

Kiowa National Grasslands Draft Wilderness Evaluation Report

Canadian River Potential Wilderness Area
PW-03-03-01G
October 24, 2007



This draft potential wilderness evaluation report is divided into three parts: capability, availability, and need. Capability and availability are intended to be objective evaluations of existing conditions in the Canadian River Potential Wilderness Area.

The most important area of focus for public comment is the “need” evaluation. The intent of this part of the evaluation is to consider if the Canadian River fits into the National Wilderness Preservation System at the regional level. This report offers data that helps us understand different sources that might generate need; ultimately, however, need for wilderness is generated by public demand. Therefore, public input is an essential component of this part of the wilderness evaluation.

We would like your feedback on this draft report - if we have missed an important detail or you would like to share your comments or other input, please contact us (our contact information can be found on the last page of this report).

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Introduction

As part of the Land and Resource Management Plan (the Plan) revision for the Kiowa, Rita Blanca, Black Kettle and McClellan Creek National Grasslands (the Grasslands), the Forest Service has prepared this draft wilderness evaluation report for the Canadian River Potential Wilderness Area (see map 1).¹

Purpose

Completion of a potential wilderness inventory and evaluation is an essential step in the plan revision process. The Forest Service must evaluate all lands possessing wilderness characteristics for potential wilderness during plan revision (39 CFR 219.17).

Wilderness is just one of many special area designations that the Forest Service will consider during plan revision but it is one of only two special area evaluations that are mandatory. If an area is recommended for wilderness designation, then the revised plan will contain goals and objectives that protect its wilderness characteristics.

The Process

A wilderness evaluation begins with an inventory of potential wilderness, which includes areas of federal land over 5,000 acres, and then determines if those areas meet the definition of wilderness². Once a list of potential wilderness areas is created, each area is evaluated for capability, availability and need. These evaluation factors are described in more detail in this report in the introductions to each evaluation step and in Appendix A. The purpose of this report is to summarize the findings of the wilderness capability, availability and need evaluations based on the best available data

The Cibola National Forest and Grasslands will use this report when making a preliminary administrative recommendation for wilderness or non-wilderness designation for the Canadian River Potential Wilderness Area. The Deciding Official's (the Forest Supervisor) recommendation will be documented in the final Plan. Public comments on this issue will be accepted and considered throughout the plan revision process. If this area is recommended for wilderness, the recommendation will receive further review by the Chief of the Forest Service and the Secretary of Agriculture. If the Chief of the Forest Service intends to move forward with a wilderness recommendation, the Forest Service will complete a detailed analysis of the trade-offs in accordance with the National Environmental Policy Act, including further public review and comment. Ultimately,³ only Congress has the authority to make final decisions on wilderness designation.

Area Overview

Acres, Location, Topography: The Canadian River Potential Wilderness Area is approximately 6,033 acres and is located in northeast New Mexico on the Middle Canadian River above the Conchas reservoir. The area is defined by the Canadian River

¹ The potential wilderness area described in this report overlaps the Canadian River Inventoried Roadless Area (IRA) from RARE II by 5,268 acres.

² Areas smaller than 5,000 acres may also be included if they are adjacent to an existing Wilderness Area or east of the 100th meridian.

³ Forest Service Handbook (FSH) 1909.12, Chapter 73

canyon gorge with elevations ranging from 6,100 feet at the river to 6,800 feet at the canyon rim. Nearby population centers include Las Vegas to the southwest and Raton to the northwest. The Potential Wilderness Area is located approximately 40 miles east of Interstate 25 (see map 2).

Vegetation: Along the canyon bottom, within the river floodplain, vegetation is dominated by riparian species, including willow and cottonwood. The canyon slopes dominant vegetation varies depending on aspect, with piñon pine, juniper and gambel oak being the principal tree species. The cooler, moister side drainages of the canyon are comprised of ponderosa pine.

Surroundings and Land Ownerships: The vegetation outside of the Canadian River Potential Wilderness Area is characterized by shortgrass and mixed-grass prairie on rolling hills. The non-Forest Service lands adjacent to the Potential Wilderness Area boundary contain some parcels of private ranchlands and lands managed by the State of New Mexico and the Bureau of Land Management (BLM). All lands not in National Forest System ownership are not being considered as part of the Potential Wilderness Area but they will be analyzed for their effects on the canyon's wilderness characteristics (see map 3).

Access and Boundaries: The Canadian River Potential Wilderness Area can be accessed north of Roy, NM on Forest Road (FR) 600. This road extends from NM Hwy 39 near Mills, NM above the canyon to the Mills Canyon campground at the canyon bottom. To reach NM Hwy 39, one must exit I-25 at Wagon Mound and drive 45 miles east to Roy, NM. The Potential Wilderness Area boundary follows the ridgeline to include the canyon bottom, except where it intentionally excludes road corridors for FR 600 through the center of the canyon, FR 601 and 602 in the canyon bottom.⁴ The boundary around these roads is set back 100 ft on either side of the right-of-way line, which is the standard width for archeological clearance for road maintenance and reconstruction. The only exception is where that distance would exclude a portion of the Canadian River channel from the Potential Wilderness Area. For instance, if the channel is within 60 ft of the road, then the boundary would be off of the right-of-way by 60 ft not 100 ft. The boundary also excludes the Mills Canyon Campground at the bottom of the canyon with a 50 ft buffer for drainage and hazard tree removal, the concrete water crossing where FR 600 crosses the Canadian River with a 100 ft buffer to allow for vehicles to pull off on the west bank, the Melvin W. Mills Orchard Ranch House interpretive site off of FR 602, and the borrow pit where natural materials are extracted for road reconstruction and maintenance, which is approximately ¼ mile north of FR 600 on the east side of the river (see map 1).

Current Uses and Appearance: The Potential Wilderness Area is used primarily for hiking, horseback riding, fishing, hunting, riding motorized vehicles, viewing birds and other wildlife, and visiting historic sites. The Canadian River Potential Wilderness Area and surrounding areas appear mostly natural other than the appearance of user-created two track roads, invasive plants growing along the river, historic adobe structures located

⁴ These roads are also commonly referred to as K600, K601, and K602 as shown on the attached maps.

in the canyon, developed campground facilities, fences, vehicle barriers, signs, hardened low water crossings, forest development roads and bridges.

Key Attractions: The area's key attractions stem mostly from the scenic river gorge and canyon topography that differs from the surrounding plains grasslands. Attractions include diverse vegetation types, native plants and wildlife, geologic rock features, standing historic structures, and the opportunity to hike, fish and camp in a relatively large, semi-primitive, forested environment near water.

Wilderness Capability

Wilderness Capability describes the basic characteristics that make the area appropriate and valuable for wilderness designation, regardless of the area's availability or need. Five sets of factors are used to determine capability: naturalness, level of development, opportunities for solitude, special features, and the ability of the Forest Service to manage the area as Wilderness. The first four of these factors consider how the current conditions of the Potential Wilderness Area fit the definition of wilderness. Manageability is slightly different because it evaluates features of the area would make it more or less difficult to manage the area as Wilderness. This also involves determining if there are possible mitigation measures that could potentially improve the manageability of the area without impacting wilderness character. Factors are rated as high, medium or low based on the criteria shown in Appendix B.

Natural

The Canadian River Potential Wilderness Area has several features that contribute to its natural setting. The cliff features and remoteness of the Potential Wilderness Area have allowed it to retain a semi-primitive setting. Diversity of vegetation within the Potential Wilderness Area boundary is the canyon's key natural feature, varying from woody riparian vegetation, grassy meadows, piñon-juniper and oak woodlands, to stringers of ponderosa pine trees and pockets of aspen. The canyon contains several rare plants and nesting habitat for various species of birds along with a variety of other wildlife species native to the area. There are scenic views from the canyon rim and along the road descending into the canyon bottom. The segment of the Canadian River located within the Potential Wilderness Area is free-flowing and is not on New Mexico's Impaired Waters list. However, the segments to the north and south of the canyon are impounded in parts and are listed on the State's Impaired Waters list due to the effects from heavy sedimentation and adjacent non-point source pollution (NMWQCC, 2007). Night skies can be clearly seen and light pollution is not evident.

However, there are some features that detract from the area's wilderness capability. The riparian area is currently dominated by invasive, non-native plants. Human activity including the use of various types of motorized vehicles is evident throughout the canyon. User-created roads and trails exist along the river and cross the river. Vehicle tracks across meadows and up steep slopes further detract from natural ecosystem integrity and appearance.

Undeveloped

The Canadian River Potential Wilderness Area also has had a long history of human use and settlement as evident in its historic and prehistoric sites and structures. Developed recreation sites are visible in the canyon but have been excluded from the Potential Wilderness Area boundary. Part of FR 600 on the west side of the Canadian River is inside the boundary of the Canadian River Potential Wilderness Area. User-created roads and trails are visible in the canyon and there is a concrete water crossing south of the campground. Constructed vehicle barriers are quite visible near key historic sites.

Opportunities for Solitude

A person could find a short term experience of solitude, serenity, self-reliance and hiking and climbing, away from the main roads, campground, and interpretive sites, within the Potential Wilderness Area. However, the roads, trails, and developed facilities in the canyon detract from the primitive and challenging nature of recreation in the area. The small size of the area limits opportunities for long back-packing trips. From nearly anywhere in the canyon, one may easily hear the sound of chainsaws, water pumps, vehicles or other human activities occurring directly adjacent to the Potential Wilderness Area boundary.

Special Features

The high scenic quality of the canyon is important as a wilderness characteristic. The red sandstone cliffs contrast against the forested canyon slopes to provide a dramatic setting.

The area is important to several Native American tribes and has several historic and prehistoric archeological sites including the remaining structures from the Melvin W. Mills Orchard and Ranch. The standing historic adobe structures have been stabilized and will likely require future maintenance to retain their integrity.

Manageability

The boundary of the Canadian River Potential Wilderness Area is irregular in its interior due to excluding the campground, interpretive site, borrow pit and FR 600, 601 and 602, which have existed for several decades. Passenger vehicle access into the bottom of the canyon is only possible on these forest roads. Once a vehicle is in the canyon there are few natural features that prevent vehicles from driving into unroaded portions of the Potential Wilderness Area.

The relatively open terrain along the boundary, combined with the surrounding roads and private land uses, makes it very difficult to prevent motorized and mechanized vehicles from entering the area. Off highway vehicle (OHV) access is possible both upstream and downstream from the potential wilderness boundary. The area is also accessible from the west side of the canyon by an old trail system.

Given these conditions, this area holds several challenges in managing it for wilderness characteristics. Retaining the main access roads in the canyon (FR 600, 601, 602) would make it difficult to manage the area as Wilderness. Constructing fences and vehicle barriers to prevent motor vehicle access within the area would detract from wilderness characteristics. It would also be very difficult (physically, socially and politically) to close FR 600 or close vehicle access to the campground. The road has been improved in the last three years and a bridge has been constructed as part of recent campground renovations.

The Canadian River Potential Wilderness Area overall was rated as medium for wilderness capability and low for the ability of the Forest Service to manage the area as wilderness.

Availability for Wilderness

Availability criteria indicate the availability of a potential wilderness area for wilderness designation by describing other resource and land use potentials for the area. Availability examines the potential impact of designating an area as a wilderness to both the current and future land uses and activities. In essence, it is a summary of the trade-offs between wilderness and other uses. Factors are rated as high, medium or low based on the criteria shown in Appendix C.

In the Canadian River Potential Wilderness Area, most of the current recreational uses could continue if the area was designated as wilderness, other than motorized recreation. However, there are attractions in the canyon that warrant development of facilities to enhance public use and enjoyment. The canyon's developed campground and interpretive facilities are not within the boundary of the Potential Wilderness Area because they are inconsistent with wilderness characteristics but they demonstrate the potential of the area for developed recreation activities. The campground is not only a highly desired and historically used site, it is also important for protection of natural ecosystem integrity, water quality, and public safety as it discourages people from parking and camping near the riparian area, and disposing of waste in the riparian area and floodplain. Having a highly developed campground at the center of a wilderness area, even though it has been excluded from the wilderness boundary, could conflict with providing solitude and a challenging recreation experience. Interpretive facilities currently being built to provide public information and protect historic properties would also not appear compatible with wilderness area scenic characteristics. Vehicle barriers and an accessible interpretive trail are being constructed to improve access for the general public to the site and to protect it from the impacts of motorized vehicles. The area included in the Canadian River Potential Wilderness Area is part of the economic development strategy for the county, which is promoting the area as a developed recreation opportunity along the Frontera del Llano Scenic Byway.

Several prescribed burns and wildlife restoration projects are planned for the Potential Wilderness Area which could require the use of mechanized equipment. Following invasive plant treatments, riparian restoration projects are planned. These projects will include the replanting of cottonwood and willow species, which could require the use of mechanized equipment. These projects would improve habitat conditions for wildlife species including mule deer, beaver, Merriam's wild turkey, and numerous bird species such as flycatchers, chats, buntings, wrens and tanagers.

If designated a wilderness area, water improvements or impoundments would not need modification. While there are State and municipal impoundments along the river upstream from the area and an irrigation water diversion and pump station a short distance from the boundary, there is no foreseeable need for water impoundments or diversions within the Potential Wilderness Area.

The area is unencumbered by contracts or permits except for livestock grazing permits. There are three active grazing permits within the Potential Wilderness Area boundary with seasonally controlled grazing in the canyon. There is little or no potential for extraction of locatable minerals, low potential for oil-gas production, and the area is designated as "no surface occupancy" for any future oil-gas drilling. Foreseeable permits for recreation or education groups, plant gathering, research or similar uses would not require use of motorized or mechanized equipment or detract from wilderness qualities.

The area has a low potential for commercial timber harvest. Outside of the Potential Wilderness Area, piñon-juniper on the higher slopes is sold to individuals for firewood.

Some ecosystem management activities limit this area's availability for wilderness. The spread of salt cedar in the canyon has led to a decrease in the native riparian vegetation along the river. There is an interagency agreement and Forest Service decision to eliminate salt cedar and restore native riparian vegetation along the Canadian River. This would be a large-scale program that would need on-going maintenance treatments over an indefinite period of time. A decision was signed on May 29, 2007 that approved multiple entry treatment of salt cedar in the Canadian River canyon using, aerial (helicopter) and backpack herbicide application as well as the use of chainsaws or tractors. These activities are expected to be repeated for the next five years due to the timeframe required to control re-sprouting of salt cedar. Carrying out these treatments is essential to restoring and maintaining ecosystem and watershed functions, but would limit the ability to concurrently manage the area as Wilderness.

Land ownership and management concerns reduce the availability of the area for wilderness. There are several private land in-holdings and a block of State trust land, along with BLM land, some of which use roads through the Potential Wilderness Area for access. The State land has a moderate potential for future development for economic purposes. The private lands may also be developed for multiple purposes, some of which may be incompatible with wilderness characteristics. If the area were managed as Wilderness, road access to these parcels could also be limited.

Management and use of FS roads 600, 601 and 602 further reduce the area's availability for wilderness as these roads detract from wilderness characteristics of the area as a whole. If these roads were to be closed and obliterated in order to manage the area for wilderness, it would limit the ability to control wildfires as there would not be safe escape routes for firefighters due to canyon topography. This same concern about lack of escape routes and the need for firefighter safety would also limit the Forest Service's ability to manage prescribed fires that are necessary to sustain desired ecosystem conditions and protect adjacent private properties. Limiting our ability to control fires would increase the risk to private property and natural resource attributes in the area that could be damaged.

The standing historic adobe structures in the Potential Wilderness Area have been stabilized and will likely require future maintenance to retain their integrity. Movement of the materials for site stabilization would require motorized vehicles because the quantity of materials needed cannot be found in the canyon.

The Canadian River Potential Wilderness Area overall was rated medium for availability.

Need for Wilderness

The below evaluation criteria indicate how the Potential Wilderness Area might fit into the National Wilderness Preservation System, which includes all of the wilderness areas in the United States. Need is considered at the regional level and must incorporate public participation. The criteria used to evaluate need include consideration of other wilderness and non-wilderness areas that provide opportunities for unconfined outdoor recreation or preservation of certain ecosystems characteristics. Assumptions and methodology for this evaluation are briefly summarized in this report, with further detail contained in the Grasslands Plan revision record.

Wilderness and Non-wilderness Lands in the Vicinity

The Forest Service evaluated comparable public lands within a 250 mile radius of the Potential Wilderness Area, which is assumed to be approximately a day's drive (see Appendix D).

Within 250 miles of the Canadian River Potential Wilderness Area, there are 38 designated wilderness areas totaling about 1.4 million acres. Most of these Wilderness Areas are in New Mexico and Colorado. In the late 1990s and again in 2006, local residents, governments, and other interested parties were asked to comment on the need or desire for the Canadian River to be designated as wilderness. Most comments expressed their view that the area should not be designated. Some who had this view expressed concern that wilderness designation would attract more people and degrade the features that make it special. Some expressed opposition to additional federal government control and regulation that would potentially accompany congressional designation, and

some were concerned with possible effects to adjacent private land. However, representatives from wilderness advocacy groups expressed the view that attracting more people to the area through wilderness designation could contribute to the local tourism economy while protecting the special natural features in the canyon (USDA Forest Service 2006).

Within 250 miles of the Canadian River Potential Wilderness Area there are 60 to 70 non-wilderness areas over 5,000 acres in size that are specially-designated federal or state public lands likely to offer a similar unconfined recreation experience. Of these areas, about 30 are Wilderness Study Areas managed by BLM to protect wilderness characteristics, which offer a primitive or semi-primitive recreation setting similar to those provided by wilderness. Other similar non-wilderness areas include large national wildlife refuges, recreation areas, conservation areas, monuments, and others. In addition, there are many other semi-primitive back-country areas in national forests and grasslands that were not included in these calculations.

Visitor Pressure

In order to consider the degree to which regional population centers are already served by wilderness, the evaluation looked at four metropolitan areas within 250 miles (a day's drive) of the Canadian River Potential Wilderness Area: Albuquerque, Santa Fe, and Las Vegas, New Mexico, and Amarillo, Texas. All three New Mexico cities have access to over 30 designated Wilderness Areas within 250 miles, and Amarillo has 6 Wilderness Areas within 250 miles.

Albuquerque and Santa Fe both had estimated population growth of 10% and 12.4% respectively between 2000 and 2005 (US Census 2006). These cities have approximately 3.5 million acres of designated Wilderness Areas within 250 miles. This means there are 54 acres of wilderness per capita within a reasonable driving distance of Santa Fe and 7 acres per capita for Albuquerque. Some of these Wilderness Areas provide primarily day-use recreation (e.g., the Sandia Wilderness); others are large enough to accommodate multiple day backcountry trips (e.g., the Pecos Wilderness Area). Of the 45-48 Wilderness Areas within 250 miles of these cities, some are not heavily used. For example, the 2006 National Visitor Use Monitoring survey for the Cibola National Forest estimated that there were only 2,300 wilderness visitors for the Forest's Wilderness Areas (excluding the Sandia Wilderness Area), an area of approximately 100,000 acres.⁵

Forest Service direction⁶ allows for several assumptions in evaluating wilderness need, one of which is that "demand for wilderness increases with both an increasing population and a growing awareness of wilderness." However, research has found that not all population increases are equally likely to result in an increase in wilderness use. Minority populations have a negative correlation with wilderness and primitive area visitor use. When population increases are primarily among minority populations, this demographic shift is forecasted to cause an overall decline in wilderness use per capita.

⁵ The 2006 National Visitor Use Monitoring Report is expected to be available to the public in 2008.

⁶ FSH 1909.12 Ch 72.31

As a result, even areas with increasing populations can have lower rates of increase in wilderness and primitive area visitation (Bowker et al. 2006). Taking these findings into account, the expected population growth of Albuquerque and Santa Fe will not necessarily generate a proportionate increase in wilderness use, particularly because both cities are comprised of approximately 50% racial and ethnic minorities (US Census 2000). The current supply of Wilderness Areas, the percent of the local population that are likely to be wilderness users and the general population growth of these cities suggests that the demographic conditions do not create a demand for more designated wilderness areas.

Unlike larger northern New Mexico cities, the population of Las Vegas, NM is estimated to have declined 4% between 2000 and 2005 (US Census, 2006). In 2005, it's estimated that Las Vegas had 256 acres of designated Wilderness per capita. The declining population and large availability of wilderness opportunities does not suggest that the population trend of Las Vegas generates a need for more designated Wilderness Areas.

The city of Amarillo estimates that the city had 184,941 residents in 2006 and shows that the average annual growth rate from 2000 to 2005 has only been 1.1% (US Census, 2006). This stable growth rate does not indicate that the wilderness need for the Amarillo area is increasing or expected to increase.

The majority of recreation use in Texas is either lake-based or hunting and fishing. In fact, the Noble Foundation found in a 2001 survey that hunting, fishing and other recreation was the primary driver of the rural Texas real estate market, and the natural integrity of private land has been shown to improve property values (Huggins, 2003). The large amount of private land available for relatively unconfined outdoor recreation uses in the surrounding areas and the value placed on its natural integrity may further contribute to a reduced need for designated wilderness in this region.

The large number of Wilderness Areas available to these population centers and the demographic characteristics of these cities indicate that they are adequately served by existing Wilderness Areas. In addition, there is no evidence that these Wilderness Areas are experiencing significant over-crowding or visitor pressure issues.

Primitive Sanctuary for Plants and Wildlife

As part of the Grasslands Plan revision process, the Forest Service has developed a list of species that warrant consideration in the Grasslands Plan revision⁷. Appendix E displays those species from this list that are known to occur in the Canadian River Potential Wilderness Area. Though all of these species would benefit from reduced disturbance, none require a primitive wilderness environment to survive.

Wilderness areas with Similar Landform and Vegetation

⁷ This list includes species that have known population or habitat concerns, are present or have habitat within the Plan area, and may be affected by Forest Service management activities. The complete list may be found in the Plan revision record.

In order to consider how the landform and ecological condition of the Canadian River Potential Wilderness Area might be broadly similar to existing wilderness areas within the National Wilderness Preservation System, all designated Wilderness Areas west of the Mississippi River were compared to the Canadian River Potential Wilderness Area, using landform, vegetation cover type (ecosystems) and other data from the National Atlas. Wilderness Areas located east of the Mississippi were considered to be too dissimilar for this comparison. The Canadian River Potential Wilderness Area's landform is largely defined by a major river and canyon topography. Therefore, Wilderness Areas without a major river canyon were eliminated from further comparison, including Wilderness Areas containing a major river but lacking in hills or canyon topography, such as river areas in deserts or broad flat plains. Next, the percentages of major vegetation cover types in each Wilderness Area was compared to general percentages in the Canadian River Potential Wilderness Area, which is approximately 20% evergreen trees, 45% shrubs and 35% grasses. Areas with less than 5% in any of these major vegetation components were eliminated. Also, areas that did not contain these major cover types were eliminated, like those entirely dominated by deciduous or alpine forest or entirely lacking in evergreen trees, shrubs or grasses. It was assumed that a riparian ecosystem type would occur in all these wilderness areas, along the major river system. Results of this evaluation show that there are over 90 designated Wilderness Areas with similar landform and ecosystems as the Canadian River Potential Wilderness Area (See Appendix D). Thus, these areas would likely provide a similar type of recreation experience.

It should be noted that the Sabinoso Wilderness Study Area (WSA), which is approximately 20 miles south of the Canadian River Potential Wilderness Area, has been recently proposed in Congress for wilderness designation⁸. The Sabinoso WSA is approximately 20,000 acres and is part of the Canadian River basin. It is very similar to the landform and vegetation types of Canadian River Potential Wilderness Area. The Bandelier Wilderness Area, which is also located in northern New Mexico, also includes similar river canyon topography and has a vegetative cover type mix nearly identical to the Canadian River Potential Wilderness Area.

The initial evaluation of need shows that the Canadian River Potential Wilderness Area generates a low degree of need as a new wilderness area. Further evaluation and input from the public may affect this rating.

Next Steps

The Forest Service will collect comments on the Canadian River Potential Wilderness Area evaluation throughout the plan revision process. Comments on this draft of the Wilderness Evaluation Report should be sent to the Cibola National Forest Supervisor's Office by **January 11, 2008**. Afterwards, these comments will be incorporated into the wilderness evaluation.

⁸ H.R. 2632: Sabinoso Wilderness Act of 2007. Introduced June 7, 2007.

DRAFT 10/24/2007

The Forest Service invites you to join us at a public meeting in Roy, NM on **November 29, 2007 from 6pm to 8pm** at the Harding County Community Center (557 Wagon Mound Hwy 120) to discuss the Canadian River Potential Wilderness Area evaluation. The Forest Service will also be available for discussions by phone or in person with anyone who is interested.

Please share your feedback or comments on this evaluation with us:

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Appendix A: Process Consistency

The Wilderness Act of 1964 defines wilderness as:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this chapter an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

The Forest Service directives (FSH 1909.12, Chapter 70) describe the process and documentation for identifying and evaluating potential wilderness in the National Forest System.

Inventory

The Canadian River Potential Wilderness Area is the only potential wilderness area on the Kiowa, Rita Blanca, Black Kettle and McClellan Creek National Grasslands based on criteria in FSH 1909.12, Chapter 71. The High Lonesome area of the Rita Blanca National Grassland was evaluated during the inventory phase and eliminated based on the criteria for wilderness inventories on grasslands which states that potential wilderness areas may have no more than one mile of interior fence per section⁹.

Capability

In 1996 and 1997, an interdisciplinary planning team conducted a preliminary wilderness evaluation of all potential wilderness areas on the Cibola National Forest and Grasslands. Documents from this evaluation qualitatively described capability characteristics such as size (acres), access, remoteness, natural integrity, apparent naturalness, solitude and other values. In December 2006, a new interdisciplinary team reviewed the original wilderness capability analysis and updated it, considering new information, changed conditions and new evaluation criteria. The 2006 review process included ranking the potential wilderness area as having high, medium, or low wilderness potential based on capability factors (from 1992 wilderness evaluation directives). Those factors and ratings were updated by the ID Team in March 2007 to include several new criteria in FSH 1909.12, Chapter 70 (2007).

Availability

In December 2006, an interdisciplinary team ranked the area as high, medium or low for wilderness availability, based on a set of factors adapted from 1992 directives, which remain consistent with guidelines in the 2007 directives.

⁹ FSH 1909.12, Chapter 71.11 (5)(b)

Need

FSH 1909.12, Chapter 72.31 requires that the evaluation of need consider, at a minimum the following factors:

1. The location, size, and type of other wildernesses in the general vicinity and their distance from the proposed area. Consider accessibility of areas to population centers and user groups. Public demand for wilderness may increase with proximity to growing population centers.
2. Present visitor pressure on other wildernesses, the trends in use, changing patterns of use, population expansion factors, and trends and changes in transportation.
3. The extent to which nonwilderness lands on the NFS unit or other Federal lands are likely to provide opportunities for unconfined outdoor recreation experiences.
4. The need to provide a refuge for those species that have demonstrated an ability to survive in less than primitive surroundings or the need for a protected area for other unique scientific values or phenomena.
5. Within social and biological limits, management may increase the capacity of established wildernesses to support human use without unacceptable depreciation of the wilderness resource.
6. An area's ability to provide for preservation of identifiable landform types and ecosystems. Consideration of this factor may include utilization of Edwin A. Hammond's subdivision of landform types and the Bailey-Kuchler ecosystem classification. This approach is helpful from the standpoint of rounding out the National Wilderness Preservation System and may be further subdivided to suit local, subregional, and regional needs.

These directives also require the Forest Service to demonstrate need through the public involvement process, including input on the evaluation report. Public participation will begin in October 2007.

Appendix B: Capability Evaluation and Rankings

Capability Characteristics

Natural

1. Presence of non-native species

High - Non-native species are not evident

Medium – Non-native species are evident in isolated spots.

Low - Non-native species are common or scattered throughout the area.

Rating: Low – Tamarisk or salt cedar dominates most of the riparian vegetation and non-native Barbary sheep was introduced into the canyon decades ago.

2. Rivers within the Potential Wilderness Area are in free-flowing condition

High- Rivers within the area are considered free-flowing

Medium – Some rivers have impoundments or other issues that affect their free-flowing character.

Low – Rivers within the area are seasonal or heavily impacted by impoundments.

Rating: High – The only river within the area is an eligible Scenic River and meets the criteria of free-flowing.

3. Quality of night-sky as affected by light pollution

High – The night sky is clear with little to no interference from light pollution.

Medium – Some stars are visible and there is moderate degradation from light pollution

Low – Few stars are visible at night and the presence of light pollution is evident

Rating: High – lights from Las Vegas and other nearby towns are not evident in the canyon.

4. Presence of pollutants that degrade water

High – All rivers have been sampled and there are no water quality issues.

Medium – There are no known water quality issues within the area but the entire river has not been sampled.

Low – There are rivers within the area that are listed on the State Impaired Waters List (303d)

Rating: Medium- The segment within the potential wilderness boundary is not listed but the segments up and downstream from the area are listed as impaired for nutrients, air to water deposition of mercury, and eutrophication possibly caused by phosphorous levels.

5. Area provides elements of biological diversity and naturalness, including unique habitats, threatened or endangered species, or rare plants and wildlife,

High - Has critical or unique habitats and diverse ecological conditions.

Medium - Has a mix of habitats and ecological conditions.

Low - Has limited ecological conditions and habitats.

Rating: Medium - Based on the diversity of wildlife and the presence of some rare animals (particularly birds crayfish and chubs). Salt cedar detracts from the naturalness and there are developments and roads that detract from the natural integrity of the canyon. There are opportunities to get away from disturbances and view more natural areas of the canyon.

6. Area contains a variety of natural resources, including a variety of tree species and structures; for example, intermingled grasslands or meadows, numerous recreation opportunities, diversity of wildlife habitats, and wildlife, etc.

High - Diverse amount of natural resources

Medium - Mixed amount of natural resources

Low - Limited amount of natural resource diversity

Rating: High – This area is unique to the Southern Great Plains area but may not be unique for river canyons of the Southwest. Diversity of vegetation is the key natural feature. It varies from riparian areas, grass meadows, mountain shrub, piñon-juniper, cottonwood and willow galleries, and ponderosa pine. Fishing hunting, wildlife viewing, photography, and hiking are the available recreation opportunities. Combination of riparian, upland and aquatic including forested areas is unique to the Great Plains. Cliff and caves habitat provides bat roosting, raptor nesting. Rare plants are present.

Undeveloped

7. Area has current or past evidence of human activity

High - Little or no evidence of human activity

Medium - Unnoticeable or unobjectionable human activity

Low - Obvious evidence of human activity

Rating: Low – There are many user-created roads and standing structures in the canyon. There is a campground and the Forest Service has constructed interpretive sites and structures to control motorized use. There is a bridge and a concrete ford over the river. There is a high density of roads per square mile

which are used for access for camping, boating, livestock management, forest product retrieval and general recreation. Chainsaws and motorized vehicles can be clearly heard when used in the canyon or near the rim. There is little opportunity for primitive and unconfined recreation opportunities.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

8. Area provides physically and mentally challenging recreation opportunities that promote adventure and self-reliance

High – Most of the area provides challenging recreation opportunities

Medium- Only some parts of the area has the potential for challenging recreation opportunities.

Low – Few parts of the area can provide challenging recreation opportunities.

Rating: Medium - The sides of the canyon may provide opportunities but the canyon bottom does not provide challenge.

9. Opportunity to experience solitude and isolation from human activities while recreating in the area

High - Feeling of being alone or remote from civilization.

Medium – Feeling of being alone is possible but signs of civilization are likely.

Low – Little opportunity of feeling alone.

Rating: Medium – It is possible to find areas of the canyon upstream which provide a sense of solitude. However, the central part of the canyon has several developed activities which, though excluded from the potential wilderness boundary, are likely to affect the experience of visitors. In the downstream portion of the area, there are several adjacent private land in-holdings and uses that impact the visitor experience.

Special Features and Values

10. Area contains outstanding or distinct features like rock formations, panoramic views, etc.

High - Many distinct features

Medium - Some distinct features

Low - One or no distinct features

Rating: High - Unique to the Southern Great Plains area but may not be unique for river canyons of the Southwest. High scenic quality with high red sandstone cliffs. Rock cliffs, caves and panoramic views of the canyon along the rim are notable.

11. Area has potential for scientific research, environmental education, or historic/cultural opportunities.

High - Good potential for two or more opportunities

Medium - Potential for one type of opportunity

Low - Little or no potential for this type of opportunity

Rating: Medium - The area rates low for education and research but high for historic and cultural resources. The area is important to Native American tribes. There are historic and prehistoric archaeological sites that are important to the local history. Mills Orchard and Ranch structures are eligible for the Natural Register.

Overall Capability: Medium

Manageability

12. Ability to manage the area in an unroaded condition, including distance and influence from outside activities; opportunity to access the area; and resource conflicts or encumbrances.

High - Isolated from areas of activity; controlled or limited access; no encumbrances or resource conflicts

Medium - Somewhat isolated from areas of activity; adequate access opportunities; some resource conflicts and/or encumbrances

Low – Areas of activity are nearby; many access opportunities; many resource conflicts and/or encumbrances

Rating: Low - Managing the Potential Wilderness Area in an unroaded condition that protects the wilderness character would require closing existing and frequently used Forest Service roads and dealing with access issues from the private and State lands adjacent to and within the area. There is also a historic pattern of motorized use that would have to be changed. The area has fragmented land ownership pattern.

13. Motorized use within the area

Yes - Has motorized vehicle use

No - Does not have any motorized vehicle use

Rating: Yes – There is an average density of 2.8 miles per square mile of road in the canyon, most of which are user-created roads. OHV use is common within the Potential Wilderness Area.

Overall Manageability: Low

Appendix C: Availability Evaluation and Rankings

The following criteria come from the 1992 version of FSH 1909.12 Ch 70. Though the 2007 directives require a more general discussion of current and future potential uses and trends, these criteria are still applicable.

Availability Characteristics

1. Areas that are of high value for water yield or on-site storage where installation and maintenance of improvements may be required.

Low - Identified impoundment that will have an affect on wild characteristics.

Medium - Minor improvements will have an affect.

High - No impoundment needed.

Rating: Medium - There are State municipal impoundments along the river but no impoundments are needed within the Potential Wilderness Area boundary.

2. Areas needing management for wildlife or aquatic animals that MIGHT conflict with Wilderness management.

Low - Intense management (motorized equipment: helicopters, chainsaws, broadcast burning) and frequent entries (= or <5 yrs).

Medium - Management requiring helicopters but no motorized equipment on the ground and frequency is generally less than 10 years.

High - Low management requirements with no motorized equipment required to meet objectives and infrequent entries.

Rating: Low - Large equipment is needed to restore wildlife habitat including the implementation of broadcast burns and the removal of exotic trees (salt cedar) using chainsaws to restore riparian habitat.

3. Area needing active aquatic restoration activities.

Low - the majority of watershed needs attention.

Medium - Site specific improvements needed

High - Properly functioning with no or little restoration activities needed

Rating: Low - Helicopter use, chainsaws, motorized shears and four wheelers to carry out hand treatments is needed to control salt cedar,. This is due to the large scale of the treatments and the need to maintain them over time. The Forest Service needs to obliterate and rehab existing roads for watershed protection which requires motorized vehicles and machinery.

4. Area needing active vegetative restoration activity due to specific species survival (such as White Bark Pine restoration), or identifiable fuel reduction activity to

reduce the risk of catastrophic wildfire, or known areas of severe insect infestation that will lead to heavy tree mortality.

Low - The need for vegetation restoration is a higher priority and requires long-term management and mechanized or motorized equipment

Medium - Areas needing high intensity mgmt activities for a short time period (< or = 5 yrs). These areas could be available for p-Wilderness after those activities are completed (like fuel reduction activities). Some intense restoration work over small areas could be accomplished without conflicting with wilderness mgmt (species conservation work not requiring motorized equipment).

High - The area needs little vegetative restoration.

Rating: Low - Need to make shrubs more palatable and lower through prescribed fires on the side slopes. In the canyon bottom, burning is needed to restore the hydrological function by reducing piñon juniper and cholla intrusion. The area's topography makes it unsafe for firefighters to conduct a prescribed fire without road access. Management of fires in the canyon is essential to protect adjacent private land. Salt cedar management is also an important vegetative.

5. Areas of high value mineral deposits of economic or strategic importance.

Yes - There are high value mineral deposits within the boundary.

No - There are no known high value mineral deposits within the boundary.

Rating: No – The Reasonably Foreseeable Development Scenario for the Kiowa-Rita Blanca National Grasslands shows that the area has no potential for mineral extraction in the foreseeable future.

6. Areas having such unique characteristics or natural phenomena that general public access should be developed to facilitate public use and enjoyment.

High - Does not exist or minimal development will be provided.

Medium - Requires minor development or improvement that does not qualify as a developed recreation site but is a higher development level than is normally found within Wilderness.

Low - Has a developed recreation site or features that warrant construction of developed recreation site.

Rating: Low - Has developed recreation site and developed features. There is an interpretive site as well. These are necessary to protect resources from recreation use. There has been a developed campground in the canyon that pre-dated FS acquisition. There is ongoing facility reconstruction, scheduled for completion in 2007.

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7. Lands committed through contracts, permits, or agreements that would be in conflict with Wilderness management. (some minor permitted uses may still be allowed)

High - Current authorizations do not conflict with potential Wilderness.

Medium - Current authorization but can be terminated or there is long term authorization or commitment but does not require motorized equipment for access or maintenance.

Low - Currently exists, must be retained (long term commitment), and requires motorized equipment for access or maintenance.

Rating: High – There are range permits only and they do not conflict.

8. Forest Service has sufficient control to prevent development of irresolvable, incompatible uses that would lessen wilderness character and potential.

High - No in-holdings and no non-federal lands adjacent to Potential Wilderness Areas.

Medium - No in-holdings but adjacent lands may be private.

Low - In-holdings exist.

Rating: Low - There are State and private in-holdings. There is also very little federal land surrounding the area.

Overall Availability Rating: Medium

Appendix D: Need Evaluation

Designated Wilderness Areas within 250 miles of Canadian River Potential Wilderness Area

Wilderness Area	Acres
Apache Kid Wilderness	44,887
Bandelier Wilderness	25,060
Bisti/De-Na-Zin Wilderness	41,363
Bosque del Apache Wilderness	31,753
Buffalo Peaks Wilderness	40,650
Capitan Mountains Wilderness	35,698
Cebolla Wilderness	66,514
Chama River Canyon Wilderness	49,253
Collegiate Peaks Wilderness	175,357
Cruces Basin Wilderness	18,946
Dome Wilderness	4,191
Fossil Ridge Wilderness	31,443
Great Sand Dunes Wilderness	32,846
Greenhorn Mountain Wilderness	23,545
Holy Cross Wilderness	128,752
Hunter-Fryingpan Wilderness	76,408
La Garita Wilderness	128,726
Latir Peak Wilderness	21,706
Lizard Head Wilderness	42,599
Lost Creek Wilderness	117,557
Manzano Mountain Wilderness	35,050
Maroon Bells-Snowmass Wilderness	185,271
Mesa Verde Wilderness	8,611
Mount Evans Wilderness	76,716
Mount Massive Wilderness	24,828
Mount Sneffels Wilderness	16,928
Pecos Wilderness	220,088
Powderhorn Wilderness	61,092
Raggeds Wilderness	71,088
Salt Creek Wilderness	10,981
San Pedro Parks Wilderness	41,107
Sandia Mountain Wilderness	36,768
Sangre de Cristo Wilderness	162,310
South San Juan Wilderness	171,364
Spanish Peaks Wilderness	19,339
Uncompahgre Wilderness	103,835
Weminuche Wilderness	477,877
West Elk Wilderness	181,871
West Malpais Wilderness	37,878
Wheeler Peak Wilderness	20,385
White Mountain Wilderness	45,779
Withington Wilderness	18,996

Designated Wilderness Areas with Similar Topography and Vegetative Cover to Canadian River Potential Wilderness Area

Wilderness Area	Agency	State	Acres
Absaroka-Beartooth Wilderness	FS	MT-WY	899,562
Aldo Leopold Wilderness	FS	NM	206,904
Alpine Lakes Wilderness	FS	WA	392,440
Anaconda Pintler Wilderness	FS	MT	146,146
Ansel Adams Wilderness	FS	CA	227,911
Arc Dome Wilderness	FS	NV	118,341
Bandelier Wilderness	NPS	NM	25,060
Black Canyon of the Gunnison Wilderness	NPS	CO	15,857
Black Canyon Wilderness	FS	OR	11,683
Black Canyon Wilderness	NPS	AZ-NV	43,687
Black Ridge Canyons Wilderness	BLM	CO-UT	75,577
Bob Marshall Wilderness	FS	MT	996,589
Boulder River Wilderness	FS	WA	50,352
Bridger Wilderness	FS	WY	423,874
Buffalo Peaks Wilderness	FS	CO	40,649
Cabinet Mountains Wilderness	FS	MT	87,001
Cache La Poudre Wilderness	FS	CO	11,184
Carlsbad Caverns Wilderness	NPS	NM	28,147
Carson-Iceberg Wilderness	FS	CA	190,295
Cedar Bench Wilderness	FS	AZ	16,604
Colonel Bob Wilderness	FS	WA	32,502
Comanche Peak Wilderness	FS	CO	74,287
Desolation Wilderness	FS	CA	64,590
Dinkey Lakes Wilderness	FS	CA	101,475
Domeland Wilderness	FS-BLM	CA	98,260
Eagle Cap Wilderness	FS	OR	354,490
Eagles Nest Wilderness	FS	CO	139,392
Emigrant Wilderness	FS	CA	111,877
Encampment River Wilderness	FS	WY	11,846
Flat Tops Wilderness	FS	CO	242,018
Four Peaks Wilderness	FS	AZ	60,558
Frank Church-River of No Return Wilderness	FS	ID	449,878
Gila Wilderness	FS	NM	559,118
Glacier Peak Wilderness	FS	WA	558,938
Golden Trout Wilderness	FS	CA	333,980
Gospel-Hump Wilderness	FS	ID	199,406
Granite Chief Wilderness	FS	CA	25,824
Great Bear Wilderness	FS	MT	256,070
Greenhorn Mountain Wilderness	FS	CO	23,545
Gros Ventre Wilderness	FS	WY	281,131
Gunnison Gorge Wilderness	BLM	CO	17,665
Hells Canyon Wilderness	FS-BLM	ID-OR	226,620
Henry M. Jackson Wilderness	FS	WA	103,097
High Uintas Wilderness	FS	UT	423,974
Hunter-Fryingpan Wilderness	FS	CO	76,408

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Wilderness Area	Agency	State	Acres
Jarbridge Wilderness	FS	NV	110,541
John Muir Wilderness	FS	CA	521,771
Kalmiopsis Wilderness	FS	OR	178,552
Lake Chelan-Sawtooth Wilderness	FS	WA	151,494
Lee Metcalf Wilderness	FS-BLM	MT	131,003
Lizard Head Wilderness	FS	CO	42,598
Marble Mountain Wilderness	FS	CA	221,167
Maroon Bells-Snowmass Wilderness	FS	CO	185,270
Mazatzal Wilderness	FS	AZ	249,157
Mesa Verde Wilderness	NPS	CO	5,310
Mission Mountains Wilderness	FS	MT	72,096
Mokelumne Wilderness	FS	CA	88,592
Monarch Wilderness	FS	CA	45,875
Monument Rock Wilderness	FS	OR	20,139
Mount Baker Wilderness	FS	WA	121,624
Mount Skokomish Wilderness	FS	WA	13,608
Mount Timpanogos Wilderness	FS	UT	10,320
Mount Zirkel Wilderness	FS	CO	165,646
Norse Peak Wilderness	FS	WA	54,476
North Fork Wilderness	FS	CA	7,978
Opal Creek Wilderness	FS	OR	34,937
Paiute Wilderness	BLM	AZ	89,596
Pasayten Wilderness	FS	WA	536,565
Pecos Wilderness	FS	NM	220,087
Platte River Wilderness	FS	CO-WY	25,211
Popo Agie Wilderness	FS	WY	103,510
Rawah Wilderness	FS	CO	78,207
Salt River Canyon Wilderness	FS	AZ	32,073
San Gabriel Wilderness	FS	CA	35,188
San Geronimo Wilderness	FS-BLM	CA	115,195
San Rafael Wilderness	FS	CA	195,018
Sawtooth Wilderness	FS	ID	215,510
Scapegoat Wilderness	FS	MT	235,043
Selway-Bitterroot Wilderness	FS	ID-MT	3,120,935
Sequoia-Kings Canyon Wilderness	NPS	CA	688,423
Sheep Mountain Wilderness	FS	CA	36,720
Siskiyou Wilderness	FS	CA	154,753
South San Juan Wilderness	FS	CO	171,363
South Sierra Wilderness	FS	CA	29,413
Steens Mountain Wilderness	BLM	OR	144,913
Stephen Mather Wilderness	NPS	WA	682,080
Sycamore Canyon Wilderness	FS	AZ	58,873
Tatoosh Wilderness	FS	WA	15,332
Teton Wilderness	FS	WY	582,188
The Brothers Wilderness	FS	WA	17,339
Trinity Alps Wilderness	FS	CA	496,607
Uncompahgre Wilderness	FS	CO	99,260

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Wilderness Area	Agency	State	Acres
Ventana Wilderness	FS	CA	239,989
Washakie Wilderness	FS	WY	659,274
Weminuche Wilderness	FS	CO	474,879
Wenaha-Tucannon Wilderness	FS	OR-WA	180,612
West Elk Wilderness	FS	CO	181,870
Wheeler Peak Wilderness	FS	NM	20,385
Winegar Hole Wilderness	FS	WY	12,529
Yolla Bolly-Middle Eel Wilderness	FS	CA	147,443
Yosemite Wilderness	NPS	CA	641,662

FS = Forest Service

BLM = Bureau of Land Management

NPS = National Park Service

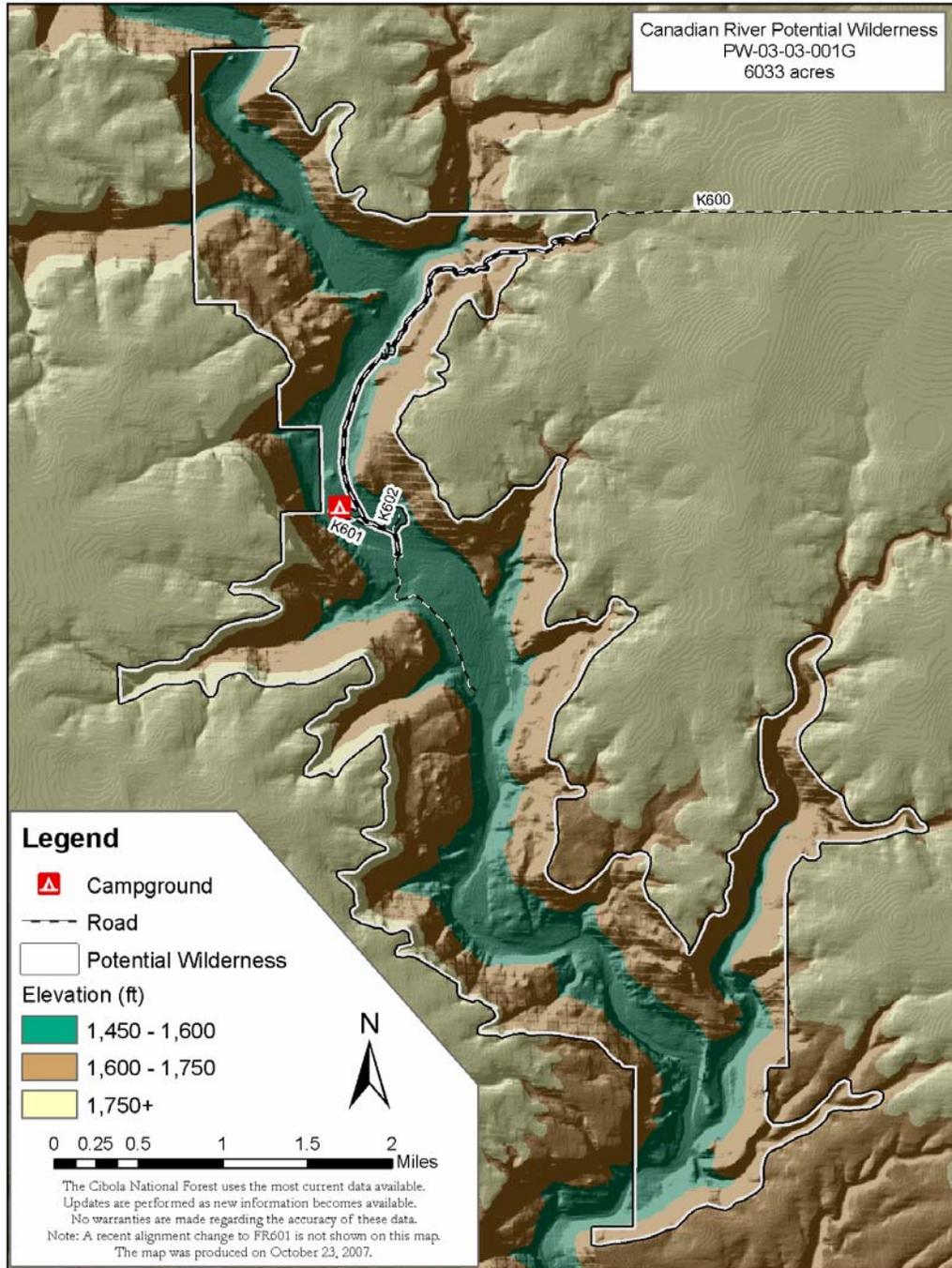
Appendix E: Species that Warrant Consideration in the Grasslands Plan Revision that are known to occur on the Canadian River Potential Wilderness Area

County	Scientific Name	Common Name and Taxon	Notes
Harding, NM	<i>Orconectes deanae</i>	Conchas Crayfish Invertebrate crustacean	Occurs in the Canadian River in Mills Canyon. Pittenger (2004) species may be relatively intolerant of excessive deposition of fine-grained sediments and that watershed degradation and resulting stream siltation is likely a major determinant of habitat suitability. This could be a good species associated with an aquatic ecosystem characteristic (water quality). Pittenger, John. 2004. Distribution of the Conchas Crayfish in New Mexico, Internal rept. NM Dept. of Game and Fish.
Mora, NM	<i>Speyeria nokomis nokomis</i>	Nokomis Fritillary Invertebrate Insect	NatureServe Global Status Last Reviewed: 30Sep1998 Palustrine Habitat(s): HERBACEOUS WETLAND, Riparian Habitat Comments: Found in streamside meadows and open seepage areas with an abundance of violets in generally desert landscapes. Colonies often isolated. Bison M lists Nokomis as regular breeding resident of Mora Co. NM, Cary, Steven J., and Richard Holland. 1992. New Mexico Butterflies: Checklist, Distribution and Conservation. Journal of Research on the Lepidoptera. 31(1-2):57-82.
Harding, NM	<i>Euphorbia strictior</i>	Panhandle Spurge Plant	NatureServe Global Status Last Reviewed: 21Mar1999 Habitat Comments: Plains and hills; often in disturbed soils in rights-of-way, sandy limestone soils, in pinyon-juniper woodland or juniper savannah. Infrequent in sandy areas of the short grass plains
Harding, NM	<i>Herrickia horrida</i>	Horrid Herrickia Plant	Sept 07 removed from Forest Sensitive Species list NatureServe Global Status Last Reviewed: 10Sep1997 Locally common where it occurs in northern New Mexico (P. Knight 1996). Comments: The known distribution in New Mexico is Mora, Cofax, and Harding

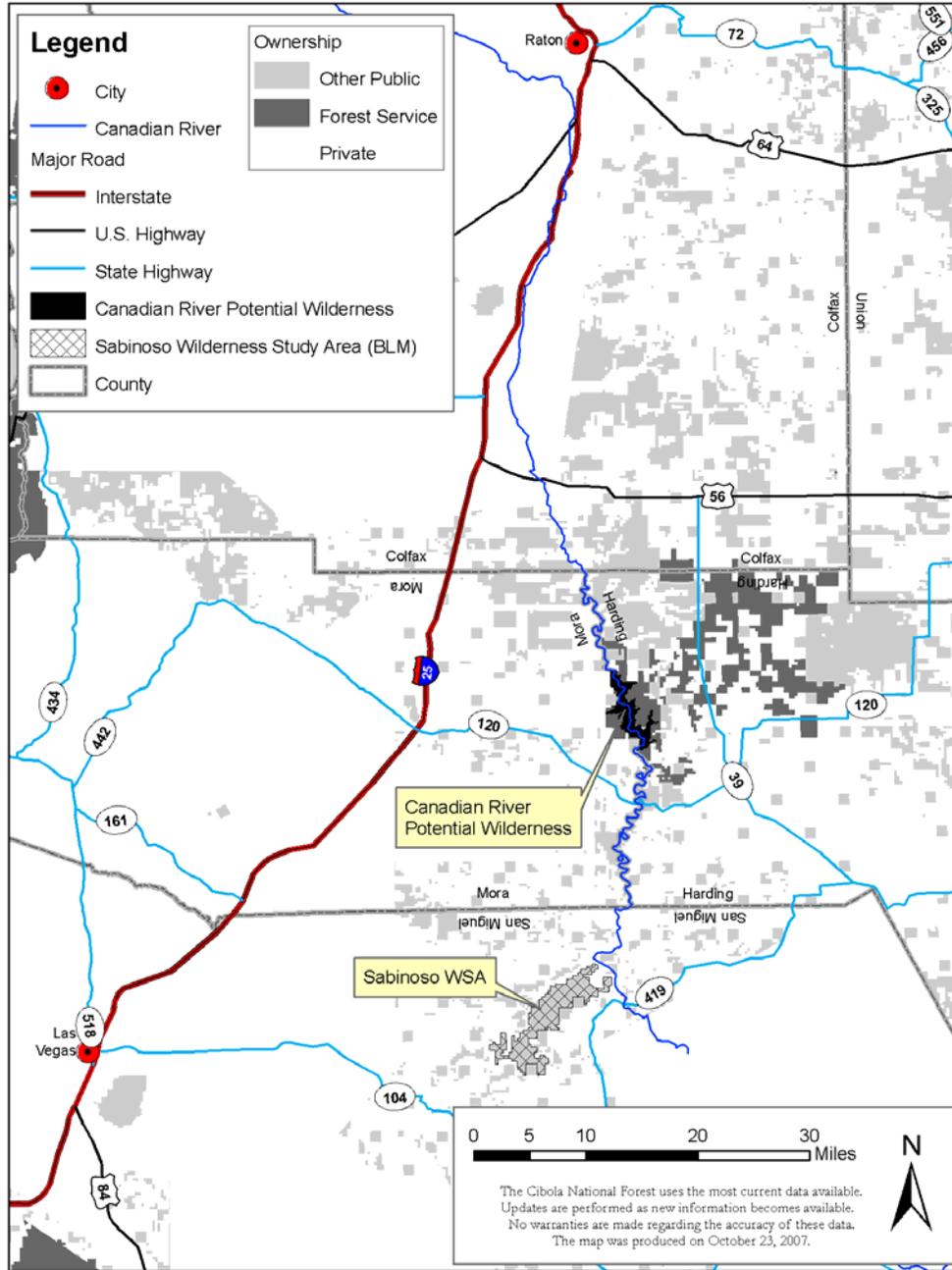
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County	Scientific Name	Common Name and Taxon	Notes
Harding, NM	<i>Parthenium alpinum</i>	Alpine Fever-few Plant	NatureServe Global Status Last Reviewed: 20Oct1995 Habitat Comments: Dry upland sites in sparse grasslands or shrublands, especially mountain-mahogany (<i>Cercocarpus</i> spp.) shrublands. Often on limestone; occasionally on shale. 1500-2200 m elevation.
Harding, NM	<i>Packera spellenbergii</i>	Spellenberg's Groundsel Plant	Sept 07 Forest Service Sensitive Species list NatureServe Global Status Last Reviewed: 24Dec1997 Habitat Comments: High plains, shortgrass prairie. On nearly barren, white calcareous knolls. Associated with alpine fever-few (<i>Parthenium alpinum</i>).
Harding, NM	<i>Reithrodontomys megalotis</i>	Western harvest mouse Mammal	NatureServe Global Status Last Reviewed: 08Nov1996 Palustrine Habitat(s): Riparian Terrestrial Habitat(s): Cropland/hedgerow, Desert, Grassland/herbaceous, Old field, Shrubland/chaparral, Woodland - Hardwood, Woodland - Mixed
Harding, NM	<i>Buteo albonotatus</i>	Zone-tailed hawk Bird	Zone-tailed hawks occur in canyons in pine-oak, evergreen, and riparian woodlots at lower (2800 - 5500 ft) to middle (5000 - 7500 ft) elevations. Desert Riparian Deciduous Woodland, Marsh. Woodlands, especially of cottonwoods, that occur where desert streams provide sufficient moisture for a narrow band of trees and shrubs along the margins.
Mora, NM	<i>Gila pandora</i>	Rio Grande Chub Fish	This species is found in impoundments and pools of small to moderate streams and is frequently associated with aquatic vegetation (Woodling 1985). The species is a midwater carnivore feeding on zooplankton, aquatic insects and juvenile fish The Rio Grande chub normally inhabits small to moderate-sized streams but also occurs in impoundments. It appears to prefer pools and pool-runs in association with cover (NMDGF, 1994)

Map 1: Canadian River Potential Wilderness Area



Map 2: Canadian River Potential Wilderness Area Vicinity Map



Map 3: Canadian River Potential Wilderness Area & Adjacent Areas

