

Appendix I

Habitat Assessment

Mountain Peak Energy Storage
Conditional Use Permit Application
September 2025

Wildlife Habitat Assessment

Mountain Peak Energy Storage Project Saline County, Kansas

June 2023



Prepared for

Mountain Peak Energy Storage LLC

1780 Hughes Landing Blvd
Ste 675
The Woodlands, TX 77380

Prepared by



390 Union Boulevard
Suite 400
Lakewood, CO 80228

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Acronyms and Abbreviations

Assessment	wildlife habitat assessment
BGEPA	Bald and Golden Eagle Protection Act
CFR	Code of Federal Regulations
ESA	Endangered Species Act
FR	Federal Register
IPaC	Information for Planning and Consultation
KDWP	Kansas Department of Wildlife and Parks
MBTA	Migratory Bird Treaty Act
NCED	National Conservation Easement Database
NHD	National Hydrography Dataset
PEM	palustrine emergent
Project Area	Project area totaling 39.4 acres within Saline County, Kansas
Project	Mountain Peak Energy Storage Project
SINC	Species in Need of Conservation
Tetra Tech	Tetra Tech, Inc.
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

Tetra Tech, Inc. (Tetra Tech) conducted a wildlife habitat assessment (Assessment) for the proposed Mountain Peak Energy Storage Project (Project) located in Saline County, Kansas. The survey area consists of one privately owned parcel, approximately 39.4 acres in size (Project Area), located in Saline County, Kansas, north of State Highway 4 and west of S. Simpson Road, and approximately 4.5 miles southeast of the city of Salina, Kansas (Figure 1). The purpose of the Assessment is to identify predominant vegetative communities and land uses within the Project Area to determine if suitable habitat for state and federally protected species is present, as well as outline the applicable federal, state, and local regulations, policies, and related permits and approvals relative to biological resources that may be required for development of the Project.

1.1 Ecoregion

The Project is located within the Smoky Hills Level IV Ecoregion of the Central Great Plains Level III Ecoregion of Kansas (Chapman et al. 2001). This ecoregion was previously a sprawling grassland dominated by mixed-grass prairie, with low trees and shrubs in its southern extent, undulating to hilly plains with historic tallgrass prairie to the east and mixed-grass prairie to the west. Present day land use in the Smoky Hills ecoregion is dominated by cropland and grassland (Chapman et al. 2001).

1.2 Topography

According to the USGS Assaria 1:24,000 topographic quadrangle, the Project Area largely consists of flat land with one stream depicted within the Project boundary (USGS 2022). Elevations range from 1,310 feet to 1,360 feet above mean sea level and the Project Area gently slopes west (Figure 2).

1.3 Land Use and Land Cover

According to the National Land Cover Database (USGS 2023a), the dominant land cover in the Project Area is Grasslands/Herbaceous (39 acres, 93.9 percent as listed in Table 1 and shown in Figure 4). The site visit verified that the grasslands/herbaceous landcover was the dominant land cover in the Project Area. The Project Area was dominated by cheatgrass (*Bromus tectorum*), smooth brome (*Bromus inermis*), little bluestem (*Schizachyrium scoparium*), tall fescue (*Festuca arundinacea*), troublesome sedge (*Carex molesta*), fleabane (*Erigeron annuus*), Canada goldenrod (*Solidago canadensis*), Maximilian's sunflower (*Helianthus maximiliani*), frost aster (*Symphotrichum pilosum*), yarrow (*Achillea millefolium*), stickywilly (*Galium aparine*), field bindweed (*Convolvulus arvensis*) and coralberry shrub (*Symphoricarpos orbiculatus*). The closest largest body of water is the Smoky Hills River, which is located approximately 1.5 miles west of the Project Area and provides high-quality habitat for many wildlife species. A transmission line right-of-way transects the northwest corner of the Project Area in a northeast-southwest orientation. An existing substation is located immediately north of the Project Area.

Table 1. Land Cover Present within the Project Area

Land Use	Acreage	Percentage of Project Area ¹
Cultivated Crops	2	5.08%
Developed, Open Space	0.4	1.02%

Land Use	Acreage	Percentage of Project Area ¹
Grasslands/Herbaceous	37	93.9%
Grand Total	39.4	100%

Source: USGS 2023a

2.0 REGULATORY FRAMEWORK

This section outlines the applicable federal, state, and local regulations, policies, and related permits and approvals relative to biological resources that may be required for development of the Project.

2.1 Federal Regulations

2.1.1 Endangered Species Act

The Endangered Species Act (ESA) directs the U.S. Fish and Wildlife Service (USFWS) to identify and protect endangered and threatened species and their critical habitat, and to provide a means to conserve their ecosystems. Among its other provisions, the ESA requires the USFWS to assess civil and criminal penalties for violations of the Act or its regulations. Section 9 of the ESA makes it unlawful to knowingly violate the “take” provisions of the ESA. “Take” is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct” 16 United States Code (U.S.C.) 1532. Significant modification or degradation of listed species’ habitats where the modification kills or injures wildlife by significantly impairing essential behavioral patterns is considered “harm” under ESA regulations. Projects involving federal lands, funding, or authorizations require consultation between the federal agency and the USFWS, pursuant to Section 7 of the ESA. Projects without a federal nexus work directly with USFWS to avoid adversely impacting listed species and their critical habitats.

2.1.2 Bald and Golden Eagle Protection Act

Bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are afforded legal protection under authority of the Bald and Golden Eagle Protection Act (BGEPA; 16 U.S.C. 668–668d). The BGEPA prohibits the take, sale, purchase, offer of sale, purchase or barter, transport, export or import, at any time or in any manner of any bald or golden eagle, alive or dead, or any part, nest, or egg thereof (16 U.S.C. 668). The BGEPA also defines take to include “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb” (16 U.S.C. 668c), and includes criminal and civil penalties for violating the statute (16 U.S.C. 668). The term “disturb” is defined as agitating or bothering an eagle to a degree that causes, or is likely to cause, injury to an eagle, or either a decrease in productivity or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior, 50 Code of Federal Regulations (CFR) §22.3.

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements the U.S.’ obligations under four international treaties for the protection of more than 1000 species of migratory birds (78 FR 65844–65864), including the bald eagle and golden eagle. The MBTA is administered by the USFWS and prohibits “take” of migratory birds—their parts, eggs, or nests “at any time, by any means.” “Take” is defined by the

MBTA as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities.” There has been varying guidance on the prohibition of incidental take under the MBTA (USFWS 2023a). A rulemaking on October 4, 2021, reestablishes incidental take as prohibited under the MBTA. This regulation took effect on December 3, 2021. Nest clearance surveys are conducted prior to construction to place buffers around occupied nests to avoid any take due to construction.

2.2 State Regulations

Development in the state of Kansas is regulated by different agencies depending on the land ownership, size and type of the development, and access needs.

2.2.1 Kansas Department of Wildlife and Parks

The Kansas Department of Wildlife and Parks (KDWP) has the statutory charge for managing and conserving wildlife resources within state borders for hunted, fished, and non-game wildlife, including state-listed threatened and endangered species (K. S. A. § 32-957 – 963 – Nongame and Endangered Species Conservation Act). Agency consultation and continued correspondence with the KDWP will identify potential impacts to state threatened and endangered species as well as habitat or species of concern. Permits such as USACE Section 404 and Kansas Department of Transportation permits will require documentation that impacts to these resources have been evaluated, such as a letter from the KDWP including their recommendations to minimize impacts.

The KDWP also maintains a list of vulnerable non-statutory protected species, designated Species in Need of Conservation (SINC) (KDWP 2023a). This designation provides no regulatory protection; however, KDWP may request field investigations for SINC species and/or avoidance of SINC species or their habitat to the maximum extent practicable during Project development and operations.

2.2.2 State-Listed Endangered and Threatened Species

Additionally, KDWP administers Action Permits for threatened and endangered species under the Nongame and Endangered Species Conservation Act. Any action that is totally or partially funded with public money or requires a permit from a state or federal agency that will impact threatened or endangered species or their critical habitats will require an Action Permit from the KDWP before construction begins. No permit is required if impacts to threatened or endangered species or their critical habitats are not anticipated.

3.0 METHODS

3.1 Desktop Review

The assessment of biological resources within the Project Area is intended to identify any constraints associated with potentially occurring federally or state-listed species, protected habitats, or environmentally sensitive areas that may be impacted by the proposed Project.

Tetra Tech conducted a desktop analysis to identify potential species of concern and their associated habitats that have the potential to occur within the Project Area. Tetra Tech reviewed the following publicly available data:

- KDWP Saline County Threatened and Endangered Species List (KDWP 2023a)
- Google Earth Aerial Imagery
- National Conservation Easement Database Mapping Application (NCED 2023)
- USFWS Information for Planning and Consultation (IPaC) online tool (USFWS 2023b)
- USFWS National Wetland Inventory dataset (USFWS 2023c)
- USFWS Critical Habitat Mapper (USFWS 2023d)
- U.S. Geological Survey (USGS) National Hydrography Dataset (USGS 2023b)

Based on the results of both IPaC and the KDWP county list of protected species occurrences within Saline County, KS, Tetra Tech compiled a list of federal and state protected species that have the potential to occur within the Project Area. This list is available in Table 2 below and was the focus of the assessment during the field survey.

3.2 Field Survey

After completing the desktop review, a qualified Tetra Tech biologist conducted a field survey of the Project Area on May 30 and 31, 2023. A further 0.5-mile buffer was surveyed for raptor nests. The biologist documented habitat types, assessed the area for potential, suitable habitat for federally and state-listed species, and, if observed, mapped species occurrences with a handheld GPS unit. All wildlife and plant species observed during the field survey were documented. Land use was also noted and recorded. Representative photographs were taken at select locations throughout the Project Area.

4.0 RESULTS

4.1 Desktop Review

Tetra Tech completed the desktop data review using the USFWS IPaC and KDWP databases and identified multiple state and federally listed species as having the potential to occur on-site (Table 2). Of these species, those with potential habitat present or with a moderate or above likelihood of being present onsite include the: Monarch butterfly (*Danaus plexippus*) and the American burying beetle (*Nicrophorus americanu*) (Appendix A; Appendix B; KDWP 2023a).

According to the USFWS IPaC, there are no designated critical habitats, refuges, or protected lands within the Project Area (Appendix A). Review of the USFWS Critical Habitat Mapper indicated the nearest critical habitat is located approximately 75 miles southwest of the Project Area, near Great Bend, Kansas (USFWS 2023d).

Table 2. Protected Species Potentially Occurring in the Project Area

Common Name	Scientific Name	Federal Status 1	State Status 1	Species-habitat Associations	Potential Habitat Present	Likelihood of Occurrence 2
Birds						
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA	-	Forested areas adjacent to large bodies of water, large, super-canopy roost trees that are open and accessible. Project is located within year-round range.	No	Low
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA	-	Mountainous canyon land, rimrock terrain of open desert, grassland areas, riparian habitats, and occasionally in forested areas. Project is located on the edge of non-breeding (scarce) range and wintering range.	No	Low
Least tern	<i>Sterna antillarum</i>	-	SE	Summer resident that requires barren areas near water, such as sand bars in riverbeds and shores of large impoundments. Project is located outside of the breeding range but may occur as transients anywhere in Kansas. No state designated critical habitat and no recorded occurrences in Saline County.	No	Low
Piping plover	<i>Charadrius melodus</i>	-	ST	Rare migrants through Kansas that require sparsely vegetated shallow wetlands and open beaches and sandbars adjacent to or within streams and impoundments. Nesting has been recorded on sand bars along the Kansas River. Piping Plovers may occur occasionally anywhere in the state where suitable habitat is found. No state designated critical habitat and no recorded occurrences in Saline County.	No	Low
Snowy plover	<i>Charadrius alexandrinus</i>	-	ST	Lives on open salt flats, beaches and bars of rivers, and wetlands. Project is located outside of expected breeding range. No state designated critical habitat and no recorded occurrences in Saline County.	No	Low
Whooping crane	<i>Grus americana</i>	FE	SE	Regular spring and fall transients through Kansas, generally passing through marked corridor in March through April and October through November. Occurrences outside the marked corridor have been infrequent but as crane populations increase, such sightings may become more frequent. Preferred resting areas are wetlands in level to moderately rolling terrain away from human activity where low, sparse vegetation permits ease of movement and an open view. Project is located within marked migration corridor and species has been observed in Saline County. No state designated critical habitat in the county (Figure 4).	No	Low, during spring and fall migration seasons
Mammals						
Eastern spotted skunk	<i>Spilogale putorius</i>	-	ST	Prefers forest edges and upland prairie grasslands, where rock outcrops and shrub clumps are present. May occur in suitable habitat anywhere in the state. No state designated critical habitat and no recorded occurrences in Saline County.	No	Low
Northern long-eared bat	<i>Myotis septentrionalis</i>	FE	-	Non-migratory. Found in conifer forests, deciduous forests, and mixed forests. Roosts in cavities, caves, mines, underneath tree bark or in crevices of trees and snags, bridges/culverts; rarely roosts in barns. Hibernates in caves and mines.	No	Unlikely

Common Name	Scientific Name	Federal Status 1	State Status 1	Species-habitat Associations	Potential Habitat Present	Likelihood of Occurrence 2
Tricolored bat	<i>Permyotis subflavus</i>	FPE	-	During the non-hibernating season (spring through fall) the species generally roosts and forages in hardwood/mixed pine-hardwood forests near water resources where tree cavities, crevices, and live or dead leaf clusters are present. Has been documented to roost in structures such as barns, culverts, and bridges. Winter hibernacula typically occurs in caves or large culverts/bridges that regulate temperatures during the winter season.	No	Unlikely
Fishes						
Topeka shiner	<i>Notropis topeka</i>	FE	ST	Occurs in the headwaters of small prairie streams with high water quality and cool temperatures. These streams generally exhibit intermittent flow during summer; however, pools are maintained by spring or groundwater percolation. The substrates of these streams are most often clean gravel; however, bedrock and clay hardpan overlain by a thin silt layer are not uncommon. Topoka shiners most often occur in pool and run areas. Mainly found in the Flint Hills in east central Kansas and in Wallace County in the far western part of the state. While the species has been observed in Saline County, there is no state designated critical habitat in the county.	No	Unlikely
Insects						
Monarch butterfly	<i>Danaus plexippus</i>	FC	-	The overall range for monarch butterfly is South America through Northern Canada. Migrating monarchs may be present in Kansas in spring and fall months and can be found in many different habitat types from forests to agricultural fields to urban centers, if wildflowers are available for feeding adults and native milkweeds are for larvae.	Yes	Moderate
American burying beetle	<i>Nicrophorus americanus</i>	FT	SE	Typically found in upland grasslands or near the edge of grassland/forest. Sandy/clay loam soils and food (carrion) availability are also important. The species appears to prefer loose soil in which carrion can be easily buried. Historically occurred in the eastern third of Kansas, but currently known only to occur in southeast Kansas. While there are species observation records in Saline County, there is no state designated critical habitat in the county.	Yes	Low

Notes:

1/ BGEPA = Bald and Golden Eagle Protection Act, FE = Federally Proposed Endangered, FT = Federal Threatened, FC = Federal Candidate, SE = State Endangered, ST = State Threatened.
 2/ Likelihood of Occurrence: Unlikely – unsuitable habitat in Project vicinity; Low – marginally suitable habitat in Project and vicinity; Moderate – suitable habitat present in Project and vicinity, or species known to occur in habitat similar to Project; High-highly suitable habitat present or known populations exist in Project vicinity.
 Sources: KDWP 2023a, 2023b, 2023c, 2023e, 2023f; NatureServe 2023; USFWS 2020, 2023g, 2023i, 2023j, 2023k, 2023l, 2023e, 2023f.

4.2 Field Survey

A Tetra Tech biologist completed the protected species habitat assessment field survey for the Project Area between May 30 and 31, 2023. The following sections describe the findings of the on-site field survey.

4.3 Habitats

4.3.1 Terrestrial Habitat

Terrestrial habitat observed within the Project Area consisted of herbaceous grassland (Figure 5). The Project Area contains fallow fields and signs of recent disturbance were not observed. The Project Area is surrounded by agricultural fields.

Dominant vegetation within the herbaceous grassland included cheatgrass (*Bromus tectorum*), smooth brome (*Bromus inermis*), little bluestem (*Schizachyrium scoparium*), tall fescue (*Festuca arundinacea*), troublesome sedge (*Carex molesta*), fleabane (*Erigeron annuus*), Canada goldenrod (*Solidago canadensis*), Maximilian's sunflower (*Helianthus maximiliani*), frost aster (*Symphotrichum pilosum*), yarrow (*Achillea millefolium*), stickywilly (*Galium aparine*), field bindweed (*Convolvulus arvensis*) and coralberry shrub (*Symphoricarpos orbiculatus*). Additionally, small populations of common milkweed (*Asclepias syriaca*) were present in small pockets throughout the Project Area.

4.3.2 Aquatic Habitat

Two distinct aquatic habitats were observed within the Project Area and consisted of 6 palustrine emergent (PEM) wetlands and one intermittent stream. The 6 PEM wetlands total approximately 0.179-acre and the intermittent stream totaled approximately 834 liner feet (Figure 5). The PEM wetlands delineated within the Project Area consisted of small depressions within the grasslands. The wetlands were largely dominated by herbaceous species including hairy buttercup (*Ranunculus sardous*), curly dock (*Rumex crispus*), troublesome sedge, Muhlenberg's sedge (*C. muehlenbergii*), fox sedge (*C. vulpinoidea*), creeping spike rush (*Eleocharis palustris*) and cheatgrass. Formal wetland delineations were also conducted within the Project Area during the field survey, and results are documented in a separate Wetland Delineation Report.

4.4 Protected Species

The following section describes each of the protected species' potential to occur within the Project Area based on the desktop and field survey results.

4.4.1 American Burying Beetle

The American burying beetle is the largest member of the *Nicrophorus* genus in North America. The species is carnivorous, scavenging on the carcasses of small vertebrates to bury in the topsoil as a food source for their larva. The American burying beetle uses a wide range of habitats that contain undisturbed soils, are not excessively rocky or wet, and are dominated by native vegetation (KDWP 2023b).

Although no American burying beetles were observed within the Project Area, upland grasslands within the Project Area could provide marginally suitable habitat for the species. Additionally, the species is currently known to only occur in southeast Kansas (KDWP 2023b). American burying beetle habitat is predominantly dependent on the availability of carrion. Small mammals were observed within the Project Area during the assessment (i.e., mice and rabbits) and could provide a potential food source for the species.

Effective November 16, 2020, USFWS issued a Section Final 4(d) Rule that reclassified the American burying beetle from endangered to threatened on the Federal List of Endangered and Threatened Wildlife (85 Federal Register [FR] 65241-65261). Under the Provisions of the Section 4(d) rule, incidental take is not prohibited outside of defined conservation lands because the Southern Plains Analysis Area currently has low risks to the species associated with land development. The combined permanent loss of habitat projected due to urban and agricultural expansion is less than 2 percent (USFWS 2019). Because the Project Area is not located within conservation lands, consultation for the species with USFWS would not be required.

4.4.2 Monarch Butterfly

The monarch butterfly is a migratory species that relies on milkweed (*Asclepias* spp.) plants as a primary food source during its larval (caterpillar) stage and forage on a range of flowering plants found in open fields, roadside areas, grasslands, and wetlands as a food source as an adult. This species is a candidate species for federal listing under the ESA, which means it is currently not subject to the USFWS Section 7 and/or 10 requirements under the ESA (USFWS 2023e).

No monarch butterflies were observed within the Project Area during the Assessment; however, numerous milkweed plants were observed within the herbaceous grasslands on site (Figure 5; Appendix C, Photo 2). Although suitable habitat for this species was observed within the Project Area, the species is currently designated a candidate for listing and therefore no further consultation would be required.

4.4.3 Whooping Crane

Whooping crane is a federally endangered species that migrates through the central U.S. within a narrow corridor that includes central Kansas. The documented corridor is approximately 2,400 miles long by 220 miles wide, a zone that encompasses 95 percent of known sightings of whooping cranes. The species passes through Kansas during the spring and fall, generally in March through April and October through November. Occurrences outside the marked corridor have been infrequent but as crane populations increase, such sightings may become more frequent. Preferred resting areas are wetlands in level to moderately rolling terrain away from human activity where low, sparse vegetation permits ease of movement and an open view (USFWS 2023f). The Project Area falls within the whooping crane migration corridor as shown on Figure 3, and the species has been observed in Saline County (KDWP 2023c). The wetlands assessment revealed that on-site wetlands are small (totaling 0.179 acre), depressional features that do not appear to support surface water for substantial periods of time. It is possible migrating cranes would pass through the Project Area during the spring and fall migration seasons and forage in larger wetlands closer to the Smoky Hill River; however, it is the

opinion of Tetra Tech that it is unlikely whooping crane would utilize the palustrine emergent wetlands within the Project Area as resting and foraging areas.

4.5 Observed Wildlife

During the on-site habitat assessment, Tetra Tech biologists observed a total of 13 wildlife species (2 mammals and 11 birds) within the Project Area (Table 3). These wildlife species were observed utilizing the herbaceous grasslands on site. All observed bird species are common throughout the state of Kansas and are protected by the MBTA. The presence of these species is not expected to be of concern during agency reviews.

Table 3. Wildlife Observed During the Habitat Assessment

Common Name	Scientific Name	Protection Status ^{1/}	Observation
Mammals			
Eastern cottontail rabbit	<i>Sylvilagus floridanus</i>	N/A	Visual
Deer mouse	<i>Peromyscus maniculatus</i>	N/A	Visual
Birds			
American crow	<i>Corvus brachyrhynchos</i>	MBTA	Visual/Aural
Brown-headed cowbird	<i>Molothrus ater</i>	MBTA	Aural
Cooper's Hawk	<i>Accipiter cooperii</i>	MBTA	Visual
Dickcissel	<i>Spiza americana</i>	MBTA	Visual/Aural
Field sparrow	<i>Spizella pusilla</i>	MBTA	Visual/Aural
Mourning dove	<i>Zenaida macroura</i>	MBTA	Visual/Aural
Northern cardinal	<i>Cardinalis</i>	MBTA	Visual
Northern Mockingbird	<i>Mimus polyglottos</i>	MBTA	Aural
Red-winged blackbird	<i>Agelaius phoeniceus</i>	MBTA	Visual/Aural
Song sparrow	<i>Melospiza melodia</i>	MBTA	Visual
Turkey vulture	<i>Cathartes aura</i>	MBTA	Visual

Note:

^{1/} MBTA = Migratory Bird Treaty Act

5.0 SUMMARY

Results of the protected species desktop review and field habitat assessment completed between May 30 and 31, 2023, determined the Project Area could provide suitable habitat for the American burying beetle and monarch butterfly.

Since much of the Project Area is believed to contain suitable habitat for the federally threatened American burying beetle, completion of the USFWS 4(d) Determination Key for the American Burying Beetle (OEFS 2021) is recommended to determine potential for the Project to affect the species. Should a "may affect" determination be made, Section 7 consultation with the USFWS will likely be required (OEFS 2023; USFWS 2020). Under a "may affect, not likely to adversely affect" determination, consultation for the species would be considered complete and no further actions would be required. As the monarch butterfly is a federal candidate species it is not subject to the USFWS Section 7 and/or 10 requirements under the ESA and therefore is not a constraint to the Project.

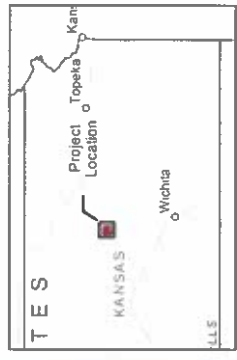
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FIGURES

Legend
Project Boundary



0 125 250 500 Feet

Figure 1
Project Location
Mountain Peak Energy Storage Project
Saline County, KS

Prepared For: Mountain Peak Energy Storage LLC

Prepared By: TETRA TECH
Date: 06/2023

Source: Esri, et. al. 2023; Tetra Tech 2023;
Mountain Peak Energy Storage LLC 2023

Coordinate System: NAD 1983 StatePlane
Kansas North FIPS 1501 (US Feet)

Legend
Project Boundary

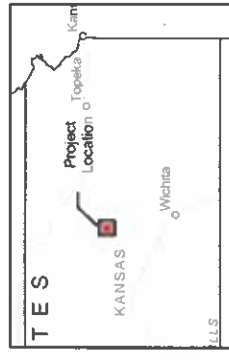
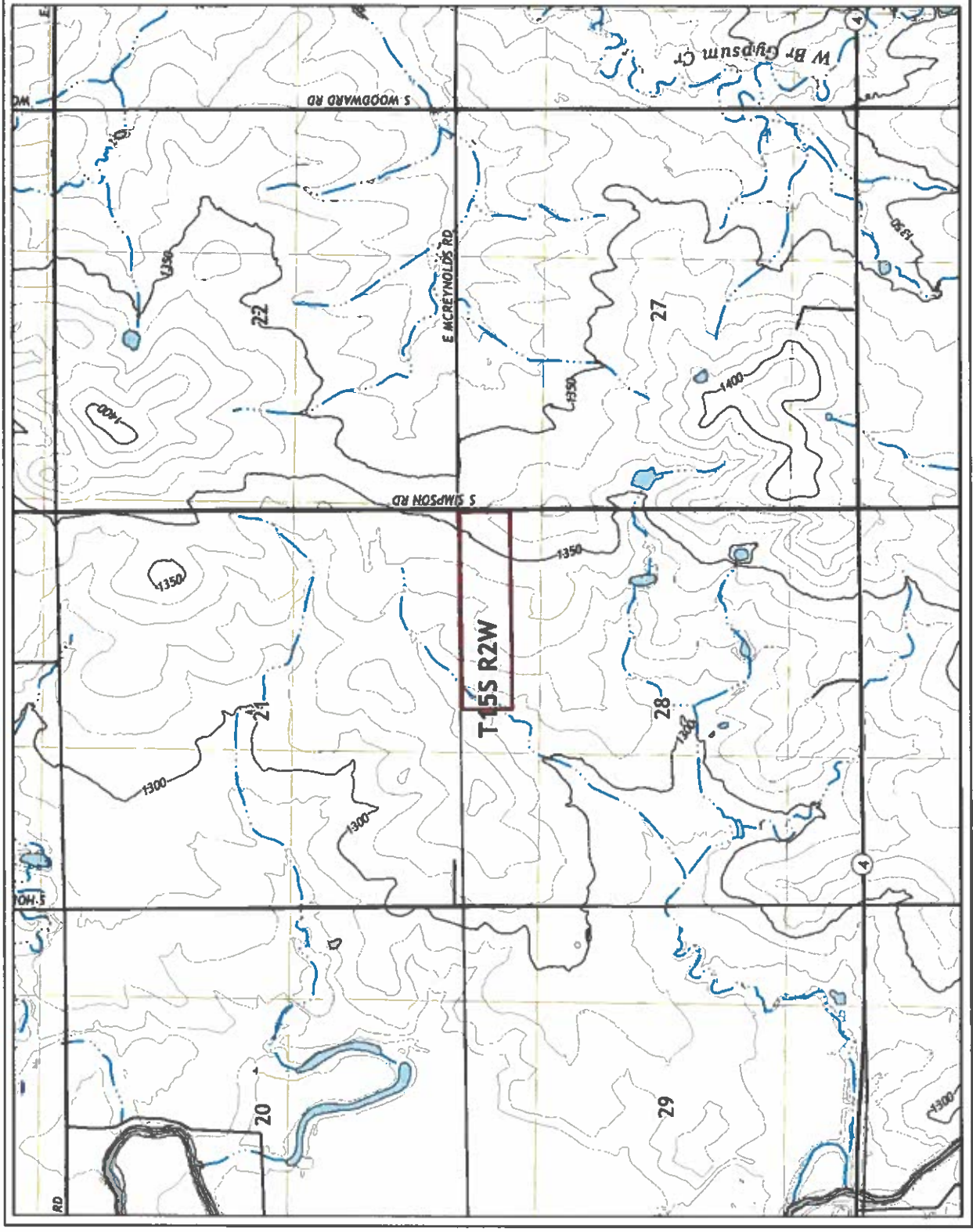


Figure 2
USGS Topographic Map
Mountain Peak Energy Storage Project
Saline County, KS

Prepared For: Mountain Peak Energy Storage LLC





Prepared By: **TETRA TECH** Date: 06/2023

Source: Esri, et al. 2023; Tetra Tech 2023;
Mountain Peak Energy Storage LLC 2023;
USGS 2022; Assaria 1:24,000 Quadrangle
Coordinate System: NAD 1983 StatePlane
Kansas North FIPS 1501 (US Feet)



Not for Construction

Legend

-  Project Boundary
-  Developed, Open Space (21)
-  Developed, Low Intensity (22)
-  Developed, Medium Intensity (23)
-  Developed, High Intensity (24)
-  Grassland/Herbaceous (71)
-  Cultivated Crops (82)

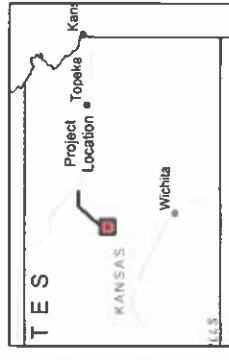


Figure 3
Land Cover
Mountain Peak Energy Storage Project
Saline County, KS

Prepared For: Mountain Peak Energy Storage LLC

Prepared By:  TETRA TECH
Date: 06/2023

Sources: Esri, et al. 2023; USGS 2018;
Tetra Tech 2023;
Mountain Peak Energy Storage LLC 2023

Coordinate System: NAD 1983 StatePlane
Kansas North FIPS 1501 (US Feet)



Mountain Peak Energy Storage Project
SALINE COUNTY, KS

Figure 4
Whooping Crane Migration Corridor

Legend

Project Area

Whooping Crane Migration Corridor

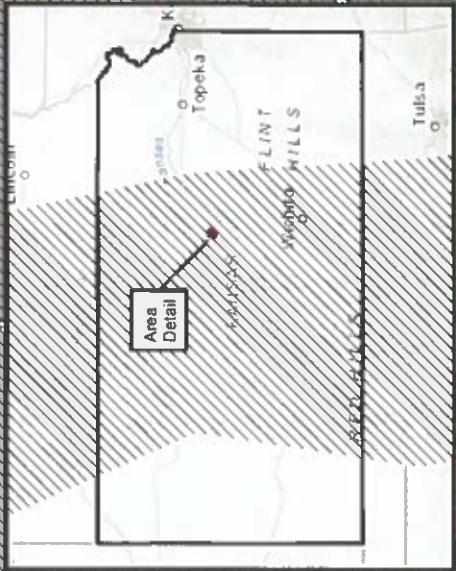
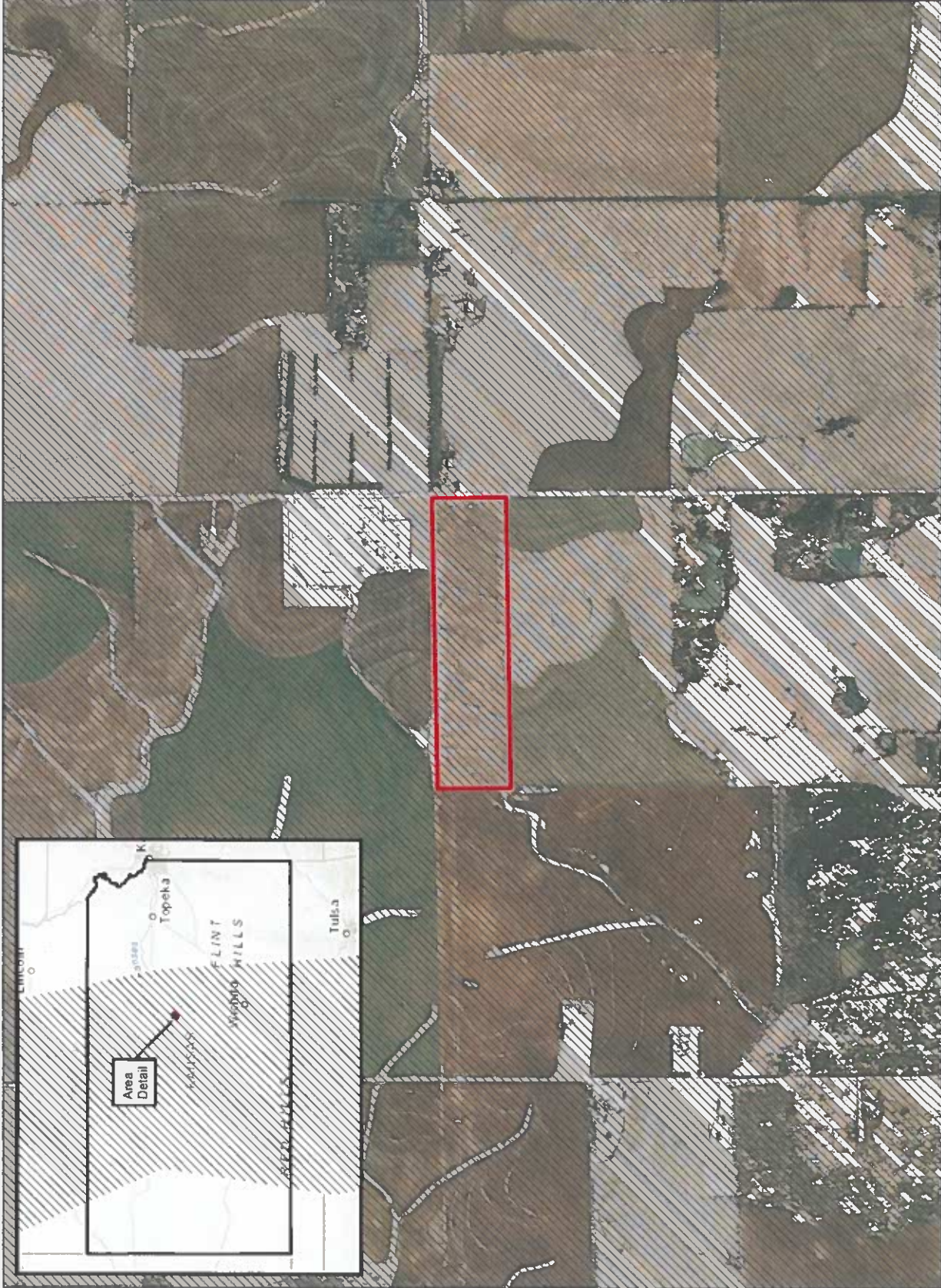
Prepared for:
Mountain Peak Energy Storage LLC

Prepared by:



Data Source: Esri et al. 2022; USGS 2022

Reference Map



NOT FOR CONSTRUCTION

3,000 Feet

1,500

750

0

1:10,000 NAD 1983 StatePlane Kansas South FIPS 1502 Feet



- Legend**
- Project Boundary
 - Photo Locations
- Habitats**
- Herbaceous Grassland
 - Palustrine Emergent Wetland
 - Intermittent Stream

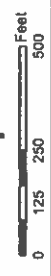
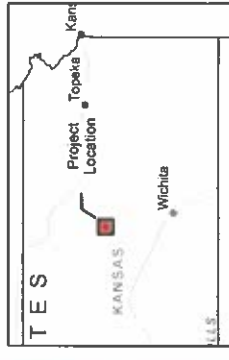


Figure 5
 Project Area Habitat
 Mountain Peak Energy Storage Project
 Saline County, KS

Prepared For: Mountain Peak Energy Storage LLC
 Prepared By: TETRA TECH
 Date: 06/2023

Source: Earl, et al. 2023; Tetra Tech 2023;
 Mountain Peak Energy Storage LLC 2023

Coordinate System: NAD 1983 StatePlane
 Kansas North FIPS 1501 (US Feet)



Habitat	Potentially Suitable For
Herbaceous Grassland	American burying beetle, Monarch Butterfly

APPENDIX A
USFWS INFORMATION FOR PLANNING AND
CONSULTATION



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, KS 66502-2801
Phone: (785) 539-3474 Fax: (785) 539-8567



In Reply Refer To:
Project Code: 2023-0091938
Project Name: Mountain Peak Battery Energy Storage

June 09, 2023

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 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 U.S. Fish and Wildlife Service (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 ECOS-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 ECOS-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/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), 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 U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

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 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.php>.

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. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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**

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".

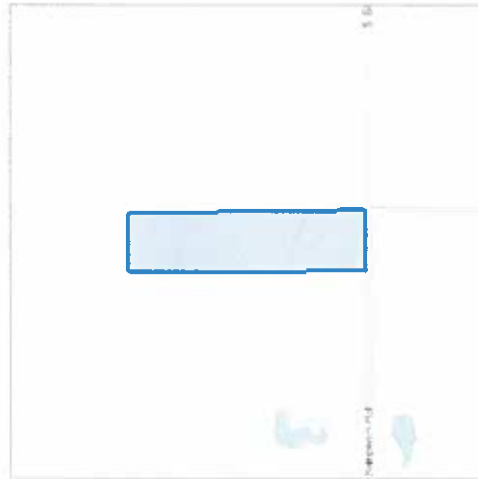
This species list is provided by:

Kansas Ecological Services Field Office
2609 Anderson Avenue
Manhattan, KS 66502-2801
(785) 539-3474

PROJECT SUMMARY

Project Code: 2023-0091938
Project Name: Mountain Peak Battery Energy Storage
Project Type: New Constr - Above Ground
Project Description: Proposed battery energy storage project.
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.7245571,-97.54392626865966,14z>



Counties: Saline County, Kansas

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 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.

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
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
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
Whooping Crane <i>Grus americana</i> Population: Wherever found, except where listed as an experimental population There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

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.



IPAC USER CONTACT INFORMATION

Agency: Tetra Tech, Inc.

Name: Jeff Golladay

Address: 117 Hearthstone Drive

City: Aiken

State: SC

Zip: 29803

Email jgolladay91@gmail.com

Phone: 8154518139

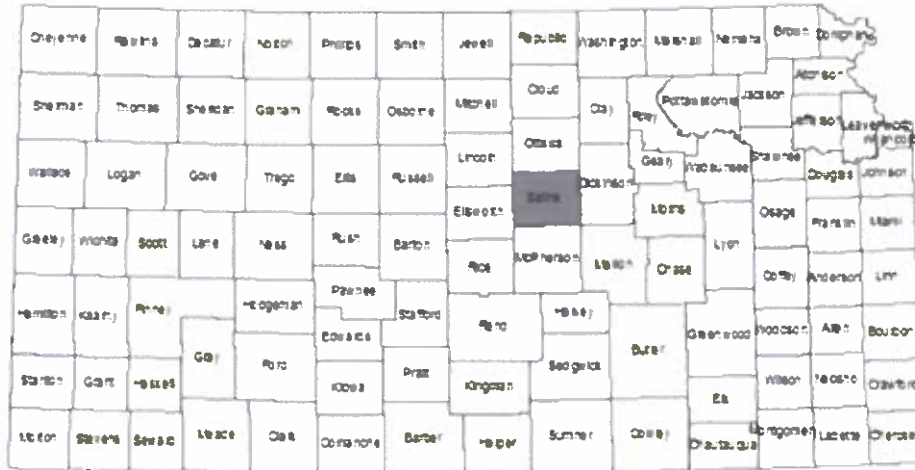
APPENDIX B
KANSAS DEPARTMENT OF WILDLIFE AND PARKS
THREATENED AND ENDANGERED SPECIES LIST FOR
SALINE COUNTY, KANSAS



[Print This Page](#)

[Back to Site](#)

Saline County



Threatened and Endangered (T&E) Species

Critical Habitat Designated

There are no T&E species with critical habitat in Saline county

No Critical Habitat Designated

- TOPEKA SHINER** *Notropis topeka*
State: Threatened Federal: Endangered Critical Habitat: No
- WHOOPING CRANE** *Grus americana*
State: Endangered Federal: Endangered Critical Habitat: No
- LEAST TERN** *Sterna antillarum*
State: Endangered Federal: Endangered Critical Habitat: No
- PIPING PLOVER** *Charadrius melodus*
State: Threatened Federal: Threatened Critical Habitat: No
- SNOWY PLOVER** *Charadrius alexandrinus*
State: Threatened Federal: N/A Critical Habitat: No
- EASTERN SPOTTED SKUNK** *Spilogale putorius*
State: Threatened Federal: N/A Critical Habitat: No
- AMERICAN BURYING BEETLE** *Nicrophorus americanus*
State: Endangered Federal: Endangered Critical Habitat: No

Species In Need of Conservation (SINC)

There are no SINC species with critical habitat in Saline county

- Southern Bog Lemming** *Synaptomys cooperi*
State: SINC Federal: N/A Critical Habitat: No
- Western Hognose Snake** *Heterodon nasicus*

State: SINC **Federal:** N/A **Critical Habitat:** No

Black Tern *Chlidonias niger*

State: SINC **Federal:** N/A **Critical Habitat:** No

Short-eared Owl *Asio flammeus*

State: SINC **Federal:** N/A **Critical Habitat:** No

Ferruginous Hawk *Buteo regalis*

State: SINC **Federal:** N/A **Critical Habitat:** No

Golden Eagle *Aquila chrysaetos*

State: SINC **Federal:** N/A **Critical Habitat:** No

Bobolink *Dolichonyx oryzivorus*

State: SINC **Federal:** N/A **Critical Habitat:** No

Henslow's Sparrow *Ammodramus henslowii*

State: SINC **Federal:** N/A **Critical Habitat:** No

Long-billed Curlew *Numenius americanus*

State: SINC **Federal:** N/A **Critical Habitat:** No

Franklin's Ground Squirrel *Poliocitellus franklinii*

State: SINC **Federal:** N/A **Critical Habitat:** No

APPENDIX C REPRESENTATIVE PHOTOGRAPHS

Protected Species Habitat Assessment Photographic Documentation
Mountain Peak Energy Storage Project
Saline County, Kansas
May 30-31, 2023

Photo: 1

Description:

Typical view of the herbaceous grassland habitat within the Project Area.

Orientation:

Facing west.



Photo: 2

Description:

View of common milkweed and potentially suitable monarch butterfly habitat within the Project Area.

Orientation:

Facing northeast.



TETRA TECH

Photographs taken by Jeff Golladay.

**Protected Species Habitat Assessment Photographic Documentation
Mountain Peak Energy Storage Project
Saline County, Kansas
May 30-31, 2023**

Photo: 3

Description:

View of potential small mammal burrow within the Project Area. No burrowing mammals were observed during the Project Area Assessment.



Photo: 4

Description:

Typical view of palustrine emergent wetland habitat within the Project Area.

Orientation:

Facing north.



TETRA TECH

Photographs taken by Jeff Golladay.

Protected Species Habitat Assessment Photographic Documentation
Mountain Peak Energy Storage Project
Saline County, Kansas
May 30-31, 2023

Photo: 5

Description:

View of intermittent stream channel in southwest corner of the Project Area.

Orientation:

Facing north.



Photo: 6

Description:

View of intermittent stream in northwest corner of the Project Area. This reach of the stream is beginning to overgrow with vegetation.

Orientation:

Facing east.



TETRA TECH

Photographs taken by Jeff Golladay.