



National Nuclear Security Administration
Office of Secure Transportation
P.O. Box 5400
Albuquerque, New Mexico 87185-5400



11/4/22

Bobby Komardley, Chairman
Apache Tribe of Oklahoma
511 E. Colorado
Anadarko, OK 73005

Dear Mr. Komardley,

The U.S. Department of Energy, National Nuclear Security Administration (NNSA), Office of Secure Transportation (OST), has determined that an Environmental Assessment (EA) will be prepared for NNSA's proposal to construct and consolidate OST facilities over a ten-year period at the NNSA Pantex Plant in Carson County, TX. The scope of the proposed activities would include: construction (vegetation removal, earthwork, utility extension) and operation of a new OST campus on a currently vacant plot of land adjacent to the main Pantex Plant facility. The proposed projects evaluated in the EA include: preparation of campus infrastructure (roads, utilities, etc.), construction of a vehicle maintenance facility, construction of a federal agent facility, construction of a physical training/intermediate use of force facility, construction of a shipping/receiving facility, construction of a live fire shoothouse, construction of an indoor shooting range, construction of vehicle wash rack, and installation of ammunition storage magazines/establishment of appropriate buffer zone.

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If you are interested in the project and would like to receive a copy of the Draft EA, then please send a notification within 30 days of receipt of this letter to Lisa Swift at lisa.swift@nnsa.doe.gov or P.O. Box 5400, Kirkland AFB East, Albuquerque, NM 87185, or call at (505) 737-0279. For further information about the NEPA process, please contact Jim Sanderson at james.sanderson@nnsa.doe.gov or NNSA Office of General Council, P.O. Box 5400, Albuquerque, NM 87185, or call at (202) 586-1402. Thank you for your consideration.

Sincerely,

LISA SWIFT Digitally signed by LISA SWIFT
Date: 2022.11.04 14:29:43
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Lisa Swift
General Engineer



National Nuclear Security Administration
Office of Secure Transportation
P.O. Box 5400
Albuquerque, New Mexico 87185-5400



11/4/22

William Nelson Sr., Chairman
Comanche Nation of Oklahoma
P.O. Box 908
Lawton, OK 73502

Dear Mr. Nelson,

The U.S. Department of Energy, National Nuclear Security Administration (NNSA), Office of Secure Transportation (OST), has determined that an Environmental Assessment (EA) will be prepared for NNSA's proposal to construct and consolidate OST facilities over a ten-year period at the NNSA Pantex Plant in Carson County, TX. The scope of the proposed activities would include: construction (vegetation removal, earthwork, utility extension) and operation of a new OST campus on a currently vacant plot of land adjacent to the main Pantex Plant facility. The proposed projects evaluated in the EA include: preparation of campus infrastructure (roads, utilities, etc.), construction of a vehicle maintenance facility, construction of a federal agent facility, construction of a physical training/intermediate use of force facility, construction of a shipping/receiving facility, construction of a live fire shoothouse, construction of an indoor shooting range, construction of vehicle wash rack, and installation of ammunition storage magazines/establishment of appropriate buffer zone.

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Sincerely,

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Lisa Swift
General Engineer



National Nuclear Security Administration
Office of Secure Transportation
P.O. Box 5400
Albuquerque, New Mexico 87185-5400



11/4/22

Levi Pesata, President
Jicarilla Apache Nation
P.O. Box 507
Dulce, NM 87528

Dear Mr. Pesata,

The U.S. Department of Energy, National Nuclear Security Administration (NNSA), Office of Secure Transportation (OST), has determined that an Environmental Assessment (EA) will be prepared for NNSA's proposal to construct and consolidate OST facilities over a ten-year period at the NNSA Pantex Plant in Carson County, TX. The scope of the proposed activities would include: construction (vegetation removal, earthwork, utility extension) and operation of a new OST campus on a currently vacant plot of land adjacent to the main Pantex Plant facility. The proposed projects evaluated in the EA include: preparation of campus infrastructure (roads, utilities, etc.), construction of a vehicle maintenance facility, construction of a federal agent facility, construction of a physical training/intermediate use of force facility, construction of a shipping/receiving facility, construction of a live fire shoothouse, construction of an indoor shooting range, construction of vehicle wash rack, and installation of ammunition storage magazines/establishment of appropriate buffer zone.

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Sincerely,

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Lisa Swift
General Engineer



National Nuclear Security Administration
Office of Secure Transportation
P.O. Box 5400
Albuquerque, New Mexico 87185-5400



11/4/22

Matt Komalty, Chairman
Kiowa Indian Tribe of Oklahoma
P.O. Box 369
Carnegie, OK 73015

Dear Mr. Komalty,

The U.S. Department of Energy, National Nuclear Security Administration (NNSA), Office of Secure Transportation (OST), has determined that an Environmental Assessment (EA) will be prepared for NNSA's proposal to construct and consolidate OST facilities over a ten-year period at the NNSA Pantex Plant in Carson County, TX. The scope of the proposed activities would include: construction (vegetation removal, earthwork, utility extension) and operation of a new OST campus on a currently vacant plot of land adjacent to the main Pantex Plant facility. The proposed projects evaluated in the EA include: preparation of campus infrastructure (roads, utilities, etc.), construction of a vehicle maintenance facility, construction of a federal agent facility, construction of a physical training/intermediate use of force facility, construction of a shipping/receiving facility, construction of a live fire shoothouse, construction of an indoor shooting range, construction of vehicle wash rack, and installation of ammunition storage magazines/establishment of appropriate buffer zone.

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Sincerely,

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Lisa Swift
General Engineer



National Nuclear Security Administration
Office of Secure Transportation
P.O. Box 5400
Albuquerque, New Mexico 87185-5400



11/4/22

Russell Martin, President
Tonkawa Tribe of Oklahoma
1 Rush Buffalo Rd.
Tonkawa, OK 74653

Dear Mr. Martin,

The U.S. Department of Energy, National Nuclear Security Administration (NNSA), Office of Secure Transportation (OST), has determined that an Environmental Assessment (EA) will be prepared for NNSA's proposal to construct and consolidate OST facilities over a ten-year period at the NNSA Pantex Plant in Carson County, TX. The scope of the proposed activities would include: construction (vegetation removal, earthwork, utility extension) and operation of a new OST campus on a currently vacant plot of land adjacent to the main Pantex Plant facility. The proposed projects evaluated in the EA include: preparation of campus infrastructure (roads, utilities, etc.), construction of a vehicle maintenance facility, construction of a federal agent facility, construction of a physical training/intermediate use of force facility, construction of a shipping/receiving facility, construction of a live fire shoothouse, construction of an indoor shooting range, construction of vehicle wash rack, and installation of ammunition storage magazines/establishment of appropriate buffer zone.

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Sincerely,

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Lisa Swift
General Engineer



Natural Resources
Conservation Service

State Office

101 S. Main Street
Temple, TX 76501
Voice 254.742.9800
Fax 254.742.9819

Attention: Lisa Swift
Construction and Consolidation of Office Campus at Pantex Project
Subject: NEPA/FPPA Evaluation

We have reviewed the information provided in your correspondence concerning the proposed project. This review is part of the National Environmental Policy Act (NEPA) evaluation. We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The proposed site contains areas of Prime Farmland and we have completed the Farmland Conversion Impact Rating form (AD-1006) for the proposed site. The combined rating of the site is 154. The FPPA law states that sites with a rating less than 160 will need no further consideration for protection and no additional evaluation is necessary. We encourage the use of accepted erosion control methods during the construction of this project.

If you have further questions, please contact me at 505-516-7822 or by email at mark.palmer@tx.usda.gov.

Sincerely,

Mark V. Palmer Jr. Digitally signed by Mark V. Palmer Jr.
Date: 2022.11.07 11:16:51 -06'00'

Mark V. Palmer Jr.

BIOLOGICAL SURVEY REPORT

**Environmental Assessment of the Development of the National Nuclear
Safety Administration, Office of Secure Transportation / Agent
Operations Central Command Campus at Pantex
Amarillo, Texas**

Task Order 8933122FNA400437

Prepared for:



**National Nuclear Security Administration
Office of Secure Transportation / Agent Operations Central Command**

Submitted by:



8201 Greensboro Dr.
Suite 700
McLean, VA 22102

August 26, 2022

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ABBREVIATIONS

BMP	Best Management Practices
DOE	Department of Energy
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NNSA	National Nuclear Security Administration
OST	Office of Secure Transportation
SGCN	Species of Greatest Conservation Need
TBBA	Texas Breeding Bird Atlas
TPWD	Texas Parks and Wildlife Division
USFWS	United States Fish and Wildlife Service

1.0 PURPOSE

The Office of Secure Transportation (OST), National Nuclear Security Administration (NNSA) has completed a conceptual plan outlining projected construction projects for the next ten years to consolidate and modernize facilities at a location adjacent to Department of Energy (DOE) Pantex's secure site. This new campus includes the construction of a vehicle maintenance facility, a federal agent facility, a physical training/ intermediate use of force facility, a shipping/receiving facility, a live fire shoot house, an indoor shooting rack, a vehicle wash rack, and ammunition storage magazines.

The project area for the new OST campus includes 374 acres of cultivated land and disturbed prairie. Preliminary biological review indicated that sensitive and special status species potentially occur within the project area. Previous surveys documented the presence of two species of greatest conservation need (SGCN) in Texas: the western burrowing owl (*Athene cunicularia hypugaea*) and Texas horned lizard (*Phrynosoma cornutum*). Other avian SGCN, such as the ferruginous hawk (*Buteo regalis*), have been documented throughout the Pantex plant. U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) online review has additionally identified two Federally threatened species with potential to occur within the project area: red knot (*Calidris canutus rufa*) and piping plover (*Charadrius melodus*).

Given that the project area had not been surveyed in over 15 years, NNSA contracted Solv, LLC to perform targeted biological surveys for special status species. The purpose of this Biological Survey Report is to describe the methodology, findings, recommendations, and conclusions based on the results of targeted and general biological surveys within the project area from 8/8/2022 to 8/10/2022.

2.0 EXISTING CONDITIONS

The designated project area for the proposed OST campus is a 374-acre parcel of land west of the existing Pantex plant facility. The project area primarily consists of cultivated cropland and disturbed shortgrass prairie. The site is bordered by paved roads to the north, and there is existing human disturbance within the project area including two-track roads, monitoring wells, and a pumphouse station.

Native shortgrass prairie, primarily consisting of buffalograss (*Buchloe dactyloides*) and blue grama (*Bouteloua gracilis*), can support a variety of grassland species, including raptors and prairie dogs. Located or partially located within the project area are two substantial black-tailed prairie dog (*Cynomys ludovicianus*) colonies. Prairie dog colonies are used as nesting grounds, shelter, or foraging grounds by many other grassland species, including ferruginous hawk, western burrowing owl, and mountain plover (*Charadrius montanus*). Several ephemeral wet areas are located in low drainage areas throughout the project area. These drainages do not support perennial wetland vegetation and only persist after intensive rainfall. **Figure 1** depicts the proposed OST campus project area.



Figure 1. Proposed OST Campus Project Area

Previous biological surveys have documented western burrowing owl and Texas horned lizard within the project area. Burrowing owls were observed associating with the prairie dog colonies to the north of the project area (Chipman, 2006). During past surveys, Texas horned lizards were detected regularly on the dirt roads throughout the project area (Kazmaier, 2006 & 2007).

3.0 SPECIES PROFILES

This chapter summarizes the basic life histories of targeted survey species and the relevant background regarding their conservation status.

3.1 Western Burrowing Owl

Western burrowing owl (*Athene cunicularia hypugaea*) is a small, migratory raptor that inhabits open areas throughout the western United States. The species inhabits open, treeless areas characterized by low, sparse vegetation (USFWS, No Date). Although burrowing owls will dig their own burrows, they readily use burrows from other animals and are strongly associated with prairie dog colonies. Additionally, they also use man-made burrow substitutes such as pipes or culverts when available. Burrowing owls are small predatory raptors which primarily feed upon insects and small mammals, but will pursue any potential prey they can physically handle (USFWS, No Date).

Burrowing owls breed throughout the central and western U.S., southern Canada, and northern Mexico during the summer months. In Texas, the breeding season can last from March through September (TPWD, No Date-c). In the winter, burrowing owls migrate to the southwestern U.S., northwestern and southern Mexico, and parts of Central America (USFWS, No Date). Some owls winter in areas of Texas, including the northern panhandle (TPWD, No Date-c).

Threats to burrowing owl populations include the conversion of suitable habitat to agriculture and the decline of black-tailed prairie dog populations. Burrowing owls have declined significantly in Texas from 1980 to 2005 and are designated a species of greatest conservation need (SGCN) by the Texas Parks and Wildlife Department (TBBA, 2006; TPWD, 2020). As a migratory bird species, burrowing owls are also protected under the Migratory Bird Treaty Act (MBTA).

Much of the Pantex plant consists of suitable habitat for Burrowing Owls due to the presence of shortgrass prairie and mature prairie dog colonies which provide ample vacant burrows. This includes the project area, which contains grasslands and sections of two prairie dog colonies. Historically, burrowing owls have been found within the boundary of the project area (Chipman, 2006).

3.2 Texas Horned Lizard

Texas horned lizards (*Phrynosoma cornutum*) are small, flat-bodied lizards that inhabit open, arid and semiarid environments with sparse plant cover (TPWD, No Date-a). They are commonly found in loose sand or loamy soils which they excavate for hibernation and nesting purposes. Texas horned lizards are associated with robust populations of harvester ants, their primary food source.

The Texas horned lizard currently is listed as a threatened species and a species of greatest conservation need (SGCN) in Texas (TPWD, 2020). They have historically been distributed throughout most of the state, although recent surveys have documented apparent declines in portions of the state. Texas Horned Lizard populations in eastern and central Texas seem to have experienced declines and now seem to be scarce and local. Horned lizards are still commonly found in south Texas and the lower Rio Grande Valley, but some declines have been reported in these regions. West Texas remains the stronghold for this species (TPWD, 2008). Some data has indicated the spread of invasive fire ants as one factor in the decline of the Texas horned lizards (TPWD, 2008).

Past herpetological surveys have documented Texas horned lizard presence throughout the Pantex plant, including within the project area. Detections were concentrated along the southeastern edge and the north-south road on the western side of the project area. Surveys found that horned lizards at the Pantex plant associated with roads and were most often detected during road surveys (Kazmaier, 2006 & 2007).

4.0 SURVEY METHODS

Surveys at the Pantex plant took place from August 8-10 of 2022. All surveys were conducted by a two-member team of qualified biological surveyors over a consecutive three-day period. The field team(s) were equipped with following data collection and support equipment:

- Handheld GPS
- Binoculars
- Paper datasheets and pencil

4.1 Burrowing Owl Survey Procedures

Survey teams systematically inventoried all potential burrowing owl habitat present in the study area. Burrowing owls are generally associated with dry, open, short-grass, treeless plains (Haug et al. 1993). Burrowing owls rarely dig their own burrows and will use both burrows dug from other animals and man-made holes. Therefore, survey effort was primarily focused upon the black-tailed prairie dog colonies with numerous burrows in the northeast and northwest sections of the survey area.

A combination of point count surveys and walking surveys were used to survey for owls in the morning and evening. **Figure 2** displays all transect routes and point count locations in relation to the prairie dog colonies in the project area. Surveys were conducted in the morning and evening (two hours before sunset until ½ hour after sunset; and ½ hour before sunrise until two hours after sunrise). Surveys were not conducted in inclement weather including rain, fog, high winds (>20 mph), or excessively high temperatures (>90 °F). Point count surveys were conducted at specifically selected points for 20 minutes.

Walking survey routes were planned to ensure complete coverage of the project area to the maximum extent possible. Surveyors proceeded along the transect line, stopping approximately every 200 m to scan for ten minutes. Burrowing owls are very likely to either flush or hide in a burrow if approached at distances closer than 200 m. Therefore, transect start locations were located outside the prairie dog colony, with observers surveying ahead of their route if it is necessary to enter the colony.

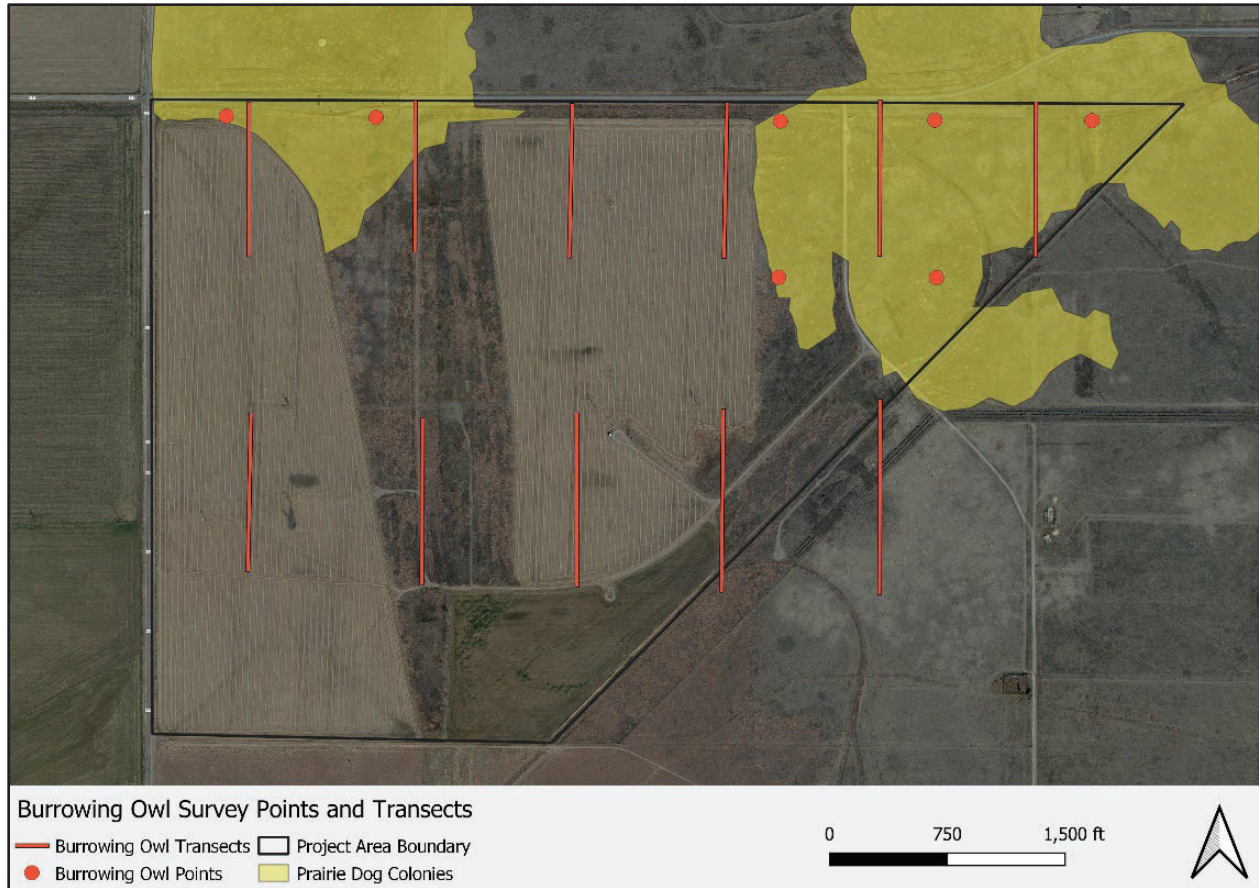


Figure 2. Burrowing Owl Survey Points and Transects

4.1.1 *Detections*

For each owl detection, the time, number, and estimated GPS coordinates were noted. Given the lack of prominent topography and high vegetation at the site, owls could be observed hundreds of meters away from the observation location and could not be directly marked with handheld GPS units. Outside of the dedicated surveys, any incidental observations of owls were also recorded.

4.2 **Texas Horned Lizard Survey Procedure**

Survey teams systematically inventoried potential Texas horned lizard habitat present in the study area with focus on the western strip of habitat that had the highest concentration of past horned lizard detections. Surveys were conducted in conditions ideal for basking lizards to the extent possible: dry, sunny, or partly sunny weather with high temperatures (80 - 95 °F).

Survey teams used transects along all unpaved roads and trails within and bordering the project area as well as systematic coverage of ideal habitat areas to search for Texas Horned Lizards. Surveyors walked all dirt trails and roads at the facility daily. Transects were also established in the ideal, Texas horned lizard prairie habitat areas in the western portion of the study area. Survey technique consisted of walking through appropriate habitat while keeping their eyes constantly on the ground and paying attention to the slightest of movements. GPS coordinates of any lizard

observations were recorded at the time of observation. Lizard scat and sign was also recorded if observed.

4.3 General Avian Point Count Procedure

General avian point counts were conducted at four points on 8/12/2022 to observe other potential bird species using the project area. Point counts lasted for one hour and each point was sampled twice: once in the morning and once in the evening. Point count locations were chosen near ephemeral wetlands and grassland habitat areas within the project area to maximize the potential diversity of bird species encountered. All birds encountered were identified visually or auditorily. Surveyors shifted observation direction from each of the cardinal directions every five minutes, with constant scanning across the horizon during the survey. **Figure 3** displays the location of the four, point count locations within the project area.



Figure 3. General Avian Point Count Locations

4.4 Field Notes

Surveyors also recorded other pertinent notes and/or data not captured elsewhere in the assessment form as necessary in a write-in field. Common field notes include but are not limited to special access restrictions, signs of habitat deterioration, or observations of potential burrowing owl / horned lizard sign including, but not limited to, scat, feathers, and pellets.

4.5 Survey Schedule

On 8/8/2022, lizard surveys were conducted along roads and ideal habitat from 1000 to 1230. In the evening, owl point count and transect surveys were conducted from 1900 to 2130.

On 8/9/2022, owl point count and transect surveys were conducted from 0630 to 1015. Systematic surveys of ideal lizard habitat and roads began at 1015 and continued until 1230. Possible lizard scat was observed during this survey, but there were no other observations. Owl point counts and transects began again at 1900 and concluded by 2115.

On 8/10/2022, general avian point counts were conducted from 0643 to 0743 and from 0753 to 0853. Surveys of roads and ideal lizard habitat began at 1015 and concluded at 1230. Evening avian point counts were conducted from 1900 to 2000 and from 2005 to 2105.

5.0 RESULTS

Over the three-day survey period, 27 individual observations of burrowing owls occurred within the project area. There were no direct observations of Texas horned lizards, however lizard scat was observed at one location. During the general avian point count surveys, 12 species of birds were observed and no special status bird species were observed other than burrowing owls. **Figure 4** displays all burrowing owl observations over the three-day period; **Figure 5** displays the results of the burrowing owl point counts surveys; **Figure 6** displays the results of the burrowing owl transect surveys; and **Figure 7** displays the location of the potential horned lizard scat. **Table 1** summarizes the number of each bird species detected.

5.1 Burrowing Owl

Figure 4 displays all burrowing owls detected along with the ranges of nearby prairie dog colonies. The majority of owl observations were located in the northwest colony near the guard post. Burrowing owls were also observed in the eastern prairie dog colony and some owls were observed in areas of the project site without nearby colonies.

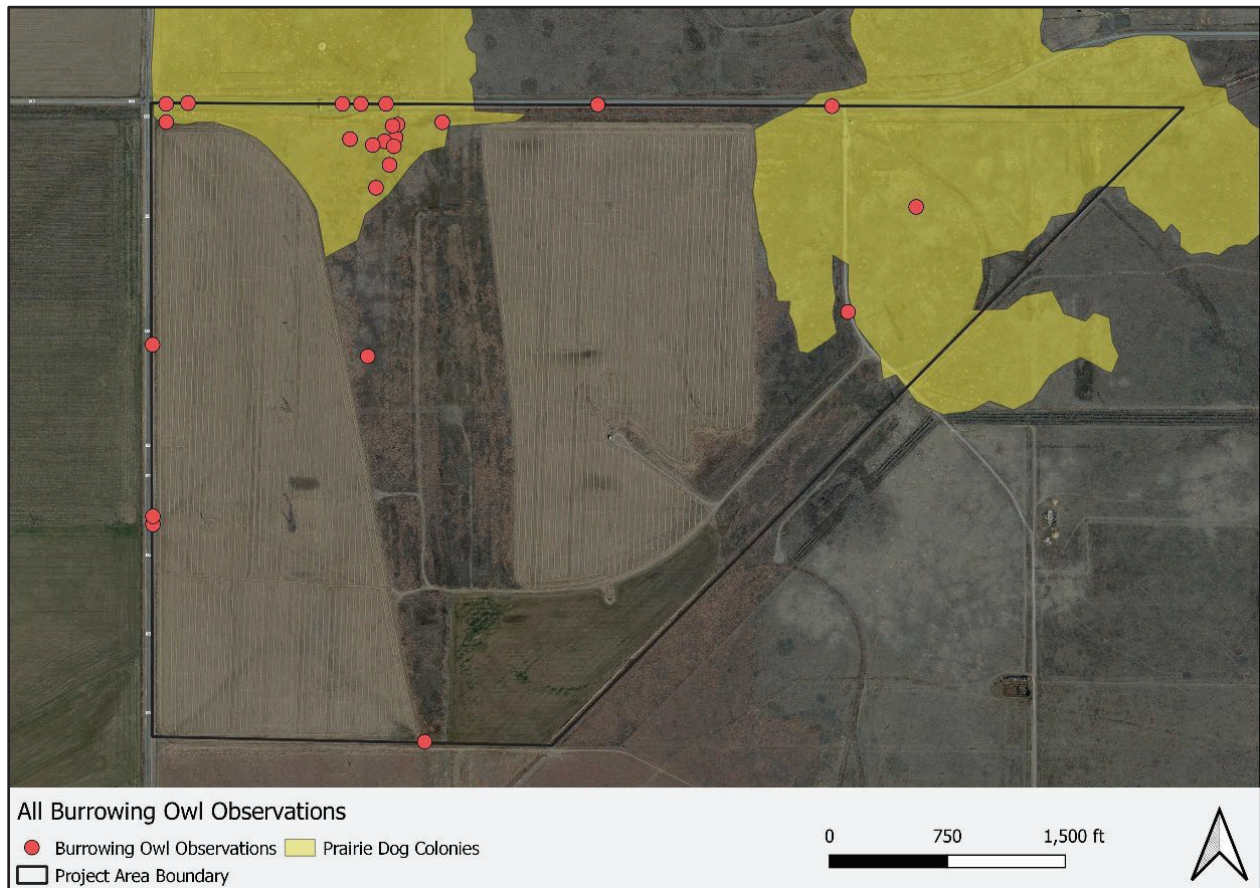


Figure 4. All Burrowing Owl Observations

Figure 5 displays the burrowing owls detected during point count. The majority of owls detected during these surveys were present in the prairie dog colony located in the northwest section of the project area near the guard post.

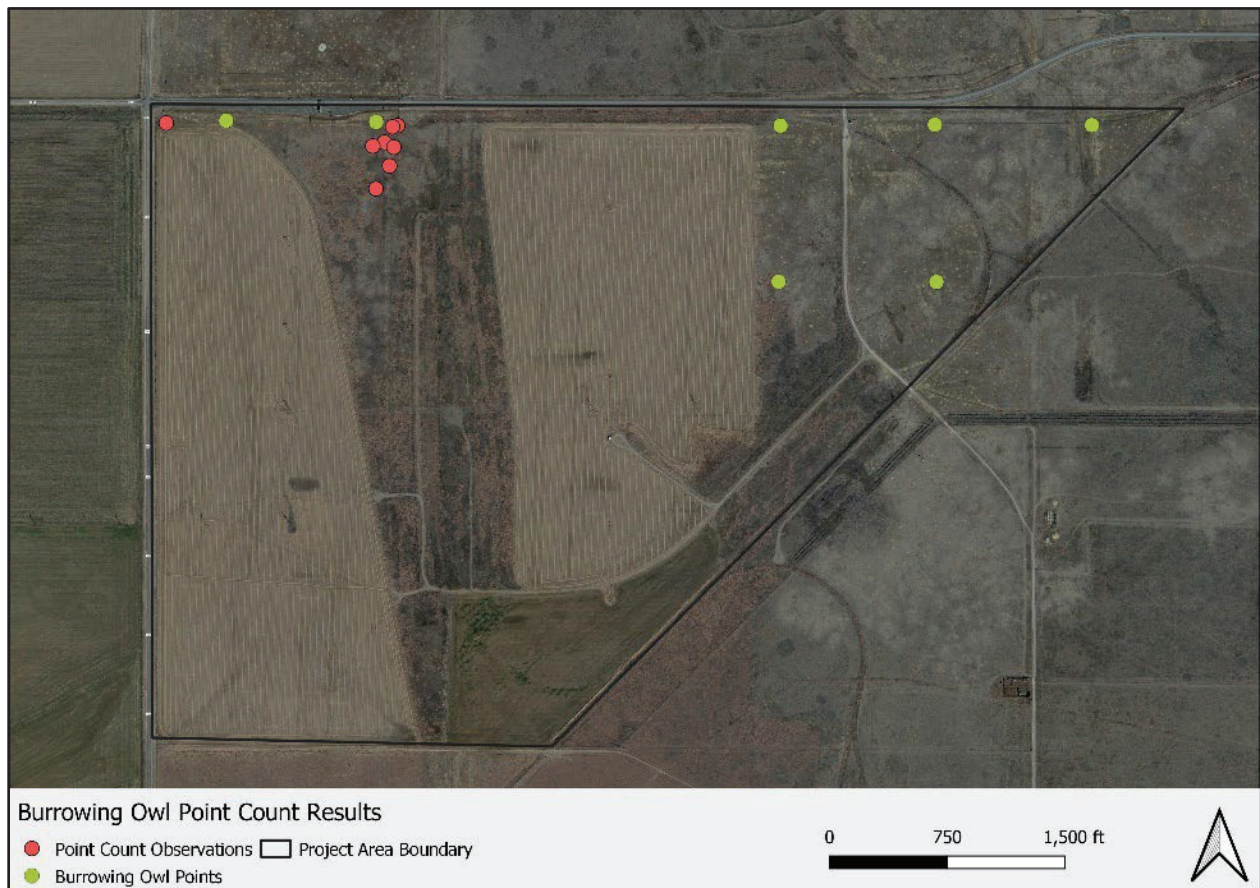


Figure 5. Burrowing Owl Point Count Observations

Figure 6 displays burrowing owls detected during transect surveys. Owls were most prevalent along the northern half of the project area that contained the prairie dog colonies. Some burrowing owls were also detected along the fence line bordering the western edge of the project area.

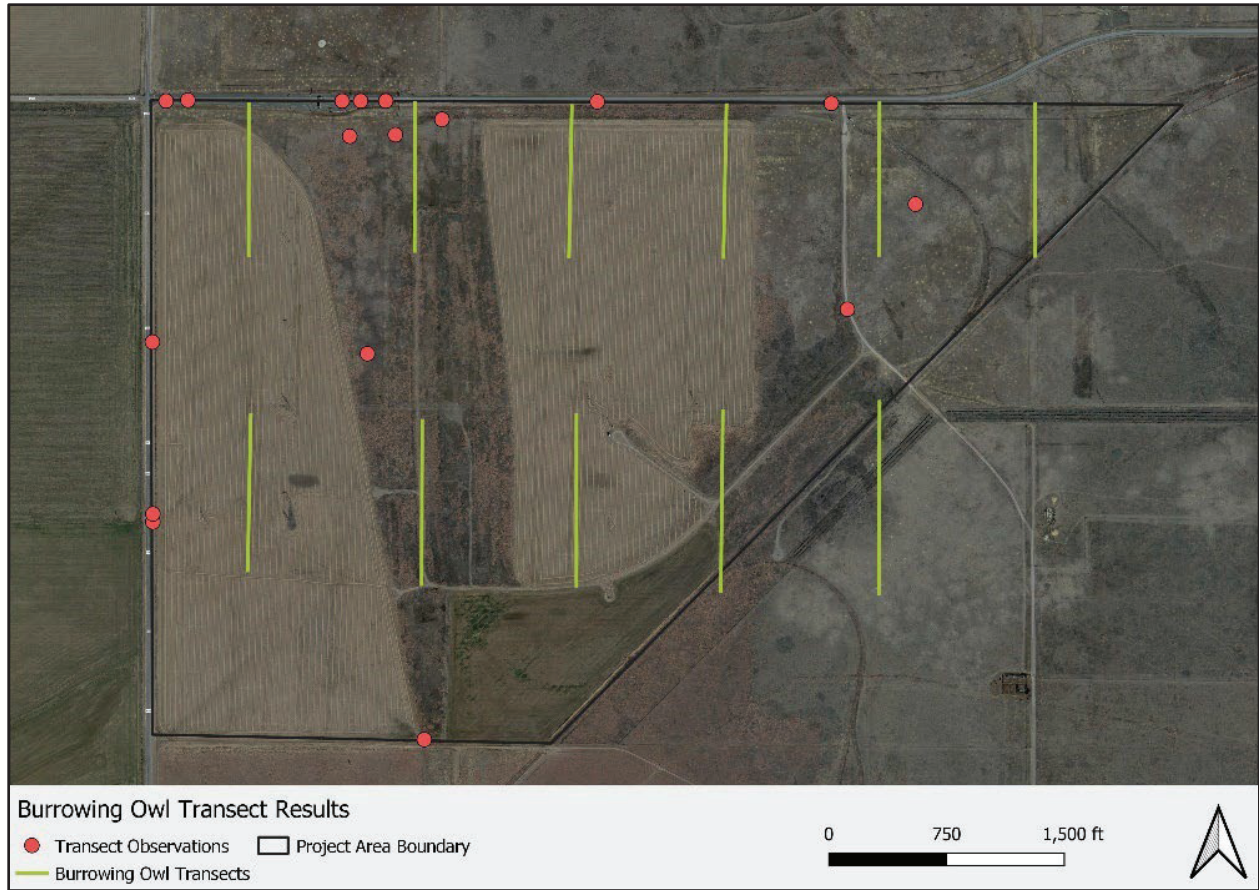


Figure 6. Burrowing Owl Transect Observations

5.2 Texas Horned Lizard

Over the three-day survey period, there were no direct observations of Texas horned lizard. However, **Figure 7** details one observation of scat that could potentially belong to a horned lizard. The scat indicates the potential presence of horned lizards because it was the correct size and primarily consisted of ants. Other than this observation, there were no other direct or indirect observations of Texas horned lizards in or adjacent to the project area.



Figure 7. Potential Horned Lizard Scat Observation

5.3 General Avian Point Counts

Table 1 summarizes the results of the general point count surveys by listing each bird species by the number of detections. The general bird surveys were conducted on 8/12 and did not identify any Federal or State special status species.

Table 1. Summary of General Bird Surveys by Species

Species	Number of Observations
Mourning dove (<i>Zenaida macroura</i>)	17
Barn swallow (<i>Hirundo rustica</i>)	16
Killdeer (<i>Charadrius vociferus</i>)	10
Unknown Sparrow (<i>Passerellidae</i> sp.)	5
Western meadowlark (<i>Sturnella neglecta</i>)	5
Upland sandpiper (<i>Bartramia longicauda</i>)	3
Burrowing owl (<i>Athene cunicularia</i>)	2

Species	Number of Observations
Canada goose (<i>Branta canadensis</i>)	1
Common grackle (<i>Quiscalus Quiscula</i>)	1
Unknown Shorebird (<i>Scolopacidae</i> sp.)	1
Red-shouldered hawk (<i>Buteo lineatus</i>)	1
Red-winged blackbird (<i>Agelaius phoeniceus</i>)	1

6.0 CONCLUSIONS

This biological survey provided conclusive evidence of burrowing owls presence and nesting within the project area, as well as potential indication of Texas horned lizard presence. Thus, Texas horned lizards could be present within the project area. However, the lack of harvester ant mounds observed in the project area indicates that any population present would likely be small. The general avian point counts did not document any additional special status bird species within the project area.

6.1 Burrowing Owls

Burrowing owls were observed within the project area during both targeted point and transect surveys. Burrowing owls were observed throughout the project area, but were most concentrated in the northwest section of the project area near the guard post. The majority of burrowing owls were observed within boundaries of the prairie dog colonies at the edges of the project area; however, some owls were also observed in short grass prairie areas. Due to the presence of burrowing owls throughout the site, Solv recommends that the following Best Management Practices (BMPs) be implemented to minimize the potential for adverse construction impacts to these birds.

6.1.1 Suggested BMPs

The following BMPs are commonly implemented to minimize and mitigate potential impacts to western burrowing owls:

- Conduct activities outside the breeding season (March to September). No disturbance should occur within 75 m (approx. 250 ft.) of occupied burrows during the breeding season or within 50 m (approx. 160 ft.) during the nonbreeding season (October to February). Occupancy should be verified by qualified biologists using visual survey methods at least 3 days prior to the start of the construction period.
- Delay ground disturbance, prairie dog control, and construction activities in preferred burrowing owl habitat areas until owls have migrated out of the project area.
- Mitigate disturbed owl habitat. Mitigation measures could include but are not limited to formally protecting equal areas of disturbed habitat elsewhere within the Pantex campus or enhancing remaining owl habitat within the project area with artificial nest burrows at the conclusion of the construction period.
- Use passive relocation techniques rather than trapping if owls must be relocated. Owls should be excluded from burrows within a 50-m buffer zone of the area of disturbance by installing one-way doors in burrow entrances. One-way doors should be left in place for at least 48 hours and up to one week to ensure that owls have left burrows before excavation.
- Prior to burrow destruction a video probe should be used to confirm that the burrow is unoccupied. If a video probe is not available burrows should be excavated with hand tools to ensure that the burrows are unoccupied.

6.2 Texas Horned Lizard

Although Texas horned lizards were not observed over the three-day survey period, presence of potential sign and generally poor observation conditions do not allow for a conclusion of species absence. The observation of potential Texas horned lizard scat indicates that some individual

lizards could be present within the project area. Similarly, weather conditions were not ideal for horned lizard activity throughout the three-day survey period; temperatures ranged from 74° to 90° F, with most days under 85° F during lizard surveys. Hotter temperatures are correlated with higher levels of Texas horned lizard activity due to their basking behavior in open areas or roads and higher activity levels of their preferred prey, harvester ants (TPWD, No Date-b). However, the lack of any direct observations during the targeted surveys and the small number of observed harvester ant mounds indicates that, a substantial Texas horned lizard population does not exist within the project area.

6.2.1 Suggested BMPs

The following BMPs are suggested mitigation measures to implement in the event that Texas horned lizards are located or observed during construction activities. The following recommended BMPs include:

- Educate crew on Texas horned lizard identification and implement stop construction observers. If a horned lizard is observed, construction should halt and Texas Parks & Wild Department (TPWD) should be contacted immediately.

General BMPs recommended by the TPWD for amphibians and reptiles that are relevant to Texas horned lizards include:

- For open trenches and excavated pits, install escape ramps at an angle of less than 45 degrees (1:1) in areas left uncovered. Visually inspect excavation areas for trapped wildlife prior to backfilling
- Avoid or minimize disturbing or removing cover objects, such as downed trees, rotting stumps, brush piles, and leaf litter. If avoidance or minimization is not practicable, consider removing cover objects prior to the start of the project and replace them at project completion.
- Examine heavy equipment stored on site before use, particularly after rain events when reptile and amphibian movements occur more often, to ensure use will not harm individuals that might be seeking temporary refuge.
- Due to increased activity (mating) of reptiles and amphibian during the spring, construction activities like clearing or grading should attempt to be scheduled outside of the spring (March-May) season. Also, timing ground disturbing activities before October when reptiles and amphibians become less active and may be using burrows in the project area is also encouraged.
- When designing roads with curbs, consider using Type I or Type III curbs to provide a gentle slope to enable turtles and small animals to get out of roadways.

6.3 General Avian Point Counts

No additional special status species were detected during the general avian point counts. It is very unlikely that red knot and piping plover, federally threatened species with the potential to occur in the project area, would utilize the project area as a stopover location considering the poor quality of habitat and the low density of migrants in the Panhandle region. Additionally, the lack of substantial trees, shrubs, or other woody plants limits the overall diversity of species that could potentially nest within the project area.

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