

CHAPTER 1: PURPOSE OF AND NEED FOR ACTION

This “Purpose of and Need for Action” chapter explains what the Lake Meredith National Recreation Area Off-road Management Plan / Environmental Impact Statement (plan/EIS) intends to accomplish and why the National Park Service (NPS) is taking action at this time to evaluate a range of alternatives and management actions for off-road vehicle (ORV) use at Lake Meredith National Recreation Area (the national recreation area). This plan/EIS presents three action alternatives for managing ORV use and assesses the impacts that could result from continuing current management (the no-action alternative) or from the implementation of any of the action alternatives. An ORV is considered to be any type of vehicle that is capable of driving on and off a paved or gravel surface.

This “Purpose of and Need for Action” chapter explains what the plan/EIS intends to accomplish and why the NPS is taking action at this time to evaluate a range of alternatives and management actions for ORV use at the national recreation area.

Upon conclusion of this plan/EIS and decision-making process, the alternative selected for implementation will become the ORV management plan, which will guide the management and control of ORVs at the national recreation area for the next 15 to 20 years. The plan will also form the basis for a special regulation to manage ORV use at the national recreation area. Brief summaries of the purpose and need are presented here; however, more information is available in the section titled “Lake Meredith National Recreation Area Background.”

PURPOSE OF THE PLAN / ENVIRONMENTAL IMPACT STATEMENT

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.

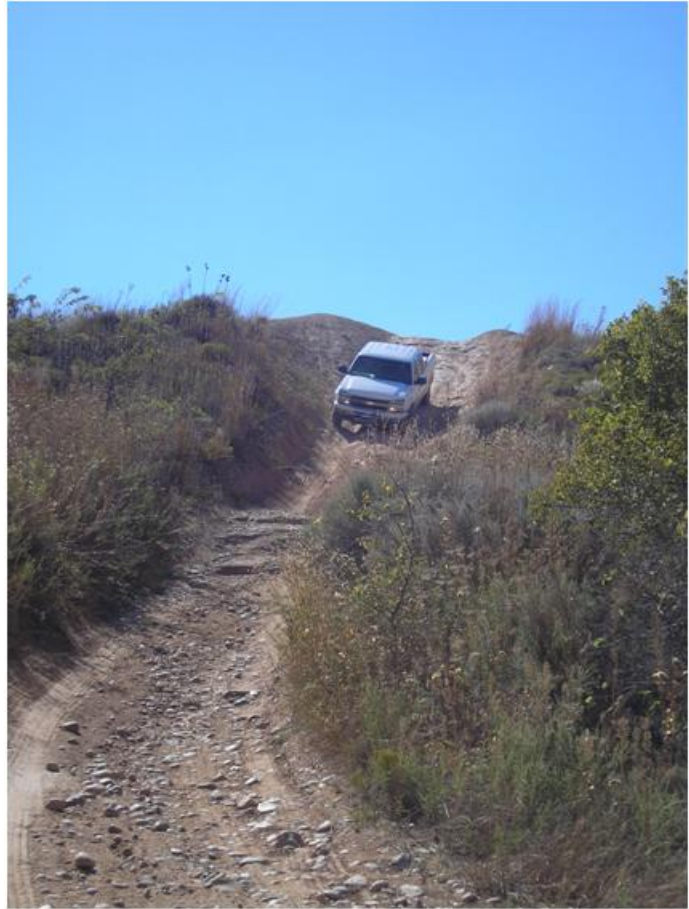
NEED FOR ACTION

The Lake Meredith National Recreation Area provides a variety of visitor experiences, including the use of ORVs. In the 1970s, a special regulation in Title 36 of the Code of Federal Regulations (CFR), Section 7.57, designated two authorized ORV use areas in the national recreation area: Blue Creek at the north end and Rosita (also known as Rosita Flats) at the south end. ORV use at the national recreation area has changed drastically since the establishment of the special regulation and the first use of ORVs, both in intensity and in the types of ORVs used. Modern all-terrain vehicles (ATVs) are the primary ORVs used today; however, they were not in use when the original regulations took effect. The intensity of ORV use at the national recreation area affects natural and cultural resources and results in visitor use conflicts.

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In addition to providing recreation opportunities, the national recreation area is home to the Arkansas River shiner (*Notropis girardi*), a federally threatened aquatic species.

Executive Order 11644, “Use of Off-road Vehicles on the Public Lands” (issued in 1972 and amended by Executive Order 11989 in 1977), requires federal agencies that allow ORV use to designate specific areas and routes on public lands where the use of ORVs may be allowed. Therefore, motorized travel off established roads would not be permitted in any areas unless designated under a special regulation. Section 3 of this executive order, as amended, authorizes the NPS to designate ORV use areas provided that the designation of such areas and trails will be based on protecting the resources of public lands, promoting the safety of all users of those lands, and minimizing conflicts among the various uses on those lands. Executive Order 11644 was issued in response to the widespread and rapidly increasing use of ORVs on public lands “often for legitimate purposes but also in frequent conflict with wise land and resource management practices, environmental values, and other types of recreational activity.” Title 36 of the CFR, Section 4.10(b), contains regulations regarding vehicles and traffic safety on NPS lands and requires that “routes and areas designated for ORV use shall be promulgated as special regulations” and that the designation of routes and areas “shall comply with §1.5 of this chapter and [Executive Order] 11644” (Volume 37 Federal Register, p 2877 [37 FR 2877]). In addition, such routes and areas may be designated only in national recreation areas, national seashores, national lakeshores, and national preserves.



ORV Use in Lake Meredith National Recreation Area

As a result of these considerations, 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, as stated in *Friends of the Earth v. Department of Interior*
- 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.

OBJECTIVES IN TAKING ACTION

Objectives are “what must be achieved to a large degree for the action to be considered a success” (NPS 2001). All alternatives selected for detailed analysis must meet project objectives to a large degree and resolve the purpose of and need for action. Objectives must be grounded in the national recreation area’s enabling legislation, purpose, significance, and mission goals, and must be compatible with direction and guidance provided by the national recreation area’s general management plan (GMP), strategic plan, and/or other management guidance. National recreation area staff identified the following objectives for developing this plan/EIS.

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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.

PROJECT STUDY AREA

The geographic study area for this plan/EIS is Lake Meredith National Recreation Area in Texas (figure 1), unless otherwise noted under each resource topic. Although the entire national recreation area is within the study area, the plan/EIS will focus on the Blue Creek and Rosita Flats areas, as shown in figures 2 and 3, which are the only two areas that are designated for ORV use, also known as off-highway vehicle (OHV) use by the state of Texas and in some park planning documents.

LAKE MEREDITH NATIONAL RECREATION AREA BACKGROUND

HISTORY OF LAKE MEREDITH NATIONAL RECREATION AREA

Lake Meredith was originally created by the construction of the Sanford Dam on the Canadian River in 1965, referred to as the Canadian River Project (CRMWA 2008). The Sanford Dam was designed and built by the Bureau of Reclamation (BOR) to allow impoundment and diversion of water for municipalities in the Texas panhandle, including Amarillo, Borger, Brownfield, Lamesa, Levelland, Lubbock, O'Donnell, Pampa, Plainview, Slaton, and Tahoka. The NPS became involved with the recreational use of the area in 1961 through a memorandum of understanding and agreement with the BOR (Contract No. 14-06-500-579) (NPS 1973). This agreement authorized the NPS to investigate, plan, and develop recreational resources for the Canadian River Project. In March 1964, another memorandum of agreement between the NPS and the BOR established that the public recreational use for the Canadian River Project area would be the responsibility of the NPS. By 1968, the BOR turned over the operation and maintenance of the Sanford Dam and associated facilities to the Canadian River Municipal Water Authority (CRMWA), resulting in a cooperative effort between the NPS and the CRMWA for the management of the reservoir and its facilities (NPS 1973). This reservoir was referred to as the Sanford Recreation Area until 1974, when it was renamed to Lake Meredith Recreation Area in honor of A. A. Meredith, a civic leader and early promoter of the lake (Texas State Historical Association 2008).

On November 28, 1990, Public Law 101-628, 16 U.S. Code (USC) 460eee, established the area as NPS land, stating, "In order 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, there is hereby established the Lake Meredith National Recreation Area." The national recreation area, containing over 44,977 acres, preserves one of the largest manmade lakes in the Texas panhandle, many archeological sites, and flora and fauna of the area, making it a valuable part of American heritage. From 1971 through 2008, over 55 million people visited the national recreation area, which is an average of almost 1.5 million visitors annually (NPS 2009j).

PURPOSE AND SIGNIFICANCE OF LAKE MEREDITH NATIONAL RECREATION AREA

All units of the national park system were established for a specific purpose and to preserve significant resources or values for the enjoyment of future generations. The purpose and significance identify uses and values that individual NPS plans should support. The following provides background on the purpose and significance of Lake Meredith National Recreation Area.

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) (Public Law 101-628).

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."

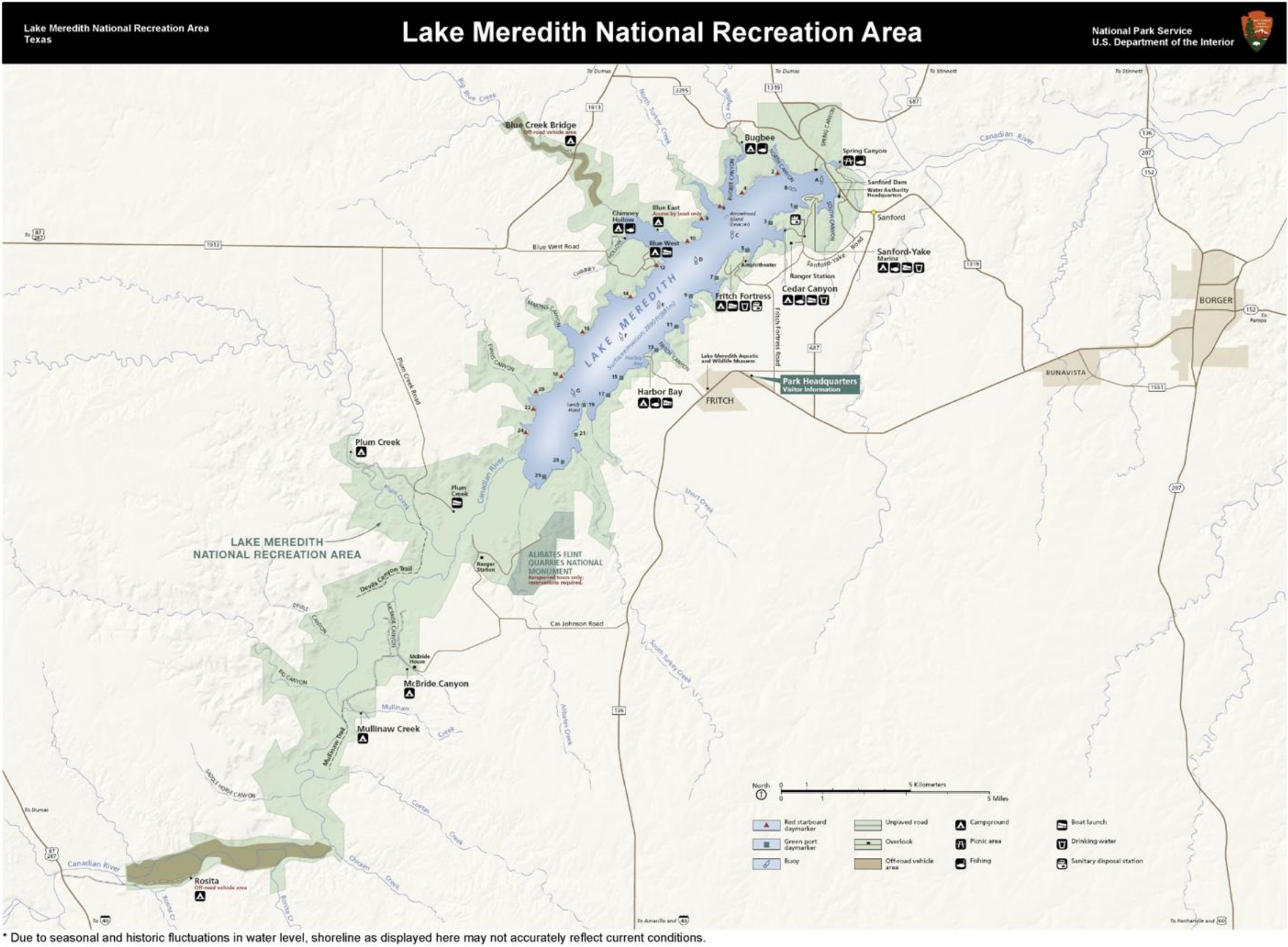


FIGURE 1: LAKE MEREDITH NATIONAL RECREATION AREA MAP

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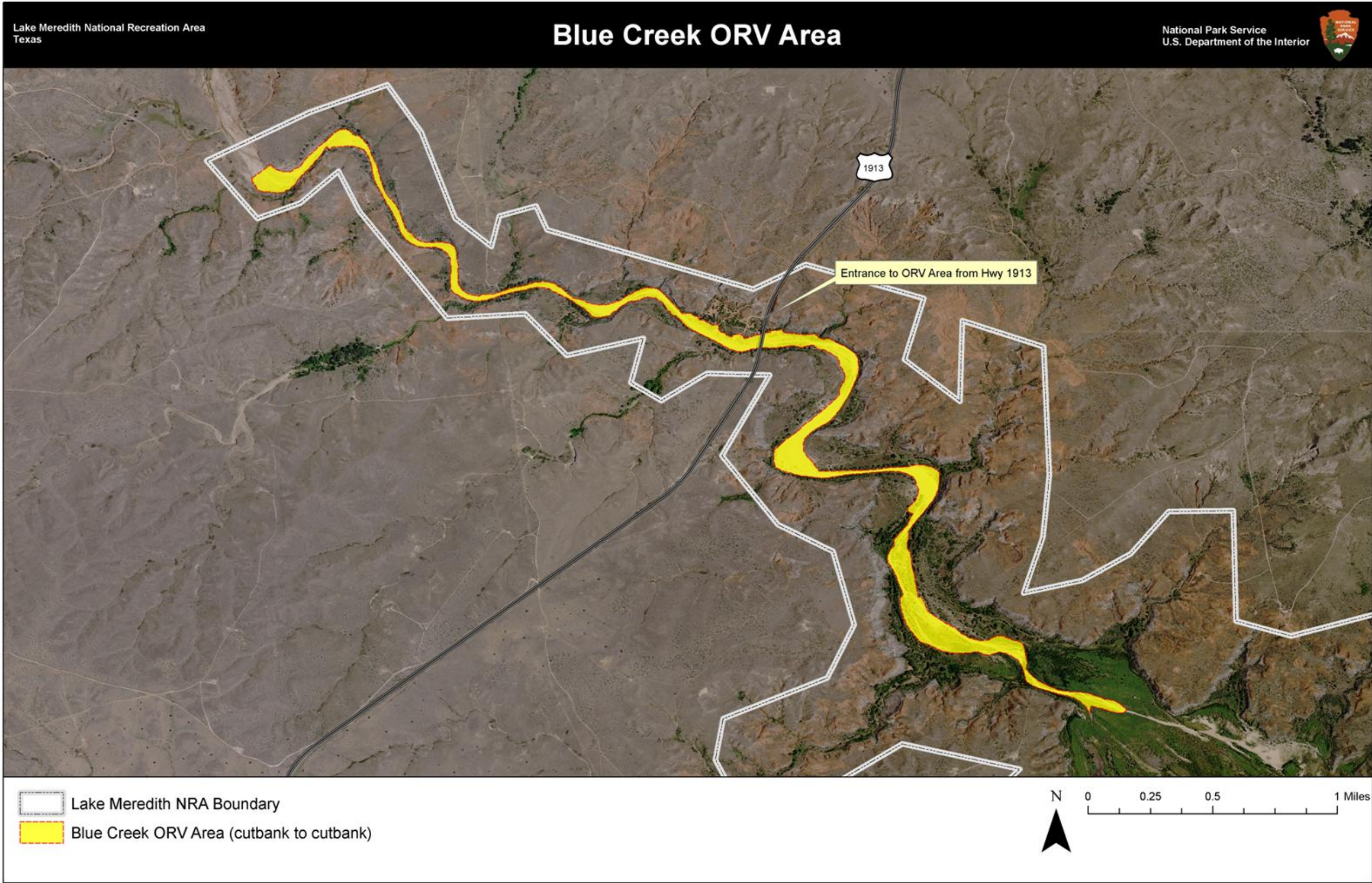


FIGURE 2: BLUE CREEK OFF-ROAD VEHICLE AREA

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FIGURE 3: ROSITA FLATS OFF-ROAD VEHICLE AREA

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A park significance statement captures the essence of a park's importance to the nation's natural and cultural heritage. Understanding park significance helps managers make decisions that preserve the resources and values necessary to each park's purpose. The following significance statements recognize the important features of the national recreation area. As stated in the *Lake Meredith National Recreation Area Draft General Management Plan*, the national recreation area has the following significance (NPS n.d.c):

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.

SUMMARY OF OFF-ROAD VEHICLE USE AND MANAGEMENT AT LAKE MEREDITH NATIONAL RECREATION AREA

In recent years, ORV management has become an issue of concern in many national park system units. Two areas of Lake Meredith National Recreation Area are currently designated as OHV areas (to avoid confusion, and for the purpose of this plan/EIS, the term "ORV" includes OHV areas): 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 (NPS 2007a).



ORV Use in Lake Meredith National Recreation Area

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 (NPS 2007a). 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. Visitors from the vicinity and nearby urban areas use the ORV use areas, especially at Rosita Flats. Every February, an event called Sand Drags is held just outside the national recreation area to the north of Rosita Flats. This locally sponsored racing event draws approximately 30,000 visitors to the area, including hundreds of motorcycles, four-wheelers, sand rails (a type of dune buggy), and river buggies. Participants and spectators come from Texas, Oklahoma, New Mexico, Colorado, and California.

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.

As stated in the 2007 *Interim OHV Use Plan* (NPS 2007a), because of the length of time that ORV use has been occurring at the national recreation area, measuring the level of impacts on resources is difficult because most of the information and data about the areas have been collected since ORVs have been present.



Regulations Bulletin Board at Blue Creek

SUMMARY OF RESEARCH ON OFF-ROAD VEHICLE USE

A literature review was prepared to support the development of the ORV management plan at Lake Meredith National Recreation Area, and is included as appendix A. The literature review summarizes the available information related to the potential effects of motorized vehicle use on natural and cultural resources, such as air and water quality, soils, vegetation, wildlife, and archeological resources. The literature review examines information on the effects of motorized vehicles on socioeconomics, aesthetics/sound, safety, and land management. Because the national recreation area is located in a semiarid region, the literature review focused on mountainous, semiarid, and desert environments, where appropriate.

The literature review was not intended to be all inclusive in covering ORV impact- and management-related studies, but it did incorporate the scientific literature used in developing the plan/EIS for the national recreation area. Some topics addressed in this review, such as air quality, can experience impacts from ORV use. However, they were not carried forward as impact topics for analysis in this plan/EIS because their impact level or frequency was not sufficient to warrant a full analysis. A list of impact topics addressed and those considered, but dismissed, is provided later in this chapter.

SCOPING PROCESS AND PUBLIC PARTICIPATION

National Environmental Policy Act (NEPA) regulations require an “early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action” (40 CFR 1501.7). To determine the scope of issues to be analyzed in depth in this plan/EIS, meetings were conducted with national recreation area staff, NPS personnel from the Environmental Quality Division, neighboring land management agencies, and other interested parties. The public was given the opportunity to learn about the planning process and to provide input during three public scoping meetings held in July 2008. The meetings were open-house-style sessions to allow the public to ask questions and provide input to the national recreation area staff in an informal atmosphere.

The public had another opportunity to comment on the draft range of alternatives with a newsletter distributed and public meetings held in April 2010. As a result of this scoping effort, numerous issues were identified as requiring further analysis in this plan/EIS. These issues represent existing concerns as well as concerns that might arise during the consideration and analysis of alternatives. These issues and impact topics also take into account comments received on the draft plan/EIS. The comment period for the draft plan/EIS was open from January 25, 2013 through March 26, 2013. Two public meetings were held: one on March 19 in Amarillo, Texas, and the other on March 20 in Fritch, Texas. During the public comment period, 116 pieces of correspondence were received. Comments included suggestions about where ORV use should be allowed, suggestions for modifications to vehicle requirements, and a request for no changes in current management.

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The issues identified during internal and public scoping are presented below. Chapter 5 includes additional information on the scoping and public involvement process and details about agency and public scoping activities that were an integral part of the planning process.

ISSUES AND IMPACT TOPICS

The national recreation area staff identified issues associated with implementing an ORV management plan at Lake Meredith National Recreation Area during the internal scoping meeting and the public identified issues during the public scoping process, including the three public meetings. The following text discusses these issues, which are the basis for the impact topics discussed in chapters 3 and 4.

SOILS

Impacts on soils from ORV use have occurred and continue to occur in the designated area of Rosita, particularly between the entrance and Bull Taco Hill. Extensive soil erosion has occurred over the last 40 years, primarily due to the use of ORVs above the 3,000-foot elevation line. On hillsides with slopes of 15 degrees or more, soils often erode during and after rainfall events because of the steep slopes and the removal of vegetation by ORV use.

The annual Sand Drags event held in February attracts over 30,000 spectators and hundreds of people racing motorcycles, four-wheelers, sand rails, and river buggies. Although it is held outside the national recreation area, there is a substantial increase in visitation associated with this event. The increased visitor and ORV traffic, and therefore the increased ORV-use intensity, have the potential to exacerbate the removal of vegetation and erosion. In addition, this event generally continues through rainstorms, and the potential for damage to geologic resources increases considerably with ORV use in wet conditions. The soils at the Blue Creek ORV use area remain in better condition than at Rosita Flats due to greater ranger presence and the rangers' ability to control ORV use and the associated impacts on hillsides and slopes. However, the potential for ORV use to impact geologic resources in the Blue Creek area remains, especially if such use increases or occurs outside designated routes or areas.

VEGETATION

Native vegetation is important for many reasons, including wildlife habitat and water quality protection. Use of ORVs in the Blue Creek and Rosita Flats areas has caused severe damage to plant communities, as documented in several planning documents and resource studies at Lake Meredith. At the Blue Creek ORV use area, ORV tracks parallel and cross Big Blue Creek several times, cutting through adjacent



2008 Public Scoping Meeting



View of Rosita Flats from Bull Taco Hill

vegetation. The damage in the Rosita Flats area is extensive, both in geographic area and in the types of effects on the natural communities (Nesom and O’Kennon 2005). Riparian area trees, including cottonwoods (*Populus deltoides*) and tall grasses, have also been impacted by having their roots exposed by ORV traffic. Invasive species are a potential threat to the native vegetation communities of the national recreation area. Thirty-seven nonnative species have been documented in the national recreation area, 10 of which have been classified as “highly invasive” and are displacing native species and 8 of which are classified as “invasive and potentially problematic.” Examples of highly invasive species found at the national recreation area include saltcedar (*Tamarix ramosissima*), Russian thistle (*Salsola tragus*), and Mexican fireweed (*Bassia scoparia*). Invasive or noxious weeds present a potential threat to the ecosystems of national park units throughout the country and control or eradication of these species is often extremely difficult and expensive. Because ORVs have been found to spread the seeds of invasive species, this issue is addressed in the plan/EIS.

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. The primary drainage in and out of the lake is the Canadian River, much of which flows underground. For drinking water supply, Lake Meredith water is blended with wellfield water from the Ogallala aquifer. Almost 100 miles of streams, fed primarily by springs, feed into the national recreation area (NPS 2007b). 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. 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.



View of the Canadian River Bed at Rosita Flats

SOUNDSCAPES AND THE ACOUSTIC ENVIRONMENT

Impacts related to soundscapes could occur where ORVs are allowed in Rosita Flats or Blue Creek. A wide variety of ORV use occurs at the national recreation area (trucks, ORVs, utility terrain vehicles (UTVs), dune buggies, rock climbers, etc.), each omitting various levels of noise. Vehicular noise has the potential to impact other users in these areas, such as those camping, enjoying picnics with their families, or participating in other activities. ORV noise could also discourage wildlife from using these areas.

WILDLIFE AND WILDLIFE HABITAT

Lake Meredith National Recreation Area provides important habitat for wildlife in the region, especially water-dependent species. Reservoirs, playa lakes, and the river systems are used as important stopover points for birds during migration. The following species are believed to be native to the national recreation area: 60 mammals, 32 reptiles, 11 amphibians, and over 200 birds (NPS 1998b). A 2002–2003 survey recorded the presence of 18 fish, 9 amphibian, 27 reptile, 72 breeding bird, and 32 mammal species at the national recreation area and Alibates Flint Quarries, including native and nonnative (exotic) species (Patrikeev 2004). Common mammals known to occur in and around the national recreation area include mule deer, white-tailed deer, coyotes, porcupines, raccoons, skunks, ground squirrels, rabbits, pocket gophers, moles, a few bat species, and several varieties of rats and mice. Pronghorn antelope may occasionally stray into the area, but are primarily found in the flatter topography in upland prairies away from the Canadian River. Prominent birdlife consists of wild turkeys, northern bobwhites, scaled quail, mourning doves, greater roadrunners, and red-winged blackbirds. The national recreation area lies along the Central Flyway, which is a major north–south bird migration route located between the arid region to the west and the moister landscapes to the east. Large numbers of ducks, geese, and other migratory birds come to use open water areas as well as wetland areas during the fall through spring months. Turtles, lizards, frogs, and snakes, including two poisonous species (prairie rattlesnake and western diamondback rattlesnake), can be found in the national recreation area (NPS 2006a).

Deer and turkeys in the national recreation area have become accustomed to the crowds and noise associated with the Rosita and Blue Creek ORV use areas. Generally, neither area supports other wildlife. However, because the Rosita and Blue Creek areas can be the only source of drinking water for wildlife in times of drought, ORV use during drought could adversely impact wildlife. Extensive ORV use at the national recreation area has resulted in the loss of a considerable amount of ground vegetation, which is important to support native wildlife such as birds, deer, and mice. ORV use also has the potential to cause impacts on wildlife as a result of vehicle noise, which contributes to species disturbance or displacement, and habitat damage caused by vehicle use outside permitted areas and within the riverbed in the Rosita ORV use area.

THREATENED AND ENDANGERED SPECIES / SPECIES OF CONCERN

Habitat for federally threatened and endangered species, such as the Arkansas River shiner, may be vulnerable to disturbances caused by recreational uses, including ORV use. The Arkansas River shiner, listed as federally threatened by the U.S. Fish and Wildlife Service (USFWS), is currently the only listed species or species of concern known to inhabit Lake Meredith National Recreation Area. Within the national recreation area, the Arkansas River shiner is present in the Canadian River from Chicken Creek upstream to the U.S. Highway 287 bridge, which includes the Rosita ORV use area. Successful reproduction of this species appears to be strongly correlated with streamflow, where Arkansas River shiners are likely to spawn in the upper to mid-water column during elevated flows (70 FR 59825–59826; USFWS 2005a). In the absence of sufficient streamflows, their eggs would likely settle to the channel bottom and be smothered (70 FR 59825–59826). According to the USFWS, the Arkansas River shiner needs more than 130 miles of unimpounded, flowing water to successfully complete its reproductive cycle (USFWS 2005d).

Within the last few decades, the Arkansas River shiner has disappeared from over 80 percent of its historical range and is almost entirely restricted to approximately 508 miles (820 kilometers) of the Canadian River (69 FR 59861). Their decline is primarily the result of modification of the duration and timing of streamflows, habitat loss by inundation, stream depletion due to water diversion and groundwater pumping, water quality degradation, competition with invasive nonnative species, and the construction of impoundments (70 FR 59828; USFWS 2009). Within the national recreation area, it is

common for rivers and streams to dry up, leaving fish congregated in small to large puddles. ORVs ridden through the puddles pose a threat to the congregated fish species, including the Arkansas River shiner (Wimer 2010a).

Current and possible future management alternatives for ORV use and other recreational uses would take into consideration the needs of federally listed threatened and endangered species, as well as species of concern, in determining management measures.

ARCHEOLOGICAL RESOURCES

Due to its use as a major trade route, the Canadian River and its tributaries were a major focal point for prehistoric and historic activities, as demonstrated by a high density of sites located on the uplands, side drainages, and tributary drainages of the river (NPS 2002a). Archeological surveys conducted in the Rosita Flats area as part of a plan for prescribed burns in 2005 identified six archeological sites (4G Consulting 2005). ORV use has the potential to expose and disturb archeological sites through the erosion that can result from tire ruts and other ORV use. Because of known archeological sites in the Rosita Flats area and the potential for unknown sites in this area and in Blue Creek, impacts on archeological resources are analyzed in this plan/EIS.

VISITOR USE AND EXPERIENCE / HEALTH AND SAFETY

ORV use has taken place at Rosita 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, visitors may be affected by potential ORV management actions, especially if certain restrictions or user fees are involved. Other popular visitor activities at the national recreation area include camping, picnicking, swimming, hunting, fishing from the shore, boating, and visiting archeological sites (Arizona State University [ASU] 2004). Visitors who do not use ORVs may also be impacted by ORV use, either through visitor conflicts or aesthetic/visitor experience issues. While there are no documented conflicts between ORV users, campers, fishermen, boaters, bird-watchers, and others (NPS 2007a), some public comments gathered through the public scoping process indicate visitors are concerned for their safety in ORV use areas, particularly due to speeding vehicles, reckless driving, and crime.



Visitor and ORV Users in Lake Meredith National Recreation Area

LAKE MEREDITH NATIONAL RECREATION AREA MANAGEMENT AND OPERATIONS

The NPS manages natural and cultural resources, public recreation, and associated facilities in the national recreation area. The superintendent has overall authority and uses five divisions for managing the park unit: (1) resource management, (2) law enforcement and visitor protection, (3) facility management, (4) administration, and (5) interpretation. In addition to numerous other responsibilities, national

recreation area staff members are charged with enforcing closures, monitoring motorized vehicle use for general violations, and providing interpretive and educational information to visitors. The implementation of additional management measures or regulations associated with this plan/EIS has the potential to impact the day-to-day operations and management of Lake Meredith National Recreation Area.

ISSUES CONSIDERED BUT DISMISSED FROM FURTHER CONSIDERATION

The following issues and impact topics were dismissed from further analysis:

Geohazards—No known geohazards in the national recreation area would be affected by the implementation of an ORV management plan; therefore, this topic was not carried forward for analysis in this plan/EIS.

Floodplains—While the entire area of Rosita Flats is a designated floodplain, no actions are being proposed that would involve the building of structures in the floodplain or that would otherwise alter the floodplain; therefore, this topic was not carried forward for analysis in this plan/EIS.

Prime Farmlands—No designated prime farmland soils exist in the national recreation area that would be affected by an ORV management plan; therefore, this topic was not carried forward for analysis in this plan/EIS.

Museum Collections—No museum collections that would be affected by an ORV management plan exist in the national recreation area; therefore, this topic was not carried forward for analysis in this plan/EIS.

Paleontology—While paleontological resources have been found in other areas of the national recreation area, formations present in the Rosita and Blue Creek areas are unlikely to contain these resources. Therefore, this resource topic was not carried forward for analysis in this plan/EIS.

Energy Resources—This topic involves assessing energy requirements and the potential for energy conservation associated with the various alternatives, but is most relevant to facility construction projects. The national recreation area would continue to operate under the wise energy use guidelines and requirements stated in the NPS *Management Policies 2006*, Executive Order 13123 (“Greening the Government through Effective Energy Management”), Executive Order 13031 (“Federal Alternative-fueled Vehicle Leadership”), Executive Order 13149 (“Greening the Government through Federal Fleet and Transportation Efficiency”), and the 1993 NPS *Guiding Principles of Sustainable Design*.

Socioeconomics—The social and economic environment of a region is characterized by its demographic composition, the structure and size of its economy, and the types and levels of public services available to its citizens. The national recreation area provides recreation, quality of life, and other amenities to regional visitors and residents. The NPS evaluated the socioeconomic environment in the three counties surrounding Lake Meredith in the center of the Texas panhandle. The national recreation area boundaries extend into Hutchinson County, Moore County, and Potter County. These three counties form the economic region of influence (ROI) and define the geographic area in which the predominant social and economic impacts from the proposed alternatives are likely to take place.

Although the national recreation area contributes to the local economy, analysis suggests that the proposed alternatives for managing ORV use would have a long-term negligible adverse impact on the overall economy within the ROI. The majority of visitors to the national recreation area live in the ROI or the state of Texas (ASU 2004). Based on the experience of national recreation area staff and a survey of

local businesses, visitor spending in the ROI is low. Close proximity allows most visitors to take day trips to the national recreation area rather than spending the night. There are few hotels in the immediate vicinity of the national recreation area, and most people who spend the night camp within the national recreation area boundaries. Furthermore, only around 10 to 15 percent of national recreation area visitors participate in the activities that would potentially be affected by the alternatives, including four-wheel driving, motorized trail biking, and ATV riding (ASU 2004). The small share of the overall visitation affected by changes in ORV regulations combined with the low level of spending suggests that any impact on the local economy would be long term, negligible, and adverse as well.

To support this assessment, a regional economic impact model, IMPLAN (Minnesota IMPLAN Group [MIG] 2008), was used to assess the quantitative impacts that the proposed alternatives may have on the local economy. An annual baseline spending level was generated using the daily visitor spending assumptions and average annual national recreation area visitation statistics from *Economic Benefits to Local Communities from National Park Visitation and Payroll, 2009* (NPS 2011b). Potential decreases in visitation to the national recreation area resulting from implementing any of the alternatives are manifested in the model through decreases in spending in the local economy. Several possible visitation scenarios that could follow the implementation of the rule were used to account for a range of possible impacts on the local economy. Extreme changes in visitation were used to illustrate the worst-case outcomes for the overall impact on the economy. These scenarios are unlikely to result from any of the alternatives and should overstate any impact of new national recreation area regulations. Results from the IMPLAN model showed that the impact on regional economic output and employment would be negligible under any of the scenarios evaluated. Even with the drop in spending associated with the 50 percent decrease in visitation, the effects on the region's economic output and employment would be minimal.

Although the impact on the overall economy would be negligible, the impact on individual businesses may vary, and a few businesses may bear the majority of any potential impact from any of the alternatives. To assess the possible impacts of the proposed alternatives on businesses that serve visitors, RTI International conducted a small-scale business survey around the national recreation area. The survey focused on three primary businesses and one secondary business that are most likely to be directly affected by any change in national recreation area ORV regulations. All of the businesses are involved in selling and servicing equipment and parts for outdoor recreation (ATVs, motorized bicycles, recreational vehicles, etc.). They are all located in Amarillo, Texas. Overall, two of the four businesses felt that the alternatives would have a significant impact on their customers and, subsequently, their businesses.

The IMPLAN analysis and small business survey support the decision to dismiss further socioeconomic evaluation of the alternatives. Because the ROI does not rely on tourism to sustain its economy, even the unlikely event of a 50 percent decrease in visitation to the national recreation area would have a long-term negligible adverse impact on the overall economy; therefore, the topic of socioeconomics was not carried forward for analysis in this plan/EIS.

Minority and Low Income Populations—Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, states “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.” Executive Order 12898 defines a minority as any person who identifies himself/herself as being of a race other than non-Hispanic White alone. A minority population is defined as either, “(a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.” (CEQ 1997). For purposes of this analysis, the threshold to determine high concentrations of

minority residents is when the area under analysis comprises minority populations more than 10 percent greater than the benchmark or reference region. In this case, the reference or benchmark geographic area is Texas. As shown in table 1, all counties in the ROI are less than 10 percentage points greater than the Texas average. Therefore, the ROI is not classified as an area with high concentrations of minority residents.

Guidance from the U.S. Census classifies a poverty area as an area where 20 percent or more of the population lives below the poverty line. As demonstrated in table 1, two of the three counties in the ROI have populations with less than 20 percent of residents living below the poverty line. In Potter County, approximately 23 percent of the population lives below the poverty line. The proposed action alternatives would regulate ORV use in different areas throughout the national recreation area. Locations where ORV use is allowed may change, although ORV use would largely still be permitted in the national recreation area. Because any change in ORV use regulations would affect all users in the same manner, no disproportionate adverse impacts to low-income populations are anticipated. The proposed action alternatives introduce an annual permit fee for using ORVs within the national recreation area. This fee would apply to all visitors who access the national recreation area with personal ORVs, and would represent a small fraction of the cost associated with purchasing and maintaining these vehicles. Therefore, it is not anticipated that permit fees introduced as part of the proposed action alternatives would result in disproportionate adverse impacts to low-income populations in Potter County and the larger ROI.

TABLE 1: ENVIRONMENTAL JUSTICE STATISTICS, 2010

Geographic Area	Percentage of Population	
	Minority	Below the Poverty Level
United States	36%	14%
Texas	55%	17%
Hutchinson County ^a	26%	15%
Borger Urban Cluster	26%	13%
Moore County	62%	13%
Potter County	51%	23%
ROI ^b	49%	20%

Source: U.S. Census Bureau, 2010.

^a Includes Borger urban cluster.

^b Per capita income was calculated as an average of the three counties; minority, poverty, and graduation statistics were calculated from actual population figures.

Urban/Gateway Communities—A gateway community is defined by the NPS *Management Policies 2006* as a community that exists in close proximity to a unit of the national park system whose residents and elected officials are often affected by the decisions made in the course of managing the park unit. Because of this, there are shared interests and concerns regarding decisions. Gateway communities usually offer food, lodging, and other services to park visitors. They also provide opportunities for employee housing and a convenient location to purchase goods and services essential to park administration. Although communities adjacent to the national recreation area would fall under this definition, as noted above under the dismissal for socioeconomic impacts, impacts would not be greater than long term, negligible, and adverse. Therefore, this impact topic was not carried forward for analysis.

Air Quality—Air quality in the Texas panhandle is relatively good, due mostly to the constant breezes that blow year-round and seldom allow stagnant air to remain in the area. Since the establishment of Lake Meredith National Recreation Area, air quality is better than in the 1950s when three carbon black plants operated near the town of Sanford, which is near the northern boundary of the national recreation area (NPS 1996). Currently, the national recreation area is in attainment for all U.S. Environmental Protection Agency (EPA)-designated criteria pollutants (Texas Commission on Environmental Quality [TCEQ] 2009). However, due to the potential for site-specific, short-term impacts on visitor experience from vehicle emissions and dust, these topic elements are discussed in the “Visitor Use and Experience” section.

Cultural Landscapes—Cultural landscapes have not been identified in Lake Meredith National Recreation Area; therefore, this topic was not carried forward for analysis in this plan/EIS.

Unique or Important Wildlife and Habitat—No unique wildlife or wildlife habitats exist in Lake Meredith National Recreation Area; therefore, this impact topic was not carried forward for analysis in this plan/EIS.

Prehistoric and Historic Structures—No known prehistoric or historic structures exist in Lake Meredith National Recreation Area; thus, none would be impacted by the implementation of this plan/EIS and this topic was not carried forward for analysis in the plan/EIS.

RELEVANT LAWS, POLICIES, REGULATIONS, AND PLANS

FEDERAL LAWS, POLICIES, REGULATIONS, AND PLANS DIRECTLY RELATED TO OFF-ROAD VEHICLE MANAGEMENT

Executive Order 11644: Use of Off-road Vehicles on the Public Lands

On February 8, 1972, President Richard Nixon issued Executive Order 11644 to “establish policies and provide for procedures that will ensure the use of ORVs on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.”

The executive order directs agencies to develop and issue regulations and administrative instructions to designate the specific areas and trails on public lands on which ORV use may and may not be permitted. According to this executive order, the location of ORV-permitted use areas and trails shall

- Minimize damage to soil, watershed, vegetation, or other resources of the public lands;
- Minimize harassment of wildlife or significant disruption of wildlife habitats;
- Minimize conflicts between ORV use and other existing or proposed recreational uses of the same on neighboring public lands, and ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors; and
- Areas and trails shall not be located in officially designated wilderness areas or primitive areas but shall be located in areas of the national park system, natural areas, or national wildlife refuges and game ranges only if the respective agency head determines that ORV use in such locations will not adversely affect their natural, esthetic, or scenic values.

Executive Order 11989: Off-road Vehicles on Public Lands

This executive order, issued on May 24, 1977, by President Jimmy Carter, directs agencies to immediately close off-road areas or trails when it is determined that ORV use causes or will cause considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat, or cultural or historic resources to the type of ORV causing such effects, until such time as determined that such adverse effects have been eliminated and measures have been implemented to prevent future recurrence. The executive order also includes the authority to preclude ORV use in portions of the public lands under an agency's jurisdiction, except those areas or trails that are suitable and specifically designated as open to such use.

Code of Federal Regulations, Title 36, Section 4.10: Travel on Park Roads and Designated Routes

This CFR section states, "operating a motor vehicle is prohibited except on park roads, in parking areas and on routes and areas designated for off-road motor vehicle use." Additionally, routes and areas designated for ORV use shall be promulgated as special regulations, with designations complying with Executive Order 11644. Lake Meredith National Recreation Area will be in compliance with this regulation as a result of the plan/EIS and special regulation.

OTHER APPLICABLE FEDERAL LAWS, POLICIES, REGULATIONS, AND PLANS

The plan/EIS must conform to the federal laws, policies, regulations, and plans described in this section. Although some of the following documents may not be directly related to ORV management, they are relevant to issues at the national recreation area that may be indirectly influenced by or associated with ORV use.

Code of Federal Regulations, Title 36 (1992)

Title 36, Chapter 1, provides the regulations "for the proper use, management, government, and protection of persons, property, and natural and cultural resources within areas under the jurisdiction of the National Park Service." It states, "the National Park Service has the authority to manage the wildlife in the parks in fulfillment of the Organic Act without the consent of the state and by methods contrary to state law" (16 USC 3).

Code of Federal Regulations, Title 43

Title 43 of the CFR, Part 24, describes the four major systems of federal lands administered by the U.S. Department of the Interior. Section 24.4(f) states that "Units of the National Park System contain natural, recreation, historic, and cultural values of national significance as designated by Executive and Congressional action." In describing appropriate activities, it states, "as a general rule, consumptive resource utilization is prohibited." In addition, Section 24.4(i) instructs all federal agencies of the Department of the Interior, among other things, to "prepare fish and wildlife management plans in cooperation with State fish and wildlife agencies and other Federal (non-Interior) agencies where appropriate." It also directs agencies to "consult with the States and comply with State permit requirements... except in instances where the Secretary of the Interior determines that such compliance would prevent him from carrying out his statutory responsibilities."

Endangered Species Act of 1973, as Amended

This act requires all federal agencies to consult with the Secretary of the Interior on all projects and proposals with the potential to impact federally endangered or threatened plants and animals. It also

requires federal agencies to use their authorities in furtherance of the purposes of the Endangered Species Act (ESA) by carrying out programs for the conservation of endangered and threatened species. Federal agencies are also responsible for ensuring that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat.

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act implements various treaties and conventions between the United States and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under this act it is prohibited, unless permitted by regulations, to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention...for the protection of migratory birds...or any part, nest, or egg of any such bird” (16 USC 703). Subject to limitations in the act, the Secretary of the Interior may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest, or egg will be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits, and migratory flight patterns.

Federal Noxious Weed Act of 1975

The Federal Noxious Weed Act (7 USC 2801–2814, January 3, 1975, as amended 1988 and 1994) provides for the control and management of nonnative weeds that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health. Because the potential exists for seeds of nonnative and potentially invasive or noxious plants to be introduced or spread by motorized vehicle use at the national recreation area, this act was considered in developing potential ORV management actions.

National Environmental Policy Act of 1969, as Amended

The NEPA is implemented through regulations of the Council on Environmental Quality (CEQ) (40 CFR 1500–1508). The NPS has in turn adopted procedures to comply with the act and CEQ regulations, as found in Director’s Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2011a), and its accompanying handbook (NPS 2001). Section 102(2)(c) of NEPA requires that an environmental impact statement (EIS) be prepared for proposed major federal actions that may significantly affect the quality of the human environment.

National Historic Preservation Act of 1966, as Amended

Section 106 of this act requires federal agencies to consider the effects of their undertakings on properties listed or potentially eligible for listing on the National Register of Historic Places (national register). All actions affecting the national recreation area’s cultural resources must comply with this legislation.

National Parks Omnibus Management Act of 1998

Both the National Parks Omnibus Management Act of 1998 (16 USC 5901 et seq.) (NPOMA) and NEPA are fundamental to NPS park management decisions. Both acts provide direction for articulating and connecting the ultimate resource management decision to the analysis of impacts using appropriate

technical and scientific information. Both also recognize that such data may not be readily available and provide options for resource impact analysis in this case.

The NPOMA directs the NPS to obtain scientific and technical information for analysis. The NPS handbook for Director's Order 12 states that if "such information cannot be obtained due to excessive cost or technical impossibility, the proposed alternative for decision will be modified to eliminate the action causing the unknown or uncertain impact or other alternatives will be selected" (NPS 2011a).

NPS Organic Act of 1916

By enacting the NPS Organic Act of 1916, Congress directed the U.S. Department of the Interior and NPS to manage units of the national park system "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (16 USC 1). The Redwood National Park Expansion Act of 1978 reiterates this mandate by stating that the NPS must conduct its actions in a manner that will ensure no "derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress" (16 USC 1 a-1).

Despite these mandates, the Organic Act and its amendments afford the NPS latitude when making resource decisions that balance visitor recreation and resource preservation. By these acts Congress "empowered [the NPS] with the authority to determine what uses of park resources are proper and what proportion of the park's resources are available for each use" (*Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1453 [9th Cir. 1996]).

Yet courts consistently interpret the Organic Act and its amendments to elevate resource conservation above visitor recreation. *Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 206 (6th Cir. 1991), states: "Congress placed specific emphasis on conservation." The court in *National Rifle Association of America v. Potter* states, "in the Organic Act Congress speaks of but a single purpose, namely, conservation." The NPS *Management Policies 2006* also recognizes that resource conservation takes precedence over visitor recreation. The policy dictates, "when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant" (NPS 2006b, sec. 1.4.3).

Because conservation remains predominant, the NPS seeks to avoid or to minimize adverse impacts on park resources and values. Yet, the NPS has discretion to allow negative impacts when necessary (NPS 2006b, sec. 1.4.3). While some actions and activities cause impacts, the NPS cannot allow an adverse impact that constitutes resource impairment (NPS 2006b, sec. 1.4.3). Specifically, NPS *Management Policies 2006*, Section 1.4.3.1 states, "In the administration of authorized uses, park managers have the discretionary authority to allow and manage the use, provided that the use will not cause impairment or unacceptable impacts." The Organic Act prohibits actions that permanently impair park resources unless a law directly and specifically allows for the action (16 USC 1a-1). An action constitutes "an impairment" when its impacts 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" (NPS 2006b, sec. 1.4.5). To determine impairment, the NPS must evaluate "the particular resources and values 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" (NPS 2006b, sec. 1.4.5).

Park managers must also not allow uses that would cause unacceptable impacts (NPS 2006b, sec. 1.4.7). These are impacts that fall short of impairment, but are still not acceptable in a particular park's

environment. For the purposes of these policies, unacceptable impacts are impacts that, individually or cumulatively, would

- Be inconsistent with a park’s purposes or values, or
- Impede the attainment of a park’s desired future conditions for natural and cultural resources as identified through the park’s planning process, or
- Create an unsafe or unhealthful environment for visitors or employees, or
- Diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values, or
- Unreasonably interfere with:
 - Park programs or activities, or
 - An appropriate use, or
 - The atmosphere of peace and tranquility, or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park, or
 - NPS concessioner or contractor operations or services.

Because park units vary based on their enabling legislation, natural resources, cultural resources, and missions, management activities appropriate for each unit and for areas in each unit vary as well. An action appropriate in one unit could impair or cause unacceptable impacts on resources in another unit. Thus, this plan/EIS analyzes the context, duration, and intensity of impacts related to the implementation of an ORV management plan at Lake Meredith National Recreation Area, as well as the potential for resource impairment or unacceptable impacts, as required by Director’s Order 12: *Conservation Planning, Environmental Impact Analysis and Decision-making* (NPS 2011a).

Redwood National Park Act of 1978, as Amended

Reasserting the system-wide standard of protection established by Congress in the original Organic Act, the Redwood Amendment stated:

The authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as may have been or shall be directly and specifically provided by Congress (P.L. 95-250, USC Sec 1a-1).

Congress intended the language of the Redwood Amendment to the General Authorities Act to reiterate the provisions of the Organic Act, not to create a substantively different management standard. The House committee report described the Redwood Amendment as a “declaration by Congress” that the promotion and regulation of the national park system is to be consistent with the Organic Act. The Senate committee report stated that under the Redwood Amendment, “The Secretary has an absolute duty, which is not to be compromised, to fulfill the mandate of the 1916 act to take whatever actions and seek whatever relief as will safeguard the units of the national park system.” Although the Organic Act and the General Authorities Act, as amended by the Redwood Amendment, use different wording (“unimpaired” and “derogation”) to describe what the NPS must avoid, both acts define a single standard for the management of the national park system—not two different standards. For simplicity, NPS *Management Policies 2006* uses “impairment,” not both statutory phrases, to refer to that single standard.

Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds

Migratory birds are of ecological and economic value to this and other countries. They contribute to biological diversity and bring tremendous enjoyment to millions of people who study, watch, feed, or hunt these birds throughout the United States and other countries. The United States has recognized the critical importance of this shared resource by ratifying international, bilateral conventions for the conservation of migratory birds, including the Convention for the Protection of Migratory Birds with Great Britain on behalf of Canada 1916, the Convention for the Protection of Migratory Birds and Game Mammals–Mexico 1936, the Convention for the Protection of Birds and Their Environment–Japan 1972, and the Convention for the Conservation of Migratory Birds and Their Environment–Union of Soviet Socialist Republics 1978. These migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats, and through the Migratory Bird Treaty Act, the United States has implemented these migratory bird conventions with respect to the United States. This executive order directs executive departments and agencies to take certain actions to further implement the Migratory Bird Treaty Act.

Executive Order 11990: Protection of Wetlands

This executive order directs federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the destruction or modification of wetlands, and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

Executive Order 11988: Floodplain Management

This executive order directs federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

Executive Order 13112: Invasive Species

The use of motorized vehicles has the potential to introduce or spread the seeds of nonnative plants at the national recreation area. This executive order requires the NPS to prevent the introduction of invasive species, provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause.

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations

This executive order focuses federal attention on the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities. The executive order is also intended to promote nondiscrimination in federal programs substantially affecting human health and the environment, and to provide minority and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment. The presidential memorandum accompanying the order underscores certain provisions of existing law to help ensure that all communities and people across the nation live in a safe and healthful environment.

NPS Management Policies 2006

NPS *Management Policies 2006* addresses management of ORVs in Section 8.2.3.1, Off-Road Vehicle Use. This section (NPS 2006b) states:

Off-road motor vehicle use in national park units is governed by Executive Order 11644 (Use of Off-road Vehicles on the Public Lands, as amended by Executive Order 11989), which defines off-road vehicles as “any motorized vehicle designed for or capable of cross-country travel on or immediately over, land, water, sand, snow, ice, marsh, swampland, or other natural terrain” (except any registered motorboat or any vehicle used for emergency purposes). Unless otherwise provided by statute, any time there is a proposal to allow a motor vehicle meeting this description to be used in a park, the provisions of the executive order must be applied.

In accordance with 36 CFR 4.10(b), routes and areas may be designated only in national recreation areas, national seashores, national lakeshores, and national preserves, and only by special regulation. In accordance with the executive order, they may be allowed only in locations where there will be no adverse impacts on the area’s natural, cultural, scenic, and esthetic values, and in consideration of other existing or proposed recreational uses. The criteria for new uses, appropriate uses, and unacceptable impacts listed in sections 8.1 and 8.2 must also be applied to determine whether off-road vehicle use may be allowed. As required by the executive order and the Organic Act, superintendents must immediately close a designated off-road vehicle route whenever the use is causing or will cause unacceptable impacts on the soil, vegetation, wildlife, wildlife habitat, or cultural and historic resources.

NPS administrative off-road motor vehicle use will be limited to what is necessary to manage the public use of designated off-road vehicle routes and areas; to conduct emergency operations; and to accomplish essential maintenance, construction, and resource protection activities that cannot be accomplished reasonably by other means. (NPS 2006b, Section 8.2.3.1)

Management policies relating to resource protection also were considered in developing this plan/EIS. For example, NPS *Management Policies 2006* instructs park units to maintain, as parts of the natural ecosystems of parks, all plants and animals native to the park ecosystems, in part by “minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them” (NPS 2006a, Section 4.4.1).

Director’s Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making and Handbook

NPS Director’s Order 12 (NPS 2011a) and its accompanying handbook (NPS 2001) lay the groundwork for how the NPS complies with NEPA. Director’s Order 12 and handbook set forth a planning process for incorporating scientific and technical information and establishing a solid administrative record for NPS projects.

Director’s Order 12 requires that impacts on park resources be analyzed in terms of their context, duration, and intensity. It is crucial for the public and decision makers to understand the implications of those impacts in the short and long term, cumulatively, and in context, based on a review and analysis of potential impacts by resource professionals and specialists. Director’s Order 12 also requires that an analysis of impairment of park resources and values be made as part of the NEPA document.

Director's Order 28: Cultural Resource Management

This director's order sets forth the guidelines for management of cultural resources, including cultural landscapes, archeological resources, historic and prehistoric structures, museum objects, and ethnographic resources (NPS 1998a). This order calls for the NPS to protect and manage cultural resources in its custody through effective research, planning, and stewardship in accordance with the policies and principals contained in NPS *Management Policies 2006*.

Director's Order 77: Natural Resource Protection

Director's Order 77 addresses natural resource protection, with specific guidance provided in Reference Manual 77: *Natural Resource Management* (NPS n.d.b), which offers comprehensive guidance to NPS employees responsible for managing, conserving, and protecting the natural resources found in national park system units. The manual serves as the primary guidance on natural resource management in units of the national park system. Reference manual chapters that are particularly relevant to this plan/EIS include air resources management; endangered, threatened, and rare species management; geologic resources management; native animal management; shoreline management; vegetation management; special use permitting; wetland protection (Director's Order 77-1 [NPS 2002b]); and floodplain management (Director's Order 77-2 [NPS 2003]).

RELATIONSHIP TO OTHER LAKE MEREDITH NATIONAL RECREATION AREA PLANNING DOCUMENTS, POLICIES, AND ACTIONS

The following plans, policies, and actions occurring at the national recreation area were considered during the development of this plan/EIS.

Resources Management Plan: Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument (1996)

This resources management plan provides goals for the national recreation area that address preserving national recreation area resources, providing for the public enjoyment and visitor experience, perpetuating cultural resources and enhancing recreational opportunities managed by partners, and ensuring organizational effectiveness. Specifically related to ORV use in the national recreation area, the resources management plan states that severe damage to soils and vegetation and resultant erosion have occurred in Rosita and Blue Creek as a result of continued ORV use. Damage to a lesser extent has occurred in other portions of the national recreation area due to illegal ORV use outside these designated ORV use areas. Furthermore, several archeological sites have been damaged both inside and outside the ORV use areas. Noise pollution from ORV use has also been a problem (NPS 1996). These resource conditions are identified and addressed in this plan.

Specifically related to ORV use in the national recreation area, the resources management plan states that severe damage to soils and vegetation and resultant erosion have occurred in Rosita and Blue Creek as a result of continued ORV use.

Alibates Flint Quarries National Monument / Lake Meredith National Recreation Area Strategic Plan FY-2008 through FY-2012

This strategic plan (NPS n.d.a) was written to fulfill the requirements of Section 104 of NPOMA. This legislation requires all field units of the national park system prepare strategic plans and annual performance plans consistent with the Government Performance and Results Act of 1993 and make these

documents available to the public. This plan contains long-term goals, which target in quantifiable, measurable ways what the national recreation area staff will accomplish during the planning period toward achieving the overall mission goals. The long-term goals in the plan address appropriate “Service-wide” goals as well as park-specific outcomes. The strategic plan includes information on how these goals will be accomplished, including staffing, fiscal, infrastructure, and other resources available to achieve the plan’s long-term goals. Goals stated under the strategic plan that relate to ORV use in the national recreation area include the following:

- By September 30, 2012, 85 percent of visitors to Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument are satisfied with appropriate park facilities, services, and recreational opportunities.
- By September 30, 2012, Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument will have or maintain 24 community partnerships designed to enhance the park’s ability to manage recreation activities seamlessly.

Interim Off-Highway Vehicle Plan

This management plan (NPS 2007a, in conjunction with the *Superintendent’s Compendium*) provides guidelines for ORV use on an interim basis until this plan/EIS is completed and a federal rule is adopted, pursuant to the requirements of Executive Order 11644 as amended. It provides a history of ORV use in the national recreation area, summarizes the issues of concern associated with ORV use, and recommends potential management actions for future planning efforts, stating that the national recreation area supports the continued use of ORVs at the national recreation area. This plan sets forth the issues of concern, but does not designate routes or areas, or park goals related to ORV use.

Superintendent’s Compendium

Under the provisions of 16 USC, Section 3, and 36 CFR 1, the *Superintendent’s Compendium* (compendium) designates closures, permit requirements, and other restrictions imposed under the discretionary authority of the superintendent for Lake Meredith National Recreation Area. Regulations listed in the compendium are a requirement in addition to those listed in parts 1–7 of Title 36, unless otherwise noted. In addition to the compendium regulations, written determinations that explain the reasoning behind the superintendent’s use of discretionary authority are required by 36 CFR 1.5(c) and appear in the document as italicized print or are available for review in the Chief Ranger’s Office. Regulations in the compendium that are related to ORV use define areas where ORVs may be used and provide the authority for area closures. These regulations include the following:

- Section 1.5: Areas in the park may be closed to public use for resource protection. These areas will be designated with fencing, barriers, and/or signs stating that a closure is in effect.
- Backcountry areas across the Canadian River at the Mullinaw Crossing are closed to access by motor vehicle(s) except during the park’s general deer hunting season, as determined by the superintendent.
- Section 1.5 (a)(2): Blue Creek and Rosita are designated as ORV use areas, regulated by 36 CFR 7.57(1)(b).
- Section 4.21 – Speed Limits: This section sets a speed limit of 15 miles per hour (mph) in the Rosita area and 35 mph in the Blue Creek area.

The compendium also addresses hunting restrictions, an activity that is permitted in Blue Creek and Rosita areas. The compendium requires recreation fees for lake use (vessels) but not for ORV use.

Visitor Study Final Technical Report: Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument (2004)

Visitor Study Final Technical Report: Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument (ASU 2004) (visitor study) presents findings from a cooperative social science research project designed to inform the NPS general management planning efforts. Although recent data from the NPS Visitor Survey Card project was available, it proved to be insufficient because no specific data existed that would inform managers about visitors' responses to various alternative scenarios for the future (ASU 2004). Thus, this visitor study was implemented to meet those needs.

Data for the visitor study were collected from current and potential national recreation area visitors and residents of the communities adjacent to the national recreation area. The study draws on four sources of data: (1) on-site survey questionnaires of current adult national recreation area visitors, (2) mail survey questionnaires of current adult national recreation area visitors contacted on site, (3) mail survey questionnaires of current and potential national recreation area visitors who purchased annual watercraft permits in 2002 and 2003, and (4) focus group interviews with organized interest groups from nearby communities.

When visitors were asked to pick only one activity they participate in while at the national recreation area, approximately 11.5 percent of those surveyed by mail and on site chose ORV activities (four-wheel driving, motorized trail bike/dirt biking, dune buggy, or ATV riding) (ASU 2004). However, it is noted that a majority of the national recreation area visitors participate in multiple activities during their visit to the national recreation area. When allowed to choose multiple activities, most respondents chose picnicking and swimming above all other recreational activities.

Master Plan: Lake Meredith National Recreation Area (1973)

The master plan for the national recreation area details the aspects of the national recreation area that make it unique, as well as providing a plan that facilitates access to land and water in the area. In regard to ORV use, the master plan identifies off-road vehicular travel, especially trail-biking, as an activity that occurs at the national recreation area. The development called for in the master plan focuses mainly around water-based uses, and not land-based uses, such as ORVs. This plan also calls for controlling various visitor uses as the need arises, noting that some areas should be designated for the consumptive use of ORVs.

General Management Plan for Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument (Ongoing)

The draft GMP for Lake Meredith National Recreation Area was published and open for public comment in January 2013, with the final GMP awaiting approval. A key feature of the plan is to determine ways to expand visitor opportunities at the national recreation area in response to changing conditions at the park, such as the variability of the lake water level in recent years. The NPS is exploring methods to improve existing recreation and introduce new activities at the national recreation area. The NPS identified alternative 3 as the preferred alternative in the draft GMP. Under alternative 3, management of Lake Meredith National Recreation Area would promote both traditional and nontraditional uses, providing development of facilities and opportunities to address changing lake conditions and visitor uses. It would become a destination for semi-primitive outdoor recreation opportunities for a broad range of skill levels. The national recreation area would strengthen partnership opportunities that employ science-based resource management and compatible land management uses to improve visitor experience and wildlife habitat. This alternative further identifies Rosita Flats and Blue Creek as ORV use areas, with

management following this plan/EIS. Decisions from this plan/EIS process will be incorporated into the GMP as planning progresses.

RELATIONSHIP TO OTHER STATE AND LOCAL PLANNING DOCUMENTS, POLICIES, ACTIONS, LAWS, AND REGULATIONS

The following state and local documents, policies, actions, laws, and regulations are directly or indirectly related to ORV use and were therefore considered during the development of this plan/EIS.

Texas Wildlife Action Plan (2006)

The Texas Parks and Wildlife Department's (TPWD) *Texas Wildlife Action Plan* (the plan) is an outline for various strategies that will assist the TPWD with the development of nongame initiatives that address the needs of animal species not typically hunted. The plan is also a requirement for the State Wildlife Grant program, as outlined by the USFWS, which provides state grants to address unmet wildlife conservation needs. In addition to analyzing detailed species information, the plan also provides broad habitat information in various ecoregions of Texas.

The plan recognizes the High Plains ecoregion of Texas as a "secondary priority ecoregion" (TPWD 2006). The High Plains ecoregion encompasses the Texas panhandle, including the Lake Meredith National Recreation Area. The plan explains that this ecoregion is one of the least conserved in Texas, and that it has experienced a high rate of conversion to cropland. Threats to the region include fragmentation; damming of springs, streams, and rivers; and surface mining.

The plan also recognizes the Canadian River Basin in an analysis of various Texas river basins. The plan explains that threats to the Canadian River Basin include increased silt loads from erosion, which could affect the suitability of riverine habitat, invertebrate production, and fish survival. It also states that brush control could increase flow rates but may also lead to changes in streambank vegetation and erosion processes (TPWD 2006). While the plan does not identify ORV use as a contributing factor to resource damage in this ecoregion and river basin, ORV activities and management will likely have implications related to the various strategies outlined in this plan/EIS.

Land and Water Resources Conservation and Recreation Plan (2005)

This plan, written by the TPWD, seeks to guide the TPWD in conserving Texas' natural and historical heritage while providing for public access and recreation to the outdoors. It specifically addresses the conservation of land and water resources, as well as land and water recreation. The NPS requires each state's park agency to update a Statewide Comprehensive Outdoor Recreation Plan every five years to be eligible for land and water conservation funds. Eligibility for this program allows the TPWD to receive matching grants for land acquisition and construction of recreational facilities on state and local parks. The *Land and Water Resources Conservation and Recreation Plan* will serve as Texas' comprehensive plan to meet the NPS eligibility requirements (TPWD 2005). While ORV use is not specifically identified in any of the conservation and recreation priorities, the plan does recognize the damage ORVs can cause to streambeds and the potential for conflicts between ORV users and other public land users or adjacent landowners. One of the major goals of the plan is to increase the participation in and quality of hunting, fishing, boating, and outdoor recreation.

Texas Off-highway Vehicle Program

The TPWD has developed an OHV program (TPWD 2008) to encourage the responsible use of OHVs and to help OHV users locate places to ride safely and legally. The program is also designed to provide

funding to develop more OHV-friendly recreational areas. Under Texas State Law, an OHV decal is required for all individuals operating an OHV in Texas in an area that is on public land or on lands that have been purchased with TPWD OHV grants. The decal is valid for a one-year period. Decals currently cost \$8.00 and revenue generated from decal sales is being used to create or improve existing OHV recreation areas in Texas. The program's website (<http://www.tpwd.state.tx.us/spdest/ohv/index.phtml>) provides information of where to buy OHV decals (including state offices and some OHV dealers), where to ride OHVs, information on responsible use, and other resources regarding safe and legal OHV operation. The State of Texas requires that all OHV users purchase and display the decal prior to operating the vehicle on public lands, including the national recreation area. Failure to obtain this decal constitutes a Class C misdemeanor and could result in a citation being issued to the OHV operator. Fines for this offense range from \$25 to \$500.