



RECORD OF DECISION

Lake Meredith National Recreation Area Off-road Vehicle Management Plan and Final Environmental Impact Statement

INTRODUCTION

The Department of the Interior, National Park Service (NPS) has prepared this Record of Decision (ROD) for the Lake Meredith National Recreation Area Off-road Vehicle Management Plan and Environmental Impact Statement (plan/EIS). This ROD is in accordance with the requirements of the National Environmental Policy Act of 1969, as amended (NEPA), its implementing regulations (40 CFR 1500–1508), the Department of the Interior NEPA regulations (43 CFR 46), and NPS Director's Order 12, Conservation Planning, Environmental Impact Analysis and Decision-Making and accompanying handbook. This ROD includes a summary of the purpose and need for action, discusses the basis for the decision, describes the other alternatives considered and the environmentally preferable alternative, lists measures to minimize environmental harm, and findings of non- impairment of park resources and values.

BACKGROUND

Congress established Lake Meredith National Recreation Area (the recreation area) in 1990 "to provide for public outdoor recreation use and enjoyment of the lands and waters associated with Lake Meredith in the State of Texas, and to protect the scenic, scientific, cultural, and other values contributing to the public enjoyment of such lands and waters" 16 U.S.C 460eee.

Situated approximately 35 miles north of Amarillo, Texas within Potter, Moore, Hutchinson, and Carson counties, the recreation area is approximately 45,000 acres in size and is the largest public landmass in the Texas Panhandle. The recreation area includes a variety of habitats that are uncommon in the region, including aquatic, wetland, and riparian areas, and one of the few areas in the region with trees. The natural and geologic resources of the area have enabled human survival, subsistence, and adaptation that have resulted in a continuum of human presence in the area for more than 13,000 years. The recreation area is also home to the Arkansas River shiner (*Notropis girardi*), a federally-threatened fish species.

The recreation area provides a variety of visitor experiences, including the use of off-road vehicles (ORVs). In 1975, the NPS promulgated a special regulation (40 FR 762, January 3, 1975) at 36 CFR 7.57(a) designating two ORV use areas at the recreation area. These two areas, currently designated as off-highway vehicle (OHV)¹ areas, are:

Rosita (also known as Rosita Flats), with approximately 1,740 acres for ORV use below the 3,000-foot elevation line, and Blue Creek, with 275 acres for ORV use. Rosita Flats is a riparian area of the Canadian River at the southern end of the national recreation area. The Blue Creek ORV use area is in the Blue Creek riparian area (which empties into Lake Meredith). Historically the local community used these two areas for recreational purposes prior to the establishment of the Sanford River Project in 1965.

¹ To avoid confusion, and for the purpose of this plan/EIS, the term ORV includes OHV areas

Since the designation of Rosita Flats and Blue Creek as ORV use areas by special regulation 36 CFR 7.57, ORV use at the national recreation area has changed considerably, both in intensity and in the types of vehicles used. Throughout the 1960s, the vehicles primarily consisted of a small number of "river buggies" crafted from old automobiles to operate in the Canadian River bottom. A few people used dirt bikes, motorcycles, or surplus military vehicles to access the area. The standard four-wheel-drive vehicles that are prevalent today were not as common and were rarely seen at the national recreation area. Regardless of the vehicle type, the majority of ORV use at the national recreation area has been for recreation, as opposed to transportation.

ORV use at Blue Creek is allowed only in the creek bottom along both sides from cutbank to cutbank. Cutbanks are defined by the national recreation area as the area at the base of the hills at the edges of the creek bed. Trails at Blue Creek generally stay within 0.5 mile of the creek. ORV use at Rosita is in the Canadian River bed as well as the surrounding hills, in some cases out to a mile or more. Although the authorized area at Rosita is below the 3,000-foot elevation line, and ORV use outside the authorized use areas is officially not allowed, it is difficult for ORV users to determine the exact location of the 3,000-foot elevation line. Although maps of designated ORV use areas are made available on bulletin boards and provided to ORV groups, once visitors enter the Rosita Flats area or the Blue Creek area, ORV boundaries may not be clearly visible. Sporadic fencing exists at the 3,000-foot elevation line in parts of Rosita, but encroachment above the line still occurs. Likewise, ORV users may find staying within the cutbanks in the Blue Creek area difficult, as the cutbank demarcation may be ambiguous.

PURPOSE AND NEED FOR ACTION

The purpose of this plan/EIS is to manage ORV use in the national recreation area for visitor enjoyment and recreation opportunities, while minimizing and correcting damage to resources.

An ORV management plan for Lake Meredith National Recreation Area is needed at this time to

- Comply with Executive Order 11644, Use of Off-road Vehicles on Public Lands
- Provide for sustainable recreational ORV use areas
- Address the lack of an approved plan, which has led to ORV use outside authorized areas
- Address resource impacts resulting from ORV use
- Address the change in numbers, power, range, and capabilities of ORVs

The objectives of the final plan/EIS are listed below.

Visitor Use and Safety

- Manage ORV use to minimize conflicts among different ORV users.
- Promote safe operation of ORVs and safety of all visitors.

Management

- Build stewardship through public awareness and understanding of NPS resource management and visitor use policy and responsibilities as they pertain to the national recreation area and ORV management.

Natural Resources

- Minimize adverse impacts on threatened, endangered, and other protected species and their habitats.
- Define effective strategies for soil erosion control and restoration of plant resources to support wildlife populations.

National Recreation Area Operations

- Identify ORV plan implementation needs and costs.
- Minimize national recreation area operations and cost impacts as the result of implementing an ORV plan.

ALTERNATIVES CONSIDERED

Alternatives Development Process

Alternatives analyzed in the plan/EIS were developed based on the results of internal and public scoping, agency input, as well as past and ongoing planning efforts. These alternatives meet, to a large degree, the management objectives of the recreation area, while also meeting the overall purpose of and need for proposed action. Because each of the identified action alternatives is responsive to the objectives, the alternatives are considered reasonable. Alternatives and actions that were considered but were not technically or economically feasible, did not meet the purpose of and need for the plan, created unnecessary or excessive adverse impacts to resources, and/or conflicted with the overall management of the recreation area or its resources were dismissed from further analysis.

Alternatives Analyzed in the Final Plan/EIS

Alternative A: No Action – Continuation of Current Management—Under the no-action alternative management of ORV use and access at the national recreation area would continue under current management strategies based on the 2007 *Interim OHV Use Plan* (NPS 2007a) as well as through the regulations contained in 36 CFR 7.57 and the Superintendent's Compendium. ORV use would continue to be permitted throughout Rosita Flats below the 3,000-foot elevation line and at Blue Creek along the creek bottom from cutbank to cutbank. No additional management tools such as zoning, permits, or use limits would be implemented.

Alternative B: Zone System – Separation of Visitor Uses, with a Permit for Educational Purposes—Under alternative B the national recreation area would, in part, base the designation of routes and areas on a zoning system, with one of the purposes being the separation of visitor uses that have the potential to conflict with one another. Established zones could include camping only, hunting, resource protection, low-speed, and beginner. At Rosita Flats, two areas would be established as an ORV area and open to ORV use: 1) the area south of the river (currently denuded of vegetation); and 2) the area east of Bull Taco Hill. Access to the riverbed from the ORV use area south of the river would be from designated access points only. Outside the two ORV use areas, ORV use would be permitted only on designated, marked routes. At Blue Creek, ORVs would be allowed only on sandy bottom areas and designated routes, with ORV use prohibited on vegetated areas.

Alternative C: Management through Use of a Permit System at Current ORV Use Areas—Under alternative C the national recreation area would manage ORV use through a permit system as well as through the establishment of use limits. Permits would include a fee and initially there would be no limit

on the number of permits issued. ORV routes and areas would be the same as those under alternative B, except that there would be one designated ORV use area in Rosita Flats, instead of two.

Alternative D: Management through Use of a Zoning and Permitting System at Current ORV Use Areas—Under alternative D the national recreation area would, in part, base the designation of routes and areas on a zoning system, with one of the purposes being the separation of visitor uses that have the potential to conflict with one another, similar to the system under alternative B. In addition, a fee permit system would be instituted that would allow the national recreation area to provide additional enforcement and amenities in the ORV use area, but would not establish use limits.

SELECTED ALTERNATIVE

The NPS will implement “Alternative D. Management through Use of a Zoning and Permitting System at Current ORV Use Areas.” The details of the Selected Alternative are described below.

Routes and Areas Designation

Under the Selected Alternative, the NPS will base the designation of routes and areas on a zoning system, with one of the purposes being the separation of visitor uses that have the potential to conflict with one another. ORV routes and areas will be established as follows:

- **Blue Creek**—ORVs will be allowed only on sandy bottom areas and designated routes, with ORV use prohibited on vegetated areas. Routes and areas where ORV use is allowed will be marked by carsonite posts.
- **Rosita Flats**—The area south of the river (currently denuded of vegetation) will be established as an ORV area and will be open to ORV use. Access to the riverbed from this ORV use area will be from designated access points only. A second ORV use area will be established east of Bull Taco Hill. Outside these ORV use areas, ORV use will be permitted only on designated, marked routes. ORVs could access the riverbed area only from marked and designated access points off the designated ORV routes. In the ORV use area and on ORV routes, driving on vegetated areas will be prohibited.

The Selected Alternative will also institute a zoning system that will be a layer on top of these routes and areas, further managing use. The following zones will be established:

- **Camping Only**—Areas will be established in Blue Creek and Rosita Flats that will be managed for camping. This management will include allowing ORVs in these zones only for camping and access purposes, prohibiting other recreational ORV use. These areas will be clearly marked with posts and cables. A 15 mph speed limit will be enforced in this zone to reduce the potential for conflicts between users. The road to the designated camping area in Rosita Flats will be improved, but not paved, to assist in the evacuation of visitors during rainstorms when the area becomes muddy. In these designated camping areas, picnic tables and fire pits may be provided. No vehicle camping (camping in a car, in a trailer, or in another motorized vehicle) will be permitted outside these areas, including within designated ORV routes and areas. The Selected Alternative will permit tent camping (no vehicles) outside of these designated camping areas in previously disturbed areas or areas that have no vegetation. Campers will be required to park vehicles in an area away from vegetation along designated ORV routes or areas and walk to where tent camping is permitted to set up their tent.
- **Hunting**—At Rosita Flats and Blue Creek, areas that are already designated for hunting during rifle season will be closed to recreational ORV use during this season. Hunters using ORVs for

access to hunting will be allowed and will be required to stay on designated routes. The rifle hunting season (deer/general gun season) is expected to last approximately eight weeks per year. During these months, ORV users who are not hunting will not be allowed in this zone.

- **Resource Protection**—A resource protection zone will be established in Rosita Flats north and east of the Bull Taco Hill ORV use area to protect vegetation and reduce soil erosion. This zone will permit only vehicles with a wheel width of 64 inches or less.
- **Low-speed**—At Blue Creek, a low-speed zone will be established on either side of the FM 1913 bridge, as many families recreate in this area and a lower speed limit will reduce the potential for conflicts between ORV users and non-ORV users. Low-speed zones will not be established at Rosita Flats.
- **Beginner**—At Rosita Flats, a beginner loop will be established to provide an opportunity for new riders to recreate in an area with others of a similar skill level. In this zone, the speed limit will be lower than 20 mph. Beginner zones will not be established at Blue Creek.

Operator/Vehicle Requirements

- Vehicles operating in any ORV use area of the national recreation area must have an ORV use decal, per Texas state law.
- All-terrain vehicle (ATV)-specific operator and vehicle requirements, per Texas state law, include the following:
 - ATV operators must wear eye protection and helmets approved by the Texas Department of Transportation.
 - ATV operators must possess valid safety certificates issued by the state of Texas under Section 663.031 of the Texas Transportation Code.
 - Any ATV operator under the age of 14 must be accompanied by a parent or guardian.
 - ATV operators may not carry passengers unless the vehicle is designed by the manufacturer for carrying passengers.
 - All ORVs will be required to have a functioning muffler system, a qualified spark arrester (ATVs only), and functioning headlights and taillights. If a vehicle does not have functioning headlights or taillights, it will be permitted to operate during the day, but not after dark.
 - Vehicle mufflers on ORVs that allow more than 96 decibels of sound will be prohibited. Noise levels will be measured 20 inches from the vehicle exhaust, pursuant to the SAE J1287 standard.
 - All ATVs will be required to have a triangular orange flag on top of an 8-foot pole attached to the back of the vehicle.
 - All ORVs will be required to display lighted headlights and taillights after dark.

National Park Service Regulations

Title 36 of the CFR, "Parks, Forests, and Public Properties," is applicable in all national park units, including Lake Meredith National Recreation Area. These regulations include those in Title 36 applicable to the operation of ORVs in the park and those applicable to individuals recreating at the park. Of particular note are the provisions of 36 CFR 1.5 and 1.6, which state that the superintendent may impose public use limits or may close all of the park or a portion of a park area to all public use or to a specific use or activity, may designate areas for a specific use or activity, may impose conditions or restrictions on a use or activity, and may establish a permit, registration, or reservation system.

Superintendent's Compendium

The provisions detailed in Superintendent's Compendium define recreation area-specific regulations imposed under the discretionary authority of the superintendent of the recreation area. These provisions are common to all alternatives, and may vary annually as the contents of the compendium change.

Campfires

The Superintendent's Compendium will continue to regulate camping-related activities, such as campfires, with additional restrictions during high fire-danger times (bans in Rosita Flats and Blue Creek follow county bans).

Education and Outreach

The national recreation area will continue to:

- Provide a bulletin board at Blue Creek and Rosita Flats with campground rules and regulations and other national recreation area information
- Provide education through visitor contact with rangers, maintenance staff, and other national recreation area staff, and through on-site educational opportunities
- Provide trash bags to visitors on busy weekends
- Develop a bulletin on ORV use areas and regulations, available at the national recreation area headquarters and at ranger stations (this information will also be displayed on the Blue Creek and Rosita Flats bulletin boards on a larger scale)
- Education and outreach will be expanded with the following actions:
 - Providing literature and trash bags to users. Literature will contain basic safety messages (speed limits, etc.). ATV rules and other national recreation area rules could be printed directly on the trash bags. NPS field staff will visit each campsite to provide this information and increase visitor contacts.
 - Providing ATV safety programs in schools, including more education about ORV use at community events the national recreation area staff attends, such as the Howdy Neighbor Day in Fritch.
 - Including ORV education when providing information at the annual Water Safety Day program.
 - Providing information containing Lake Meredith National Recreation Area ORV use area maps and rules to local retail establishments for display.

- Increasing the number of educational signs in ORV use areas and increasing patrols.
- Establishing a volunteer group to assist with cleanup and other efforts.
- Continuing to work with Texas Off-road Association on additional outreach efforts.
- Developing "tread lightly" pamphlets for ORV use.

Waste Disposal—The NPS will continue to provide waste disposal services at Blue Creek and Rosita Flats and will develop new educational programs/materials for clarifying issues such as proper waste disposal techniques.

Hours of Vehicle Operation—Under the action alternatives, there will continue to be no limitation on the operating hours of vehicles in Rosita Flats and Blue Creek except for in the designated camping areas, where non-registered motorized vehicles (such as ATVs/ utility-terrain vehicles (UTVs), dune buggies, etc.) will be prohibited from operating between 10:00 p.m. and 6:00 a.m. Visitors will be able to use their vehicles to access their camping site entrances and exits, but otherwise, quiet hours in campground areas will be between 10:00 p.m. and 6:00 a.m.

Glass Bottle Ban—There will be a glass bottle ban in the Rosita Flats and Blue Creek ORV use areas.

Speed Limits—Speed limits in Rosita Flats and Blue Creek will be 35 mph on designated routes and areas, on sandy bottom flats the speed limit will be 55 mph, and in designated camping areas the speed limit will be 15 mph.

Temporary Route and Area Closures—The Superintendent may temporarily close ORV routes and areas if resource conditions warrant. This could include closing areas that become overly rutted or closing an area after heavy rains to prevent resource damage. Once the resource condition has been corrected or conditions improve, the area will be reopened to ORV use.

MEASURES TO MINIMIZE ENVIRONMENTAL HARM

Arkansas River Shiner Protection Measures

The national recreation area will take steps to ensure the protection of the Arkansas River shiner. These include, but are not limited to, the following:

- Parking or staging of vehicles of any kind will be confined to areas outside the wetted channel of the Canadian River.
- ORV use within park boundaries will be restricted to designated routes. Access to the river will be allowed only from designated access points.
- ORV use zones will be established in Rosita Flats in two areas currently devoid of vegetation. One is south of the Canadian River and the other is east of Bull Taco Hill. Outside of these areas, ORVs will be permitted only on designated, marked routes. ORVs may access the riverbed area only from marked and designated access points off the designated ORV routes.
- A resource protection zone of approximately 1,040 acres will be established north and east of the Bull Taco Hill ORV use area to protect vegetation and reduce soil erosion. This zone will permit only vehicles with a wheel width of 64 inches or less.

- Every two to four years, depending on funding, aerial photography will be used to determine if use is occurring outside of designated routes and areas.
- Educational materials will be provided when the visitor receives a permit. Educational messages will include information about the prohibition of driving in isolated pools or entering and leaving the river at undesignated access points, as well as other information about the Arkansas River shiner. These materials could also contain the statement, "The U.S. Fish and Wildlife Service (USFWS) recommends during low water that ORV users do not drive in the river or isolated pools but may cross the channel when needed."
- Four to six times per week, on-the-ground NPS law enforcement will patrol and monitor for prohibited driving in isolated pools and the wetted channel, as well as other ORV violations. Monitoring for incidental take of Arkansas River shiner will occur at this time. Additional law enforcement patrols may occur as funding from ORV permits becomes available.
- The national recreation area will monitor the shiner population every three to five years to ensure that additional management is not necessary.
- The superintendent always retains the authority to close any portion of the national recreation area for protection of park resources, including the Arkansas River shiner.
- The NPS will develop and implement an appropriate monitoring plan. Population monitoring for the Arkansas River shiner will occur at least once every three to five years. The content, schedule, and format of the monitoring plan will be at the discretion of the NPS, but will take place no less than once every five years.
- The NPS will provide sufficient guidance to its employees and contracted employees to minimize incidental take and to ensure compliance with the terms and conditions of the FWS biological opinion
- Additional educational materials concerning Arkansas River shiner protection could be provided on existing park bulletin boards and any boards or kiosks added to campground areas to further awareness of Arkansas River shiner conservation.

Cultural Resource Protection—Within the recreation area, archeological resources will be protected and access to these resources will be restricted. Should additional resources be discovered within ORV routes or areas, the resources will be protected from ORV use.

Research and Monitoring

National recreation area staff will monitor ORV use areas to identify ORV use outside designated routes and areas. National recreation area staff will monitor ORV use on the ground throughout the year and close visitor-created ORV routes and areas by using physical barriers, signs, etc., as appropriate. During monitoring, national recreation area staff will look for new trails and new signs of disturbance, including broken fence lines. Monitoring will also include a review of law enforcement records to determine how many citations are being issued for off-trail use.

Additional monitoring will be done by aerial photography. Photos will be taken of both ORV use areas every two to four years, depending on funding. National recreation area staff will use these aerial photographs to identify ORV use occurring outside designated routes and areas. National recreation area staff will provide physical barriers, signs, etc., as appropriate to prohibit ORV use on any new visitor-

created routes. Additional patrols are likely as well. In addition, if park staff suspect off-trail use is occurring, periodic photos (known as photo points) will be taken to detect changes in the resource condition over time and the area will be closed if it is determined that the resource is being damaged.

Following the conservation recommendations in the 2014 biological opinion, the NPS will make efforts to ensure that instream survey monitoring for Arkansas River shiner within Rosita Flats is continued at a frequency that will continue to provide valuable information to the scientific community, but will not overly stress the local population. This information could be used to direct resource management decisions, as well as recovery efforts of the Arkansas River shiner population.

Table 1 includes the indicators, standards, and potential future management strategies that could be implemented in the ORV use areas. These are included as part of the general management plan (GMP) After the most appropriate indicators were identified, standards that represent the minimum acceptable condition for each indicator were assigned. The standards incorporate qualitative descriptions of the desired conditions, data on existing conditions, relevant research studies, staff management experience, and scoping on public preferences.

TABLE 1: SUMMARY OF INDICATORS, STANDARDS, AND POTENTIAL MANAGEMENT STRATEGIES APPLICABLE TO OFF-ROAD VEHICLE USE AREAS

Indicator	GMP Zone	Standard	Management Strategies
Number of breaches to the designated boundary per month	ORV Semi-primitive	No more than six breaches of designated ORV boundary per month	Educate users on impacts of leaving designated ORV use areas Remotely monitor trails (for example, with cameras) Require permits Implement temporary closures
Change in campsite condition class	Developed ORV Rural Semi-primitive	No less than 15% above condition class 4 based on site condition assessment (to be measured annually)	Educate visitors in a program that includes on the use of designated sites and the prohibition on camping outside designated areas; tools could include flyers, press releases, public events such as with hunters, and information postings at the visitor contact station and on waysides Mark designated campsites, survey with global positioning system equipment, and incorporate the results in the geographic information system to provide a baseline Increase enforcement
Number of incidences of camping outside designated areas	Developed ORV Rural Semi-primitive	Zero tolerance for camping in undesignated areas	Same as strategies for change in campsite condition class
Number of ticketed incidents related to damage of park resources per six-month period	Park-wide	No more than one ticketed violations related to park resources per six-month period	Provide pre-incident education Increase patrols based on locations of incidents / increase number of signs Implement more intensive mitigation measures based on resource impacted, such as applying coating that prevents graffiti from sticking, or rerouting trails Close facilities or areas if incidents continue

Indicator	GMP Zone	Standard	Management Strategies
Number of incidences of vehicles traveling outside the designated road or route	Cultural Developed ORV Rural	Three informal roads within 0.5 mile of designated road or route	Educate visitors to increase awareness of the impacts associated with travelling on undesignated roads Increase number of signs, with Carsonite® poles Increase the number of patrols Close area to mitigate resource damage Physical damage and productivity

As monitoring of conditions continues, managers may decide to modify or add indicators if better ways are found to measure important changes in resource and social conditions. If ORV use levels and patterns change appreciably, NPS staff might need to identify new indicators to ensure that desired conditions are achieved and maintained. This iterative learning and refining process, a form of adaptive management, is a part of the NPS user capacity management program.

BASIS FOR DECISION

A fundamental consideration for this decision was the mandate of the NPS Organic Act, as interpreted by the NPS Management Policies (NPS 2006b). The NPS considered the enabling legislation and planning documents for the recreation area; NPS Management Policies 2006; Executive Orders 11644 and 11989 respecting ORV use; and other relevant laws and regulations summarized in Chapter 1 of the final plan/EIS; the wide body of scientific knowledge regarding the effects of human disturbance on protected species, including direct and indirect effects of ORVs; and the public and agency comments received during the planning process. For each alternative, the NPS considered whether and how well it would resolve the purpose and need for taking action, including whether it would satisfy the criteria of the Executive Orders for designating ORV routes; how well it would meet the plan's objectives; and its impacts. Alternative D was identified as the selected action.

Alternative A, on the whole, would not meet the majority of the objectives. Without designated ORV routes and areas, ORVs would be able to use Blue Creek and Rosita Flats unrestricted. This type of use would allow new trails to be created and allow for the further erosion of soils and damage to vegetation, and would not meet natural or cultural resource objectives. Under this alternative, no additional management measures would be implemented, such as zoning or permit systems, and objectives related to reducing visitor conflicts would not be met. Because many of the objectives of this plan would not be met, alternative A was not identified as the Selected Alternative.

Alternatives B, C, and D would meet the objectives to a large degree, with some objectives being fully met under each of these alternatives. In regard to visitor use and safety, alternatives B and D would meet these objectives fully due to the establishment of zones that would separate visitor uses. Alternative D would further meet one of these objectives by implementing a fee-permit system, with an educational component to further reduce visitor conflicts. The establishment of the fee-permit system under alternative C would meet these objectives to a large degree, but not as fully as B or D because no zoning system would be established. In terms of management objectives, alternative C would meet this objective to a large degree, because a use limit could be established based on desired resource conditions. This use limit would allow for the national recreation area to develop public awareness strategies to build park stewardship. Alternatives B and D would meet the objective for building stewardship to a moderate degree through the increased educational components (also included in alternative C). However, neither alternative B nor D would establish a use limit, and so would not meet that objective. Alternative D would best meet objectives related to resource protection by combining the establishment of designated routes and areas, zoning and/or permit systems, and increased visitor education. Alternatives B and C would partially meet resource protection objectives, but only D would implement the full range of ORV management options to improve resource conditions. For the national recreation area operations, alternatives C and D would fully meet the objective to minimize cost due to cost recovery through the

permit system, with alternative B not meeting this objective because of the lack of cost recovery (no permit fees that would help pay for ORV management activities). All alternatives would identify costs of ORV management, but the permit fees in alternatives C and D would help meet these identified needs, fully meeting this objective. The lack of fees under alternative B would result in this alternative meeting this objective only to a large degree.

Because alternative D provides for a variety of management tools (designated routes and areas, zoning, permits with fees, and increased education), the NPS determined that this alternative, on the whole, best meets the objectives of this plan. Because alternative D provides for the maximum management flexibility and greatest resource protection, it was identified as the Selected Alternative.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The NPS is required to identify the environmentally preferable alternative in its NEPA documents for public review and comment. The NPS, in accordance with the NEPA Regulations (43 CFR 46) and the Council on Environmental Quality's (CEQ's) *Forty Questions*, defines the environmentally preferable alternative (or alternatives) as the alternative that best promotes the national environmental policy expressed in NEPA (Section 101[b]) (516 DM 4.10). The CEQ's *Forty Questions* (Q6a) further clarifies the identification of the environmentally preferable alternative, stating, "this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources."

The NPS has identified alternative D as the environmentally preferable alternative. Of all the alternatives considered, alternative D best establishes management measures that would reduce the impact of ORV use on the landscape in both Blue Creek and Rosita Flats. These measures include the following:

- The establishment of ORV routes and areas in either sand bottom areas (Blue Creek) or on already disturbed trails. Routes and areas would be clearly marked so users would be better able to avoid unknowingly going off trail.
- The overlay of zones that would reduce the intensity of use in some areas (such as the resource protection zone). In these areas, restrictions on vehicle size would result in less damage to soils and provide a better opportunity for other resources, such as vegetation, to recover.
- Designated river crossings that would better protect Arkansas River shiner habitat in addition to restrictions that would prevent driving in isolated pools during times of drought.
- A permit system that would provide educational materials to users to keep them informed on how they can best use ORV use areas while at the same time promoting resource protection.

The combination of designated routes, zoning, and a permit system in alternative D would better protect, preserve, and enhance historic, cultural, and natural resources in comparison to the other alternatives.

CONCLUSION

Overall, among the four alternatives considered, the selected action best meets the purpose, need, and objectives of the plan/EIS and is expected to support the long-term protection, preservation, and restoration of native vegetation and other natural and cultural resources at Lake Meredith National Recreation Area. It incorporates all practical means to avoid or minimize environmental harm and will not result in the impairment of park resources and values or violate the NPS Organic Act.

The required "no-action period" before approval of the ROD was initiated on January 16, 2015 with the U.S. Environmental Protection Agency's *Federal Register* notification of the filing of the final plan/EIS (80 FR 2414)

The official responsible for implementing the selected action is the Superintendent of Lake Meredith National Recreation Area.

Approved by:



Sue E. Masica
Regional Director,
Intermountain Region, National Park Service

6/26/15
Date

ATTACHMENTS

Attachment A – Impairment Determination for the Selected Action

National Park Service (NPS) *Management Policies 2006* (section 1.4) require analysis of potential effect to determine whether or not an NPS action would impair a park's resources and values. The Selected Alternative for managing off-road vehicle (ORV) use at Lake Meredith National Recreation Area (the recreation area) is alternative D.

The fundamental purpose of the national park system, established by the NPS Organic Act and reaffirmed by the General Authorities Act, as amended, is to conserve park resources and values for the enjoyment of future generations. NPS managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws give the NPS management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purpose of a park. That discretion is limited by the statutory requirements that the NPS must leave resource and values unimpaired unless a particular law directly and specifically provides otherwise.

NPS *Management Policies 2006* (section 1.4.7.1) also prohibit unacceptable impacts, which are defined as, "impacts that fall short of impairment, but are still not acceptable within a particular park's environment." During the impairment analysis, the Selected Alternative was evaluated for unacceptable impacts. The NPS has concluded that for the same reasons no impairment to park resources or values will occur (discussed below), No unacceptable impacts will occur as a result of implementation of the Selected Alternative.

Pursuant to NPS *Management Policies 2006*, impairment is an impact that, in the professional judgment of the responsible NPS manager, "would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (section 1.4.5). Whether an impact constitutes impairment depends on the particular resources that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.

An impact on any park resource or value may, but does not necessarily, constitute impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance

An impact would be less likely to constitute and impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated.

Impairment may result from visitor activities, NPS administrative activities, or activities undertaken by concessioners, contractors, and others operating in the park. Impairment may also result from sources or activities outside the park.

For the Selected Alternative, a determination of non-impairment is made for each of the impact topics carried forward for detailed analysis in the final plan/EIS. Pursuant to the *Guidance for Non-Impairment*

Determinations and the NPS NEPA Process (2011), impairment findings are not necessary for visitor experience, socioeconomics, public health and safety, environmental justice, land use, or park operations because these impact topics are not generally considered to be park resources and values, and therefore not subject to the written impairment determination found in *NPS Management Policies 2006*. A description of the current state of each resource topic evaluated for impairment can be found in chapter 3 of the final plan/EIS, "Affected Environment."

The recreation area's purpose and significance were considered during the impairment determination for the Selected Alternative. Congress established the national recreation area to, "provide for public outdoor recreation use and enjoyment of the lands and waters associated with Lake Meredith in the State of Texas, and to protect the scenic, scientific, cultural, and other values contributing to the public enjoyment of such lands and waters" (16 USC 460eee) (Public Law 101-628).

Statements of the recreation area's significance describe why a park unit is important within a global, national, regional, and ecosystem-wide context and are directly linked to the purpose of the park. Lake Meredith National Recreation Area is significant for the following reasons:

- Lake Meredith National Recreational Area is the largest area of public lands in the Texas panhandle, providing opportunities for access to diverse, affordable outdoor land- and water-based recreation activities.
- Lake Meredith and Canadian River basin in the recreation area provide aquatic, wetland, and riparian habitats, and one of the few areas in the region with trees. These habitats and the ecological transition zones between them and the surrounding landscape support diverse plant and animal species, including migratory waterfowl.
- The natural and geologic resources of the recreation area have enabled human survival, subsistence, and adaptation that have resulted in a continuum of human presence in the Texas panhandle for more than 13,000 years. Cultural sites in Lake Meredith National Recreation Area and the adjacent Alibates Flint Quarries National Monument offer views of lifeways in every cultural period that have been identified.
- The exposed geologic features of the Canadian River breaks in the recreation area reveal active geological processes that are easily visible to an extent not present elsewhere in the region. The topography and geography of the Canadian River breaks create a divergence from the surrounding landscape that offers scenic values and opportunities not found elsewhere in the region.

Soils

The primary concern related to soils in this plan/EIS is the potential for greater erosion as a result of ORV use at Blue Creek and Rosita Flats. Over 67 percent of the land base of the national recreation area is composed of slopes greater than or equal to 12 percent. Problems associated with soils in the national recreation area are generally related to soil texture (grain size) and slope. Unvegetated areas are subject to erosion by wind and water. In the national recreation area, soil compaction, erosion, and slumping occur along roads, where vegetation cover is sparse, and on steep slopes. These areas are especially prone to erosion from surface runoff during storms. The soils and geology of the park are specifically called out in the following significance statement:

The exposed geologic features of the Canadian River breaks in the recreation area reveal active geological processes that are easily visible to an extent not present elsewhere in the

region. The topography and geography of the Canadian River breaks create a divergence from the surrounding landscape that offers scenic values and opportunities not found elsewhere in the region.

Conservation of the recreation area's soils are necessary to fulfill the purposes for which the park was established and are key to the natural integrity of the park. Implementation of the Selected Alternative would not impair soils because the establishment of designated routes and areas would allow for the regeneration of vegetation on areas where ORV use had previously occurred. Restricting ORV use to designated routes and areas will reduce erosion especially along slopes and the Canadian River bank. The Selected Alternative prohibits ORVs from entering and leaving the Canadian River bed except at designated access points. This prohibition provides protection of the soils along the Canadian River. While continued ORV use would result in erosion in those designated routes and ORV areas, re-vegetation of other areas would lessen these impacts and result in long-term minor to moderate impacts to soils which would be localized only to those routes and areas, improving soil conditions in the remainder of the Rosita and Blue Creek areas. The Selected Alternative also includes soil monitoring and provides that the NPS may close designated routes and areas because of excessive erosion. Therefore, the Selected Alternative does not result in impairment. It improves the integrity of soils within Rosita and Blue Creek by restoring soils in many areas and monitoring for excessive erosion along routes and areas where use would be permitted.

Vegetation

Lake Meredith National Recreation Area provides riparian, aquatic, and wetland habitats, all of which support diverse plant and animal species. Native vegetation is important for many reasons, including wildlife habitat and water quality protection. The recreation areas vegetative communities are necessary to fulfill the purposes for which the national recreation area was established and are key to the natural integrity of the national recreation area and are identified in the recreation area's significance statement:

Lake Meredith and Canadian River basin in the recreation area provide aquatic, wetland, and riparian habitats, and one of the few areas in the region with trees. These habitats and the ecological transition zones between them and the surrounding landscape support diverse plant and animal species, including migratory waterfowl.

Although continued use of ORVs at Blue Creek and Rosita Flats would result in localized short- and long-term minor adverse impacts, the Selected Alternative would include the implementation of a zoning system and a fee-based permitting system, the enactment of new resource protection rules and regulations, and increased law enforcement. In these ways, the implementation of the Selected Alternative would contribute to long-term beneficial impacts to vegetation when compared to existing management. The overall impact of the Selected Alternative on vegetation in these areas would be short and long term, minor, and adverse. Impacts would most likely be short term in areas removed from vehicle routes, and long term at localized areas along ORV routes due to the continued ORV use there. Implementation of the Selected Alternative would not impair vegetation because the establishment of designated routes and areas would limit the creation of new trails, and allow vegetation to re-establish where trails have previously been created. As noted above, the Selected Alternative limits erosion which also benefits vegetation by retaining soil structure. Implementation of a fee-based permit system would ultimately exclude ORV riders who were caught repeatedly violating the resource protection rules. The permit system would also seek to educate ORV users about ORV rules and resource protection. For these reasons, the fee-based permit system would benefit vegetation in the national recreation area over the long term and the selected action would not result in impairment to vegetation.

Water Resources

Lake Meredith National Recreation Area contains important water resources, including the surface of the lake and tributaries and groundwater in various aquifers beneath the national recreation area. ORV use in riparian areas could impact water quality because of increased soil erosion, vehicle fluid leakage, and discarded trash, which could result in pollutants entering surface or groundwater resources. The Blue Creek and Rosita Flats ORV use areas contain water features including rivers and streams. Current management allows the operation of vehicles within and adjacent to portions of Big Blue Creek, the Canadian River, and Bonita Creek. Conservation of the recreation area's waters is necessary to fulfill the purposes for which the park was established and is key to the natural integrity of the park.

Continued ORV use at Blue Creek and Rosita Flats would result in short and long-term localized incremental contributions to erosion, resulting in sediment delivery to the Canadian River and Blue Creek. Impacts would be mitigated by several elements of the Selected Alternative. Resource protection zones included restrictions on heavier vehicles from driving within certain zones, reducing erosion and thus improving water quality. The Selected Alternative provides access to the Canadian River and Blue Creek river beds from designated access points. Restricting access to only these points reduces erosion and sedimentation. At Rosita, additional ORV routes above the riparian zones reduces erosion and sedimentation that is likely to reach the river and park limitations at Rosita would reduce contamination from leaky vehicles. Designation of routes and areas will allow for regeneration of vegetation along many existing routes which reduces erosion and sedimentation and therefore reduces risks to water quality. Increased education associated with the Selected Alternative may result in better compliance with restrictions that protect water quality. As a result, water quality would not be impaired but continue to improve under the Selected Alternative.

Soundscapes

One of the natural resources of Lake Meredith is the natural soundscape, which includes all of the naturally occurring sounds of the recreation area. Sources of noise within the recreation area and surrounding areas include bird songs, wind, and water. Examples of human-caused noise commonly heard in some areas of the national recreation area include human voices and sounds produced by vehicles, motorboats, and jet airplanes. ORV sounds may be heard in the vicinity of the Blue Creek and Rosita Flats ORV use areas. During hunting season, the sound of gunfire may be prevalent in areas open to hunting. Human-caused noise and sound levels (or loudness) may be appropriate or inappropriate depending on what uses occur in an area.

Natural soundscapes in the recreation area are necessary to fulfill the purposes for which the park was established, and are key to the natural integrity of the park. As stated in the national recreation area's enabling legislation, Congress established Lake Meredith National Recreation Area in 1990 "to provide for public outdoor recreation use and enjoyment of the lands and waters associated with Lake Meredith in the State of Texas, and to protect the scenic, scientific, cultural, and other values contributing to the public enjoyment of such lands and waters" (16 USC 460eee) (PL 101-628). Therefore, some noise is acceptable at the national recreation area when noise results from recreational uses for which the national recreation area was established. ORV use has taken place at Rosita Flats and Blue Creek since at least the 1950s and today this area is still popular with ORV enthusiasts. Because ORV use at the national recreation area is an integral component of the experience for some visitors, ORV use at Blue Creek and Rosita is currently authorized under a special regulation (36 CFR 7.57).

Based on this context of the importance of ORV use to the experience and purpose of the national recreation area, the soundscapes intensity for Blue Creek and Rosita Flats ORV use areas may allow higher noise levels than would be acceptable in other areas of Lake Meredith National Recreation Area or at other national parks where ORV use is not an acceptable use.

The Selected Alternative will result in adverse impacts to the natural soundscape in the Rosita and Blue Creek areas. However, impacts to the soundscapes are mitigated by restricting ORVs to designated routes and areas. Additionally, the 96 db muffler restriction will significantly reduce noise in these areas. Impairment of soundscape would not result under the Selected Alternative because natural sounds would predominate for the majority of the year in areas where management objectives call for natural processes to predominate. In zones where ORV use is permitted, noise from the use would continue and would be expected in those areas. The recreation area will continue to be able to provide for high quality visitor enjoyment of its soundscapes, while providing the recreational opportunities noted in its enabling legislation, and therefore ORV use as managed under the Selected Alternative will not result in impairment of the recreation area's soundscape.

Wildlife and Wildlife Habitat

Lake Meredith National Recreation Area provides riparian, aquatic, and wetland habitats, all of which support diverse plant and animal species, including migratory waterfowl throughout the region. The discussion and impacts analysis for wildlife and wildlife habitat for the plan/EIS focused on aquatic and terrestrial species, including fish, mammals, birds, and reptiles and amphibians in areas of the national recreation area that could be affected by ORV use in Blue Creek and Rosita Flats. There are approximately 28 species of fish known to inhabit Lake Meredith National Recreation Area. The general surroundings of the Blue Creek and Rosita ORV use areas provide habitat for approximately 60 native mammal species depend on the mixed grassland habitats that exist along the tops of the mesas or the more riparian habitat types found along the Canadian River and Big Blue Creek shores. Reservoirs, playa lakes, and river systems are used as important stopover points for birds during migration. Approximately 72 species of birds have been recorded in the national recreation area and approximately 32 species of reptiles and 11 species of amphibians are thought to be native to the national recreation area. Wildlife and wildlife habitat are necessary to fulfill the purposes for which the park was established and are key to the natural integrity of the park.

The continued use of ORVs in the national recreation areas would result in impacts to wildlife and wildlife habitat including species disturbance and displacement from vehicle noise, habitat destruction, and species injury or mortality. Along with habitat fragmentation, disturbance can lead to altered species ranges, altered social patterns, changes in behavior and physiology, decreased biodiversity, and individual mortality, resulting in short- and long-term moderate impacts.

Although continued use of ORVs at Blue Creek and Rosita Flats would result in localized short- and long-term moderate adverse impacts actions, the Selected Alternative includes protections for wildlife and habitat that would prevent unacceptable impacts or impairment. Zoning and designated routes and areas would provide some protection for wildlife by limiting the potential for collisions and limiting habitat disturbance. The decibel limit and speed limit may have a limited beneficial impact to wildlife. The permitting system would provide education on how to reduce mortality and disturbance of wildlife. These management actions would improve conditions for wildlife and wildlife habitat in the ORV areas. Overall, while there would be adverse impacts to wildlife from ORV use under the Selected Alternative, it would not rise to the level of impairment because the integrity of wildlife at Lake Meredith would remain intact. Protections would improve conditions and support healthy populations.

Rare, Unique, Threatened or Endangered Species

The Endangered Species Act requires federal agencies to ensure that their activities will not jeopardize existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. Only one federally listed species, the threatened Arkansas River shiner (*Notropis girardi*), is known to inhabit the national recreation area. Within the national recreation area, this species is present in the Canadian River, from Chicken Creek upstream to the U.S. Highway 287

bridge, which runs through the Rosita Flats ORV use area. The Arkansas River shiner does not occur in the Blue Creek ORV use area and park staff is unaware of any historical existence of the species in that area. In addition, the Blue Creek area does not contain habitat that would be conducive to or support future Arkansas River shiner populations. Therefore, evaluation in the plan/EIS of the effects of ORV management actions on the Arkansas River shiner focused exclusively on the Rosita Flats ORV use area, where the existence of the fish has been confirmed.

The continued use of ORVs in the national recreation area would pose a threat to the Arkansas River shiner due to habitat disturbance, degraded water quality from soil erosion and sedimentation, disruption of the reproductive cycle, and/or direct mortality resulting in short- and long-term moderate adverse impacts on the Arkansas River shiner in localized areas.

The NPS began coordination with the USFWS in 2009. After a series of informational consultation meetings, the NPS submitted a biological assessment to the USFWS Arlington Texas Ecological Services Field Office and requested formal consultation on November 25, 2013. The Arlington Texas Ecological Services Field Office provided the NPS with a draft biological opinion on April 9, 2014, and a final biological opinion on April 24, 2014 stating that the Selected Alternative, as proposed, is not likely to jeopardize the continued existence of the Arkansas River shiner. However, implementation of the Selected Alternative may result in incidental take of the Arkansas River shiner.

The Selected Alternative includes a prohibition on driving in isolated pools, a zoning system with resource protection zones, designated ORV access points at the riverbed, limitations to ORV use in riparian areas, a fee-based permit system with increased education, and increased resource management and law enforcement. These management actions provide adequate protections from ORV use for the Arkansas River Shiner. Monitoring, along with the management actions described above, ensure that use will not result in impairment of this species.

Archeological Resources

The cultural history of the northern Texas Panhandle region encompasses at least 13,000 years of prehistory and history. According to the NPS Archeological Sites Management Information System (ASMIS) database, approximately 280 archeological sites have been recorded within the boundaries of the national recreation area. These sites include more than 270 prehistoric sites or isolated finds and at least 5 historic sites with structures. Prehistoric site types range from quarries to burned stone scatters, rock art, to rock shelters, to village and "pueblo" sites. At Blue Creek, recent cultural resource inventories have been conducted in or near the ORV use areas. In 2003, the Big Bend Center of Sul Ross State University revisited 23 previously recorded sites and recorded 1 new prehistoric site on the rim or bluff above Blue Creek. The sites include village or hamlet sites and one possible multiple human burial site, all dating to the Antelope Creek phase (AD 1200–1450). In the Rosita Flats area, archeological surveys were conducted as part of a plan for prescribed burns in 2005. Six previously recorded prehistoric and historic sites were revisited, including a Late Archaic / early Woodland component, one Late Prehistoric Antelope Creek phase village site, campsites, open sites with lithic debitage (stone debris from flintknapping), and one cave habitation site. Most sites are located on benches, knolls, or ridges above the Canadian River or tributaries.

Preservation of archeological resources is necessary to fulfill the purposes for which the park was established and is key to the cultural integrity of the park. As highlighted in part of the park's significance, "The natural and geologic resources of the recreation area have enabled human survival, subsistence, and adaptation that have resulted in a continuum of human presence in the Texas panhandle for more than 13,000 years. Cultural sites in Lake Meredith National Recreation Area and the adjacent

Alibates Flint Quarries National Monument offer views of lifeways in every cultural period that have been identified.”

Implementation of the Selected Alternative would not impair archeological or historic resources because ORV routes and areas designated in the the Selected Alternative avoids or protects with barriers all known archeological resources in Rosita and Blue Creek. Should additional resources be discovered within ORV routes or areas, the resources would be protected from ORV use. On July 1, 2014, the NPS sent a letter to the Texas Historical Preservation Officer requesting concurrence that there would be no adverse impacts to historic properties from implementation of the proposed action. The Texas Historical Preservation Officer provided concurrence on July 23, 2014.