

**Environmental Assessment
Yoakum Dunes Wildlife Management Area
Headquarters Complex Construction Project
Cochran County, Texas**

**Prepared by
Texas Parks and Wildlife Department
and
US Fish and Wildlife Service
February 23, 2016**

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INTRODUCTION

This Environmental Assessment (EA) has been prepared to analyze the environmental effects of constructing a headquarters complex for the Yoakum Dunes Wildlife Management Area (WMA). Because Texas Parks and Wildlife Department (TPWD) proposes to use Wildlife and Sport Fish Restoration Program (WSFR) funds to construct the headquarters complex, the proposed project constitutes a Federal action that is subject to evaluation by the United States Fish and Wildlife Service (USFWS) under the National Environmental Policy Act.

PURPOSE AND NEED

The 13,866-acre Yoakum Dunes WMA was established by TPWD in November 2014 to provide a refuge for the lesser prairie-chicken (*Tympanuchus pallidicinctus*), as well as other native grassland wildlife. Proposed operations on the Yoakum Dunes WMA include: management and conservation of habitat, providing a site for research and demonstration of habitat management, and providing public access. To conduct these operations and provide oversight of the WMA, TPWD proposes to use WSFR funds to construct a headquarters complex for the Yoakum Dunes WMA.

ALTERNATIVES

Alternative A: Construction of a Headquarters Complex (Preferred Alternative)

Under this alternative TPWD would construct a headquarters complex. The complex would be constructed on approximately 5 acres of land approximately 3.5 miles north of the WMA as shown on Appendix A. The complex would include one residence for the resident biologist and an office to accommodate one biologist and one wildlife technician. To protect assets and to facilitate maintenance of equipment, a shop and equipment storage facility would also be constructed as part of the complex. Each building would be approximately 2,000 square feet in size and would require the construction of hardened driveways for access. Electric lines currently run along Farm to Market Road (FM) 301 and would need to be run a short distance onto the property, and a septic system would need to be installed. A water well will be drilled and a pump house, water distribution lines, and water troughs will be constructed to supply water to the facilities. Because the exact layout of the facilities and infrastructure has not yet been determined, the EA assumes the entire 5 acre site would be disturbed during construction with the exception of the buffered area discussed in the Section 106 review.

Alternative B: No Action

If no action is taken the Yoakum Dunes WMA biologist would continue to work from his current office location at his home residence. Lack of an office would also result in the wildlife technician conducting office work from his residence. Equipment would continue to be stored and maintained at dilapidated facilities on the WMA. Lack of a suitable shop would result in staff having to work in existing depilated and unsafe structures. As such, management

challenges associated with using ones home as an office, distance traveled from the home office to oversee the WMA, and poor facilities to store and maintain equipment, and lack of safe facilities to conduct maintenance operations would continue to exist.

Other Alternatives Considered but Dismissed from Further Analysis

An alternative site, located on the Yoakum Dunes WMA on the west side of FM 1780, was also considered for the proposed headquarters complex. Due to the difficulty and cost to get electricity to the buildings, it will not be considered for further analysis.

AFFECTED ENVIRONMENT

The proposed headquarters complex site is located 7.6 miles due west of Sundown, Texas on the south side of FM 301. The elevation is approximately 3,600 feet.

Physical Resources

Air/Soils

The soil at the site is Amarillo fine sandy loam with 0 to 1 percent slopes.

Water/Wetlands

No water resources occur on the proposed headquarters complex site.

Biological Resources

Vegetation

The proposed site encompasses 5 acres in the High Plains ecoregion of Texas as mapped in the Texas Conservation Plan. Plant species found in the project area include:

Honey mesquite	<i>Prosopis glandulosa</i>
Sand sagebrush	<i>Artemisia filifolia</i>
Yucca	<i>Yucca spp.</i>
Blue grama	<i>Bouteloua gracilis</i>
Black grama	<i>Bouteloua eriopoda</i>
Sideoats grama	<i>Bouteloua curtipendula</i>
Hairy grama	<i>Bouteloua hirsuta</i>
Hooded windmillgrass	<i>Chloris cucullata</i>
Silver bluestem	<i>Bothriochloa laguroides</i>
Sand bur	<i>Cenchrus echinatus</i>
Purple three-awn	<i>Aristida purpurea</i>
Russian thistle	<i>Salsola iberica</i>
Plains lazy daisy	<i>Aphanostephus ramosissimus</i>
Sleepy daisy	<i>Xanthisma texanun</i>

Tahoka daisy	<i>Machaeranthera tanacetifolia</i>
Cowpen daisy	<i>Verbesina encelioides</i>
Pony beebalm	<i>Monarda pectinata</i>
Carpetweed	<i>Mollugo verticillata</i>
Annual broomweed	<i>Amphiachyris dracunculoides</i>
Camphorweed	<i>Heterotheca subaxillaris</i>
Indian blanket	<i>Gaillardia pulchella</i>
Western bitterweed	<i>Hymenoxys odorata</i>
Spiny aster	<i>Chloracantha spinosa</i>
Rose heath	<i>Chaetopappa ericoides</i>

Federally Listed Species

According to the USWFS Information, Planning, and Conservation System (IPAC) two listed species, the threatened lesser prairie-chicken (LPC) and the endangered whooping crane (*Grus americana*), have the potential to be present in the project area.

The LPC is a species that occupies sand sagebrush, sand shinnery oak and mixed grass vegetation communities of the southern Great Plains within portions of Colorado, Kansas, New Mexico, Oklahoma and Texas. Suitable habitat for this species is not known to occur in the project area. The proposed headquarters complex site is located in the LPC Crucial Habitat Assessment Tool Estimated Occupied Range (EOR) +10, but is mapped as Category 4 (Modeled Non-Habitat). The species is not known to occur in the project area, and no LPC leks have been documented within 3 miles of the proposed project site as shown on Appendix B.

The whooping crane migrates across and winters in Texas utilizing a variety of wetland and other habitats, including coastal marshes and estuaries, inland marshes, lakes, ponds, wet meadows, rivers, and agricultural fields. During migration roosting occurs in shallow, seasonally and semi-permanently flooded palustrine wetlands and feeding occurs in wetlands and harvested grain fields for a diet of frogs, fish, crayfish, insects, and agricultural grains. Wintering areas encompass salt marshes and tidal flats on the mainland and barrier islands. The whooping crane is not known to occur in the project area. The proposed headquarters complex site is not located in the approximately 200 mile wide corridor in which 95 percent of whooping crane sightings occur. Whooping cranes have been occasionally documented with groups of sandhill cranes during migration, with the closest recorded occurrence being approximately 30 miles southeast of the proposed project area.

State Listed Species

The state-listed threatened Texas horned lizard (*Phrynosoma cornutum*) can be found in open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees. Suitable habitat may be present for the Texas horned lizard at the proposed headquarters complex site.

Other Wildlife Species

Species with the potential to occur in the project area include:

Birds

Northern bobwhite	<i>Colinus virginianus</i>
Scaled quail	<i>Callipepla squamata</i>
Mourning dove	<i>Zenaida macroura</i>
Western meadowlark	<i>Sturnella neglecta</i>
American kestrel	<i>Falco sparverius</i>
Prairie falcon	<i>Falco mexicanus</i>
Swainson's hawk	<i>Buteo swainsoni</i>
Chihuahuan Raven	<i>Corvus cryptoleucus</i>

Mammals

Pronghorn	<i>Antilocapra Americana</i>
Mule deer	<i>Odocoileus hemionus</i>
Desert cottontail	<i>Sylvilagus audubonii</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Ord's kangaroo rat	<i>Dipodomys ordii</i>
Pocket mouse	<i>Perognathus flavescens</i>
Coyote	<i>Canis latrans</i>

Reptiles

Plains rattlesnake	<i>Crotalus viridis</i>
Bull snake	<i>Pituophis catenifer sayi</i>

Historic and Cultural Resources

An archeological survey of the proposed headquarters complex site was completed by TPWD and a report was submitted to the Texas Historical Commission on December 16, 2015. A copy of the transmittal letter is attached in Appendix C.

Recreation

The Yoakum Dunes WMA has the potential to provide public access for hunting and other wildlife oriented recreation. Any public access (consumptive and non-consumptive) will be approached with caution to ensure activities do not negatively impact the survival and productivity of the lesser prairie-chicken. No public access for recreation will be allowed on the headquarters complex site.

Social and Economic Factors

The proposed headquarters complex site is located in a fairly remote location with low human population densities. Sundown, with an estimated population of 1,432 people is 7.6 miles due east, while Plains with an estimated population of 1,546 people is approximately 22 miles

southwest. Lands in the area are primarily used for farming, ranching, and oil and gas development.

ENVIRONMENTAL CONSEQUENCES

Alternative A (Preferred Alternative)

The headquarters complex would be constructed. The management challenges associated with using ones home as an office, distance traveled from the home office to oversee the WMA, and poor and unsafe facilities to store and maintain equipment and conduct maintenance operations would be eliminated.

Physical Resources

Air/Soils

A temporary impact on air quality in the construction area could result if the soil becomes dry and equipment creates dust. After construction is complete there would be no impact to air quality from the presence of TPWD personnel at the headquarters complex.

Water/Wetlands

No water resources occur on the proposed headquarters complex site.

Biological Resources

Vegetation

The proposed site is located in an area with heavy oil and gas development. An existing oil service company pipe yard is located directly adjacent to the west side of the proposed complex. Construction of the headquarters complex would not impact the value or integrity of the vegetation in the project area.

Federally Listed Species

LPC habitat is not known to occur in the project area. The proposed construction project would not directly impact the LPC or its habitat. However, sites located within the EOR+10 that do not currently provide suitable habitat (CHAT Category 4) are included in the Western Association of Fish and Wildlife Agency's Lesser Prairie-Chicken Rangewide Conservation Plan for range expansion and planning purposes. Construction of the headquarters complex would preclude potential range expansion or restoration of the site. The proposed activities may affect but are not likely to adversely affect the LPC.

Whooping crane migration stopover habitat does not occur in the project area. The proposed headquarters complex site does not contain water resources or grain fields and the surrounding

area has been heavily disturbed by oil and gas activities. The proposed activities would have no effect on the whooping crane.

State Listed Species

Texas horned lizards are generally active in this part of Texas from mid-April through September. At that time of year, they may be able to avoid slow (less than 15 miles per hour) moving equipment. The remainder of the year, this species hibernates only a few inches underground and they will be much more susceptible to earth moving equipment and compaction. If Texas horned lizards are encountered during construction they will be allowed to safely leave the site or will be relocated by a permitted individual to a nearby area with similar habitat that would not be disturbed during construction.

Other Wildlife Species

The construction of the headquarters complex may temporarily disturb and displace wildlife species if they are in the vicinity of the project area when construction is taking place. After construction is complete, wildlife that avoided the area are expected to return.

Historic and Cultural Resources

The construction of the headquarters complex would have no impact on historic and cultural resources. However, if any archeological remains are discovered during construction, all ground disturbing work will cease until the archeologist can delineate the nature of the discovery and assess the site boundaries.

Recreation

The construction of the headquarters complex would enhance recreation by providing centralized facilities closer to the WMA. Having centralized facilities located nearby, would provide opportunity for better public access and increased oversight of the WMA.

Social and Economic Factors

Social and economic benefits will result from increased public access and recreational opportunities after the facilities are constructed.

Alternative B: (No Action)

If the No Action alternative is implemented, there would be no construction of the headquarters complex for the Yoakum Dunes WMA. The management challenges associated with using ones home as an office, distance traveled from the home office to oversee the WMA, and poor and unsafe facilities to store and maintain equipment and conduct maintenance operations would continue to exist.

Physical Resources

Air/Soils

If the headquarters complex is not built, there would be no dust created by the construction of the facilities.

Water/Wetlands

No water resources occur on the proposed headquarters complex site.

Biological Resources

Vegetation

If the headquarters complex is not built, there would be no impact to the existing vegetation at the proposed construction site.

Federally Listed Species

If the headquarters complex is not built, there would be no impact to the LPC or whooping crane from construction of the facilities.

State Listed Species

If the headquarters complex is not built, there would be no impact to the Texas horned lizard from construction of the facilities.

Other Wildlife Species

If the headquarters complex is not built, there would be no impact to wildlife from construction of the facilities.

Historic and Cultural Resources

If the headquarters complex is not built, there would be no impact to historic and cultural resources from construction of the facilities.

Recreation

If construction of the headquarters complex does not occur, recreational opportunities would not be enhanced.

Social and Economic Factors

Anticipated public access and recreational benefits would not occur.

CUMULATIVE IMPACTS

Cumulative impacts are the consequences that may result from the effects of the proposed action when added to other past, present, and potential future actions. Consequences of future actions must be considered reasonable based on current information.

Managing and enhancing the native vegetation communities within the Yoakum Dunes WMA is a critical WMA function. Management strategies that promote floral and faunal diversity and enhance habitats for grassland species, especially the lesser prairie-chicken, would be the primary approach to achieve habitat and wildlife resource goals. A variety of management tools including rotational/prescribed grazing (cattle-cow/calf), chemical and mechanical treatment of woody and herbaceous vegetation, and prescribed fire will be coordinated and utilized to manage vegetative communities. Having a centralized headquarters complex would create a location for TPWD staff to effectively and efficiently manage the wildlife and habitat resources of the Yoakum Dunes WMA. Overall, the cumulative impacts from the construction of the headquarters complex would be positive.

PUBLIC REVIEW

The acquisition of this property for construction of a headquarters complex was discussed at TPWD's November 2015 Commission Meeting which was open to the public and audio of the meeting was live-streamed on the internet. Details of the commission agenda item and archived digital audio files can be found at http://tpwd.texas.gov/business/feedback/meetings/2016/1105/agenda/item_11/index.phtml.

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REFERENCES

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Southern Great Plains Crucial Habitat Assessment Tool. August, 2013. kars.ku.edu/maps/sgpchat/ (Accessed December 9, 2015)

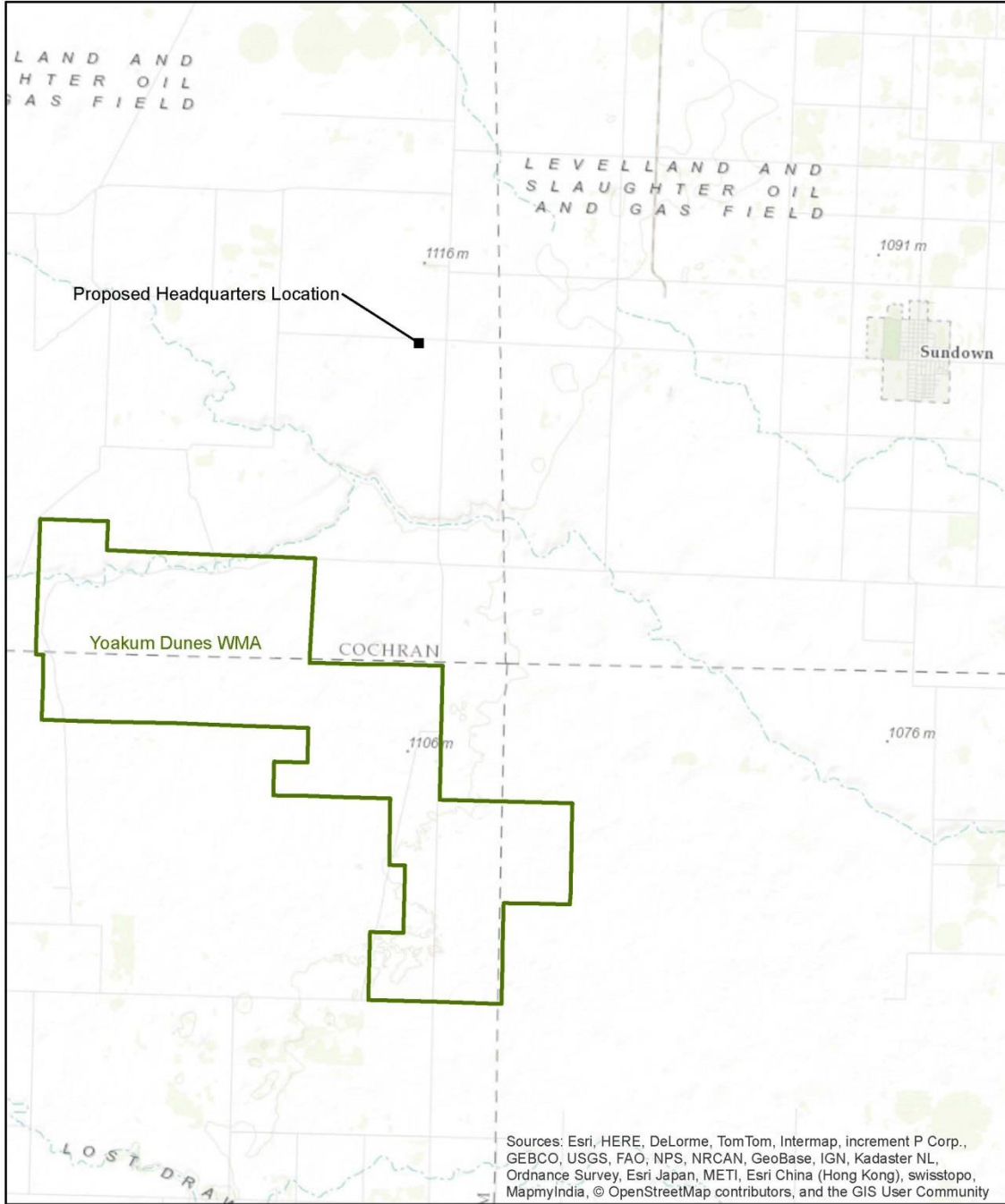
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Appendix A

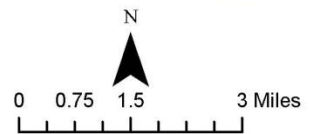


Date: 12/9/15

Map compiled by the Texas Parks and Wildlife Department, Wildlife Habitat Assessment Program. No claims are made to the accuracy of the data or to the suitability of the data to a particular use.

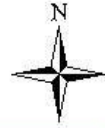


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Appendix B

Yoakum Dunes WMA Headquarters Complex Cochran County



Appendix C

NI LCA



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December 16, 2015

Ms. Tiffany Osburn
Archeology Division
Texas Historical Commission
P. O. Box 12276
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CONCUR
by William A. Mart
for Mark Wolfe
State Historic Preservation Officer
Date 12-7-16
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Executive Director

Re: Section 106 Review for Proposed Archaeological Surveys of Alternative Headquarter Complexes at the New Yoakum Dunes Wildlife Management Area, Yoakum and Cochran Counties Texas.

Dear Ms. Osburn:

The Wildlife Division of the Texas Parks and Wildlife Department (TPWD) has acquired some 14,040 acres ranch lands for the creation of the new Yoakum Dunes Wildlife Management Area (WMA) in Yoakum, Terry and Cochran Counties, Texas. We are in the process of developing a headquarter complex for this new WMA, and have conducted archaeological surveys at two areas, designated YDHQ-1 and YDHQ-2. Enclosed is a report of the archaeological surveys conducted at these two parcels. The survey of slight ridges at YDHQ-1 involved surface survey and the excavation of 5 shovel tests within two low rises of this 1.3 acre parcel. Biological restrictions due to its proximity of this location to the Lesser Prairie Chicken mating dance grounds (lek) currently render this choice as unsuitable for development.

An intensive cultural resource survey was conducted in a 5.4 acre parcel located in YDHQ-2 about 5 miles north of YDHQ-1. The systematic survey and excavation of ten shovel tests encountered no historic or prehistoric artifacts except within the disturbed areas of a well pad located near the southwest corner of the parcel. In the disturbance area and the adjacent well pad were found burned rock, a Scallorn arrow point and thick plainware pottery indicative of a probable Early Ceramic period campsite (A.D. 500-1100) that was designated site 41CQ2. Even though no other artifacts were found during the surface and subsurface inspection, TPWD intends to establish a 20 m wide buffer around the well pad for restricted developments.

TPWD IS SEEKING THE SHPO CONCURRENCE THAT DEVELOPMENTS MAY PROCEED ON YDHQ-2 OUTSIDE THE BUFFER ZONE AROUND SITE 41CQ2, AND IF BIOLOGICAL ISSUES PERMIT, AT YDHQ-1. Should any archeological remain be discovered during the development of the office/shop, residence and septic field, all ground disturbing work will cease in the immediate vicinity until the archeologist can delineate the nature of the discovery and assess the site boundaries.

Sincerely,

Christopher Lintz
Christopher Lintz
Cultural Resource Specialist, Wildlife Division
Texas Parks and Wildlife Department

**DRAFT REPORT
ACCEPTABLE**

Encl: report.

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