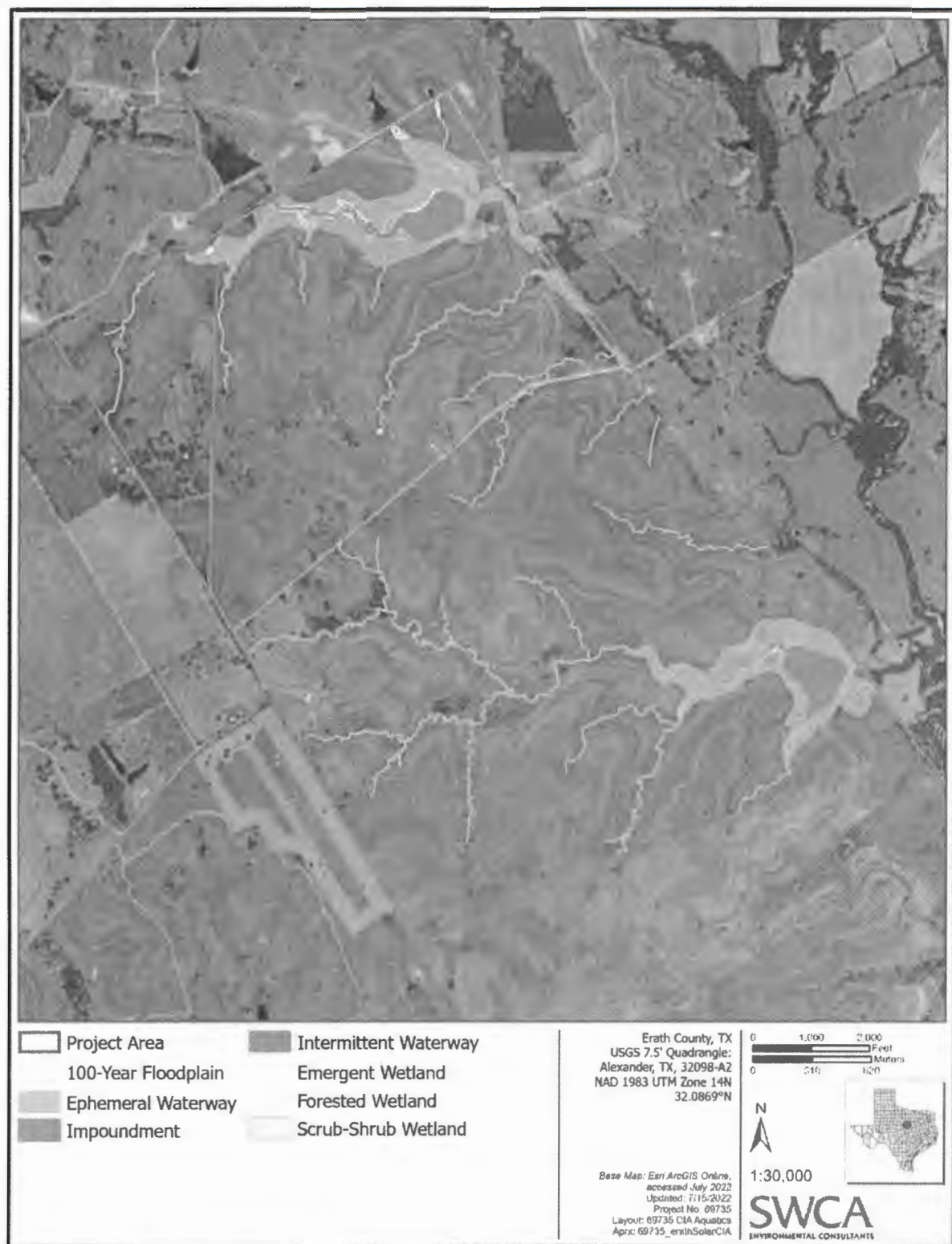


Figure 4. Aquatic resources delineation results overview.

4.2 Biological Resources

Biological resources include the species protected by the regulations listed in Section 2.2. This includes federally and/or state-listed species protected by the ESA and the Texas Parks and Wildlife Code, as well as species protected by the BGEPA and the MBTA.

4.2.1 Threatened, Endangered, and Protected Species

SWCA reviewed county lists of threatened and endangered species produced by the TPWD (2022c) and USFWS (2022b) to develop a list of protected species (i.e., federally threatened, endangered, proposed, and candidate species, and state-listed threatened and endangered species) that are known or considered to have potential to occur, or that formerly occurred, in Erath County (see Appendix A). Additionally, the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) are both federally protected by the BGEPA and were included in SWCA's review.

SWCA defines potential occurrence as follows:

- *No potential*: No habitat and no recent documentation of species within or in vicinity of the project area.
- *Low potential*: Limited habitat within and in vicinity of the project area and no recent documentation within or in proximity to the project area.
- *Moderate potential*: Potential habitat is present but no recent documentation within or in proximity to the project area.
- *High potential*: Known observations of species within or in close proximity to the project area and high-quality habitat characterizations within the project area.

Following review of habitat requirements and records of occurrence, species identified as having no or low potential to occur in the project area are not discussed further in this CIA. Each of the species identified as having moderate or high potential of occurring in the project area are discussed individually below.

The Texas Natural Diversity Database (TXNDD, 2022) revealed no recorded occurrences of listed threatened or endangered species within the project area. The closest TXNDD (2022) occurrence to the project area is for the federally endangered golden-cheeked warbler (*Setophaga chrysoparia*) approximately 15 miles to the east of the project area. Although golden-cheeked warblers have been observed within the project vicinity, the project area does not contain suitable habitat for the species; therefore, it has low potential to occur. The USFWS (2022c) has not designated critical habitat for any species in Erath County.

The **white-faced ibis** (*Plegadis chihi*) is a state-listed threatened species that is a medium-sized wading bird. The white-faced ibis is a common to uncommon resident along the coast, including the southern third of Erath County, and a casual to rare wintering species at inland locations throughout the state. They can also be a rare and localized breeder away from the coast (Lockwood and Freeman 2014). The species occurs nearly statewide as a transient during the spring and fall migration periods. The white-faced ibis feeds on a variety of aquatic prey and may occur in marshes, irrigated or flooded cropland, herbaceous wetlands, and freshwater or saline wetland habitats (National Audubon Society 2022b; TPWD 2022d). This species nests in marshes, low trees, or on the ground in bulrushes (*Scirpus* spp.), cattails (*Typha* spp.), or floating mats (TPWD 2022d). The project area is located within the range of scattered irregular occurrence for migrants or wintering white-faced ibis (Lockwood and Freeman 2014).

The TXNDD (2022) does not hold records of white-faced ibis from within or near the project area and the species has not been recorded on the Selden BBS (USGS 2019) or Crawford CBC (National Audubon Society 2022a) reviewed for this CIA. Multiple records of this species have been submitted to eBird (2022) from within 25 miles of the project area, with most records occurring to the northwest and with locations suggesting most were seen by people while traveling public roads. The nearest record was obtained in May 2019 approximately 5.3 miles northwest of the project area, where one observer reported four individuals along CR 255 within a pasture. The most recent record was obtained on April 28, 2021, when two individuals were recorded approximately 14.5 miles northwest of the project area. The pastures and ponds of the project area appear to provide suitable habitat for use by white-faced ibis and the species is considered to have moderate potential to occur in the area, at least on a temporary basis during the spring, late summer, and fall, with reduced chance to occur during the winter. However, the species is not expected to nest in the project area, and very likely does not over-winter regularly in the project area. For these reasons, and because state-listed species are not afforded protections on private lands, the white-faced ibis does not pose a risk of constraint for the project.

The **whooping crane** (*Grus americana*) is a federally and state-listed endangered large wading bird of open, mostly wetland habitats. Members of this species' only wild population nest in northwestern Canada and winter mainly in and adjacent to the Aransas National Wildlife Refuge on the Texas coast (Canadian Wildlife Service and USFWS 2007). The project area is approximately 275 miles north of Aransas National Wildlife Refuge. These birds migrate between the two areas each spring and fall by flying across the Great Plains through migration corridor that ranges between approximately 100 and 200 miles wide. The project area lies approximately 10 to 13 miles west of the 50% core of the migration corridor, where 50% of whooping crane records occur, and within the 75% core of the whooping crane migration corridor (USFWS 2022d).

During the winter, whooping cranes typically utilize estuarine marshes bays, and tidal flats. The species will also occasionally visit nearby rangeland and farmland to forage. During migration, whooping cranes utilize cropland, shallow freshwater wetlands, and wide, shallow rivers as stopover habitat. The species sometimes joins sandhill cranes (*Antigone canadensis*), a common migrant and wintering species in the region, for portions of migration and at foraging areas (Urbanek and Lewis 2020). Whooping cranes may also stop over on the marshy edges of large reservoirs or sandbars of major rivers (Armbruster 1990; Watershed Institute, Inc. 2013).

No records of whooping crane have been submitted to eBird (2022) within 25 miles of the project area. The TXNDD (2022) does not hold records of whooping crane from within or near the project area and the species has not been recorded on the Selden BBS (USGS 2019) or Crawford CBC (National Audubon Society 2022a) reviewed for this CIA. The USFWS (2022d) tracks records of whooping cranes observed in the United States away from their traditional wintering grounds. The closest USFWS (2022d) record of a whooping crane was obtained in Comanche County in April 2002 and concerns two adults reported on the ground and flying. SWCA has discovered that the records held by the USFWS are not always mapped precisely, but, as mapped by the USFWS, these birds were observed approximately 15 mile west of the project area.

Some of the ponds and wetlands present in the project area might offer suitable overnight roosting habitat for migrant whooping cranes, but it would require an assessment of their physical characteristics and the surrounding landscape to make that determination. Pastureland within the project area also might offer foraging habitat for migrant whooping cranes. Given that the project area is located within the core migration corridor used by whooping crane, it is likely that some members of this species fly over the project area during the spring and fall migration periods on an annual or nearly annual basis.

Based on the definitions provided in Section 4.2.1, whooping crane is considered to have moderate potential to stop over in the project area during migration, with that potential likely low in any given year

but with likelihood of eventual occurrence increasing with time. Because whooping cranes are not expected to nest or over-winter in the project area, this species overall appears to pose a low risk of project constraint. Construction of the project would result in the loss of pasture and hayfields that might be able to be used for foraging by migrant whooping cranes, but it appears highly doubtful that the fields of the project area are needed by any individuals of the species in order to be capable of successfully traveling between their nesting and wintering grounds. Therefore, the loss of pasturelands as a result of the project does not appear that it would cause significant adverse impacts to whooping cranes as similar pastureland and cropland is present in the project vicinity. The project also appears to pose low collision risk to this species because it does not include the construction of new overhead transmission line. For these reasons, whooping crane does not appear to be a significant constraint for the project.

The **bald eagle** is no longer protected by the ESA and is no longer state listed as threatened in Texas. The species winter range encompasses much of Texas east of the Trans Pecos including Earth County; however, the species' breeding range is smaller and nesting typically occurs in the eastern third of the state (Lockwood and Freeman 2014). The bald eagle is increasing in number as a nesting species in Texas and is primarily found near rivers and large lakes and usually nests in tall trees or on cliffs near water (USFWS 2007). Bald eagles may breed in Texas from late October through early May (Sauer et al. 2014). During winter, the species occurs throughout the state and in greater numbers due to the influx of migrants and overwintering individuals from northern latitudes bolstering the resident population (Campbell 2003; Lockwood and Freeman 2014). In winter, this species often occurs near abundant food sources such as waterfowl concentration areas, prairie dog (*Cynomys ludovicianus*) towns, or permanent water sources for fish. Roosting habitat includes deciduous or coniferous trees that are open and accessible above the canopy (Cornell Lab of Ornithology 2022).

This species is not known to have nested in Erath County between 1970 and 2009 (Ortego et al. 2009). The TPWD has established a page on iNaturalist that it uses to track the locations of bald and golden eagle nests as submitted by members of the public. No bald eagle nest locations have been submitted to iNaturalist (2022b) from Erath County or near the project area.

The TXNDD (2022) reveals the closest recent record of bald eagle is from 2012 and located approximately 74 miles south of the project area, along the Lampasas River in central Bell County. The Selden BBS (USGS 2019) does not include records of this species, but the Crawford CBC (National Audubon Society 2022a) includes records for nearly every year the surveys have been conducted from 2000 to 2020. Data from eBird (2022) reveal multiple observations of bald eagle located adjacent to the project area and within the project region, with the closest observation recorded approximately 7 miles northwest of the project area near U.S. Route 377 and CR 250 concerning one bald eagle with no other details provided

The bald eagle is considered to have a moderate potential to fly over, roost, or forage within the project area, perhaps on a year-round basis; however, bald eagles are not expected to nest within the project area due to a lack of suitable trees near larger bodies of water. Suitable habitat for nesting bald eagles is present in the region, though, likely associated with Proctor Lake or the Brazos River, approximately 17 miles west and 28 miles east of the project area, respectively.

The project area is located within the known wintering range of the bald eagle (Lockwood and Freeman 2014), and recent observations of this species have been submitted to eBird (2022) within proximity to the project area. The bald eagle has moderate potential to occur within the project area on an occasional basis during the winter because of the relative proximity of large creeks and lakes but has low potential to nest within the project area due to a lack of suitable habitat. Because there is low potential for bald eagles to nest in the project area, SWCA does not anticipate further action for the species. However, if an eagle is observed roosting within the project area during construction, crews should stop work until the eagle has removed itself from the area.

4.3 Ecologically Significant/Public Lands

The project area is located solely on private land and, aside from adjacent CR and FM ROWs, no other public land is located in proximity to the project area. No federal, state, or other protected, ecologically significant areas, such as public parks, wildlife management areas, state parks or forests, national parks or forests, or other recreation areas, occur within or directly adjacent to the project area (USGS 2022a; National Conservation Easement Database 2022).

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APPENDIX A

**U.S. Fish and Wildlife Service and Texas Parks and Wildlife Department
Lists of Endangered, Threatened, and Rare Species**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Erath County, Texas



Local office

Arlington Ecological Services Field Office

☎ (817) 277-1100

📠 (817) 277-1129

✉ arles@fws.gov

2005 Ne Green Oaks Blvd
Suite 140
Arlington, TX 76006-6247

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. 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.

The following species are potentially affected by activities in this location:

Birds

NAME

STATUS

Golden-cheeked Warbler *Setophaga chrysoparia*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/33>

Piping Plover *Charadrius melodus*

Threatened

This species only needs to be considered if the following condition applies:

- Wind Energy Projects

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/6039>

Red Knot *Calidris canutus rufa*

Threatened

Wherever found

This species only needs to be considered if the following condition applies:

- Wind Energy Projects

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/1864>

Whooping Crane *Grus americana*

Endangered

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/758>

Clams

NAME

STATUS

Texas Fawnsfoot *Truncilla macrodon*

Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/8965>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION

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 habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- 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](#)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

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

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

American Golden-plover *Pluvialis dominica*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Bald Eagle *Haliaeetus leucocephalus*

Breeds Sep 1 to Jul 31

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>

Lesser Yellowlegs *Tringa flavipes*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Red-headed Woodpecker *Melanerpes erythrocephalus*

Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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 and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ()

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence

at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

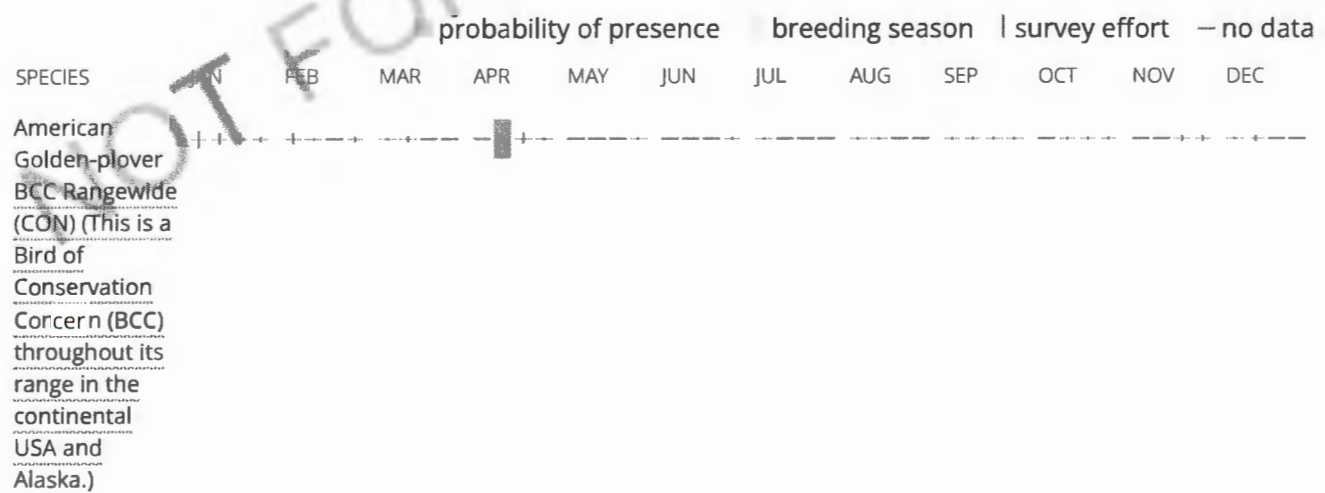
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

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

Survey Timeframe

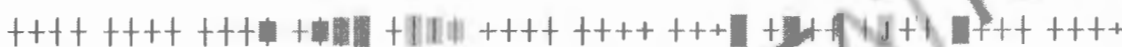
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald Eagle
Non-BCC
Vulnerable
(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.)



Lesser
Yellowlegs
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



Red-headed
Woodpecker
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental
USA and
Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure.

To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern \(BCC\)](#) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Last Update: 7/6/2022

ERATH COUNTY

AMPHIBIANS

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: SU

BIRDS

bald eagle *Haliaeetus leucocephalus*

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B,S3N

black rail *Laterallus jamaicensis*

Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

black-capped vireo *Vireo atricapilla*

Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3B

chestnut-collared longspur *Calcarius ornatus*

Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

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ERATH COUNTY

BIRDS

Franklin's gull *Leucophaeus pipixcan*

This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

golden-cheeked warbler *Setophaga chrysoparia*

Ashe juniper in mixed stands with various oaks (*Quercus* spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2S3B

lark bunting *Calamospiza melanocorys*

Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (*Koeleria*), buffalograss also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

mountain plover *Charadrius montanus*

Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

Sprague's pipit *Anthus spragueii*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3N

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S2

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ERATH COUNTY

BIRDS

white-faced ibis *Plegadis chihi*

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.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1S2N

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

MAMMALS

big brown bat *Eptesicus fuscus*

Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

black-tailed prairie dog *Cynomys ludovicianus*

Dry, flat, short grasslands with low, relatively sparse vegetation, including areas overgrazed by cattle; live in large family groups

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

eastern red bat *Lasiurus borealis*

Red bats are migratory bats that are common across Texas. They are most common in the eastern and central parts of the state, due to their requirement of forests for foliage roosting. West Texas specimens are associated with forested areas (cottonwoods). Also common along the coastline. These bats are highly mobile, seasonally migratory, and practice a type of "wandering migration". Associations with specific habitat is difficult unless specific migratory stopover sites or wintering grounds are found. Likely associated with any forested area in East, Central, and North Texas but can occur statewide.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

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ERATH COUNTY

MAMMALS

eastern spotted skunk

Spilogale putorius

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat

Lasiurus cinereus

Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

long-tailed weasel

Mustela frenata

Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

mountain lion

Puma concolor

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

southeastern myotis bat

Myotis austroriparius

Caves are rare in Texas portion of range; buildings, hollow trees are probably important. Historically, lowland pine and hardwood forests with large hollow trees; associated with ecological communities near water. Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3?

swamp rabbit

Sylvilagus aquaticus

Primarily found in lowland areas near water including: cypress bogs and marshes, floodplains, creeks and rivers.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

tricolored bat

Perimyotis subflavus

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

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ERATH COUNTY

MAMMALS

western hog-nosed skunk *Conepatus leuconotus*

Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. *telmalestes*

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

MOLLUSKS

Brazos heelsplitter *Potamilus streckersoni*

Reported from streams, but not far into the headwaters, to large rivers, and some reservoirs. In riverine systems occurs most often in nearshore habitats such as banks and backwater pools but occasionally in mainchannel 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 (Randklev et al. 2014b,c; Tsakiris and Randklev 2016b; Smith et al. 2019) [Mussels of Texas 2020]

Federal Status:	State Status: T	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: SNR

Texas fawnsfoot *Truncilla macrodon*

Occurs in large rivers but may also be found in medium-sized streams. Is found in protected near shore areas such as 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 (Randklev et al. 2010; Howells 2010o; Randklev et al. 2014b,c; Randklev et al. 2017a,b). [Mussels of Texas 2019]

Federal Status: PT	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S2

REPTILES

Brazos water snake *Nerodia harteri*

Aquatic: Shallow, fast-flowing water with a rocky or gravelly substrate preferred. Adults can be found in deep water with mud bottoms, such as large section of rivers and reservoirs. Riffle habitat is particularly important for this species.

Federal Status:	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

prairie skink *Plestiodon septentrionalis*

The prairie skink can occur in any native grassland habitat across the Rolling Plains, Blackland Prairie, Post Oak Savanna and Pineywoods ecoregions.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2

DISCLAIMER

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ERATH COUNTY

REPTILES

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas garter snake *Thamnophis sirtalis annectens*

Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G5T4	State Rank: S1

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: 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 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box turtles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

western massasauga *Sistrurus tergeminus*

Terrestrial: Shortgrass or mixed grass prairie, with gravel or sandy soils. Often found associated with draws, floodplains, and more mesic habitats within the arid landscape. Frequently occurs in shrub encroached grasslands.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3

PLANTS

Comanche Peak prairie clover *Dalea reverchonii*

Shallow, calcareous clay to sandy clay soils over limestone in grasslands or openings in post oak woodlands, often among sparse vegetation in barren, exposed sites, most known sites are underlain by Goodland Limestone, most known sites are on roadway right-of-ways; flowering April-June, one account for October

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2S3

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ERATH COUNTY

PLANTS

Engelmann's bladderpod

Physaria engelmannii

Grasslands and calcareous rock outcrops in a band along the eastern edge of the Edwards Plateau, ranging as far north as the Red River (Carr 2015).

Federal Status:

State Status:

SGCN: Y

Endemic: N

Global Rank: G4

State Rank: S3

Hall's prairie clover

Dalea hallii

In grasslands on eroded limestone or chalk and in oak scrub on rocky hillsides; Perennial; Flowering May-Sept; Fruiting June-Sept

Federal Status:

State Status:

SGCN: Y

Endemic: Y

Global Rank: G3

State Rank: S2

prairie butterfly-weed

Gaura triangulata

Open sandy areas; Annual; Flowering March-June

Federal Status:

State Status:

SGCN: Y

Endemic: N

Global Rank: G3G4

State Rank: S3

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