

DRAFT

**Shady Oaks Gun Range Expansion
Cedar Park, Travis County, Texas**



Environmental Assessment

Prepared for

Texas Parks and Wildlife Department

and

U.S. Fish & Wildlife Service

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CHAPTER 1 PROJECT INTRODUCTION, NEED AND PURPOSE

1.1 PROJECT INTRODUCTION

This environmental assessment (EA) has been prepared for the proposed expansion of the Shady Oaks Gun Range (SOGR). SOGR is an existing gun range that is seeking to expand its facility to accommodate and increase shooting and training opportunities for, women, youth, and disabled persons. The SOGR is located at 3100 Woodall Drive, Cedar Park, Travis County, Texas (**Figure 1**). Titanium Environmental Services (TES) conducted a desktop analysis for the subject project area, as well as an on-site field investigation on July 24, 2016.

1.2 DESCRIPTION OF PROPOSED ACTION

There are four areas of proposed construction associated with Phase 1 of the SOGR expansion which include the following:

- 1) A dedicated hunter education, archery, beginning firearms safety, and firearms proficiency class facility along with dedicated storage.

- 2) A 27-foot wide by 126-foot long uncovered outdoor archery training platform that would extend from the existing retail/shooting range toward the southern property boundary.

- 3) An additional 15 parking spaces, new fire lane, and a new private fire hydrant directly east of the existing parking lot located on the east side of the existing SOGR retail and gun range buildings.

- 4) A temporary construction staging area with concrete washout area located along Woodall Drive directly northeast of the current SOGR main parking lot.

Though not part of the scope of this project, a second phase (Phase 2) is tentatively planned following the completion of Phase 1. Phase 2 would provide a 50-yard range building by transforming the archery platform into an enclosed indoor 50 yard rifle range. Range baffles and equipment would be installed, as well as the heating, ventilation, and air conditioning and high-efficiency particulate air system installation as part of the Phase 2 activities.

1.3 PROJECT NEED

Prior to SOGR's April 23, 2014 opening, there were no publicly accessible shooting range facilities compliant with National Rifle Association (NRA) or National Shooting Sports Foundation (NSSF) safety design guidelines within the region. The existing SOGR facility has met a local and regional need for a shooting range that meets these guidelines. The proposed expansion would fulfill the following needs:

- Provide gun and archery related training courses to a venue nearer to an expanding user group. The expansion would allow for an increased number of courses available to the public including: NRA Family Marksman, Introduction to Handguns and Rifles, Hunter's Education, Beginner Pistol, Rifle, and Modern Sporting Rifle Platform Proficiency, Ladies and Bring a Friend, Archery Cam and Beginners Archery Clinics, and Private Instruction.
- The SOGR expansion would serve an expanded customer base which would provide improved accessibility and learning opportunities for women, youth, and disabled hunters.

1.4 PROJECT PURPOSE

The purpose of the project is to provide increased public access and to expand local and regional shooting range capacity for the area around Cedar Park, Texas. Particular focus for the project is to provide greater hunter education opportunities for women, youth, and disabled shooters and to provide opportunities to learn safe gun handling and marksmanship skills.

1.5 PROJECT FUNDING

Financial assistance for this project would be provided by funding through a grant under United States Fish and Wildlife Service's (USFWS) Wildlife and Sport Fish Restoration Program that would be administered by the Texas Parks and Wildlife Department (TPWD). The USFWS program provides grant funds to the states and insular areas fish and wildlife agencies for projects to restore, conserve, manage and enhance wild birds and mammals and their habitat. Projects also include providing public use and access to wildlife resources, hunter education and development and management of shooting ranges. The program is authorized by the Wildlife Restoration Act (Pittman-Robertson PR) of 1937.



CHAPTER 2 ALTERNATIVES ANALYSIS

The proposed action involves the expansion of an existing facility, therefore, two alternatives were considered, which include a Preferred Alternative and a No Build Alternative. Because the proposed action involves the expansion of an existing facility, off-site alternatives were not considered.

2.1 ALTERNATIVE 1 – PREFERRED ALTERNATIVE

This alternative would address the need and purpose of the project. The Preferred Alternative would include the expansion of the SOGR which would include:

1. A dedicated hunter education, archery, beginning firearms safety, and firearm proficiency class facility along with dedicated storage.
2. A 27-foot wide by 126-foot long uncovered outdoor archery training platform that would extend from the existing retail/shooting range toward the southern property boundary.
3. An additional 15 parking spaces, new fire lane, and a new private fire hydrant directly east of the existing parking lot located on the east side of the existing SOGR retail and gun range buildings.
4. A temporary construction staging area with concrete washout area located along Woodall Drive directly northeast of the current SOGR main parking lot.

The proposed construction areas would occupy a footprint of approximately 0.3 acre and would be located on a maintained lawn (**Figure 2**). Erosion and sedimentation controls (best management practices) will be installed within the construction footprint. Additional controls were installed during the original construction of the facility. The existing and proposed controls include:

- Vegetative filter strips
- Rock energy dissipaters
- Silt fence
- Sediment traps
- Rock berms

2.2 ALTERNATIVE 2 – NO BUILD ALTERNATIVE

A No Build Alternative would result in no action being taken. However, this alternative would not address the need and purpose of the project. Under the No Build Alternative, the area would be utilized in a manner similar to existing land use patterns; most of the proposed project area would be maintained as a mowed clearing. The existing SOGR would continue to operate under the current business plan. Consequently, the SOGR would not be able to meet the needs of expanding user groups under the No Build Alternative.

CHAPTER 3 AFFECTED ENVIRONMENT

3.1 PHYSICAL ENVIRONMENT

SOGR is located in northwest Travis County in central Texas. It is on the western edge of Cedar Park which is about 18 miles northwest of downtown Austin, a major metropolitan area (Figure 1). The gun range is bordered by Woodall Drive on the north and Whitestone Boulevard (Farm-to-Market 1431) to the south. The project area is approximately two miles northeast of Sandy Creek and Lake Travis. Lake Travis is an impoundment of the Colorado River, and within the Colorado River watershed. The proposed project area is located in the southwest edge of an industrial development area with housing development directly northwest of SOGR. Representative site photos can be found in **Appendix A**.

3.1.1 Climate

The regional climate is humid subtropical with hot summers and relatively mild winters. Temperatures in summer normally exceed 90 degrees Fahrenheit while sub-freezing temperatures occur about 25 days per year. Precipitation is fairly evenly distributed with May and September being the heaviest rainfall months with influence from tropical cyclones. Precipitation from April through September usually results from thunderstorms, with large amounts of rain falling within short periods of time which in more extreme events causes flash floods. Thunderstorms and heavy rains may occur in all months of the year, but winter precipitation is typically light rain with rare brief snow events. Average annual rainfall is around 33 inches (WDB 2016).

3.1.2 Geology and Soils

Geologically, the proposed project area is underlain by the Edwards Limestone formation comprised primarily of limestone, dolostone, and chert. The proposed project area occurs on limestone formations with potential for subterranean features (caves and mesocavernous voids) (USFWS 2011). Surface features indicating the presence of these subterranean features were not observed within the proposed project area. Two soil types are found in the proposed project area: Tarrant soils 5-18 percent slope and Tarrant and Speck Soils, 0-2 percent slope (**Figure 3**). According to the *Soil Survey for Travis County* (USDA 2016), Tarrant soils 5-18 percent slope occupies plains and convex ridges. Typical profiles are very stony clay over bedrock beginning at 8-12 inches. These soils are well drained. Tarrant and Speck Soils, 0-2 percent slope occupies plains and convex ridges. Typical profiles are very stony clay over bedrock beginning at 10-12 inches. These soils are well drained.

3.1.3 Prime and Unique Farmland Soils

The project location does not contain prime or unique farmland soils (USDA 2016).

3.1.4 Surface Water



No surface water features are present within the proposed project area. Storm water run-off from the proposed project area follows the gentle surface slope southeast towards Lime Creek which is located approximately 0.3 mile from the project area (**Figure 4**).

3.1.5 Groundwater

The major aquifer underlying the study area is the Trinity Aquifer. The proposed project area is in the Trinity subcrop between the Trinity outcrop to the west and the Balcones fault zone of the Edwards Aquifer outcrop to the east. The Trinity aquifer is a group of minor aquifers comprising the Trinity group. These minor aquifers include the Antlers, Glen Rose, Paluxy, Twin Mountains, Travis Peak, Hensell, and Hosston aquifers. These aquifers consist of limestones, sands, clays, gravels, and conglomerates. Their combined freshwater saturated thickness averages about 600 feet in North Texas and about 1,900 feet in Central Texas. (TWDB 2016). Trinity aquifer is characterized by slow recharge occurring from rainfall (Edwards Aquifer 2016).

3.1.6 Topography

The U.S. Geological Survey (USGS) Nameless and Leander 7.5-minute topographic quadrangle maps indicate that the proposed project area is a gently sloping terrace (**Figure 4**). Elevations for the project area range from 1,050 feet above mean sea level (AMSL) at the northeast to 1,080 feet AMSL to the southeast. According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the slope of the project area soil types range from 0 to 18 percent (USDA 2016).

3.1.7 Floodplains

Federal Emergency Management Agency (FEMA) maps display the documented flood zones of various water bodies and flood prone areas. According to FEMA information published on September 6, 2008, the entire proposed project area lies outside of FEMA-designated floodplain zones. The nearest floodplain is located approximately 0.75 mile to the southeast (**Figure 5**).

3.2 BIOLOGICAL ENVIRONMENT

The project location consists of a maintained lawn adjacent to structures and pavement as well as mixed upland woodland. This setting matches the mapped ecological systems classifications of High and Low Intensity Urban areas as well as Edwards Plateau: Deciduous Oak - Evergreen Motte and Woodland as defined by the Texas Ecological Systems classification (TPWD 2016a).

3.2.1 Vegetation

The Shady Oaks Gun Range additions will be constructed in areas that have been previously cleared and are predominantly covered by an herbaceous layer of maintained Bermuda grass (*Cynodon dactylon*). Mexican Tophat (*Ratibida colunitera*), Beebalm (*Monarda spp.*), Ragweed (*Ambrosia spp.*), Sunflower (*Helianthus spp.*), and Bull Nettle (*Cnidocolus texanus*) are also present in the proposed project area. The area immediately outside of the proposed project area is dominated by mixed oak/juniper woodland interspersed with grassy areas. The remainder of the property is developed with buildings and parking amenities.

3.2.2 Threatened and Endangered Species



A threatened and endangered species habitat survey was conducted to assess the existing conditions in the proposed project area relative to such species. A current list of the state and federally listed threatened and endangered species and their preferred habitat was obtained from Texas Parks and Wildlife Department (TPWD) and U. S. Fish and Wildlife Service (USFWS) databases. The threatened and endangered species lists for Travis County, Texas were used to determine listed species that could potentially occur in the proposed project area (**Appendix B**). The Texas Natural Diversity Database (TXNDD) lists no species occurrences within or nearby the proposed project area. No estimated or designated critical habitat (50 CFR Parts 17 and 226) exists at the project location. No threatened or endangered species, or species of concern were observed during a field survey conducted by TES. **Table 1** presents information regarding the presence or absence of their habitat within the proposed action area.



Table 1. Habitat suitability of federal and state listed threatened and endangered species with potential to occur in the Proposed Action Area

Class	Name		Federal Status ¹	State Status ²	Habitat Description ^{1,2}	Habitat Present	Critical Habitat
	Common	Scientific					
Amphibians	Austin blind salamander	<i>Eurycea waterlooensis</i>	E	-	Mostly restricted to subterranean cavities of the Edwards Aquifer; dependent upon water flow/quality from the Barton Springs segment of the Edwards Aquifer; only known from the outlets of Barton Springs (Sunken Gardens (Old Mill) Spring, Eliza Spring, and Parthenia (Main) Spring which forms Barton Springs Pool); feeds on amphipods, ostracods, copepods, plant material, and (in captivity) a wide variety of small aquatic invertebrates.	N	Y (18 Miles SE)
	Barton Springs salamander	<i>Eurycea sosorum</i>	E	E	Dependent upon water flow/quality from the Barton Springs pool of the Edwards Aquifer; known from the outlets of Barton Springs and subterranean water-filled caverns; found under rocks, in gravel, or among aquatic vascular plants and algae, as available; feeds primarily on amphipods.	N	N
	Jollyville Plateau salamander	<i>Eurycea tonkawae</i>	T	-	Known from springs and waters of some caves north of the Colorado River.	N	Y (1.75 Miles SE)
Arachnids	Bee Creek Cave Harvestman	<i>Texella reddelli</i>	E	-	Endemic to a few caves in Travis and Williamson counties. This species is a Karst invertebrate.	N	N
	Bone Cave Harvestman	<i>Texella reyesi</i>	E	-	Endemic to several caves in Travis and Williamson counties; weakly differentiated from <i>Texella reddelli</i> . This species is a Karst invertebrate.	N	N
	Tooth Cave Pseudoscorpion	<i>Tartarocreagris texana</i>	E	-	Known from small limestone caves of the Edwards Plateau Karst formations. This species is a Karst invertebrate. This species is a Karst invertebrate.	N	N
	Tooth Cave Spider	<i>Tayshaneta myopica</i>	E	-	Limestone cave adapted known to Edwards Plateau Karst formations. This species is a Karst invertebrate.	N	N

Table 1 (cont'd). Habitat suitability of federal and state listed threatened and endangered species with potential to occur in the Proposed Action Area

Class	Name		Federal Status ¹	State Status ²	Habitat Description ^{1,2}	Habitat Present	Critical Habitat
	Common	Scientific					
Birds	Bald Eagle	<i>Haliaeetus leucocephalus</i>	DL	T	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds.	N	N
	Black-capped Vireo	<i>Vireo atricapilla</i>	E	E	Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer.	N	N
	Golden-cheeked Warbler	<i>Setophaga chrysoparia</i>	E	E	Juniper-oak woodlands; dependent on Ashe juniper for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.	Y	N
	Interior Least Tern	<i>Sterna antillarum athalassos</i>	E	E	Subspecies is listed only when inland (more than 50 miles from a coastline); nests along sand and gravel bars within braided streams, rivers; also known to nest on man-made structures (inland beaches, wastewater treatment plants, gravel mines, etc.); eats small fish and crustaceans, when breeding forages within a few hundred feet of colony.	N	N
	Peregrine Falcon	<i>Falco peregrinus</i>	-	T	Both subspecies migrate across TX from more northern breeding areas in U.S. and Canada to winter along coast and farther south; subspecies (<i>F. p. anatum</i>) is also a resident breeder in west TX, the two subspecies listing statuses differ, <i>F.p. tundrius</i> is no longer listed in TX; but because the subspecies are not easily distinguishable at a distance, reference is generally made only to the species level; see <i>F. p. anatum</i> subspecies for habitat.	N	N

Table 1 (cont'd). Habitat suitability of federal and state listed threatened and endangered species with potential to occur in the Proposed Action Area

Class	Name		Federal Status ¹	State Status ²	Habitat Description ^{1,2}	Habitat Present	Critical Habitat
	Common	Scientific					
Birds (cont'd)	Red Knot	<i>Calidris canutus rufa</i>	T	-	Red knots migrate long distances in flocks northward through the contiguous United States mainly April-June, southward July-October. The Red Knot prefers the shoreline of coast and bays and also uses mudflats during rare inland encounters. Wintering Range includes- Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Jefferson, Kennedy, Kleberg, Matagorda, Nueces, San Patricio, and Willacy Counties. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and tidal flat/shore.	N	N
	Whooping Crane	<i>Grus americana</i>	E	E	Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.	N	N
Fishes	Smalleye Shiner	<i>Notropis buccula</i>	-	S	Endemic to upper Brazos River system and its tributaries (Clear Fork and Bosque); apparently introduced into adjacent Colorado River drainage; medium to large prairie streams with sandy substrate and turbid to clear warm water.	N	N
Insects	Kretschmarr Cave Mold Beetle	<i>Texamaurops reddelli</i>	E	-	Cave-adapted beetle found under rocks buried in silt; small, Edwards Limestone caves in the Jollyville Plateau, a division of the Edwards Plateau Karst formations. This species is a Karst invertebrate.	N	N
	Tooth Cave Ground Beetle	<i>Rhadine persephone</i>	E	-	Endemic to small caves in Travis and Williamson counties associated with the Edwards Plateau Karst formations. This species is a Karst invertebrate.	N	N
Mammals	Red Wolf	<i>Canis rufus</i>	E	E	Extirpated; formerly known throughout eastern half of Texas in brushy and forested areas, as well as coastal Prairies.	N	N

Table 1 (cont'd). Habitat suitability of federal and state listed threatened and endangered species with potential to occur in the Proposed Action Area

Class	Name		Federal Status ¹	State Status ²	Habitat Description ^{1,2}	Habitat Present	Critical Habitat
	Common	Scientific					
Mollusks	False Spike Mussel	<i>Quadrula mitchelli</i>	-	T	Possibly extirpated in Texas; probably medium to large rivers; substrates varying from mud through mixtures of sand, gravel and cobble; Rio Grande, Brazos, Colorado, and Guadalupe (historic) river basins.	N	N
	Smooth Pimpleback	<i>Quadrula houstonensis</i>	C	T	Small to moderate streams and rivers as well as moderate size reservoirs; mixed mud, sand, and fine gravel, tolerates very slow to moderate flow rates, appears not to tolerate dramatic water level fluctuations, scoured bedrock substrates, or shifting sand bottoms, lower Trinity (questionable), Brazos, and Colorado River basins.	N	N
	Texas Fatmucket	<i>Lampsilis bracteata</i>	C	T	Found in streams and rivers on sand, mud, and gravel substrates; intolerant of impoundment; broken bedrock and coarse gravel or sand in moderately flowing water; Colorado and Guadalupe River basins.	N	N
	Texas Pimpleback	<i>Quadrula petrina</i>	C	T	Found in mud, gravel and sand substrates, generally in areas with slow flow rates; Colorado and Guadalupe river Basins.	N	N
Reptiles	Texas Horned Lizard	<i>Phrynosoma cornutum</i>	-	T	Open, arid and semi-arid regions with sparse vegetation, including grass, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky.	N	N

C=Candidate; E=Endangered; S=Sensitive; T=Threatened; DL=Delisted; - = No Status; Y=Yes; N=No; S=South; SE=Southeast

¹ Source: USFWS 2016

² Source: TPWD 2016

Critical habitat occurs in Travis County for the Jollyville Plateau Salamander (*Eurycea tonkawae*) and the Austin Blind Salamander (*Eurycea waterlooensis*) (USFWS 2016b, 2016c). The nearest critical habitat is for the Jollyville Plateau Salamander occurring approximately 1.75 miles southeast of the subject property (USFWS 2016a). The Jollyville Plateau Salamander prefers springs and waters associated with cave systems north of the Colorado River and the Austin Blind Salamander is mostly restricted to subterranean cavities of the Edwards Aquifer. Soil types associated with the Edwards Limestone formation are present on the property. Although this formation contains suitable habitat for these species, surface evidence (i.e. open hole) of the subterranean features (caverns and mesocavernous voids) necessary to support the salamanders was not observed in the proposed project area.

Of the listed federal and state threatened or endangered species for Travis County, potential habitat for Golden-cheeked Warblers (*Setophaga chrysoparia*) occurs on the subject property adjacent to the proposed construction areas. Golden-cheeked Warblers utilize the bark of mature Ashe Juniper (*Juniperus ashei*) to build nests and require this vegetation for suitable breeding habitat. Foraging occurs in broad-leaved trees and shrubs. Suitable habitat for the Black-capped Vireo (*Vireo atricapilla*) was not observed in the proposed project area due to the lack of a combination of small trees and shrubs within the proposed project area and immediate adjacent areas.

Suitable habitat for Golden-cheeked Warbler is present immediately adjacent to the project area. Potential foraging or breeding activity may occur in the suitable habitat that is located on the subject property (**Figure 2**).

The endangered Karst invertebrates have designated habitat zones in Travis County. The project area occurs within a designated Karst Zone two (USFWS 2016d). Karst zone two designates areas having a high probability of suitable habitat for endangered or other endemic invertebrate cave fauna. TXNDD lists no recorded occurrences of Karst invertebrates on or near the project location. Soil types associated with the Edwards Limestone formation are present on the property. Although this formation contains suitable habitat for these species, no evidence of the subterranean features (caverns and mesocavernous voids) necessary to support the Karst invertebrates (USFWS, 2011) is present in the proposed project area.

Refer to section 4.2.2.1 for biological evaluation and determination of effects information for threatened and endangered species.

3.2.3 Other Wildlife Species

Wildlife species that are adapted to urban environments are likely to be present on the subject property. During the field survey, a vulture (*Cathartes* or *Coragyps* sp.) and House Sparrows (*Passer domesticus*) were observed. Wildlife species that would typically utilize the open herbaceous area associated with the project location include passerine birds, small rodents, and a variety of insects. Typical wildlife species expected to occur within the undeveloped area immediately to the east would include squirrels (*Sciurus* spp.), raccoons (*Procyon lotor*), nine-banded armadillo (*Dasypus novemcinctus*), a variety of birds, reptiles, insects, and arachnids.



3.2.4 Wetlands and other Waters of the United States

Jurisdictional wetlands, which are those that are regulated by the USACE under Section 404 of the Clean Water Act, must exhibit three characteristics: hydrology, hydrophytes, and hydric soils (US ACOE 1987). A formal wetland delineation, in accordance with the U.S. Army Corps of Engineers (USACE) guidelines, was not performed as part of the EA. However, observations were made during the field survey to determine the presence or absence of wetlands and other waters of the United States within the project area. No such features exist in or near the project area.

3.3 LAND USE

According to the National Resources Conservation Service land use and land cover data, the proposed project area is located on developed, open space (NRCS). The surrounding property is largely developed with the exception of the property to the east-southeast, which is a mix of evergreen forest, deciduous forest, and shrub scrub habitat. According to the land use map available through the city of Cedar Park, Texas, the entire proposed project area is classified as *Commercial Services* (**Figure 6**).

3.4 CULTURAL RESOURCES

On July 24, 2016, Stone Point Services, LLC conducted a cultural resources survey investigation for the proposed project area. No cultural materials were recovered and no further archeological investigations were recommended. The report was submitted to the Texas Historical Commission (THC) on September 2, 2016. A concurrence letter from the State Historic Preservation Office (SHPO) was received on October 7, 2016 (**Appendix C**).

Based upon both pedestrian survey and shovel testing, no cultural resources were identified within the footprint of the expansion. Likewise, none of the existing buildings at the Shady Oaks Gun Range are eligible for the National Register of Historic Places.

3.5 HAZARDOUS MATERIALS

An assessment of potential hazardous substances and materials was conducted in conformance with the scope and limitations of ASTM (American Society for Testing and Materials) Practice E 1527-13 for the proposed project site.

Hazardous substances/materials are defined as any solid, liquid, contained gaseous or semi-solid waste, or any combination of regulated wastes that may pose a potential hazard to human health and the environment. Hazardous substances are primarily generated by industry, hospitals, research facilities, and the government. Improper management and disposal of hazardous substances can lead to pollution of groundwater or other drinking water supplies, and the combination of surface water and soil.

The assessment of hazardous substances and materials consisted of a review of the Federal and State environmental databases; a site visit; a quality assurance/quality control review to confirm the information provided in the databases and to document any additional field observations; and,



review of facility-specific information. A regulatory database search was performed to obtain information concerning facilities that handle hazardous materials or regulated substances/materials. The databases are maintained by the State and/or Federal government regulatory agencies. The databases that were searched and the corresponding search distances from the proposed project area are listed below in **Table 2**.

Table 2. Federal and State Environmental Record Sources

Database	Search Radius
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list including: CERCLA and CERCLA NFRAP	0.50-mile
Federal National Priority List (NPL)	1.0-mile
Federal Resource Conservation Recovery Act (RCRA) Corrective Action System (CORRACTS) and Treatment, Storage, and Disposal (TSD) facilities list	1.0-mile
Federal Resource Conservation and Recovery Information System (RCRIS) list (RCRA Generators) and TCEQ Industrial Hazardous Waste (IHW) list	0.125-mile
Federal Emergency Response Notification System (ERNS) list	0.125-mile
Federal Toxic Chemical Release Inventory System (TRI) list	0.25-mile
State-equivalent CERCLIS	0.50-mile
State-equivalent NPL/State Superfund (TxSSF or ST NPL) list	1.0-mile
State landfill and/or solid waste disposal site (TxLF or SWLF) list and Closed Landfill Inventory (CLI) list	1.0-mile
State registered Petroleum Storage Tank (PST) facilities	0.125-mile
State registered Leaking Petroleum Storage Tank (LPST) facilities list	0.50-mile
Federal or State Institutional Control/Engineering Control (IC and/or EC) lists	0.50-mile
Registered Dry Cleaners (DC)	0.50-mile
State Spills (TxSpill) list	0.125-mile
Texas Voluntary Cleanup Program (TxVCP) or Texas Innocent Owner/Operator (xIOP) list	0.50-mile

The ASTM regulatory database search reported a total of one regulatory listing within the all appropriate inquiries ASTM-designated distance search range as follows: one leaking petroleum storage tank (LPST) facility. This site also has a petroleum storage tank registration (PST) and an industrial hazardous waste corrective action (IHW); however, these two classifications are outside of the ATSM specified radii for their classification. A map showing the location of three of the spatially known recorded sites (TxDOT facility, Engine Rebuilders Service, and Hur Enterprises) is provided in **Figure 5**. Additionally, three unmapped or “orphan” facilities were reported in the search. Based on the description of the facilities and the available location

information, they appear to be within the radii for their respective ATSM classifications, however, their exact locations are undetermined. These three facilities include a municipal solid waste disposal site, two petroleum storage tank (PST) sites, as well as one leaking petroleum storage tank (LPST) remediation site. The TCEQ Central Registry database lists the addresses for these three sites as they existed when the sites were registered with the TCEQ. Since the time when the sites were active, the City of Cedar Park has undergone changes and additions to area roads which has altered road names and address numbers for the area. These changes have not been updated with the TCEQ Central Registry.

Some sites may be recorded in more than one database. A summary of the regulatory database facilities is provided in **Table 3**.

Table 3. Regulatory Database Facilities

Facility Name	Address and Distance/Direction	Facility Type
TxDOT Travis North Maintenance Facility	2001 West Whitestone Blvd, 0.45 mile SE	PST (ID No. 44992) and LPST (ID No. 107176). LPST incident listed as inactive, and has an end date of 7/13/1995. The PST registration is active and is registered to a 4,000 gallon diesel tank. Based on information from the TCEQ database and given the distance and topography of the area to the proposed project area, the facility does not appear to be an environmental concern at this time.
Engine Rebuilders Service	16816 FM 1431, undetermined distance/direction	PST (ID No. 62763) and LPST (ID No. 104077). The LPST incident is listed as inactive, and has an end date of 9/02/1992. However, the start date is listed as 3/25/1993. The PST registration is inactive and was registered to two 4,000 gallon gasoline tanks in addition to a 400 gallon gasoline tank. All underground tanks were removed from the ground on 8/31/1991.
Hur Enterprises	16812 FM 1431, Est. 0.125 mile NE	PST (ID No. 69379). PST is inactive, and was registered to a 2,000 gallon gasoline tank, which was listed as permanently filled in place on 3/26/1997. Based on information from the TCEQ database and given the distance and topography of the area to the proposed project area, the facility does not appear to be an environmental concern at this time.
Travis County Precinct 3 Citizen Collection Station	16812 FM 1431, undetermined distance/direction	MSWD (ID No. 685). MSWD is active, and has a start date of 3/25/1975.

Appendix E contains the results of the hazardous materials database search.

3.6 AIR QUALITY

The Clean Air Act requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants that are common in outdoor air, considered harmful to public health and the environment, and that come from numerous and diverse sources. More stringent nonattainment area rules are established for those areas found to exceed the NAAQS. The proposed project area is in Travis County which is not subject to ozone nonattainment area rules (TCEQ 2016).

3.7 NOISE

Existing noise levels in the vicinity of the proposed project area are moderate. Notable sources include the indoor gun range as well as traffic on Woodall Drive and State Highway 141. There are no noise sensitive receptors in the vicinity of the proposed project. Noise sensitive receptors include schools, hospitals, daycare facilities, elderly housing, and convalescent facilities.

3.8 RECREATION

The proposed project area and surrounding property is privately owned and not in use or designated as a city, state, or federal recreational facility. Local, state, and federal recreational facilities such as parks, public swimming pools, and boat launches are operated and owned or overseen by government entities. Although not a city, state, or federal-designated recreational facility, the SOGR provides recreational opportunities to the public in the form of archery, and firearm training, education and practice.

3.9 SAFETY

The current SOGR range design exceeds National Rifle Association (NRA) and National Shooting Sport Foundation (NSSF) Design Guide safety standards.

SOGR has implemented rules and procedures for the safe use of their ranges and safe operation of weapons. SOGR has range safety officers to supervise range activities and to ensure safe use of their ranges. Patrons are required to sign an agreement stating acknowledgement of the safety rules and requiring that the patron understands and abides by those safety rules and direction from range safety officers while at SOGR.

Though not part of Phase I covered by the EA, during Phase II of the Shady Oaks Gun Range expansion, lead containment systems within the indoor target range would collect and store the lead until a third party company, licensed to perform the work, removes and recycles the lead following all applicable state and federal laws.



3.10 LOCAL ECONOMIC CONDITIONS

According to 2010 U.S. Census data, the proposed project area does not contain minority or low-income individuals. Two residential areas, located approximately 0.15 mile to the northwest and 0.70 mile to the east, respectively, are not considered low-income areas and are not considered areas predominated by a minority population (Census 2010). Further, the proposed project area is located in an area designated as *Commercial Services* according to the Cedar Park, Texas land use map (**Figure 6**). The current SOGR facility contributes indirectly to the local economy because users, who travel in from the surrounding region, typically consume gas, food, and other amenities from surrounding businesses.

3.11 ENVIRONMENTAL JUSTICE

Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” requires Federal agencies to identify and address disproportionate adverse effects of proposed actions on minority populations and low-income communities. Based on information provided Section 3.10 (Local Economic Conditions) of this EA, there are no low-income communities near the proposed project area. Likewise, census data does not show minority populations near the proposed project area.

CHAPTER 4 ENVIRONMENTAL CONSEQUENCES

4.1 PHYSICAL ENVIRONMENT

4.1.1 Climate

Preferred Alternative and No Build Alternative – Neither alternative has the ability to measurably affect climate.

4.1.2 Geology and Soils

Preferred Alternative – There would be soil disturbance due to construction of the proposed training facility, parking lot expansion and archery platform construction. These areas are predominantly previously cleared and leveled areas. Further, there would be no deep excavation in the proposed project area. Consequently, there would be no impacts anticipated to the site geology. The stony clay top soils present make exposed soils resistant to erosion. Best management practices (BMPs) would be used throughout construction, and any remaining exposed topsoil would be stabilized following project activities.

No Build Alternative – The SOGR would continue to maintain operations under the existing business plan. Consequently, there would be no impact to the site geology and soils under the No Build Alternative.

4.1.3 Prime and Unique Farmland Soils

Preferred Alternative and No Build Alternative – Neither alternative would affect prime and unique farmland soils as none are present at the project location (USDA 2016).

4.1.4 Surface Water

Preferred Alternative – Some locations within the proposed project area would be leveled, or graded to accommodate storm water runoff, which would not have a notable effect on storm water drainage. Storm water control best management practices would be utilized during construction and permanent stormwater controls would also be utilized following completion of the project construction. No long-term water quality impacts would occur as a result of the Preferred Alternative. Further, this alternative would not alter rainfall drainage patterns or contaminate or otherwise adversely affect the public water supply, water treatment facilities, or water distribution systems.

No Build Alternative - No impact to surface water quality would occur within the proposed project area under the No Build Alternative.

4.1.5 Groundwater

Preferred Alternative and No Build Alternative - Groundwater would not be required for the proposed project. The project construction would involve shallow excavation which would not affect groundwater. No adverse effects to groundwater would occur as no use or interaction with local groundwater would occur for either alternative.

4.1.6 Topography

Preferred Alternative – Some locations within the proposed project area would be leveled, or gently graded towards existing slopes. Topography would not be significantly altered.

No Build Alternative – Topography would not change within the project area under the No Build Alternative.

4.1.7 Floodplains

Preferred Alternative and No Build Alternative – The project area does not lie within any designated floodplain boundary; therefore, neither alternative would have an impact on floodplains.

4.2 BIOLOGICAL ENVIRONMENT

4.2.1 Vegetation

Preferred Alternative - Construction would occur in areas that are currently mowed or maintained regularly. Up to three Ashe Juniper trees would be removed from within the maintained lawn area as a result of construction activities. Herbaceous vegetation within areas subjected to clearing would be restored by reseeding the areas with permanent vegetation conducive to mowing. Vegetation and property maintenance would continue with a reduction in area of vegetation, but not type. BMPs would be utilized to minimize impacts to surrounding vegetation. The project design for the preferred alternative includes the minimal practicable impacts to native vegetation and negligible impacts to existing vegetation should occur.

No Build Alternative – Mowing and maintenance of vegetation would continue, maintaining the herbaceous vegetation.

4.2.2 Threatened and Endangered Species

In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed and proposed threatened or endangered species. Based on a review of TPWD, TXNDD, and USFWS records, no species occurrence or designated critical habitat for threatened and endangered species occurs in the proposed project area or adjacent to the project area. Of the species listed in **Table 1**, Golden-cheeked Warblers and endangered Karst invertebrates have



potential habitat in the project vicinity. A summary of the effect determinations for these species is presented below in **Table 4**.

Table 4. Effect Determinations on Listed Species in the Project Vicinity

Species	Effect Determination	Critical Habitat Determination
Golden-cheeked Warbler (<i>Setophaga chrysoparia</i>)	May affect, not likely to adversely affect.	Not designated
Karst invertebrate species	May affect, not likely to adversely affect.	Not designated

Preferred Alternative - Based on a field investigation performed by TES, potentially suitable habitat for the Golden-cheeked Warbler is present adjacent to the proposed project area. Species utilization of adjacent habitat would require acclimatization to the current elevated level of anthropogenic activity in the area and would be unlikely to be disturbed by construction activities. This species is sensitive to disturbance, and consequently is unlikely to occupy adjacent habitat. No warblers or their nests were observed during the field investigation. The field investigation was conducted in late July which at the end of the nesting season for the species, which is generally present in Travis County only during this period in their life cycle. Although suitable habitat is adjacent to the project area, no activities would occur within that habitat. Construction activities may remove up to three Ashe Juniper trees from within the maintained lawn area creating a slight potential for indirect effect through a minor decrease in potential nest building materials in proximity to suitable habitat. Removal of vegetation outside of nesting season is preferred to eliminate the possibility for other potential effects to Golden-cheeked Warblers. Construction activities would commence immediately following the environmental clearance process and grant approval. The anticipated approval timeline may result in construction activities occurring during nesting season. Coordination between USFWS Wildlife and Sport Fish Restoration (WSFR) and USFWS Austin Ecological Service Field Office occurred regarding the Golden-cheeked Warbler. A site visit performed by Ecological Services on January 20, 2017 determined the project site and vicinity would be only marginally suitable for use by Golden-cheeked Warblers.

For this project, the primary concern is whether or not Golden-cheeked Warblers will visit or pass through the adjacent marginal habitat during migration or the breeding season, within the time frame for construction. Minimal disturbance to these species from project construction activities could occur if present. However, it is not anticipated that the species would be adversely affected because of their limited time in the area and because the proposed project actions are limited in scope outside the adjacent habitat. The project would not alter the adjacent habitat. This minimal disturbance is not anticipated to be severe enough nor of lengthy duration to where birds would be negatively affected. Therefore, noise and disturbance associated with construction would have an insignificant effect to the Golden-cheeked Warblers. USFWS has determined that the project *may affect, but is not likely to adversely affect* the Golden-cheeked Warbler.

Designated critical habitat for the Jollyville Plateau Salamander and Austin Blind Salamander is present in Travis County, but is not present in nor adjacent to the proposed project area (**See Table 1**). No other critical habitat is present in Travis County.

The proposed project area occurs within a designated Karst zone, referred to as Karst Zone 2. Karst Zone 2 has a high probability of suitable habitat for endangered or other endemic invertebrate cave fauna. Although the proposed project area contains a soil type associated with suitable habitat for these species, no evidence of the subterranean features (caverns and mesocavernous voids) necessary to support the Karst invertebrates (USFWS, 2011) is present in the proposed project area. Coordination between USFWS WSFR and USFWS Austin Ecological Services Field Office determined that a full Karst invertebrates' survey was not needed. The project would be constructed in an area that is already cleared and leveled, and no deep excavation would occur. Consequently, there would be no impacts anticipated to the site geology. Therefore, the project *may affect, but is not likely to adversely affect* listed karst invertebrate species. Due to the potential for karst features or caves without surface expression to be encountered during construction, if such a feature is encountered work should immediately cease in the vicinity of the feature, the feature should be covered, and a Section 10(A)(1)(a) permitted scientist should inspect the site as soon as possible in order to evaluate potential species habitat.

No Build Alternative – Mowing and maintenance within the proposed project area would prevent biological succession and would eliminate the potential for increased habitat naturalization under the No Build Alternative.

4.2.2.1 Biological Evaluation and Determination of Effects

An Intra-Service Section 7 Biological Evaluation Form was completed in conjunction with this EA (**Appendix F**). This form outlines the determination of effects for federally listed endangered, threatened, and candidate species in relation to the preferred alternative actions. The determinations of effects are summarized below.

Preferred Alternative –The preferred alternative is not likely to adversely affect the Golden-cheeked warbler. No suitable habitat would be impacted and minimal disturbance would occur to adjacent habitat. Activities would result in the removal of up to three Ashe Juniper trees from the previously altered lawn area adjacent to potentially suitable habitat. Occupation of the adjacent suitable habitat is unlikely due to the current elevated level of anthropogenic disturbance and activities surrounding the potential habitat.

The preferred alternative is not likely to adversely affect the Karst invertebrates. No evidence of subterranean features are present and no deep excavation would occur as a result of the proposed action.

No direct or indirect effects to the remaining listed threatened or endangered species or their habitats would occur as no suitable habitat is present.

No Build Alternative – No effect for the listed species would occur under the No Build Alternative.

4.2.3 Other Wildlife Species



Preferred Alternative - Due to the primarily developed urban nature of the project area and surrounding area, other wildlife species likely to utilize the area would include birds, small terrestrial mammals, amphibians, reptiles, and insects that are tolerant of these conditions. Such wildlife that could be utilizing the project area (~0.33 acre) may experience some short term displacement impact during the project construction. However, affected species are expected to disperse to adjacent areas outside of the construction zone. The affected species should re-colonize (or continue to utilize) areas on the property that are not subjected to the development activities following completion of the project construction. No permanent or long-term impacts to other wildlife species are expected to occur from the project. Birds present in the area may fall under the protection of the Migratory Bird Treaty Act (MBTA). Disturbance of occupied nests including eggs, young, and nesting birds is prohibited under MBTA. Clearing of potential nesting vegetation outside of nesting season is recommended. If clearing during nesting season is unavoidable, trees in and adjacent to the clearing area should be surveyed for nests. If nests are encountered, then work should cease immediately and TES or another qualified biologist should be contacted to survey and assist with MBTA compliance.

No Build Alternative – Continued mowing and maintenance within the proposed project area would prevent biological succession thereby limiting potential wildlife utilization on the subject property.

4.2.4 Wetlands and other Waters of the United States

Preferred Alternative and No Build Alternative – The proposed project area does not contain any wetlands or other waters of the U.S. Consequently, there would be no impacts to these resources under either alternative.

4.3 LAND USE

Preferred Alternative and No Build Alternative – Currently, the proposed project area is a maintained lawn adjacent to structures and pavement, as well as mixed upland woodland. This setting matches the National Resources Conservation Service land use and land cover data, which lists the project area as open space.

The NRCS designation as open space would still apply following the proposed project activities. The city of Cedar Park designates land use for this property as Commercial Services which is consistent with the current and intended use. Due to the prior development of the property and the current land use designation, the proposed project activities would not result in adverse impacts to land use.

4.4 CULTURAL RESOURCES

Preferred Alternative – Stone Point Services, LLC completed an archeological investigation of the proposed expansion areas at the Shady Oaks Gun Range and concluded that no cultural resources would be impacted by implementation of the Preferred Alternative. In the event that archeological deposits or features should be encountered during construction, work would cease immediately and the Archeology Division of the THC would be contacted for further consultation. Tribal consultation will also be completed prior to implementation of the Preferred Alternative.



No Build Alternative – No impact to cultural resources would occur as a result of the No Build Alternative.

4.5 HAZARDOUS MATERIALS

Preferred Alternative and No Build Alternative – One LPST site (Texas Department of Transportation [TxDOT] Travis North Maintenance Facility, LPST ID No. 107176) is located 0.45 miles southeast of the proposed project area. Given the topography of the area, the gradient between the TxDOT facility and the proposed project area, and distance between the TxDOT facility and the subject property, the LPST is not an environmental concern to the proposed project at this time.

An LPST belonging to Engine Rebuilding Services is assigned a historical address of 16816 FM 1431, Leander, Texas. This site has been closed with the TCEQ since 1993 and the PST database indicated that the three tanks were removed in 1991. The location of the site was most likely north of the current Woodall Drive, near proximity to the subject property. Based on the address being even numbered, as is the present Hur Enterprises (Once 16812 FM 1431, now Hur Industrial Boulevard.), it is presumed that this property is across the street to the north of the subject property. The topography of the area and the location of drainage ditches along the north side of Woodall Drive would prevent the transport of potential contaminants to the proposed project area via surface runoff. Similarly, since the LPSTs have been removed according to TCEQ regulations and given the gradient between this facility and the proposed project area, the removed LPSTs are not an environmental concern to the proposed project.

4.6 AIR QUALITY

Preferred Alternative - Construction may likely cause a disturbance of soils in the proposed project area. Dust from this type of disturbance would become airborne during dry periods and pose a nuisance to surrounding businesses. Exhaust from construction equipment would be similar to that of the surrounding road traffic. The project construction would not exceed NAAQS. Dust from construction activities can become a temporary and short-term nuisance for surrounding businesses. The average annual wind speed for Austin, Texas (nearest major city) is 6.9 mph (WDB, 2016) and prevails from the south during most of the year (NOAA, 2016). Therefore, the periodic application of water to construction areas may be necessary to help reduce the airborne dust load during dry periods. There would be no permanent nor long-term impact to air quality as a result of the Preferred Alternative.

No Build Alternative – No impacts to air quality would occur as a result of the No Build Alternative.

4.7 Noise

Preferred Alternative - Noise levels associated with construction equipment and activities would be of a temporary nature. Construction activities would occur during the daytime when such activities are more tolerable. Further, noise resulting from the project construction would be of an intermittent nature rather than constant. There would be no impacts to noise sensitive receptors as a result of the project.



No Build Alternative – Implementation of the No Build Alternative would not result in an increase in noise levels in the proposed project area nor surrounding areas.

4.8 Recreation

Preferred Alternative - The nature of the facility, in part, is to provide recreational opportunities to the public. The proposed expansion would result in an increase in capacity and variety of recreational usage at SOGR.

No Build Alternative – Under the No Build Alternative recreational services of the SOGR would continue at their current level.

4.9 Safety

Preferred Alternative - According to the National Field Archery Association (NFAA) and the International Field Archery Association (IFAA), the standard buffer following a target that is not backstopped is 25 yards or half the distance to the target, whichever is greater. The project area that will specifically house the archery range is located facing southeast nearly parallel to the property line of a storage lot, with the potential for 62 yards of travel to the furthest target. A minimum buffer of 31 yards behind the range should be used for a target at this distance. Appropriate buffers would need to be established for the new archery range and the current safety rules and practices would continue. Following these conditions, the Preferred Alternative would not adversely affect safety. Standard safety procedures for construction would be implemented for the proposed project activities.

In regards to SOGR's lead management plan, there would be no environmental impact because the lead containment and removal activities would be performed following all applicable state and federal laws.

No Build Alternative – No adverse impacts to safety would occur under the No Build Alternative.

4.10 LOCAL ECONOMIC CONDITIONS

Preferred Alternative – Minority and low-income populations are not shown to be prevalent in the vicinity of the project area. No adverse impacts are anticipated as a result of the Preferred Alternative. Due to the nature of the Preferred Alternative to these populations, no disproportionately high and adverse human health or environmental impacts are anticipated. Additionally, the Preferred Alternative would not result in any displacements.

The Preferred Alternative would result in an expansion of services that would provide a positive impact due to increased use of the area. Locally, users would result in an increase in sales of gas, food, and other similar products. Expansion of the SOGR could provide some short-term employment opportunities. However, due to the relatively small scale of the proposed construction, the number of jobs would be minimal and effects to employment rates and the local economy from the construction labor force would be negligible.

No Build Alternative – There would be no change to the local economy from the implementation of the No Build Alternative.



4.11 ENVIRONMENTAL JUSTICE

Preferred Alternative - Based on information provided in Section 3.10 (Local Economic Conditions) of this EA, there are no low-income nor minority communities near the proposed project area. Consequently, the Preferred Alternative would not result in disproportionate adverse effects to low income or minority populations. Further, the SOGR is available to the public at large.

No Build Alternative – No impacts would occur to minority and low income populations under the No Build Alternative.

CHAPTER 5 CUMULATIVE EFFECTS

Preferred Alternative – An analysis of cumulative effects is intended to disclose the incremental impacts that the alternatives could cause when considered in the context of impacts associated with past, present, and reasonably foreseeable future actions. Based on information provided in this EA, it has been determined that the implementation of the Preferred Alternative would result in negligible impacts to the human environment and natural environment. It has been further determined that the cumulative effects are expected to be minimal to non-existent in some cases for resources including wetlands and other Waters of the U.S., groundwater, and prime and unique farmlands. The proposed project would occupy areas (approximately 0.3 acre) that are currently maintained as a mowed lawn. Under this alternative, the property area located to the east would be maintained in a natural state.

No Build Alternative – Cumulative effects to the human environment and natural environment would not occur under the No Build Alternative.

CHAPTER 6 COORDINATION WITH AGENCIES

Under the USFWS Grant Program the SOGR has worked closely with the USFWS and TPWD to ensure compliance with the Grant requirements and other requirements, including preparation of this EA. In addition, coordination letters were sent to the USFWS, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, TPWD, THC, and TCEQ to inform them of the proposed project and solicit their input regarding the performance of the EA. Copies of the agency coordination letters and agency responses are provided in **Appendix C**.

Stone Point Services, LLC submitted the Cultural Resources Survey Report to the THC in September 2016 for review and concurrence.

CHAPTER 7 PUBLIC INVOLVEMENT PROCESS

In order to help make the public aware of the proposed project, the SOGR placed information on its Facebook page, Yelp page, and website. The information describes the proposed facility expansion elements, need and purpose of the project, and funding support through the USFWS' Wildlife and Sport Fish Restoration Grant Program in collaboration with the TPWD. Further, an information flyer (public outreach statement) was prepared in using the same information on the proposed project and the flyers were placed at several public locations.

Beginning the week of September 25, 2016, the public outreach statement was posted at the following Community Notice Billboard locations.

1. Cedar Park Public Library, 550 Discovery Blvd., Cedar Park, TX 78613
2. Callahan's Feed Store, 218 Old Hwy. 183, Cedar Park, TX 78613
3. Tractor Supply, 2000 N. Bell Blvd., Cedar Park, TX 78613
4. Natural Grocers, 1890 Ranch, 1335 E Whitestone Blvd., Cedar Park, TX 78613
5. Cedar Bark Park, 2525 W New Hope Dr., Cedar Park, TX 78613
6. Veterans Memorial Park, 2525 New Hope Dr., Cedar Park Texas 78613
7. The Juice Spot, 1890 Ranch, 1335 E Whitestone Blvd. S-130, Cedar Park, TX 78613
8. Shady Oaks Gun Range, 3100 Woodall Dr., Cedar Park Texas

The public outreach statement was also posted online at the following locations starting the week of September 25, 2016:

- Public Submission - Cedar Park Chamber of Commerce
- www.ShadyOaksGunRange.com
- www.facebook.com/shadyoaksgunrange

Information in the public outreach statement directed the public to contact the SOGR regarding any questions on the proposed project, and to contract the TPWD regarding any questions on the grant administration process. To date, the SOGR nor the TPWD have received any questions or comments regarding the proposed project. **Appendix G** contains a copy of the public outreach statement.

This Draft EA will be posted for a 30 day comment period on the following website:

http://tpwd.texas.gov/business/feedback/public_comment/

CHAPTER 8 ENVIRONMENTAL COMMITMENTS

The planning process for the SOGR proposed project included environmentally protective measures. Further such measures are planned for use during the construction of the proposed project. The following is a summary of some of those protective measures:

- The proposed expansion would be located in an area with no surface waters or jurisdictional Waters of the United States.
- Site placement utilizes a previously graded and leveled area to minimize the need for ground disturbance and earth moving operations during construction.
- Construction BMPs will be utilized to protect and minimize impacts to soils, vegetation, and downgradient surface waters.
- Vegetation clearing is minimal through placement within a maintained lawn area.
- No suitable Threatened or Endangered species habitat will be directly impacted and the site has no recorded occurrence of protected species or their critical habitat on or near the construction area.
- Adjacent marginal habitat for the endangered Golden-cheeked Warbler will not be directly impacted, and indirect effects are not likely to adversely affect this species.
- No Karst invertebrates or their suitable habitat were observed, but due to the potential for karst features or caves without surface expression to be encountered during construction, if such a feature is encountered work should immediately cease in the vicinity of the feature, the feature should be covered, and a Section 10(A)(1)(a) permitted scientist should inspect the site as soon as possible in order to evaluate potential species habitat.
- No cultural resources were found and no previously recorded sites occur on or near the project area. In the event that archeological deposits or features should be encountered during construction, work would cease immediately and the Archeology Division of the THC would be contacted for further consultation.

Vegetation removal will either occur outside of bird nesting season or, if clearing occurs during bird nesting season, vegetation in and adjacent to the clearing area should be surveyed for nests prior to the clearing activities. If nests are encountered, then work should cease immediately and TES or another qualified biologist should be contacted to survey and assist with MBTA and ESA compliance.

CHAPTER 9 PREPARERS

This environmental assessment document was prepared by the following individuals:

Titanium Environmental Services, LLC

- Dan Murphy, Natural Resources Project Manager – Dan has 30 years of experience in environmental analysis and documentation. He received his B.S. Degree in Wildlife & Fisheries Sciences from Texas A&M University and is a registered Professional Wetland Scientist (Society of Wetland Scientists) and Certified Wildlife Biologist (The Wildlife Society).
- Laura Rectenwald, Senior Scientist / Professional Geoscientist – Laura has 20 years of experience in performing environmental assessments. She obtained a Master of Science in Environmental Science from Baylor University and a Ph.D in Forestry from Stephen F. Austin State University.
- Patrick Ireland, Environmental Scientist – Patrick has been involved with natural resource related projects for the last 7 years, 5 of which have been with Titanium Environmental Services, LLC. Patrick received a Bachelor of Liberal Arts from the University of Mississippi and a Master of Science in Fisheries Science from Texas A&M University, College Station, Texas.
- Jeff Williams, Natural Resources Specialist, / Project Supervisor - Jeff has served in the biological science field over the past 8 years. Jeff has a Bachelor of Science in Biology from West Texas A&M University and a Wetland Science and Management Certification from the University of Washington.
- Kirian Brown, Biologist – Kirian has been involved with biological surveys and related environmental projects with Titanium Environmental Services, LLC for the last 3 years. Kirian received a Bachelor of Science from Pennsylvania State University and a Master of Science in Wildlife and Fisheries Science from the University of Texas at Tyler.
- Joe Mars, GIS Specialist – Joe has 5 plus years as a Geographic Information Systems specialist. Joe has a Bachelor of Science in Environmental Science from Stephen F. Austin State University.
- Ray Montez, Environmental Scientist – Ray has recently joined Titanium Environmental Services, LLC following graduation from Stephen F. Austin State University with a Master of Science in Environmental Science. Ray is experienced in GIS and mapping work.

Stone Point Services, LLC

- Todd McMakin, Archaeologist - Todd McMakin, Senior Archaeologist for Stone Point Services, LLC. Todd received his B.A. in Anthropology from the College of Charleston in 1991 and his M.A. in Anthropology from the University of Southern Mississippi in 1995. Todd has been working in the field of archeology for more than 25 years and has been acting as Principal Investigator on projects for over 21 years.



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