

DRAFT
ENVIRONMENTAL ASSESSMENT

El Dorado Shooting Range
El Dorado State Park
El Dorado, Kansas

Prepared by:
Kansas Department of Wildlife, Parks & Tourism, Parks Division
And
U.S. Fish and Wildlife Service
Mountain Prairie Region

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CHAPTER 1: PROJECT SUMMARY, PURPOSE AND NEED

1.1 PROJECT SUMMARY

Location: El Dorado State Park

County: Butler

Nearest town: El Dorado, KS

Township/Range/Section: NE ¼, Section 32, T25S, R6E

GPS location: N 37.83404°, W -96.78734° (Attachment 1)

The Kansas Department of Wildlife, Parks & Tourism (KDWPT) proposes to construct a shooting range at El Dorado State Park (ELDP), on land leased from the Corps of Engineers (COE) (Lease #DACW56-1-80-247), located immediately west of the KDWPT office at the intersection of NE Bluestem Rd. and NE Shady Creek Access Rd. The shooting range complex will consist of a 14 position 100 yard rifle range, a 12 position 25 yard handgun/rifle range, a 30 position 15 yard handgun range, a 5 position shotgun patterning range, a gatehouse, a combination administrative/storage building with restrooms, and a tree buffer to the south to avert noise. There also will be covered sitting areas south of the range area for non-shooters.

Shooting areas (firing line) will be covered over a concrete pad, with a bench at the rear. The perimeter of the entire area will be fenced. The gatehouse will be used to check all users in and out. A 60 space parking area, including 7 ADA spaces will be constructed with a turnaround at the end. The entrance road to the gatehouse will consist of 2 lanes. The parking area and roads will initially be surfaced with crushed rock and then paved in the future. All shooting areas will be bermed with a minimum of 8 foot high side berms and 20 foot high end/impact berms. Material from the berms will come from leveling the ranges and adjacent properties to the north. If necessary dirt will be collected northeast of the project site, directly north of the KDWPT office, but this is unlikely. A 1% slope away from the firing line and to the side will be constructed to facilitate drainage into a detention pond. All disturbed areas will be seeded to minimize erosion. Baffles will be positioned down range to maintain “no blue sky” concept (Attachment 2). Construction will be contracted.

KDWPT is aware of the growing concern about lead relating to shooting ranges. KDWPT will take a proactive stance and a lead management program will be instituted while the range is in operation. Best Management Practices for Lead Outdoor Shooting Ranges as written by the EPA (EPA, 2003) will be implemented. The pH of the soil will be tested for alkalinity and limed to maintain proper pH. Water quality monitoring will be examined in the detention pond, which will be constructed to collect all surface runoff.

The perimeter will be fenced, signed, and flag poles will be erected to fly flags when the range is in use. The total area to be used, plus a safety zone is 15 acres.

This project is estimated to cost \$1,200,000. State share will be provided by the Shooting Range project (Wildlife Fee Fund). Funding from the Pittman-Robertson Federal Aid in Wildlife Restoration Act administered through the U. S. Fish and Wildlife Service will reimburse the Wildlife Fee Fund for seventy five percent of the total expenses.

1.2 PURPOSE

The purpose of this range is to provide a safe setting for shooting rifles, handguns, and shotguns. Expected results and benefits will be to provide shooting opportunities for the public in an area where such opportunities are limited. The range complex will provide opportunities for marksmanship practice, live-fire exercises in Hunter Education classes, and a safe place for hunters to sight in rifles and pattern shotguns before hunting seasons. Opportunities also exist for 4-H and other civic groups to shoot.

1.3 NEED

ELDP is located near a populous area of the state. Although demand for a safe place to shoot is extremely high, opportunities to shoot are extremely limited. The population of Butler County, where the park is located, is over 65,000 (Demographics, Butler County, 2014). The population of Sedgwick County, adjacent to Butler County, is approximately 500,000, so the need for shooting opportunities is tremendous (Demographics, Sedgwick County, 2014). Over the last 11 years, El Dorado State Park has averaged 866,902 visitors per year. The potential exists to have 100 people use the range on full days open to the public.

The park is located on property owned by the U.S. Army Corps of Engineers. The COE is in the formal process of approving the master plan as designed by Schwab-Eaton, P.A. KDWPT has discussed the project with them and was careful to incorporate all their comments and suggestions. To date, the COE has tentatively supported the project pending the status of the Environmental Assessment.

Currently, there are no public outdoor rifle, handgun, and shotgun ranges near El Dorado, Kansas. Although several ranges exist in the Wichita area, most ranges are private or do not accommodate rifles, handguns, and shotguns. Many of these ranges are intended for sporting clays or handguns only. Because there is no established place for people to shoot safely, this activity takes place in various settings, some safer than others. Private land, COE property, and undeveloped state areas are often used. This range will provide a safe, confined, and controlled environment for this activity.

Demand for a nearby shooting range has been voiced since the late 1980's, when target shooting was prohibited on the El Dorado Wildlife Area. Over the last 14 years, the KDWPT employees in El Dorado receive in excess of 100 requests per year for a facility which will allow marksmanship practice. People who frequent El Dorado State Park have reported driving to the Cheney Reservoir shooting range, over 70 miles, to shoot at a public range.

This range would also benefit those who have obtained or are becoming educated for concealed carry permits. In 2013, 4,445 Sedgwick County residents applied for their concealed carry permits. This along with the 14,826 active Sedgwick County permits creates a demand for permit holders to hone their marksmanship (Plumlee, 2014).

The range and meeting room will be used for Hunter Education classes. This site will provide a convenient location for those classes and a location for live-fire HE exercises in the El Dorado/Wichita area.

The master plan will be constructed in phases, as funding becomes available. A nonprofit 501(c)(3) organization will be formed to manage and promote the range for the public once it is built.

1.4 BACKGROUND

Hunting is a very important part of Kansas' economy and is a tradition for many Kansans. The state continues to try to capture interest in new hunters by promoting hunter safety courses in communities across the state. KDWPT has instituted a hunter recruitment program called "Pass It On," designed to reverse the declining trend in hunter numbers. The program is made up of many different subprograms, such as Outdoor Mentors, Shooting Opportunities, Hunting Access, Special Hunts, and Education and Awareness (KDWPT, 2014).

When the Kansas Hunter Education Program (HE) began, state legislature passed law KSA 32-920 requiring that all persons under the age of 16 years complete a 4 hour course in "firearms safety" to become eligible to obtain a hunting license.

Over time the Program has evolved and grown, meeting the requirements for federal aid support and implementing recommendations of the International Association of Fish and Wildlife Agencies Hunter Education Study Team as revised in 1990. Since the HE program began, more than 480,000 individuals have been certified through its classes. In 2012 a total of 10,229 individuals were certified (Robins, 2014).

Objectives of the HE Safety Program are:

- To reduce hunting-related accidents.
- To provide a 10 hour (minimum) HE course to first-time, resident hunters statewide.
- To conduct annual statewide mass media hunter education efforts to inform hunters of laws, regulations, and acceptable standards of behavior.
- To provide a safe place for HE students and the public to develop and practice shooting skills by providing financial assistance to third party cooperators for maintenance, improvement and development of equipment and facilities on target ranges statewide.

Over the period of 2003 through 2012, hunting accidents have averaged 16 per year, with hunting fatalities averaging 1 per year. Total accidents during the period vary from a low of 12 (2009) to a high of 26 (2004).

1.5 FUNDING

Part of the State of Kansas allotment is reserved for Hunter Education, for which this project qualifies. This project is estimated to cost \$1,200,000. State share will be provided by the Shooting Range project (Wildlife Fee Fund). The Pittman-Robertson Federal Aid in Wildlife Restoration Act administered through the U. S. Fish and Wildlife Service is expected to reimburse the Wildlife Fee Fund seventy five percent of the total expenses.

For the first two years of the project, KDWPT will support the management of the range by providing \$40,000 per year to hire personnel to run the range. This period of time will allow the nonprofit group to build membership and amass dues to take over full management of the area.

1.6 DECISIONS THAT NEED TO BE MADE

KDWPT and the USFWS will select one of the alternatives analyzed in this document and the Fish and Wildlife Service's Regional Director will determine, based on the facts and recommendations herein, whether this Environmental Assessment (EA) is adequate to support a Finding of No Significant Impact (FONSI) decision, or whether an Environmental Impact Statement (EIS) will need to be prepared.

CHAPTER 2: ALTERNATIVES

2.1 ALTERNATIVE 1 - PREFERRED ACTION

A shooting range complex would be developed at El Dorado State Park, on land leased from the COE, located at the south end of park property west of the park office. The shooting range complex will consist of a 14 position 100 yard rifle range, a 12 position 25 yard handgun/rifle range, a 30 position 15 yard handgun range, a 5 position shotgun patterning range, a gatehouse, a combination administrative/storage building with restrooms, and a tree buffer to the south to avert noise (Attachment 2).

The proposed location for the Preferred Action and No action is S32, T25, R06E, NE4; NW4; N/2 N/2 NE4 SW4; BEG SE/C SW4 W330 N330 E 330 S330 TO POB; W/2 SE4 LESS ROW.

The perimeter will be fenced, signed, and two flag poles will be erected to fly flags when the range is in use. The total area to be used, plus a safety zone is 15 acres.

Each rifle and handgun range would be side and end bermed with a minimum of 8 foot high side berms and 20 foot high end/impact berms. An 8 ft. wide strip would be placed on the top of the berm. This could assist future maintenance purposes (increasing the height, reshaping, lead reclamation, etc). The footprint of the berm would vary to accommodate an interior berm slope of 1.5:1 and exterior slope of 4:1, depending on topography.

Material from the berms will come from leveling the ranges, adjacent property to the north, and if necessary property to the northeast, directly north of the KDWPT office. An estimated 33,000

cubic feet of dirt will be required for the berms. Dirt will be acquired from land directly north of the project site on land currently seeded to native warm season grasses and forbs. This land was also previously disturbed. After the land is used for acquiring dirt, it will be seeded back into native warm season grasses and forbs. For safety purposes, the final layer of fill would be screened for rocks before being incorporated into the berm.

Shooting areas (firing line) will be a covered concrete pad, with a bench at the rear. The perimeter of the entire area will be fenced (see typical cross section on plans in (Attachment 2)). The gatehouse will be used to check all users in and out.

A two lane road will enter the shooting range by the gatehouse and end at a turnaround by the shotgun patterning range. This road will allow access to all the ranges and allow a convenient way for users to turn around to exit. Along the drive, 60 head-in parking spaces will be constructed, including 7 ADA spaces. The road with the parking spaces will accommodate two-way traffic flow. The parking area and roads will be surfaced with crushed rock initially and eventually paved with asphalt. When range is not in operation, gates will be closed and locked.

On the rifle and handgun ranges, baffles will be positioned down range to maintain “no blue sky” concept (see typical cross section on plans in Attachment 2). Construction will be contracted.

KDWPT is aware of the growing concern about lead relating to shooting ranges. KDWPT will take a proactive stance, and a lead management program will be instituted while the range is in operation. The program will be based on Best Management Practices for Lead Outdoor Shooting Ranges as written by the EPA (EPA, 2003) will be implemented, using earth berms, monitoring soil pH, and remediating as necessary by liming the soils. A lead removal program, based on number of rounds fired, will be carried out by a reclamation contractor. It is estimated that the reclamation will occur about every 5 years. Water quality monitoring will be carried out in the detention pond which collects all surface runoff.

A 1% slope away from the firing line, and to the side will be constructed to facilitate drainage. All disturbed areas will be seeded with species less palatable to wildlife, in particular, deer, to minimize erosion and wildlife in the shooting area. All areas within the ranges will be mowed to facilitate lead reclamation, and reseeded as necessary following the reclamation process.

An administration/storage building will also be constructed. It will be a 40’ by 80’ insulated building. It will include lighting, AC, heat, water and restrooms which will be accessible from inside or outside the building. The gatehouse will be insulated structure. Lighting, AC, and heat will also be included.

Authorized firearms will be:

- 100 yard range: All muzzle-loading firearms, all rifles smaller than 50 caliber, and shotguns fired with slugs
- 25 yard range: All muzzle-loading firearms, all rifles smaller than 50 caliber, shotguns fired with slugs, any caliber pistol, rimfire rifles, and air rifles
- 15 yard range: Any caliber pistol, rimfire rifles, and air rifles

- Shotgun range: all shotguns

Fully automatic firearms are not authorized. Tracer and armor-piercing ammunition are prohibited.

Target frames and target sheets will be available on-site. If the shooter chooses he/she may bring his/her own paper targets as long as the target is the proper size.

The nonprofit public group will manage and maintain the area, through a Letter of Agreement, a Special Use Agreement, and Standard Operating Procedures (Attachment 3).

2.2 ALTERNATIVE 2 - BOULDER BLUFF AREA 4

Alternative 2 is located at T25S, R5E, Section 24, NE ¼, R6E, Section 19, NW ¼. The site is a half mile north of the dam. The plan would be very similar to the Preferred Action. It would include a 100 yard range, 25 yard range, 15 yard range, and a shotgun patterning range.

Comparable structures such as the detention pond, gatehouse, and meeting room/storage building with restrooms and utilities would be built. Similar safety procedures and structures, including side and end berms, baffles, range flags, posted fences, and authorized firearms would be included as well.

Because of the topography and the numerous rocks and boulders, soil would be transported from another location.

Plans and costs estimate have not been developed for this alternative, but would likely be greater than the Preferred Action.

2.3 ALTERNATIVE 3 – NO ACTION

This area would be allowed to continue succession to a more natural state. Haying would continue. Recreation would remain unspecified at the Preferred Action site. Hunting and horseback riding would continue at Alternative 2.

With no action, continuation of recreational shooting in informal locations would continue, raising safety issues from unintended targets to uncontrollable shooting. Lead would probably not be a concern because of lack of concentrations. The main effect would be a continuation of public dissatisfaction at not having a safe public, outdoor location for recreational shooting.

Table 1:

	Recreation	Safety	Socioeconomic
Alternative 1 (Preferred)	Provide rifle, handgun range and	Provide safe, controlled area to	Bring an additional segment of users to

	shotgun ranges for the general public, and hunter education students	sight in firearms. Bullet containment within constructed berms and baffles. Hunter Ed facilities	Park and new flow of revenue direct and indirect from a variety of sportsmen to the surrounding community
Alternative 2	Provide rifle, handgun range and shotgun ranges for the general public, and hunter education students	Provide safe, controlled area to sight in firearms. Bullet containment within constructed berms and baffles. Hunter Ed facilities	Bring an additional segment of users to Park and new flow of revenue direct and indirect from a variety of sportsmen to the surrounding community
Alternative 3 (No Action)	Potential for lack of shooting sport recruitment due to lack of facilities	Continued scattered use of back country for sighting in weapons	Continued public requests for range development

CHAPTER 3: AFFECTED ENVIRONMENT

3.1 PHYSICAL ENVIRONMENT

ELDP is located in Butler County in the south central part of the state. It is close to Wichita, a major metropolitan area (30 miles). The state park is surrounded by tall grass prairie flora and fauna. The land nearby is used for farming, haying, and grazing. Since it is in a rural location, there are no air quality concerns, nor should the range cause any to arise. There is no flowing water nearby. All alternatives are located in the watershed of the El Dorado Reservoir. Considering the best management practices will be exercised, we anticipate no effect to the reservoir.

3.1.1 Soils

Preferred Action and No Action- Soil types include Dwight silt loam (72.3%), Labette-Dwight complex (21%), and Labette-Sogn silty clay loams (6.7%). These soils are rated for percent clay at 23%, 35%, and 47%. The pH for each is 6.5, 6.1, and 6.1 (Attachment 4). The 100 yard range and the 25 yard range would be constructed on the Dwight silt loam soil type. The greater part of the 15 yard range would be constructed over Dwight silt loam soil with a fraction of the range overlapping the Labette-Dwight complex. The shotgun patterning range would be positioned on Labette-Sogn silty clay loam (Web Soil Survey 2014).

The soil collection for the Preferred Action will occur immediately north on nearly 14 acres. Soil types in this area are the same at the Preferred Action and No Action site. Percentages differ as follows; Labette-Sogn silty clay loams (64.1%), Labette-Dwight complex (39.1%), and Dwight silt loam (6.8%) (Attachment 5) (Web Soil Survey, 2014).

Alternative 2- Soil types include Tully silty clay loam eroded (60.7%), Labette-Sogn silty clay loam (18.5%), Tully silty clay loam (17.8%), Dwight soils (1.5%), and Dwight silt loam (1.4%). There soils are rated at percent clay 39%, 47%, 36%, 32%, and 23% respectively. Ratings on the pH scale are 6.5, 6.1, 6.5, 6.5, and 6.5 (Attachment 6) (Web Soil Survey 2014).

Because of the large amount of visible rocks, soil would need to be brought in from another site for safety purposes. The soil will most likely be purchased. Many boulders are visible on the ground. Scraping dirt at this site when leveling would be difficult.

3.1.2 Topography

Preferred Action and No Action- Slope ranges from zero to eight percent (Web Soil Survey 2014). Nearly three-fourths of the project site has a slope between zero and one percent. This is where majority of the range, including the 100 yard, the 25 yard and the greater part of the 15 yard range, will be located. The slope of the shotgun patterning range varies between zero to three percent. The north western reaches of the range has the most fluctuation in slope, between zero or eight percent (Attachment 4). This is located past the end berm of the shotgun range. Beyond the proposed end berms of the rifle and shotgun ranges the land slopes down and eventually meets the reservoir. The KDWPT contacted the DWR and the shooting range would be constructed out of the floodplain.

Alternative 2- Slope ranged from zero to eight percent (Attachment 6) (Web Soil Survey 2014). At the north end of the range is a large hill. The topography would allow for a natural backstop. The site is not far from the water's edge or elevated high above it. KDWPT employees have witnessed flooding in this area during large flood events.

3.2 Biological Environment

Preferred Action, Alternative 2 and No Action- The ground has been previously disturbed. This disturbance took place during the initial construction of El Dorado State Park. Forbs, grasses and sparse trees currently cover the area.

3.2.1 Vegetation

Preferred Action - The rifle, handgun, and shotgun range will be constructed on a field currently being hayed. Species found here are those common in tallgrass prairies. Predominant grass species include Big Bluestem, Little Bluestem, Switch Grass, Indian Grass, Purpletop, Side-Oats Grama, Hairy Grama, and Blue Grama. No threatened or endangered plant species are known to exist in the area.

Alternative 2- Similar species to the Preferred Action site exist in this area. Johnson Grass (*Sorghum halepense*), was noted in large quantities. Chemical management strategies are used to control this noxious weed. No threatened or endangered plant species are known to occur in the area.

No Action- Similar species to the Preferred Action exist in this area. No threatened or endangered plant species are known to occur in the area.

3.2.2 State and Federal Threatened and Endangered Species

Preferred Action, Alternative 2, and No Action- No State or Federal threatened/endangered species, or candidate species are known to be present. KDWPT submitted an Environmental Checklist to the Environmental Services Section to verify for this specific location (Attachment 7). The review indicated that no significant impacts to crucial wildlife habitat, species in need of conservation, threatened or endangered species would occur. According to the USFWS records, no critical habitat occurs in Butler County for any federally threatened and endangered species, except for the Topeka Shiner (*Notropis topeka*) (Attachment 8).

The Topeka shiner habitat needs require small to mid-size prairie streams with high water quality and cool to moderate temperatures. The streams exhibit flows that are perennial and can be intermittent during summer months. The Topeka shiners habitats are located in the central prairie regions of the United States. The proposed project site does not include any of these habitat requirements to sustain the species.

3.2.3 Other Wildlife Species

Preferred Action, Alternative 2, and No Action- Because of the habitat similarity, all three alternatives should have similar species in the area. Both game and nongame species can be found (Attachment 9). The diverse habitat within El Dorado State Park is utilized by several species of birds, mammals, reptiles, and amphibians. This number decreases on the land which will be used for the shooting range because of the decrease in habitat diversity in the existing disturbed field. Bird species sighted using this land includes Quail, Mourning Dove, Red-tailed Hawk, Northern Harrier, as well as several species of migratory song birds. Common mammals found include White-tailed Deer, Coyote, Raccoon, Opossum, Armadillo, Striped Skunk, and Eastern Cottontail. Reptiles sighted include the Gopher Snake and Ornate Box Turtle.

3.3 Land Use

El Dorado State Park is a multiuse recreational area. Camping, fishing, boating, sailing, hunting, beach use, swimming, and horseback riding are offered. The state park consists of 4,300 acres in park, 4,000 wildlife area acres, and the lake covers approximately 8,000 surface acres.

Preferred and No Action- Site currently has no specialized recreational use. Haying occurs once a year.

Alternative 2- Trails run through the south edge and on the north side past the placement of the end berms. The trails are mostly used for horseback riding. The area is also open to public hunting.

3.4 Cultural/Historical Resources

Preferred Action and No Action- No known cultural/historic resources are known to exist on the site. Previous work done to develop the lake and the state park did not result in identification of any concerns in this area. The State Historic Preservation Office has reviewed the project and has no objection to the project (Attachment 10).

Alternative 2- A review was not submitted for this alternative because the KDWPT does not yet plan to pursue construction here. If the decision is made to place the range in this location, the State Historic Preservation Office will be contacted before any construction is begun.

3.5 Noise

Preferred Action - Noise levels for all sites are low, since the area is undeveloped. Boaters may be heard on the lake. There is also traffic noise from vehicles using the paved roads. Hunting does not occur, but gunfire may occasionally be heard at this site.

Alternative 2- The noise level for this site is low. It is located in an undeveloped area. Hunting occurs and close gunfire can be common during hunting seasons. Boaters can be heard from the lake as well as trains on the nearby railroad tracks.

No Action- The noise level is low. Boaters using the lake may be heard along with vehicles on the nearby road. Hunting does not occur, but may gunfire may occasionally be heard.

3.6 Recreation

Preferred and No Action- There is no designated recreational use. Recreation is extremely light. Fishing and boating occurs on the reservoir beyond the shooting range.

Alternative 2- Frequent recreation from hunters and horseback riders occurs. Fishing and boating in the area is common, but in the opposite direction of fire.

3.7 Safety

Preferred Action- A shooting range at this site would pose no threat to safety. South of the site, a road runs east to west. Since the direction of fire is to the north, there will be no effect to people who use the road. This area is located in open space within the park boundary. Beyond the site is the reservoir. Boating and fishing occur frequently on the lake. The only structure behind the end berms is an underground power line. Public land ownership is approximately 10 miles downrange.

Public land ownership is roughly 100 yards from the road. Within a half mile of the shooting range, there are only 5 residences, the closest being less than 1000 feet away from the approximate firing line. Within a mile, there are approximately 30 residences.

Alternative 2- This area is also located in open space within the park boundary. To the north, a road runs east to west. There is also another road to the west that runs north to south. Although the direction of fire is to the north, the baffles and berms would prevent any bullets from escaping the area. Also the natural topography would help prevent accidents from occurring. If the range was built in this location, the shooter would be lying at a lower elevation than the road. Recreational use by hunters and horseback riders occurs. Recreation of this type will cease if construction is to take place here.

There are only 2 residences within a mile of the shooting range. The closest of which is approximately three-quarters of a mile away.

No Action- This alternative poses no threat to safety and is located in open space within the park.

3.8 Local Socioeconomic Conditions

Preferred Action and No Action- Alternatives contribute indirectly to the income of the area. It lies within El Dorado State Park boundaries, and thus not subject to development without permission from KDWP/COE. Park users in general consume gas, food, and lodging from the surrounding businesses adding to the local economy.

Alternative 2- This site also contributes indirectly to the local economy in similar ways to the Preferred Action and No Action sites.

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

4.1 Physical Environment

4.1.1 Soils

Preferred Action- Most of the soil will be disturbed to level these ranges. Soil will be collected from approximately 14 acres to help construct the berms. Not all soil may be disturbed, depending on the amount necessary for construction. Dirt to be used as the top layer will be screened for rocks. The area will then be seeded. Depth to ground water exceeds 6 feet (Web Soil Service, 2014). Multiple methods will be taken to prevent groundwater contamination. Lime will be added to the soil to maintain a pH that is not conducive to lead dissolving and allowing it to migrate through the soil and into the groundwater. Reclamation of lead will assist as well. No effect is expected on the ground water.

KDWPT is aware of concerns about lead bullets and shot might arise during operation, and if the area were eventually closed. In order to be proactive, and to lessen the potential of lead, and

based on information contained within Best Management Practices for Lead at Outdoor Shooting Ranges (EPA, 2003), KDWPT has chosen the following for lead management.

1. The pH level in the impact areas of the berms on the rifle, handgun, and the shotgun patterning range will be checked once a year. Lime will be added to the soil to maintain a pH of 6.5 to 8.5.
2. A detention pond will be placed behind the end berm of the 25 yard range to trap water runoff. This will collect all runoff from the 100 yard, 25 yard, 15 yard, and shotgun patterning range. After a rain event, water samples can be collected for lead concentrations before being released. Water will be released into the safety zone, approximately 250 meters away from the reservoir.
3. Records will be kept of the numbers of shots taken in the shotgun patterning range. After approximately 800,000 shots, the area will be reclaimed by a contractor. Reclaimed ammo will be recycled. The amount collected and the amount recycled will be recorded.
4. Records will be kept of the approximate number of rounds fired per firing lane on the rifle and pistol range. After approximately 80,000 rounds have been fired per firing lane, the lead in the berm will be reclaimed. It is estimated reclamation will occur every 5 years.

Alternative 2- Most of the soil will be disturbed to level the shooting range. Additional soil will be need to construct the range, the KDWPT plans to purchase this soil.

No Action- No soil disturbance will occur.

4.1.2 Topography

Preferred Action and Alternative 2- Areas within the ranges will be leveled, or finished at a 1% slope away from the firing line, and 8-ft side berms and a 20-ft end berm will be constructed. Drainage from the 100 yard range will occur through a culvert in the side berm and will flow directly to the detention pond. Drainage from the 25 range will occur through a culvert in the side berm which will connect it to the 15 yard range. From there the drainage from 25 and 15 yard range will go under the end berm of the 15 yard range through a culvert directly into the detention pond. Drainage from the shotgun patterning range will slope towards the detention pond. Drainage around the safety zone would remain the same.

No Action- Topography would not change, and storm water drainage would remain the same.

4.1.3 Cumulative Effects

Preferred Action- The topography and soil will be changed at the construction site and soil collection site as the land is cut or filled. This will cause a change in the drainage, which will affect less than 29 acres. This includes the land to be used for the shooting range and the land soil will be collected from. Some land may not be disturbed in the safety zone. All water will still drain into the reservoir, but the change in topography may affect the rate at which the water drains. Since Best Management Practices are being used, no negative impact is expected.

Alternative 2- The topography and soil will change as the land is cut or filled and as soil is brought in to help construct the shooting range. As much dirt from the site will be used as possible, but because of the large amount of rock in the area, soil will need to be purchased. All water will drain into the reservoir, but the change in topography will affect the rate the water drains. Approximately 15 acres would be disturbed.

No Action - No changes in the physical environment will take place.

4.2 Biological Environment

4.2.1 Vegetation

Preferred Action and Alternative 2 – All trees would be cleared from the rifle, handgun and shotgun ranges. Areas within the berms would be reseeded to permanent vegetation conducive to mowing and lead reclamation, and to a species that is least palatable to wildlife in the area, with deer as a priority. Vegetation in the safety zone will not be disturbed, unless tree removal is recommended by reviewing agencies.

Mowing will occur on all ranges, and the areas of the safety zone that are currently free of woody vegetation.

No Action- Vegetation will continue to be hayed.

4.2.2 State and Federal Threatened and Endangered Species

Preferred Action, Alternative 2, and No Action- According to the USFWS records, no critical habitat occurs in Butler County for any federally threatened and endangered species, except for the Topeka Shiner. No direct or indirect effect would occur on the Topeka Shiner or its habitat. Construction would not occur near historical records of the Topeka Shiner. No streams are located near either site.

4.2.3 Other Wildlife

Preferred Action and Alternative 2 - A fence will be constructed around the perimeter of the project area, primarily for safety reasons, but it will also act as a deterrent to wildlife, mainly deer, from entering the area. Fencing will be a standard height (4-5 feet). Effects of the loss of habitat should be minimal, since large amounts of similar habitat are located in the immediate area with similar disturbance.

When construction is started, KDWPT expects an immediate decrease in the use of the land by several species of wildlife. Habitat disturbance, noise, and traffic will cause wildlife to avoid the area. After construction, the use of the range by people is expected to keep many species of wildlife from using the land. Noise, traffic, and maintained lawns are expected factors.

The maintained lawns and noise of the shooting range will discourage nesting and use by migratory song birds. The noise and traffic will likely deter Quail, Mourning Dove, Accipiters, White-tailed Deer, Coyote, Raccoon, Opossum, Armadillo, Striped Skunk, and Eastern Cottontail.

No Action –Wildlife will continue to use the land without change.

4.2.4 Cumulative Effects

Preferred Action and No Action- Since this area is in El Dorado State Park, and overall development will continue to maintain a park-like setting for outdoor recreation, cumulative effects within the park should be minimal. In the future, more development could occur surrounding the park, increasing the value of the open space, natural habitats and large contiguous areas of undeveloped land within the park. Although the shooting range may displace some animals, large impacts are not expected because of the large amount of similar habitat surrounding the proposed site.

4.3 Land Use

Preferred Action- A net positive impact is anticipated. Positive impacts include new recreation in the state park which will bring in people who may not already visit. Users will be able in improve marksmanship and HE classes can practice live fire in the El Dorado/Wichita Area. This project will provide shooting opportunities for the public in a very populous area of the state where shooting opportunities are limited.

Alternative 2- A net positive impact is anticipated. Positive impacts include new recreation in the state park which will bring in people who may not already visit. Users will be able in improve marksmanship and HE classes can practice live fire in the El Dorado/Wichita Area. This project will provide shooting opportunities for the public in a very populous area of the state where shooting opportunities are limited.

Negative impacts include no longer being able to hunt or horseback ride in this particular area, although there are many opportunities to participate in these activities in different areas of the park.

No Action – Land use will remain the same.

4.4 Cultural/Historical Resources

Preferred Action – No impacts are anticipated. The State Historic Preservation Office has been contacted and reported no effect should occur when construction on this project has commenced. If historic/archeological resources are encountered during construction or operation, all operations will cease, and the SHPO will be consulted before any work or operation is resumed.

Alternative 2 - No impacts are anticipated. The State Historic Preservation Office has not been contacted yet, but will be if construction occurs in this area. If historic/archeological resources are encountered during construction or operation, all operations will cease, and the SHPO will be consulted before any work or operation is resumed.

No Action – No impact will occur.

4.5 Noise

Preferred Action – Noise levels will increase with the construction temporarily. The operation of the shooting range will increase the noise level. Levels will not pose a threat to human health (hearing impairment) of those living nearby. The KDWPT has conducted sound level tests at different locations neighboring the proposed shooting range (Attachment 11). Different calibers were tested, using rifle, handguns, and rifles. Only once noise levels reach over 85dB. This reading was taken at Location 1 (the closest location) using a .45 caliber pistol, with the wind in its favor. This noise is expected to be muffled as baffles, berms, and a tree row are installed. When the wind was neutral, the same round was fired and only recorded at 51 dB, quieter than a normal conversation. The decibel reader may have picked up wind noise and produced higher readings, because this is consistent when other calibers are compared on windy versus non-windy days.

Alternative 2- Noise will increase temporarily from construction. After construction is completed more cars and gunfire will be heard as people travel to and use the range. Housing developments occur just one mile away from the site have the possibility of being affected. Decibel readings have not been conducted, but because the closest house is approximately three-quarters of a mile away, the KDWPT does not expect the noise levels to pose a threat to the residents even though they may be able to hear shots occasionally. If this alternative is pursued, decibel readings will be conducted.

No Action – Noise levels at the site would not change

4.6 Recreation

Preferred Action and Alternative 2- Initially the range plans to be open Friday afternoons, Saturday, and Sunday. The range plans to expand shooting hours once the nonprofit group is established and has a larger volunteer base. Special events can be reserved in advance. Daily hours of operation will be adjusted according to daylight hours and majority user preferences.

Because of the large population base surrounding the project, and the fact that the range will have rifle, handgun, and shotgun ranges, it is estimated that there will be 100 people visiting on some of the public use days.

No Action- Recreational use will remain non-specific and diversified.

4.7 Safety

Preferred Alternative- The shooting range will provide a positive impact to safety in the area. It will provide a safe location for marksmanship practice for shotguns, handguns, and rifles. This range will provide a safe, confined, and controlled environment for this activity. The range will also be used for Hunter Education classes and live fire exercises.

Baffles and berms will be placed to maintain the “no blue sky” concept. Those boating and fishing will not be affected at either site. The baffles and berms will offer protection. The firing direction would be to the north, so road users would not be affected.

Flags will be flown to alert users when the range is in use. A large safety zone will be established behind and around range. The entire area will be fenced.

A negative impact would be that patrol and control of use on this range would have to be increased. A nonprofit group would be formed to manage the range, including firing safety.

Alternative 2 – The shooting range will provide a positive impact to safety in the area. It will provide a safe location for marksmanship practice for shotguns, handguns, and rifles. This range will provide a safe, confined, and controlled environment for this activity. The range will also be used for Hunter Education classes and live fire exercises.

Baffles and berms will be placed to maintain the “no blue sky” concept. Although there is a road north of the range, the topography would prevent any effect to road users because of a large hill. This in addition to the baffles and berms will be sufficient in containing lead from shooters. Those boating and fishing will not be affected at either site. The direction of fire is the opposite direction of the reservoir.

Flags will be flown to alert users when the range is in use. A large safety zone will be established behind and around range. The entire area will be fenced.

A negative impact would be that patrol and control of use on this range would have to be increased. A nonprofit group would be formed to manage the range, including firing safety.

No Action – No change from the current condition.

4.8 Local Socioeconomic Conditions

Preferred Alternative and Alternative 2 – The shooting range will provide a positive impact due to increased use of the area. Locally, shooters will increase sales of gas, food, and lodging. More dispersed increases in sales of ammunition, guns, and accessories should occur.

No Action – No change from the current condition.

CHAPTER 5: COORDINATION AND CONSULTATION - AGENCIES

KDWPT is required to submit a letter of request for approval of the shooting range to the COE, and has worked closely with them (Mike Lowry, Head Ranger USACE Council Grove/El Dorado, as lead contact) on this project, incorporating their suggestions and requirements. To date, they have no objections to the project.

KDWPT contacted Dane Bailey, Kansas Department of Agriculture, Division of Water Resources in regard to floodplain mapping. Mr. Bailey provided a Floodplain Insurance Rate Map (FIRM) showing floodplain delineations (Attachment 12). If construction would occur within the floodplain the KDWPT will acquire a Local Floodplain Development Permit.

KDWPT is working with the KDHE on their requirements for the project.

KDWPT has submitted a letter of inquiry to the SHPO. Action on historic/archeological sites will be coordinated with the COE. SHPO has determined that their office has no objection to the implementation of the project.

KDWPT has worked in conjunction with the U. S. Fish and Wildlife Service, Wildlife and Sport Fish Restoration to prepare the Environmental Assessment for the proposed project.

KDWPT has constructed a Letter of Agreement, Special Use Permit, and Standard Operating Procedures for the future nonprofit organization to manage and maintain the range once it is built.

KDWPT, Parks Division submitted an Environmental Services Review Checklist to the Environmental Services Section of KDWPT. The review indicated that no significant impacts will affect crucial wildlife habitats, species in need of conservation, or threatened or endangered species. No KDWPT permits or special authorizations will be needed.

CHAPTER 6: PUBLIC INVOLVEMENT PROCESS

No public involvement has taken place to date. The KDWPT plans to hold open public meetings to hear comments and concerns. Anyone for or against will be allowed to voice their opinions and their comments will be noted and addressed properly.

CHAPTER 7: PREPARERS

This document was prepared by Zackary Cordes, with assistance from Seth Turner (Manager ELDP), Tyler Burt (Ranger ELDP) and Randy Just (Ranger ELDP). Schwab-Eaton P. A. was contracted by KDWPT to do the engineering and design work. Final review and comments was prepared by U.S. Fish and Wildlife Service's Wildlife and Sport Fish Restoration Program staff Otto Jose.

CHAPTER 8: WORKS CITED

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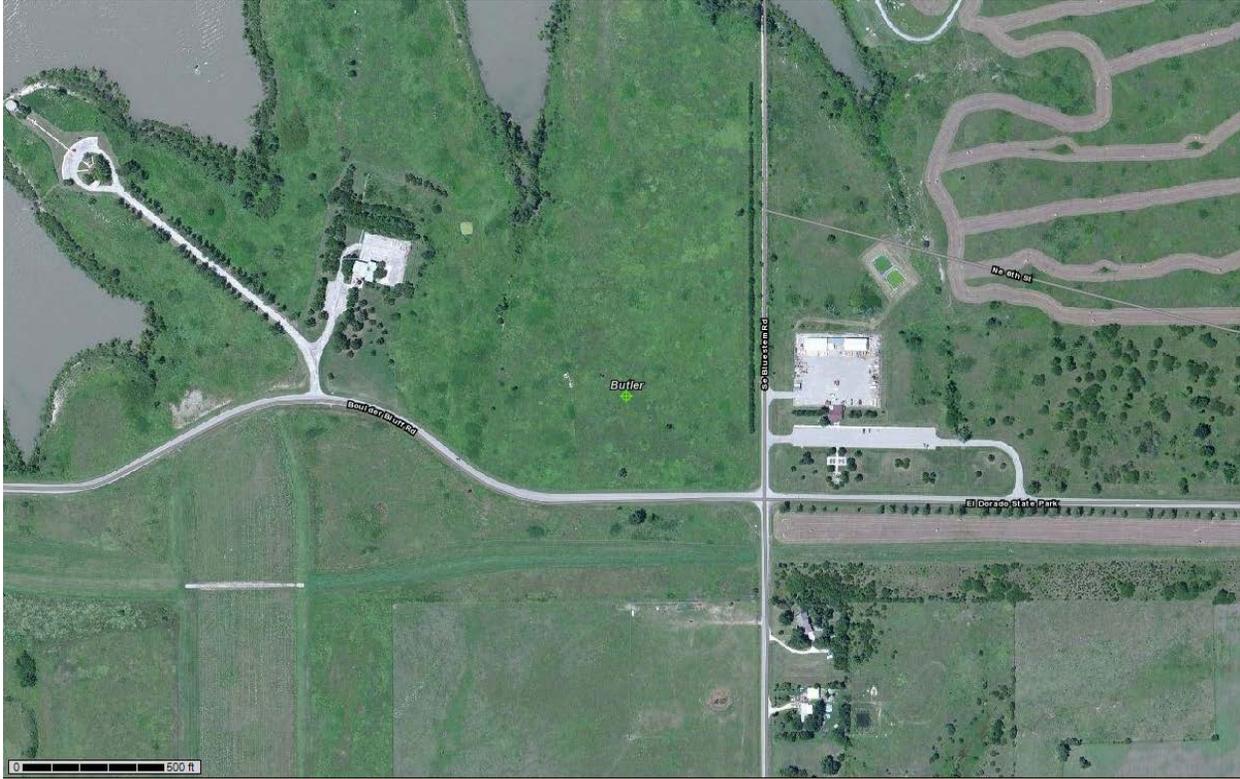
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Attachment 1

Aerial Photos for the Preferred Alternative





Attachment 3

Friends Group Agreements and Standard Operating Procedures

LETTER OF AGREEMENT
between
KANSAS DEPARTMENT OF WILDLIFE, PARKS & TOURISM
and
FRIENDS OF THE EL DORADO SHOOTING RANGE

This agreement is made and signed on the ____ day of _____, 2014 between the Kansas Department of Wildlife, Parks and Tourism, hereinafter referred to as the “Department,” and the Friends of the El Dorado Shooting Range, hereinafter referred to as the “Friends Group,” regarding the El Dorado Shooting Range, hereinafter referred to as the “Range.”

Both the Department and the Friends Group wish to enter into an agreement setting forth a relationship between themselves by means of which they work toward the improvement, development, maintenance, and proper management of the Range. They agree as follows:

- A. Subject to the limits and conditions described below, the Friends Group may:
1. Receive and disburse earned and donated funds, materials, and equipment for the benefit and support of the Range, on the property of El Dorado State Park. However, prior written approval of the Department is required before accepting any donation of funds, materials, or equipment on behalf of the Department, or before undertaking any improvements or construction on Department property.
 2. Charge entry or participation fees for special events and recreational activities conducted by the Friends Group and allowed under state and federal laws, codes, rules and regulations, and when approved in advance in writing by the Department as further set forth herein.
 3. Assist in the operation, development, and maintenance of the Range as approved in writing by the Department.
 4. Provide educational or interpretative materials, literature, and services as approved in writing by the Department for sale at the Range.
 5. Conduct educational, recreational, and interpretative activities, special programs, shows, auctions, and special events and other fund-raising activities as approved in writing by the Department.
 6. Provide food, non-alcoholic beverages, and souvenirs for sale during special events and programs approved in writing by the Department.
- B. The Department shall review in advance and provide timely approval, as appropriate, for the following (and no such activities or actions shall be allowed without Department approval):
1. Any operations of the Friends Group to take place at the Range, including development or maintenance activities, and the location, times of operations of any interpretative or educational activities, sales, shows, sports and special programs.

2. The content, quality, quantity, and price of educational and the interpretive materials and literature; foods and non-alcoholic beverages; and souvenirs offered for sale to the public by the Friends Group during special events and programs.
3. The nature, content and scope of activities and special events, and entry or participation fees charged by the Friends Group.
4. Any proposal in which the Friends Group raised funds would be spent on the Range.
5. Any construction or improvement project as a result of Friends Group activities, as well as any expenditures having the purpose of undertaking construction on the Range. The Department retains the right to inspect or supervise any such project occurring on Department property.

C. All Friends Group funds shall be managed and held by the Friends Group.

D. The El Dorado State Park Manager shall act as liaison to the Friends Group on behalf of the Department and shall be the primary contact representing the Department. The Friends Group shall assign contact people from their membership to act as liaison to the Department.

E. All improvements, additions, and renovations made to Department property by the Friends Group, including but not limited to buildings, grounds, improvements, storage facilities, concession facilities, utility systems, and parking areas, shall become the property of the Department upon their placement on Department property, unless otherwise agreed in writing by the Department and the Friends Group. Upon acceptance of any such facilities, the Department shall assume liability for those which it operates. No improvements, additions, or major repairs shall be preformed or placed on Department property without prior written approval of the Department. The Friends Group shall supply plans and drawings as requested by the Department for evaluations of proposed improvements or additions to, repair or renovation of building or facilities. The Department may condition, limit, or deny approval.

F. Although it is the intent of the parties to participate in mutually agreeable projects, they both recognize the Department shall have final authority to determine how Friends Group raised funds are spent on Department property or on behalf of Department programs.

G. Should it appear likely that the Friends Group will be unable to raise sufficient funds to complete an approved project upon which it is working, such funds by the Friends Group may be transmitted to the Department to be used for that project or for another Department project identified in consultation with the Friends Group. If the Range complex ceases to exist, any funds raised by the Friends Group shall be used for the benefit of other jointly approved Department programs or facilities within El Dorado State Park.

H. Amounts raised by the Friends Group may be used only for the benefit of the Range. If the Friends Group ceases to exist, any funds raised by the Friends Group shall become the property of El Dorado State Park and shall be used for the benefit of the Range complex under the terms and conditions of this Agreement.

I. This Agreement may not be assigned in whole or in part without the prior written approval of the Department.

J. This Agreement may be modified only through written agreement by the authorized representatives of the parties.

K. This Agreement shall terminate upon the termination of El Dorado State Park lease with USACE (#DACW56-1-80-247), upon ninety (90) days written notice from either party, or at anytime upon mutual agreement of the parties.

L. This Agreement shall not become effective until the Friends Group has developed, and the Department has approved, a plan of operations for Range activities concerning the Range. The Agreement hereby approved by the authorized representatives of the parties.

Kansas Department of Wildlife, Parks & Tourism
Range

Friends of the El Dorado Shooting

By: _____

By: _____

Printed: _____

Printed: _____

Title: _____

Title: _____

01-14-2014

SPECIAL USE AGREEMENT
by and between
KANSAS DEPARTMENT OF WILDLIFE, PARKS AND TOURISM
and
FRIENDS OF THE EL DORADO SHOOTING RANGE

This Special Use Agreement is made and entered into this _____ day of _____, 2014, by and between the Friends of the El Dorado Shooting Range (referred to as the “Friends Group”) and the State of Kansas by and through the Department of Wildlife, Parks and Tourism (referred to as the “Department”) located at 512 SE 25th Avenue, Pratt, Kansas 67124-8174.

WHEREAS, the Department is lessee of certain land in Butler County, Kansas owned by the United States Army Corps of Engineers, Lease No. #DACW56-1-80-247, also referred to as El Dorado State Park,

WHEREAS, the Department operates and regulates El Dorado State Park on said leased land, for the benefit of public outdoor recreation and the wise management and use of the state’s natural resources; and

WHEREAS, the Department operates a shooting range, more specifically described, hereinafter referred to as Premises.

Location: El Dorado State Park
County: Butler
Nearest incorporated town: El Dorado, KS
Township/Range/Section: S32, T25, R06E, NE4
GPS center of project: N 37.83404°, W -96.78734°

WHEREAS, the Secretary of the Department has the authority by Kansas Statutes Annotated §32-825(b) to develop and maintain outdoor recreation areas and facilities of the State;

WHEREAS, the Department is authorized to assist and cooperate with certain citizen-support organizations and to allow use of department-controlled property by such organizations under such conditions as the Department may prescribe, and in pursuit of the goals, objectives, and purposes of the Department; and

WHEREAS, the Friends Group is a non-profit corporation duly organized and existing under and by virtue of the laws of the State of Kansas, and is exempt from the payment of federal income taxes pursuant to section 501(c)(3) of the Federal Internal Revenue Code, and otherwise meet the qualifications of a citizen-support group under Kansas Statutes Annotated § 32-832; and

WHEREAS, the Friends Group wishes to use the Premises leased by the Department, for public outdoor recreation pursuant to the by-laws and deemed to fit in with the goals objectives and purposes of the Department;

NOW, THEREFORE, in consideration of the premises and of the mutual covenants set forth below, the Parties agree as follows:

The Friends Group agrees:

1. To provide public access, staffing and supervision to the rifle, handgun, and shotgun ranges (Premises) initially three days a week (Friday, Saturday, Sunday) with the intention of operating 40 (forty) hours a week after the Premises and Friends Group have been equipped and staffed.
2. As approved by Department, the Premises may be used for Friends Group meetings and for educational or recreational purposes, including but not limited to, education, shooting and other outdoor-related recreational activities.
3. To develop, administer staff, maintain and supervise the Premises for education, shooting and related recreational activities in accordance with the Friends Group's Standard Operation Procedures (hereinafter referred to as "SOP"). The Friends Group's Plan shall be reviewed annually and approved by Department. The SOP shall include the dates tentatively scheduled for use of the Premises, fee schedules, and any items or assistance that would require Department funding.
4. With prior approval of Department, all structures, trails, buildings, real property fixtures and any other improvements including landscaping, vegetation alterations and tree removal shall be constructed and accomplished in accordance with the SOP. Title to any improvement constructed or erected by the Friends Group shall remain vested with Department but shall be maintained by the Friends Group in a condition satisfactory to the Department.
5. The Friends Group shall conduct no mining operations, remove no sand, gravel, or kindred substances from the ground, commit no waste of any kind, nor in any manner substantially change the contour or condition of the Premises, unless such action is authorized pursuant to the SOP.
6. In a manner satisfactory to Department, the Friends Group shall maintain all soil and water conservation structures that may exist upon said Premises at the beginning of this Agreement or that may be constructed during the term of this Agreement.

7. The Friends Group shall take appropriate measures to prevent or control soil erosion within Premises and shall correct any soil erosion resulting from approved Friends Group activities as directed by Department.
8. Upon its expiration of this Agreement, the Friends Group shall repair and restore any areas damaged from its use, including, but not limited, erosion control, soil replacement, vegetation and tree re-establishment per Department's request.
9. The Friends Group shall monitor the noise levels created by the activities occurring upon the Premises to avoid distraction or nuisance to residents within the surrounding area. Consideration for reasonable noise should be expected as generated by the normal use of a shooting range. Should the noise level of Friends Group's activities become a factor, the Friends Group shall be responsible for undertaking measures to reduce noise emissions.
10. The Friends Group may charge fees for consumables and use of Friends Group's personal property provided to the public including, but not limited to, clay targets, paper targets, and target frames. The Friends Group is prohibited from charging any fee prohibited by Kansas statute or Department rules and regulations. Fees may NOT be charged based on access to the Premises. A fee schedule must be provided to and approved by Department prior to implementation.
11. Prior to using pesticides, the Friends Group shall obtain written approval from the Department and use only Department approved pesticides within the Premises.
12. The Friends Group shall be responsible for all maintenance of Premises including, but not limited to, trimming, painting, cleaning, emptying of refuse containers, and removal of trash.
13. The Premises shall be kept in good order and in a clean, safe and sanitary condition by, and at the expense, of the Friends Group. Sanitary facilities are to be maintained by the Friends Group such as a portable facility.
14. The Friends Group shall make reasonable effort to increase its membership as well as recruit new hunter education instructors from the public. No interested person shall be denied Friends Group membership provided the individual meets the same requirements met by other members. Every reasonable effort is to be made as to extend the use of the Premises to as many persons as possible.
15. The Friends Group shall have first priority for the use of the Premises, as long as use is consistent with the terms of this Agreement and is subject to mandatory open access for the public
16. The Friends Group shall provide a schedule of planned events to Department at least sixty (60) days in advance of any event. Planned events shall be approved by Department.

17. The Friends Group shall not deny Department use of the Premises, for any purpose, if notified sixty (60) days in advance and the use is not in conflict with a previously scheduled Friends Group activity.

DEPARTMENT agrees:

1. To permit Friends Group access to Premises 40 (forty) hours a week for public use and additional dates for educational and outdoor recreational purposes.
2. To be responsible for any vegetation management upon Premises with herbicides, vegetation management, including, but not limited to, routine mowing, haying, prescribed burning and providing a dumpster to dispose of the trash.
3. Mowing shall be done in conformance with the same standard as to cutting height and frequency as practiced on other department public use areas. Areas to be maintained by Department with routine mowing will be designated and mutually agreed to by the Friends Group and Department.
4. Upon discovery of any hazardous condition on the Premises that presents an immediate threat to health or danger to life or property, the Department will notify the Friends Group and shall require that part or all of the property be closed until such condition is corrected and the danger eliminated. If the condition is not corrected and is a result of the Friends Group's use, Department will have the option to correct the hazardous condition, cancel the Agreement and/or collect the cost of repairs from Friends Group.
5. Department may permit use of Premises by other persons or organizations other than the Friends Group. In this event, Friends Group shall not be responsible for staffing and supervision of the Premises and shall not include use of any of the Friends Group's personal property. Department shall also be responsible for or shall arrange for any trash removal, clean up and/or maintenance, including sanitation facilities, and repair to any and all property damaged as a result of such use.

Both Parties Agree:

1. Every provision of this Agreement is subject to the laws of the State of Kansas. The Friends Group shall comply with all applicable Federal laws and regulations and with all applicable laws, ordinances, and regulations of the State, county and the municipality wherein the Premises are located. The Friends Group shall conform to all rules and regulations prescribed by the Secretary of the Department.
2. The Friends Group shall neither assign nor sublet any interest, privilege, or license in this Agreement. Failure to comply with this provision may result in immediate revocation of the Agreement.
3. This Agreement contains the entire agreement between the parties hereto, and no modification of this agreement, or waiver, or consent hereunder shall be valid unless the same be in writing, signed by the parties to be bound or by a duly authorized representative.

4. Camping upon Premises, including, but not limited to, transient trailers or recreational vehicles is prohibited. Occupying any lands, buildings, vessels or other facilities within the Premises for the purpose of maintaining a full or part-time residence is prohibited except for Department employees or Friends Group members residing on the Premises for security purposes or for other special one-time events, as authorized by Department.
5. The right of entry is hereby expressly reserved to the Department, its officers, agents, and employees, to enter upon the Premises at any time and for any purpose. The Department has the right to supervise generally any activities conducted on the Premises. If the real property and realty improvements are fenced and/or locked, the Department shall have in its possession keys that shall allow access to said Premises and realty improvements. The key custodian for the Department shall be the El Dorado State Park Manager.
6. Any property of the Department damaged or destroyed by the Friends Group incident to the exercise of the privileges granted herein shall be promptly repaired or replaced by the Friends Group to the satisfaction of the Department. The Friends Group shall exercise due diligence in the protection of the Premises against damage from any and all causes which are reasonably within the Friends Group's power.
7. The Friends Group shall have no claim for damages against Department or any officer, agent or employee thereof on account of action pursuant to this Agreement.
8. This Agreement may be rescinded by the Friends Group or by Department at any time within ninety (90) days notice in writing to the other party.
9. This Agreement may be revoked by the Department in the event the Friends Group violates any of the terms and conditions contained herein and continues and persists for a period of thirty (30) days after the Friends Group has been notified of the violation. The Friends Group is charged at all times with full knowledge of all the limitations and requirements of this Agreement, and the necessity for correction of deficiencies and with compliance with reasonable requests by Department.
10. Department's failure at any time to require strict performance by the Friends Group of any of the provisions of this Agreement shall not waive or diminish Department's right thereafter to demand strict compliance therewith or with any provision. Decisions by Department concerning future requests by the Friends Group to renew, extend, expand, or modify rights under the Agreement shall reflect Friends Group's past performance and compliance with the Agreement terms.
11. This Agreement shall be effective upon signature by both parties and run for a term of three years.
12. On or before the termination of this Agreement, the Friends Group shall vacate the Premises, remove its personal property from the Premises, and restore the Premises to a condition satisfactory to the Department. If the Friends Group shall fail or neglect to remove its personal property and restore the Premises, then, at the option of the

Department, the Friends Group's personal property shall either become the property of Department without compensation, or Department may cause it to be removed and the Premises to be so restored at the expense of the Friends Group. There shall be no claim for damages against the Department or its officers or agents made on account of such removal and restoration work. The Friends Group shall also pay, on demand, any consideration that may be expended by Department after the expiration, termination or revocation of this Agreement in restoring or repairing the property.

13. This Agreement is subject to all existing easements, and easements subsequently granted, for roadways, utilities or any other purpose, located or to be located on the Premises.
14. The Friends Group shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archeological, architectural or other cultural artifacts, relics, vestiges, remains or objects of antiquity. In the event such items are discovered on the Premises, the Friends Group shall immediately notify the Department and the site and the material shall be protected by the Friends Group from further disturbance until a professional examination of them can be made or until clearance to proceed is authorized by the Kansas State Historical Society and the Department.
15. Within the limits of their respective legal powers, the parties to this Agreement shall protect the Premises against pollution of its air, ground and water.
16. The Friends Group acknowledges that it has inspected the Premises, knows of its conditions and understands that the same is without any representations or warranties whatsoever and without obligation on the part of Department to make any alterations, repairs or additions thereto.
17. Notice shall be deemed to have been duly given if and when enclosed in a properly sealed envelope, addressed as aforesaid, and deposited postage prepaid in a post office or branch post office regularly maintained by the United States Government. Notices given to the department may be mailed to:

El Dorado State Park
Park Manager
618 NE Bluestem Rd.
El Dorado, KS 67042

The Friends Group address will be attached after the group and address have been established.

18. Information concerning any phase of this Agreement shall be made available, upon request, to any member of the public, unless otherwise excluded under the Kansas Open Records Act K.S.A. §45-221(a) *et seq.*
19. In the event any of the provisions of this Agreement are deemed to be invalid or unenforceable, the same shall be deemed severable from the remainder of the Agreement.

If such provision shall be deemed invalid due to its scope and breadth, such provision shall be deemed valid to the extent of the scope and breadth as permitted by law.

20. Individual Friends Group members shall be considered volunteers of the Department whenever maintaining the Premises, teaching educational programs approved by the Department and supervising public use of the Premises.
21. The Department shall not be responsible for damages to property or injuries to persons which may arise from or be incident to the exercise of the privileges herein granted if caused by the Friends Group and its members while operating outside of the scope of their contractual duties under this Agreement. Friends Group members providing supervision for the public use shall be considered Department volunteers so long as acting within the scope of the Friends Group's contractual obligations. The Department shall not be liable for damages to the personal property of the Friends Group stored on the Premises, or for damages to the personal property or injuries to the person of the Friends Group's members or others who may be on the Premises at their invitation or the invitation of any one of them, arising from or incident to any governmental activities on the Premises.
22. The provisions found in Contractual Provisions Attachment (for DA-146a), identified as "Exhibit A" are hereby incorporated into this Agreement.
23. The Friends Group agrees to prevent any exclusive or private use of all or any part of the Premises by any individual or group of individuals unless as provided herein. The Friends Group shall not discriminate against any person or persons or exclude them from participation in Friends Group activities, programs, or operations conducted on the Premises because of race, color, national origin or ancestry, sex, age, handicap, disability, sexual orientation, gender identity, military or veteran status or political affiliation. All complaints of discrimination shall be forwarded to the Office of the Secretary, 1020 S. Kansas Avenue, Suite 200, Topeka, KS 66612.
24. This Agreement constitutes the entire agreement between the parties hereto as to the subject matter herein set forth. This Agreement shall supersede and control over all prior written or oral agreements and representations pertaining thereto between the parties to this Agreement, or their predecessor in title concerning the subject matter hereof.
25. The Friends Group shall ensure that no employees, volunteers or agents of the Friends Group improperly benefit from the construction, maintenance, or operation of the Project.
26. Each party shall act in their individual capacity and not as agents, employees, partners, in joint venture, or as associates of one another. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purpose whatsoever.
27. To certify, by placement of signature to this Agreement, that neither party nor any of their principals, subcontractors and suppliers used on this project are presently debarred,

suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in such an agreement by any Federal or State Department or Agency.

The Parties have caused this Agreement to be executed by their duly authorized representatives as of the day first written above.

Kansas Department of Wildlife, Parks & Tourism Friends of the El Dorado Shooting Range

By: _____

By: _____

Printed: _____

Printed: _____

Title: _____

Title: _____

Approved but not a Party to

by: _____

Date: _____

U.S. Army Corps of Engineers

01-15-2014

**Friends of the El Dorado Shooting Range
STANDARD OPERATION PROCEDURES (SOP)**

1. **Facilities:** The El Dorado Range is available to the public up to 40 hours per week. Dates and times will be posted at the range, on the El Dorado State Park web page, on the KDWPT web page and local papers. The range will be available up to two days per week for approved special events and range personnel training. Daily range use fees for non-members are; \$10.00 per person, under age 16 free when under the supervision of a paying adult (18 years of age or older). A Range safety officer must be present during live fire. Targets are available at the range house; target style and cost are posted at the range house.

2. **Authorized Persons:** The following persons are allowed to use the range:

- a. Public and Members of Friends Group who are in good standing.
- b. Anyone using the range must sign-in and sign a “covenant not to sue” form, and pay the proper fees.
- c. Individuals/groups approved by the Friends Group or State Park Manager on a case by case basis. For example, Hunter Education Classes, Firearms Training classes, 4-H clubs, Scout groups, etc.

3. **Authorized Firearms.** Centerfire rifles smaller than 50 caliber may be used. All muzzle-loading firearms may be used. Air rifles or pistols are allowed. Fully automatic firearms are not authorized.

100 Range: All muzzle-loading firearms, all rifles smaller than 50 caliber, and shotguns fired with slugs

25 Range: All muzzle-loading firearms, all rifles smaller than 50 caliber, shotguns fired with slugs, any caliber pistol, and air rifles

15 Range: Any caliber pistol, rimfire rifles, and air rifles

4. **Responsibilities.**

a. Friends of the El Dorado Shooting Range

- 1) Maintain range facility.

- 2) Provide Range Safety Officers, firearm safety, and other training to promote the shooting sports in the community.
- 3) Provide written schedule of public use and shooting events.

b. Chief Range Safety Officer

- 1) Assist the Friends Group in conducting Range Safety Officer training.
- 2) Ensure each Range Safety Officer understands and can execute live fire procedures.
- 3) Recommend changes to the range SOP as needed.
- 4) Serve as Range Safety Officer.

c. Range Safety Officers

- 1) Must be approved by the Friends Group President or the Chief Range Safety Officer. They must attend a Range Safety Officer class given by or approved by the Chief Range Safety Officer or the National Rifle Association.
- 2) Assure that all necessary items are available before each shooting session: forms, radio, cell phone, emergency phone number sheets, first-aid kit, range SOPs, flags, etc.
- 3) Conduct range inspection using check list for the range
- 4) Check that annual members have current annual membership cards. Collect non-member fees. Assure that all shooters/observers have “covenant not to sue” forms on file.
- 5) Conduct range safety briefings
- 6) Conduct live fire in accordance with the above safety rules. Evict shooters who commit serious infractions of the safety rules and report to the Friends Group President for possible suspension of future shooting privileges. Report all incidents to the Chief Range Safety Officer.
- 7) Turn on red lights/warning buzzers before shooters start downrange. Turn off lights/buzzers when all shooters are back behind firing line. **Anyone on the firing line may call cease fire and turn on the red light/buzzer if they see someone down range.**
- 8) Keep the gate locked at all times when the range is not open to the public.

5. **Range Safety.** Range Safety Officers will be present when the range is open to the public or during live fire at the range. All shooters are required to follow the directions of the Range Safety Officers. Range Safety Officers are responsible for assuring that each shooter has signed in and completed a “covenant not to sue” agreement (if one is not on file). The range flag must be displayed while shooting.

All shooters will observe the following safety rules:

a. **ALWAYS KEEP THE GUN POINTED IN A SAFE DIRECTION**

ALWAYS KEEP YOUR FINGER OFF THE TRIGGER UNTIL READY TO SHOOT

ALWAYS KEEP THE GUN UNLOADED UNTIL READY TO USE

b. Fire only authorized firearms and ammunition.

c. Only load firearms on the firing line and after the Range Safety Officer (if present) have given the command to load.

d. No shooting across firing lanes.

e. Any shooter should give the command "Cease Fire" if an unsafe condition occurs.

f. Firearms must be benched (actions open and facing up, chambers empty, and muzzles pointing in a safe direction) when the red lights are on, indicating people may be downrange.

g. Shoot only from the designated firing line.

h. Fire at authorized paper targets held in the provided stands only. No glass, metal, box, or other targets are allowed.

i. Insure all projectiles impact within the established range safety limits.

j. Use appropriate ear protection.

k. Wear appropriate eye protection.

l. Notify Range Safety Officer or Chief Range Safety Officer of any safety infraction or unsafe equipment.

m. Firearms that are out of the case and not being fired must be benched, holstered, or in the provided racks.

n. All shooters are responsible for their guns, ammunition, and other personal property while at the range.

o. Police all brass, paper, and other debris after shooting. **Brass goes in the brass collection bucket everything else in the trash cans.**

p. Shooters may not consume alcoholic beverages or illegal drugs, or any prescription or over the counter drugs that would impair shooting ability while on range property.

q. Wash hands with cold water before eating, drinking, or smoking to avoid lead contamination.

r. No pets are allowed on the range.

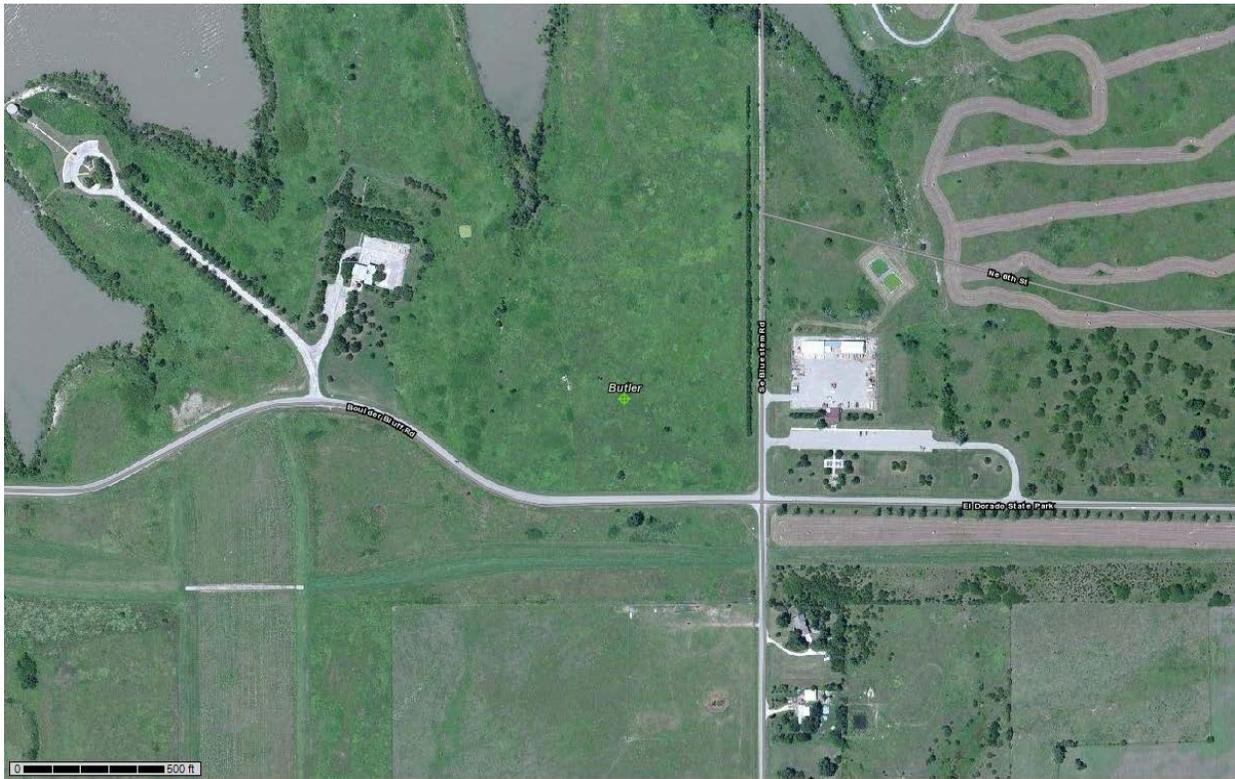
6. **Emergency procedures.**

- a. Take charge of situation.
- b. Evaluate severity of injuries and need for assistance.
- c. Render aid.
- d. Call 911, if needed.
- e. Direct medical help to location.
- f. Complete Emergency Report Sheet.

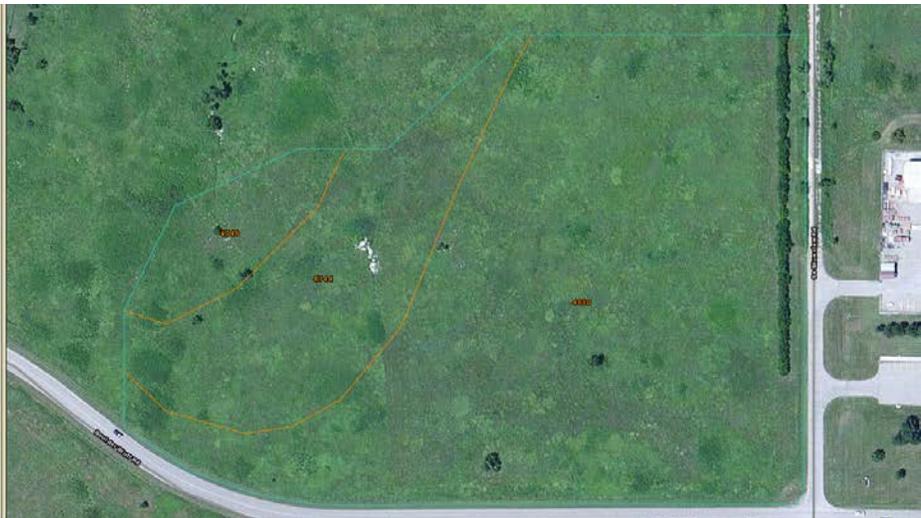
01-15-2014

Attachment 4

Preferred Alternative Soil Type



Butler County, Kansas (KS015)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4600	Dwight silt loam, 0 to 1 percent slopes	10.8	72.3%
4744	Labette-Dwight complex, 0 to 3 percent slopes	3.1	21.0%
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	1.0	6.7%
Totals for Area of Interest		14.9	100.0%



Tables — pH (1 to 1 Water) — Summary By Map Unit

Summary by Map Unit — Butler County, Kansas (KS015)					
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI	
4600	Dwight silt loam, 0 to 1 percent slopes	6.5	10.8	72.3%	
4744	Labette-Dwight complex, 0 to 3 percent slopes	6.1	3.1	21.0%	
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	6.1	1.0	6.7%	
Totals for Area of Interest			14.9	100.0%	

Description — pH (1 to 1 Water)

Soil reaction is a measure of acidity or alkalinity. It is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion. In general, soils that are either highly alkaline or highly acid are likely to be very corrosive to steel. The most common soil laboratory measurement of pH is the 1:1 water method. A crushed soil sample is mixed with an equal amount of water, and a measurement is made of the suspension.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Summary by Map Unit — Butler County, Kansas (KS015)					
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI	
4600	Dwight silt loam, 0 to 1 percent slopes	23.0	10.8	72.3%	
4744	Labette-Dwight complex, 0 to 3 percent slopes	35.0	3.1	21.0%	
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	47.0	1.0	6.7%	
Totals for Area of Interest			14.9	100.0%	

Description — Percent Clay

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Butler County, Kansas

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
4600	Dwight silt loam, 0 to 1 percent slopes	Dwight (90%)	R076XY005KS — Sodic Claypan (Draft) (Peer Review) (PE 30-36)	10.8	72.3%
		Irwin (5%)	R076XY007KS — Clay Upland (Draft) (Peer Review) (PE 30-36)		
		Labette (5%)	R076XY015KS — Loamy Upland 31-38 PZ		
		Aquolls (0%)			
4744	Labette-Dwight complex, 0 to 3 percent slopes	Labette (35%)	R076XY015KS — Loamy Upland 31-38 PZ	3.1	21.0%
		Dwight (35%)	R076XY005KS — Sodic Claypan (Draft) (Peer Review) (PE 30-36)		
		Irwin (5%)	R076XY007KS — Clay Upland (Draft) (Peer Review) (PE 30-36)		
		Sogn (2%)	R076XY028KS — Shallow Limy 31-38 PZ		
		Rock outcrop (2%)			
		Aquolls (0%)			
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	Labette (50%)	R076XY015KS — Loamy Upland 31-38 PZ	1.0	6.7%
		Sogn (45%)	R076XY028KS — Shallow Limy 31-38 PZ		
		Aquolls (0%)			
Totals for Area of Interest			14.9	100.0%	

Tables — Depth to Water Table — Summary By Map Unit

Summary by Map Unit — Butler County, Kansas (KS015)					
Map unit symbol	Map unit name	Rating (centimeters)	Acres in AOI	Percent of AOI	
4600	Dwight silt loam, 0 to 1 percent slopes	>200	10.6	75.7%	
4744	Labette-Dwight complex, 0 to 3 percent slopes	>200	3.0	21.2%	
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	>200	0.4	3.1%	
Totals for Area of Interest			13.9	100.0%	

Description — Depth to Water Table

"Water table" refers to a saturated zone in the soil. It occurs during specified months. Estimates of the upper limit are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Report — Map Unit Description

Butler County, Kansas
4600—Dwight silt loam, 0 to 1 percent slopes

Map Unit Setting
 Elevation: 900 to 1,660 feet
 Mean annual precipitation: 31 to 38 inches
 Mean annual air temperature: 54 to 57 degrees F
 Frost-free period: 175 to 200 days

Map Unit Composition
 Dwight and similar soils: 90 percent
 Minor components: 10 percent

Description of Dwight
Setting
 Landform: Hillslopes
 Landform position (two-dimensional): Summit
 Landform position (three-dimensional): Interfluvium
 Down-slope shape: Convex
 Across-slope shape: Convex
 Parent material: Residuum weathered from limestone and shale

Properties and qualities
 Slope: 0 to 1 percent
 Depth to restrictive feature: 39 to 59 inches to lithic bedrock
 Drainage class: Moderately well drained
 Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 m/hr)
 Depth to water table: More than 80 inches
 Frequency of flooding: None
 Frequency of ponding: None
 Gypsum, maximum content: 5 percent
 Maximum salinity: Nonsaline to slightly saline (0.0 to 8.0 mmhos/cm)
 Sodium adsorption ratio, maximum: 25.0
 Available water capacity: Moderate (about 8.5 inches)

Interpretive groups
 Farmland classification: Farmland of statewide importance
 Land capability classification (irrigated): 4s
 Land capability (nonirrigated): 4s
 Hydrologic Soil Group: D
 Ecological site: Sodic Claypan (Draft) (Peer Review) (PE 30-36) (R076XY005KS)

Typical profile
 0 to 6 inches: Silt loam
 6 to 28 inches: Silty clay
 28 to 55 inches: Silty clay
 55 to 65 inches: Bedrock

Attachment 5

Soil Collection Site Soil Type



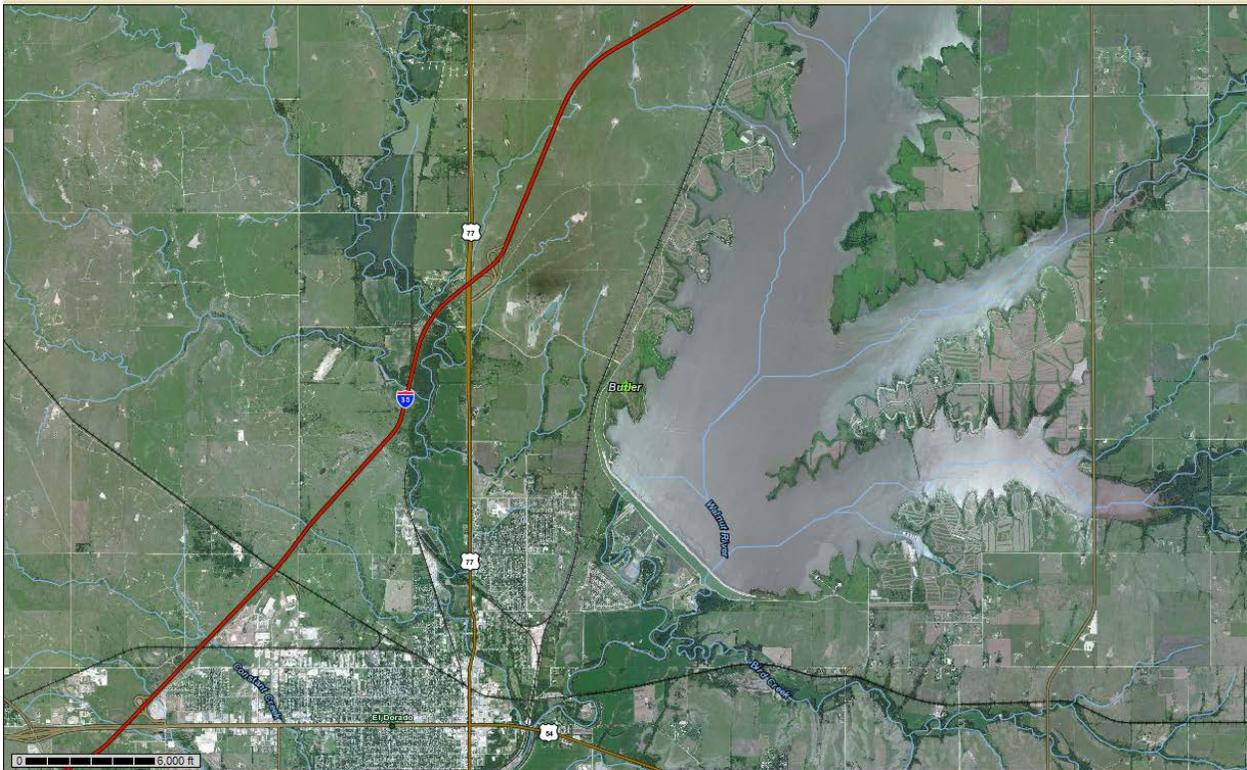
Butler County, Kansas (KS015)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4600	Dwight silt loam, 0 to 1 percent slopes	0.9	6.8%
4744	Labette-Dwight complex, 0 to 3 percent slopes	3.9	29.1%
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	8.6	64.1%
Totals for Area of Interest		13.4	100.0%



Attachment 6

Alternative 2 Soil Type



Butler County, Kansas (KS015)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4600	Dwight silt loam, 0 to 1 percent slopes	0.2	1.4%
4620	Dwight soils, 1 to 3 percent slopes, eroded	0.2	1.5%
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	2.3	18.5%
4783	Tully silty clay loam, 3 to 7 percent slopes	2.2	17.8%
4784	Tully silty clay loam, 3 to 7 percent slopes, eroded	7.6	60.7%
Totals for Area of Interest		12.5	100.0%



Summary by Map Unit — Butler County, Kansas (KS015)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4600	Dwight silt loam, 0 to 1 percent slopes	6.5	0.2	1.4%
4620	Dwight soils, 1 to 3 percent slopes, eroded	6.5	0.2	1.5%
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	6.1	2.3	18.5%
4783	Tully silty clay loam, 3 to 7 percent slopes	6.5	2.2	17.8%
4784	Tully silty clay loam, 3 to 7 percent slopes, eroded	6.5	7.6	60.7%
Totals for Area of Interest			12.5	100.0%

Description — pH (1 to 1 Water)

Soil reaction is a measure of acidity or alkalinity. It is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion. In general, soils that are either highly alkaline or highly acid are likely to be very corrosive to steel. The most common soil laboratory measurement of pH is the 1:1 water method. A crushed soil sample is mixed with an equal amount of water, and a measurement is made of the suspension.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Table — Ecological Sites by Map Unit Component — Rangeland

Butler County, Kansas					
Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
4600	Dwight silt loam, 0 to 1 percent slopes	Dwight (90%)	R076YV005KS — Sodic Claypan (Draft) (Peer Review) (PE 30-36)	0.2	1.4%
		Irwin (5%)	R076YV007KS — Clay Upland (Draft) (Peer Review) (PE 30-36)		
		Labette (5%)	R076YV015KS — Loamy Upland 31-38 PZ		
		Aquillo (0%)			
4620	Dwight soils, 1 to 3 percent slopes, eroded	Dwight, eroded (85%)	R076YV005KS — Sodic Claypan (Draft) (Peer Review) (PE 30-36)	0.2	1.5%
		Labette (15%)	R076YV015KS — Loamy Upland 31-38 PZ		
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	Labette (50%)	R076YV015KS — Loamy Upland 31-38 PZ	2.3	18.5%
		Sogn (45%)	R076YV028KS — Shallow Limy 31-38 PZ		
		Aquillo (0%)			
4783	Tully silty clay loam, 3 to 7 percent slopes	Tully (90%)	R076YV015KS — Loamy Upland 31-38 PZ	2.2	17.8%
		Irwin (5%)	R076YV007KS — Clay Upland (PE 25-34)		
		Norge (5%)	R076YV015KS — Loamy Upland (PE 25-34)		
4784	Tully silty clay loam, 3 to 7 percent slopes, eroded	Tully, eroded (85%)	R076YV015KS — Loamy Upland 31-38 PZ	7.6	60.7%
		Norge (15%)	R076YV015KS — Loamy Upland (PE 25-34)		
Totals for Area of Interest				12.5	100.0%

Tables — Percent Clay — Summary By Map Unit

Summary by Map Unit — Butler County, Kansas (KS015)				
Map unit symbol	Map unit name	Rating (percent)	Acres in AOI	Percent of AOI
4600	Dwight silt loam, 0 to 1 percent slopes	23.0	0.2	1.4%
4620	Dwight soils, 1 to 3 percent slopes, eroded	32.0	0.2	1.5%
4746	Labette-Sogn silty clay loams, 0 to 8 percent slopes	47.0	2.3	18.5%
4783	Tully silty clay loam, 3 to 7 percent slopes	36.0	2.2	17.8%
4784	Tully silty clay loam, 3 to 7 percent slopes, eroded	39.0	7.6	60.7%
Totals for Area of Interest			12.5	100.0%

Description — Percent Clay

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Most of the material is in one of three groups of clay minerals or a mixture of these clay minerals. The groups are kaolinite, smectite, and hydrous mica, the best known member of which is illite.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

Report — Map Unit Description
<p>Butler County, Kansas</p> <p>4784—Tully silty clay loam, 3 to 7 percent slopes, eroded</p> <p>Map Unit Setting</p> <p>Elevation: 900 to 1,600 feet Mean annual precipitation: 31 to 47 inches Mean annual air temperature: 54 to 61 degrees F Frost-free period: 190 to 225 days</p> <p>Map Unit Composition</p> <p>Tully, eroded, and similar soils: 85 percent Minor components: 15 percent</p> <p>Description of Tully, Eroded</p> <p>Setting</p> <p>Landform: Hillslopes Landform position (three-dimensional): Side slope Down-slope shape: Convex Across-slope shape: Convex Parent material: Clayey colluvium</p> <p>Properties and qualities</p> <p>Slope: 3 to 6 percent Depth to restrictive feature: More than 80 inches Drainage class: Well drained Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum content: 1 percent Available water capacity: Low (about 5.0 inches)</p> <p>Interpretive groups</p> <p>Farmland classification: Farmland of statewide importance Land capability (nonirrigated): 4e Hydrologic Soil Group: C Ecological site: Loamy Upland 31-38 PZ (R076XY015KS)</p> <p>Typical profile</p> <p>0 to 6 inches: Silty clay loam 6 to 42 inches: Silty clay 42 to 80 inches: Silty clay</p>

Attachment 7

KDWPT Environmental Services Review



Zackary Cordes <zscordes@gmail.com>

Project Review: Shooting Range at El Dorado S.P. in Butler Co.; T25S-R06E-Sec.32 (Track 20140035)

1 message

Bartels, Brian <brian.bartels@ksoutdoors.com>
To: Zackary Cordes <zscordes@gmail.com>

Mon, Feb 17, 2014 at 11:49 AM

Mr. Cordes:

The referenced project was reviewed for potential impacts on crucial wildlife habitats, current state-listed threatened and endangered species and species in need of conservation, and Kansas Department of Wildlife, Parks, and Tourism managed areas for which this agency has administrative authority.

We have no objections to the proposed project and provide the following general recommendations:

- Incorporate principles of low impact development (LID), such as permeable asphalt pavement, swales, bioretention, raingardens and on-site phytoremediation. For more information on LID <http://www.epa.gov/owow/NPS/lid>
- Implement and maintain standard erosion-control Best-Management-Practices such as silt fencing, hay/straw-bale-ditch checks, erosion-control blankets, storm drain inlet protection and temporary weed-free seeding/mulching.
- Reseed with native warm-season grass (e.g. Buffalo Grass, *Bouteloua dactyloides*).
- Replant the tree buffer with native trees appropriate for ecological region. <https://www.kansasforests.org/>

Results of our review indicate there will be no significant impacts to crucial wildlife habitats; therefore, no special mitigation measures are recommended. The project will not impact any currently-listed threatened or endangered species or species in need of conservation. No Department of Wildlife, Parks, and Tourism permits or special authorizations will be needed if construction is started within one year, and no design changes are made in the project plans.

Since the Department's recreational land obligations and the State's species listings periodically change, if construction has not started within one year of this date, or if design changes are made in the project plans, the project sponsor must contact this office to verify continued applicability of this assessment report. For our purposes, we consider construction started when advertisements for bids are distributed.

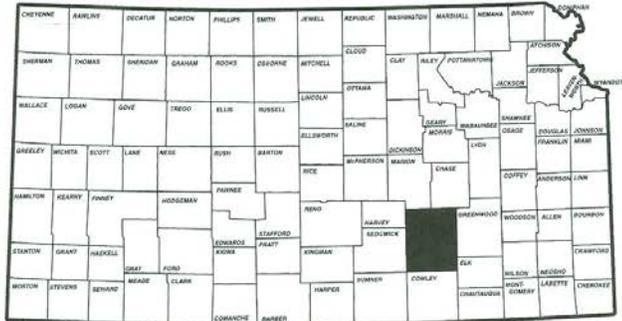
Please consider this email our official review of this project. If you have any questions please contact me.



Brian Bartels, Ecologist
Ecological Services
Kansas Dept. of Wildlife, Parks, and Tourism
512 SE 25th Ave., Pratt, KS 67124
office: 620-672-0746
cell: [620-770-6628](tel:620-770-6628)
fax: 620-672-2972

BUTLER COUNTY

COUNTY LOCATOR MAP



STATUS KEY

- THR = Threatened
- END = Endangered
- SNC = Species In Need of Conservation
- CAN = Candidate Listing
- NA = Not Applicable

THREATENED & ENDANGERED (T&E) SPECIES

- | | |
|--|---|
| American Burying Beetle <i>Nicrophorus americanus</i>
State: END Federal: END Critical Habitat: NO | Whooping Crane <i>Grus americana</i>
State: END Federal: END Critical Habitat: NO |
| Eastern Spotted Skunk <i>Spilogale putorius</i>
State: THR Federal: NA Critical Habitat: NO | |
| Eskimo Curlew <i>Numenius borealis</i>
State: END Federal: END Critical Habitat: NO | |
| Least Tern <i>Sterna antillarum</i>
State: END Federal: END Critical Habitat: NO | |
| Piping Plover <i>Charadrius melodus</i>
State: THR Federal: THR Critical Habitat: NO | |
| Sharp Hornsnail <i>Pleurocera acuta</i>
State: THR Federal: NA Critical Habitat: NO | |
| Snowy Plover <i>Charadrius alexandrinus</i>
State: THR Federal: NA Critical Habitat: NO | |
| Topeka Shiner <i>Notropis topeka</i>
State: THR Federal: END Critical Habitat: YES | |

SPECIES IN NEED OF CONSERVATION (SINC)

- | | |
|---|---|
| Black Tern <i>Chlidonias niger</i>
State: SNC Federal: NA Critical Habitat: NA | Whip-poor-will <i>Caprimulgus vociferus</i>
State: SNC Federal: NA Critical Habitat: NA |
| Cardinal Shiner <i>Luxilus cardinalis</i>
State: SNC Federal: NA Critical Habitat: NA | Yellow Sandshell Mussel <i>Lampsilis teres</i>
State: SNC Federal: NA Critical Habitat: NO |
| Creepers Mussel <i>Sprophitus undulatus</i>
State: SNC Federal: NA Critical Habitat: NA | Yellow-throated Warbler <i>Dendroica dominica</i>
State: SNC Federal: NA Critical Habitat: NA |
| Ferruginous Hawk <i>Buteo regalis</i>
State: SNC Federal: NA Critical Habitat: NA | |
| Golden Eagle <i>Aquila chrysaetos</i>
State: SNC Federal: NA Critical Habitat: NA | |
| Henslow's Sparrow <i>Ammodramus henslowii</i>
State: SNC Federal: NA Critical Habitat: NA | |
| Short-eared Owl <i>Asio flammeus</i>
State: SNC Federal: NA Critical Habitat: NA | |
| Spotted Sucker <i>Minytrema melanops</i>
State: SNC Federal: NA Critical Habitat: NA | |

KANSAS DEPARTMENT OF WILDLIFE, PARKS AND TOURISM
Effective January 2005
Subject to future revisions

9

Attachment 8

USFWS Review



United States Department of the Interior



FISH AND WILDLIFE SERVICE
KANSAS ECOLOGICAL SERVICES FIELD OFFICE
2609 ANDERSON AVENUE
MANHATTAN, KS 66502
PHONE: (785)539-3474 FAX: (785)539-8567

Consultation Tracking Number: 06E21000-2014-SLI-0059

January 09, 2014

Project Name: El Dorado State Park Shooting Range

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: El Dorado State Park Shooting Range

Official Species List

Provided by:

KANSAS ECOLOGICAL SERVICES FIELD OFFICE
2609 ANDERSON AVENUE
MANHATTAN, KS 66502
(785) 539-3474

Consultation Tracking Number: 06E21000-2014-SLI-0059

Project Type: ** Other **

Project Description: We will construct a 15 acre rifle, pistol and shotgun range on COE owned land leased by the KDWP. Land will be leveled with dirt from another 15 acres immediately north. Best Management Practices will be used as suggested by the EPA.



United States Department of Interior
Fish and Wildlife Service

Project name: El Dorado State Park Shooting Range

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-96.7856972 37.8330794, -96.7880488 37.833079, -96.7880511 37.8330791, -96.788866 37.8331727, -96.7888737 37.8331753, -96.7895501 37.8335647, -96.7895559 37.8335697, -96.7895593 37.8335765, -96.78956 37.8335842, -96.7892382 37.8365583, -96.7892357 37.836566, -96.7892302 37.8365722, -96.7892228 37.8365756, -96.7880635 37.8368403, -96.7870264 37.8374116, -96.7870207 37.8374137, -96.7870146 37.837414, -96.7857218 37.8372785, -96.785715 37.8372765, -96.7857093 37.8372722, -96.7857054 37.8372663, -96.7857039 37.8372593, -96.7856792 37.8365573, -96.7856792 37.8365567, -96.7856578 37.8331026, -96.7856572 37.8330994, -96.7856578 37.8330964, -96.7856577 37.8330821, -96.7856592 37.8330745, -96.7856635 37.8330679, -96.7856699 37.8330636, -96.7856776 37.833062, -96.7856852 37.8330635, -96.7856918 37.8330678, -96.7856961 37.8330742, -96.7856972 37.8330794), (-96.7857192 37.8365562, -96.7857433 37.8372405, -96.7870125 37.8373736, -96.7880466 37.8368039, -96.7880518 37.8368019, -96.7891999 37.8365398, -96.7895188 37.8335928, -96.7888573 37.833212, -96.7880477 37.833119, -96.7856979 37.8331194, -96.7857192 37.8365562)))

<http://ecos.fws.gov/ipac>, 01/09/2014 12:02 PM

2



United States Department of Interior
Fish and Wildlife Service

Project name: El Dorado State Park Shooting Range

Project Counties: Butler, KS

<http://ecos.fws.gov/ipac>, 01/09/2014 12:02 PM

3



United States Department of Interior
Fish and Wildlife Service

Project name: El Dorado State Park Shooting Range

Endangered Species Act Species List

There are a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Topeka shiner (*Notropis topeka* (=tristis))

Population: Entire

Listing Status: Endangered

Has Critical Habitat: Final designated

<http://ecos.fws.gov/ipac>, 01/09/2014 12:02 PM

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United States Department of Interior
Fish and Wildlife Service

Project name: El Dorado State Park Shooting Range

Critical habitats that lie within your project area

There are no critical habitats within your project area.

<http://ecos.fws.gov/ipac>, 01/09/2014 12:02 PM

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Attachment 9

Possible Wildlife Species

Possible Species

Mammals	
Virginia Opossum	<i>Didelphis virginiana</i>
Elliot's Short-tailed Shrew	<i>Blarina hylophaga</i>
Least Shrew	<i>Cryptotis parva</i>
Eastern Mole	<i>Scalopus aquaticus</i>
Eastern Red Bat	<i>Lasiurus borealis</i>
Big Brown Bat	<i>Eptesicus fuscus</i>
Nine-banded Armadillo	<i>Dasyurus novemcinctus</i>
Eastern Cottontail	<i>Sylvilagus floridanus</i>
Woodchuck	<i>Marmota monax</i>
Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>
Eastern Fox Squirrel	<i>Sciurus niger</i>
Plains Pocket Gopher	<i>Geomys bursarius</i>
Hispid Pocket Mouse	<i>Chaetodipus hispidus</i>
Western Harvest Mouse	<i>Peromyscus megalotis</i>
White-footed Mouse	<i>Peromyscus leucopus</i>
Deer Mouse	<i>Peromyscus maniculatus</i>
Hispid Cotton Rat	<i>Sigmodon hispidus</i>
Eastern Woodrat	<i>Neotoma floridana</i>
Norway Rat	<i>Rattus norvegicus</i>
House Mouse	<i>Mus musculus</i>
Prairie Vole	<i>Microtus ochrogaster</i>
Coyote	<i>Canis latrans</i>
Northern Raccoon	<i>Procyon lotor</i>
Least Weasel	<i>Mustela nivalis</i>
Badger	<i>Taxidea taxus</i>
Striped Skunk	<i>Mephitis mephitis</i>
Bobcat	<i>Lynx rufus</i>
White-tailed Deer	<i>Odocoileus virginianus</i>

Reptiles	
Eastern Collared Lizard	<i>Crotaphytus collaris</i>
Great Plains Skink	<i>Eumeces obsoletus</i>
Six-lined Racerunner	<i>Aspidoscelis sexlineatus</i>
Western Slender Glass Lizard	<i>Ophisaurus attenuatus</i>
Prairie Kingsnake	<i>Lampropeltis calligaster</i>
Speckled Kingsnake	<i>Lampropeltis holbrooki</i>
Great Plains Rat Snake	<i>Elaphe emoryi</i>
Western Rat Snake	<i>Elaphe obsoleta</i>
Gopher Snake	<i>Pituophis catenifer</i>
Flathead Snake	<i>Tantilla gracilis</i>

Plains Blackhead Snake	<i>Tantilla nigriceps</i>
Ringneck Snake	<i>Diadophis punctatus</i>
Dekay's Brown Snake	<i>Storeria dekayi</i>
Common Garter Snake	<i>Thamnophis sirtalis</i>
Ornate Box Turtle	<i>Terrapene ornata</i>

Birds	
Northern Bobwhite	<i>Coinus virginianus</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Wild Turkey	<i>Meleagris gallopavo</i>
Turkey Vulture	<i>Cathartes aura</i>
Osprey	<i>Pandion haliaetus</i>
Mississippi Kite	<i>Ictinia mississippiensis</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Northern Harrier	<i>Circus cyaneus</i>
Sharp-shinned Hawk	<i>Accipiter striatus</i>
Cooper's Hawk	<i>Accipiter cooperii</i>
Northern Goshawk	<i>Accipiter gentilis</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
Rough-legged Hawk	<i>Buteo lagopus</i>
Golden Eagle	<i>Aquila chrysaetos</i>
Killdeer	<i>Charadrius vociferus</i>
Eurasian Collared-Dove	<i>Streptopelia decaocto</i>
White-winged Dove	<i>Zenaida asiatica</i>
Mourning Dove	<i>Zenaida macroura</i>
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
Barn Owl	<i>Tyto alba</i>
Eastern Screech Owl	<i>Megascops asio</i>
Great Horned Owl	<i>Bubo virginianus</i>
Barred Owl	<i>Strix varia</i>
Long-eared Owl	<i>Asio otus</i>
Short-eared Owl	<i>Asio flammeus</i>
Common Nighthawk	<i>Chordeiles minor</i>
Common Poorwill	<i>Phalaenoptilus nuttallii</i>
Chuck-will's-widow	<i>Antrostomus carolinensis</i>
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>
Belted Kingfisher	<i>Megaceryle alcyon</i>
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Hairy Woodpecker	<i>Picoides villosus</i>
Northern Flicker	<i>Colaptes auratus</i>

American Kestrel	<i>Falco sparverius</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Eastern Wood-Pewee	<i>Contopus virens</i>
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>
Alder Flycatcher	<i>Empidonax alnorum</i>
Willow Flycatcher	<i>Empidonax traillii</i>
Least Flycatcher	<i>Empidonax minimus</i>
Eastern Phoebe	<i>Sayornis phoebe</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>
Western Kingbird	<i>Tyrannus verticalis</i>
Eastern Kingbird	<i>Tyrannus tyrannus</i>
Scissor-tailed Flycatcher	<i>Tyrannus forficatus</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Northern Shrike	<i>Lanius excubitor</i>
White-eyed Vireo	<i>Vireo griseus</i>
Bell's Vireo	<i>Vireo bellii</i>
Yellow-throated Vireo	<i>Vireo flavifrons</i>
Blue-headed Vireo	<i>Vireo solitarius</i>
Warbling Vireo	<i>Vireo gilvus</i>
Philadelphia Vireo	<i>Vireo philadelphicus</i>
Blue Jay	<i>Cyanocitta cristata</i>
American Crow	<i>Corvus brachyrhynchos</i>
Horned Lark	<i>Eremophila alpestris</i>
Purple Martin	<i>Progne subis</i>
Tree Swallow	<i>Tachycineta bicolor</i>
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Bank Swallow	<i>Riparia riparia</i>
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>
Barn Swallow	<i>Hirundo rustica</i>
Carolina Chickadee	<i>Poecile carolinensis</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>
Tufted Titmouse	<i>Baeolophus bicolor</i>
Red-breasted Nuthatch	<i>Sitta canadensis</i>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
Brown Creeper	<i>Certhia americana</i>
House Wren	<i>Troglodytes aedon</i>
Winter Wren	<i>Troglodytes hiemalis</i>
Sedge Wren	<i>Cistothorus platensis</i>
Marsh Wren	<i>Cistothorus palustris</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>
Bewick's Wren	<i>Thryomanes bewickii</i>
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>
Golden-crowned Kinglet	<i>Regulus satrapa</i>
Ruby-crowned Kinglet	<i>Regulus calendula</i>
Eastern Bluebird	<i>Sialia sialis</i>

Mountain Bluebird	<i>Sialia currcoides</i>
Townsend's Solitaire	<i>Myadestes townsendi</i>
Swainson's Thrush	<i>Catharus ustulatus</i>
Hermit Thrush	<i>Catharus guttatus</i>
Wood Thrush	<i>Hylocichla mustelina</i>
American Robin	<i>Turdus migratorius</i>
Varied Thrush	<i>Ixoreus naevius</i>
Gray Catbird	<i>Dumetella carolinensis</i>
Brown Thrasher	<i>Toxostoma rufum</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
European Starling	<i>Sturnus vulgaris</i>
American Pipit	<i>Anthus rubescens</i>
Sprague's Pipit	<i>Anthus spragueii</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>
Lapland Longspur	<i>Calcarius lapponicus</i>
Smith's Longspur	<i>Calcarius pictus</i>
Chestnut-collared Longspur	<i>Calcarius ornatus</i>
Snow Bunting	<i>Plectrophenax nivalis</i>
Ovenbird	<i>Seiurus aurocapilla</i>
Louisiana Waterthrush	<i>Parkesia motacilla</i>
Kentucky Warbler	<i>Geothlypis formosa</i>
Black-and-white Warbler	<i>Mniotilta varia</i>
Prothonotary Warbler	<i>Protonotaria citrea</i>
Tennessee Warbler	<i>Oreothlypis peregrina</i>
Orange-crowned Warbler	<i>Oreothlypis celeta</i>
Nashville Warbler	<i>Oreothlypis ruficapilla</i>
Mourning Warbler	<i>Geothlypis philadelphia</i>
Common Yellow Throat	<i>Geothlypis trichas</i>
American Redstart	<i>Setophaga ruticilla</i>
Northern Parula	<i>Setophaga amerioa</i>
Magnolia Warbler	<i>Setophaga magnolia</i>
Blackburnian Warbler	<i>Setophaga fusca</i>
Yellow Warbler	<i>Setophaga petechia</i>
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>
Blackpoll Warbler	<i>Setophaga striata</i>
Pine Warbler	<i>Setophaga pinus</i>
Yellow-rumped Warbler	<i>Setophaga coronata</i>
Yellow-throated Warbler	<i>Setophaga dominica</i>
Black-throated Green Warbler	<i>Setophaga virens</i>
Canada Warbler	<i>Cardellina canadensis</i>
Wilson's Warbler	<i>Cardellina pusillaeas</i>
Spotted Towhee	<i>Pipilo maculatus</i>
Eastern Towhee	<i>Pipilo erythrophthalmus</i>
American Tree Sparrow	<i>Spizella arborea</i>
Chipping Sparrow	<i>Spizella passerina</i>

Clay-colored Sparrow	<i>Spizella pallida</i>
Field Sparrow	<i>Spizella pusilla</i>
Vesper Sparrow	<i>Pooecetes gramineus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Lark Bunting	<i>Calamospiza melanocorys</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Grasshopper Sparrow	<i>Ammondramus savannarum</i>
Baird's Sparrow	<i>Ammondramus bairdii</i>
Le Conte's Sparrow	<i>Ammondramus leconteii</i>
Fox Sparrow	<i>Passerella iliaca</i>
Song Sparrow	<i>Melospiza melodia</i>
Lincoln's Sparrow	<i>Melospiza lincolni</i>
Swamp Sparrow	<i>Melospiza gerogiana</i>
White-throated Sparrow	<i>Zonotrichia albicollis</i>
Harris's Sparrow	<i>Zonotrichia querula</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Summer Tanager	<i>Piranga rubra</i>
Scarlet Tanager	<i>Piranga olivacea</i>
Northern Cardinal	<i>Cardinalis cardinalis</i>
Blue Grosbeak	<i>Passerina caerulea</i>
Lazuli Bunting	<i>Passerina amoena</i>
Painted Bunting	<i>Passerina ciris</i>
Dickeissel	<i>Spiza americana</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Eastern Meadowlark	<i>Sturnella magna</i>
Western Meadowlark	<i>Sturnella neglecta</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Rusty Blackbird	<i>Euphagus carolinus</i>
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>
Common Grackle	<i>Quiscalus quiscula</i>
Great-tailed Grackle	<i>Quiscalus mexicanus</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Orchard Oriole	<i>Icterus spurius</i>
Baltimore Oriole	<i>Icterus galbula</i>
House Finch	<i>Haemorhous mexicanus</i>
Purple Finch	<i>Haemorhous purpureus</i>
Red Crossbill	<i>Loxia curvirostra</i>
Pine Siskin	<i>Spinus pinus</i>
American Goldfinch	<i>Spinus tristis</i>
House Sparrow	<i>Passer domesticus</i>

Attachment 10

State Historical Preservation Office Review

El Dorado State Park
618 NE Bluestem Rd.
El Dorado, KS 67042-8643



phone: 316-321-7180
fax: 316-321-7190
ElDoradoSP@ksoutdoors.com
www.kdwp.state.ks.us

Robin Jennison, Secretary

Department of Wildlife, Parks, and
Tourism

Sam Brownback, Governor

November 5, 2012

Jennie Chinn
State Historical Preservation Officer
Cultural Resources Division
State Historical Society
Kansas History Center
6425 SW 6th Ave
Topeka, KS 66615-1099

Ms. Chinn:

I am requesting archeological clearance for a project to be completed in El Dorado State Park, Butler County, Kansas.

Location:

El Dorado State Park, Park Office Area: The specific location is S32 , T25 , R06E , NE4; NW4; N/2 N/2 NE4 SW4; BEG SE/C SW4 W330 N330 E330 S330 TO POB; W/2 SE4 LESS ROW

Description:

This project will be for the addition of a firearms range next to the park office. Ground has been previously disturbed in most of the area during initial construction of El Dorado State Park.

I have included aerial photographs of the site to aid in identification. I have reviewed the historical site maps and found to the best of my knowledge that the project should not affect any previously known historical archeological sites. Any fees assessed for this clearance can be billed directly to El Dorado State Park. Should you require any further information, please contact me.

Thank you,

Seth M Turner
Manager, El Dorado State Park
Kansas Wildlife, Parks, & Tourism

6425 SW 6th Avenue
Topeka, KS 66615



KSR&C No. 12-11-047

phone: 785-272-8681
fax: 785-272-8682
cultural_resources@kshs.org

Kansas Historical Society

Sam Brownback, Governor
Jennie Chinn, Executive Director

November 8, 2012

Seth M. Turner
Manager, El Dorado State Park
Kansas Wildlife & Parks
618 NE Bluestem Road
El Dorado KS 67042

RE: Firearms Range
El Dorado State Park
Butler County

Dear Mr. Turner:

The Kansas State Historic Preservation Office has reviewed its cultural resources files for the area of the above-referenced project in accordance with 36 CFR 800. The project, as proposed, should have no effect on properties listed in the National Register of Historic Places or otherwise identified in our files. This office has no objection to implementation of the project.

Any changes to the project area that include additional ground disturbing activities will need to be reviewed by this office prior to beginning construction. If construction work uncovers buried archaeological materials, work should cease in the area of the discovery and this office should be notified immediately.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Tim Weston 785-272-8681 (ex. 214). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,
Jennie Chinn
State Historic Preservation Officer


Patrick Zollner
Deputy State Historic Preservation Officer

Attachment 11

Firearm Sound Readings



Preliminary sound readings for firearms range.

Readings taken on Sept 2, 2013.

Reading from corps sign @ 4 way stop in front of office at 1:30 pm

Average decibel reading with no traffic: mid 50's

Average decibel reading with traffic: approx 75

High decibel reading: 80

Readings taken at driveway to first house south of park office at approx 1:45pm

Average reading with no traffic: low to mid 50's

Average reading with traffic: approx 75

High decibel reading: 90 (Harley Davidson)

Reading taken at last driveway south of park office at approx 2:00 pm

Average decibel reading with no traffic: low to mid 50's

Average decibel reading with traffic: 75 to 78

High decibel reading: 86

At the time these readings were taken there was some boat and jet ski traffic that was audible but I noticed no substantial difference in readings.

Range Decibel Reading 1/14/2014			
Start Time: 10:00	Temp.: 43 F	Humidity: 57%	Wind: N 25 mph

Location 1			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			80
Rimfire Rifle	.22 LR		80
Rimfire Rifle	.22 WMR		85
Centerfire Rifle	30-30	150 gr SP	81
Centerfire Rifle	.303 British	150 gr SP	81
Centerfire Rifle	.308 Win	150 gr SP	75
Centerfire Rifle	30-06	180 gr sp	80
Centerfire Rifle	7 MM Mag	150 gr SP	84
Centerfire Rifle	.223	55 gr FMJ	80
Handgun	9 MM	125 gr FMJ	81
Handgun	.40 Cal.	180 gr FMJ	81
Handgun	.45 Cal.	230 gr FMJ	89
Shotgun	12 Ga.	00 Buck 1145 FPS	85
Shotgun	16 Ga.	1 oz 8 shot	83
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	82

Location 2			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			73
Rimfire Rifle	.22 LR		73
Rimfire Rifle	.22 WMR		73
Centerfire Rifle	30-30	150 gr SP	74
Centerfire Rifle	.303 British	150 gr SP	73
Centerfire Rifle	.308 Win	150 gr SP	75
Centerfire Rifle	30-06	180 gr sp	77
Centerfire Rifle	7 MM Mag	150 gr SP	77
Centerfire Rifle	.223	55 gr FMJ	71
Handgun	9 MM	125 gr FMJ	70
Handgun	.40 Cal.	180 gr FMJ	75
Handgun	.45 Cal.	230 gr FMJ	75
Shotgun	12 Ga.	00 Buck 1145 FPS	73
Shotgun	16 Ga.	1 oz 8 shot	73
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	73

Location 3			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			43
Rimfire Rifle	.22 LR		43
Rimfire Rifle	.22 WMR		43
Centerfire Rifle	30-30	150 gr SP	43
Centerfire Rifle	.303 British	150 gr SP	43
Centerfire Rifle	.308 Win	150 gr SP	46
Centerfire Rifle	30-06	180 gr sp	46
Centerfire Rifle	7 MM Mag	150 gr SP	46
Centerfire Rifle	.223	55 gr FMJ	44
Handgun	9 MM	125 gr FMJ	43
Handgun	.40 Cal.	180 gr FMJ	43
Handgun	.45 Cal.	230 gr FMJ	43
Shotgun	12 Ga.	00 Buck 1145 FPS	44
Shotgun	16 Ga.	1 oz 8 shot	43
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	43

Location 4			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			48
Rimfire Rifle	.22 LR		49
Rimfire Rifle	.22 WMR		50
Centerfire Rifle	30-30	150 gr SP	66
Centerfire Rifle	.303 British	150 gr SP	57
Centerfire Rifle	.308 Win	150 gr SP	66
Centerfire Rifle	30-06	180 gr sp	55
Centerfire Rifle	7 MM Mag	150 gr SP	68
Centerfire Rifle	.223	55 gr FMJ	64
Handgun	9 MM	125 gr FMJ	53
Handgun	.40 Cal.	180 gr FMJ	58
Handgun	.45 Cal.	230 gr FMJ	52
Shotgun	12 Ga.	00 Buck 1145 FPS	50
Shotgun	16 Ga.	1 oz 8 shot	51
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	63

Location 5			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			48
Rimfire Rifle	.22 LR		48
Rimfire Rifle	.22 WMR		48
Centerfire Rifle	30-30	150 gr SP	54
Centerfire Rifle	.303 British	150 gr SP	55
Centerfire Rifle	.308 Win	150 gr SP	57
Centerfire Rifle	30-06	180 gr sp	55
Centerfire Rifle	7 MM Mag	150 gr SP	58
Centerfire Rifle	.223	55 gr FMJ	50
Handgun	9 MM	125 gr FMJ	51
Handgun	.40 Cal.	180 gr FMJ	51
Handgun	.45 Cal.	230 gr FMJ	56
Shotgun	12 Ga.	00 Buck 1145 FPS	48
Shotgun	16 Ga.	1 oz 8 shot	49
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	50

Location 6			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			35
Rimfire Rifle	.22 LR		35
Rimfire Rifle	.22 WMR		35
Centerfire Rifle	30-30	150 gr SP	45
Centerfire Rifle	.303 British	150 gr SP	38
Centerfire Rifle	.308 Win	150 gr SP	50
Centerfire Rifle	30-06	180 gr sp	50
Centerfire Rifle	7 MM Mag	150 gr SP	53
Centerfire Rifle	.223	55 gr FMJ	42
Handgun	9 MM	125 gr FMJ	35
Handgun	.40 Cal.	180 gr FMJ	42
Handgun	.45 Cal.	230 gr FMJ	44
Shotgun	12 Ga.	00 Buck 1145 FPS	41
Shotgun	16 Ga.	1 oz 8 shot	35
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	41

Range Decibel Reading 1/21/2014			
Start Time: 1:00	Temp.: 21 F	Humidity: 21%	Wind: S 1 mph
Location 1			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			32
Truck Driving By			75
Rimfire Rifle	.22 LR		32
Rimfire Rifle	.22 WMR		32
Centerfire Rifle	30-30	150 gr SP	45
Centerfire Rifle	.303 British	150 gr SP	46
Centerfire Rifle	.308 Win	150 gr SP	51
Centerfire Rifle	30-06	180 gr sp	53
Centerfire Rifle	7 MM Mag	150 gr SP	48
Centerfire Rifle	.223	55 gr FMJ	43
Handgun	9 MM	125 gr FMJ	45
Handgun	.40 Cal.	180 gr FMJ	42
Handgun	.45 Cal.	230 gr FMJ	51
Shotgun	12 Ga.	00 Buck 1145 FPS	43
Shotgun	16 Ga.	1 oz 8 shot	44
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	51

Location 2			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			31
Dog Barking			47
Rimfire Rifle	.22 LR		31
Rimfire Rifle	.22 WMR		31
Centerfire Rifle	30-30	150 gr SP	44
Centerfire Rifle	.303 British	150 gr SP	41
Centerfire Rifle	.308 Win	150 gr SP	44
Centerfire Rifle	30-06	180 gr sp	44
Centerfire Rifle	7 MM Mag	150 gr SP	47
Centerfire Rifle	.223	55 gr FMJ	44
Handgun	9 MM	125 gr FMJ	40
Handgun	.40 Cal.	180 gr FMJ	41
Handgun	.45 Cal.	230 gr FMJ	45
Shotgun	12 Ga.	00 Buck 1145 FPS	34
Shotgun	16 Ga.	1 oz 8 shot	34
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	44

Location 3			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			31
Airplane Overhead			52
Rimfire Rifle	.22 LR		31
Rimfire Rifle	.22 WMR		31
Centerfire Rifle	30-30	150 gr SP	31
Centerfire Rifle	.303 British	150 gr SP	31
Centerfire Rifle	.308 Win	150 gr SP	31
Centerfire Rifle	30-06	180 gr sp	33
Centerfire Rifle	7 MM Mag	150 gr SP	34
Centerfire Rifle	.223	55 gr FMJ	31
Handgun	9 MM	125 gr FMJ	31
Handgun	.40 Cal.	180 gr FMJ	31
Handgun	.45 Cal.	230 gr FMJ	31
Shotgun	12 Ga.	00 Buck 1145 FPS	31
Shotgun	16 Ga.	1 oz 8 shot	31
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	31

Location 4			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			30
Car Driving By			71
Rimfire Rifle	.22 LR		30
Rimfire Rifle	.22 WMR		39
Centerfire Rifle	30-30	150 gr SP	50
Centerfire Rifle	.303 British	150 gr SP	49
Centerfire Rifle	.308 Win	150 gr SP	55
Centerfire Rifle	30-06	180 gr sp	56
Centerfire Rifle	7 MM Mag	150 gr SP	52
Centerfire Rifle	.223	55 gr FMJ	41
Handgun	9 MM	125 gr FMJ	48
Handgun	.40 Cal.	180 gr FMJ	49
Handgun	.45 Cal.	230 gr FMJ	49
Shotgun	12 Ga.	00 Buck 1145 FPS	36
Shotgun	16 Ga.	1 oz 8 shot	27
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	40

Location 5			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			31
Rimfire Rifle	.22 LR		31
Rimfire Rifle	.22 WMR		31
Centerfire Rifle	30-30	150 gr SP	47
Centerfire Rifle	.303 British	150 gr SP	48
Centerfire Rifle	.308 Win	150 gr SP	54
Centerfire Rifle	30-06	180 gr sp	53
Centerfire Rifle	7 MM Mag	150 gr SP	53
Centerfire Rifle	.223	55 gr FMJ	45
Handgun	9 MM	125 gr FMJ	43
Handgun	.40 Cal.	180 gr FMJ	49
Handgun	.45 Cal.	230 gr FMJ	44
Shotgun	12 Ga.	00 Buck 1145 FPS	46
Shotgun	16 Ga.	1 oz 8 shot	42
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	44

Location 6			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			31
Rimfire Rifle	.22 LR		31
Rimfire Rifle	.22 WMR		31
Centerfire Rifle	30-30	150 gr SP	38
Centerfire Rifle	.303 British	150 gr SP	40
Centerfire Rifle	.308 Win	150 gr SP	43
Centerfire Rifle	30-06	180 gr sp	40
Centerfire Rifle	7 MM Mag	150 gr SP	48
Centerfire Rifle	.223	55 gr FMJ	36
Handgun	9 MM	125 gr FMJ	34
Handgun	.40 Cal.	180 gr FMJ	37
Handgun	.45 Cal.	230 gr FMJ	40
Shotgun	12 Ga.	00 Buck 1145 FPS	33
Shotgun	16 Ga.	1 oz 8 shot	31
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	36

Range Decibel Reading 1/24/2014			
Start Time: 10:30	Temp.: 21 F	Humidity: 28%	Wind: SSW 25 mph
Location 1			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			70
Rimfire Rifle	.22 LR		70
Rimfire Rifle	.22 WMR		70
Centerfire Rifle	30-30	150 gr SP	72
Centerfire Rifle	.303 British	150 gr SP	71
Centerfire Rifle	.308 Win	150 gr SP	74
Centerfire Rifle	30-06	180 gr sp	71
Centerfire Rifle	7 MM Mag	150 gr SP	79
Centerfire Rifle	0.223	55 gr FMJ	70
Handgun	9 MM	125 gr FMJ	70
Handgun	.40 Cal.	180 gr FMJ	76
Handgun	.45 Cal.	230 gr FMJ	70
Shotgun	12 Ga.	00 Buck 1145 FPS	70
Shotgun	16 Ga.	1 oz 8 shot	70
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	70

Location 2			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			42
Rimfire Rifle	.22 LR		42
Rimfire Rifle	.22 WMR		42
Centerfire Rifle	30-30	150 gr SP	43
Centerfire Rifle	.303 British	150 gr SP	43
Centerfire Rifle	.308 Win	150 gr SP	43
Centerfire Rifle	30-06	180 gr sp	44
Centerfire Rifle	7 MM Mag	150 gr SP	46
Centerfire Rifle	0.223	55 gr FMJ	43
Handgun	9 MM	125 gr FMJ	42
Handgun	.40 Cal.	180 gr FMJ	42
Handgun	.45 Cal.	230 gr FMJ	43
Shotgun	12 Ga.	00 Buck 1145 FPS	34
Shotgun	16 Ga.	1 oz 8 shot	32
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	43

Location 3			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			39
Rimfire Rifle	.22 LR		39
Rimfire Rifle	.22 WMR		40
Centerfire Rifle	30-30	150 gr SP	41
Centerfire Rifle	.303 British	150 gr SP	41
Centerfire Rifle	.308 Win	150 gr SP	41
Centerfire Rifle	30-06	180 gr sp	45
Centerfire Rifle	7 MM Mag	150 gr SP	48
Centerfire Rifle	0.223	55 gr FMJ	43
Handgun	9 MM	125 gr FMJ	41
Handgun	.40 Cal.	180 gr FMJ	40
Handgun	.45 Cal.	230 gr FMJ	46
Shotgun	12 Ga.	00 Buck 1145 FPS	48
Shotgun	16 Ga.	1 oz 8 shot	40
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	43

Location 4			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			49
Rimfire Rifle	.22 LR		49
Rimfire Rifle	.22 WMR		49
Centerfire Rifle	30-30	150 gr SP	51
Centerfire Rifle	.303 British	150 gr SP	51
Centerfire Rifle	.308 Win	150 gr SP	51
Centerfire Rifle	30-06	180 gr sp	53
Centerfire Rifle	7 MM Mag	150 gr SP	54
Centerfire Rifle	0.223	55 gr FMJ	51
Handgun	9 MM	125 gr FMJ	49
Handgun	.40 Cal.	180 gr FMJ	49
Handgun	.45 Cal.	230 gr FMJ	52
Shotgun	12 Ga.	00 Buck 1145 FPS	51
Shotgun	16 Ga.	1 oz 8 shot	51
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	51

Location 5			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			55
Rimfire Rifle	.22 LR		55
Rimfire Rifle	.22 WMR		55
Centerfire Rifle	30-30	150 gr SP	59
Centerfire Rifle	.303 British	150 gr SP	59
Centerfire Rifle	.308 Win	150 gr SP	60
Centerfire Rifle	30-06	180 gr sp	58
Centerfire Rifle	7 MM Mag	150 gr SP	62
Centerfire Rifle	0.223	55 gr FMJ	57
Handgun	9 MM	125 gr FMJ	59
Handgun	.40 Cal.	180 gr FMJ	57
Handgun	.45 Cal.	230 gr FMJ	59
Shotgun	12 Ga.	00 Buck 1145 FPS	57
Shotgun	16 Ga.	1 oz 8 shot	56
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	58

Location 6			
Weapon	Caliber	Ammo Load	Decibel Reading
Base Reading			47
Rimfire Rifle	.22 LR		47
Rimfire Rifle	.22 WMR		47
Centerfire Rifle	30-30	150 gr SP	47
Centerfire Rifle	.303 British	150 gr SP	47
Centerfire Rifle	.308 Win	150 gr SP	47
Centerfire Rifle	30-06	180 gr sp	48
Centerfire Rifle	7 MM Mag	150 gr SP	50
Centerfire Rifle	0.223	55 gr FMJ	47
Handgun	9 MM	125 gr FMJ	47
Handgun	.40 Cal.	180 gr FMJ	47
Handgun	.45 Cal.	230 gr FMJ	50
Shotgun	12 Ga.	00 Buck 1145 FPS	47
Shotgun	16 Ga.	1 oz 8 shot	47
Shotgun	20 Ga.	3/4 oz slug 1600 FPS	47

Attachment 12

DWR Review

El Dorado State Park Shooting Range - Floodplain Map

1-13-2014

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 Flood Zone A

