

Appendix S

Areas of Critical Environmental Concern (ACECs) Evaluation

Areas of Critical Environmental Concern Research Natural Areas Relevance and Importance Evaluations

Overview

This report summarizes the relevance and importance evaluations of three locations being considered as potential Areas of Critical Environmental Concern (ACECs)/Research Natural Areas (RNAs) within the Canyons of the Ancients National Monument (the Monument) (Map 8). The three locations proposed as ACECs/RNAs are: the Expanded McElmo RNA, the Cannonball Mesa RNA, and the Sand Canyon RNA. There is currently one existing ACEC/RNA on the Monument: the McElmo RNA.

The three proposed ACECs/RNAs are being reviewed as part of the current Resource Management Plan (RMP) process. These evaluations have been completed in accordance with the Federal Land Policy and Management Act (FLMPA), BLM Manual 1601 (Land Use Planning), BLM Manual 1613 (Areas of Critical Environmental Concern), and all other relevant manuals/handbooks, laws, rules, regulations, policies, and guidelines. (Please Note: RNAs are unique types of ACECs, and are considered ACECs even if they are only referred to as RNAs in this document.)

With the publication of the Notice of Intent (NOI) on April 24, 2002 in the Federal Register, the BLM formally initiated the development of a Draft Resource Management Plan (DRMP) and associated Draft Environmental Impact Statement (DEIS) for the Monument. Public scoping for the DRMP/DEIS was initiated at that time, with subsequent mailings and public meetings.

During the initial planning period, members of the BLM's planning team were requested to submit internal information for consideration. Three potential ACECs/RNAs were proposed, along with the continuation of the existing McElmo RNA, covering a total of approximately 7,286 acres.

In 2002, a land exchange, the Sackman Land Exchange, was initiated (BLM 2004a; Ecosphere Environmental Services 2002). This action proposed to convey 320.08 acres of Federal lands in Archuleta County, Colorado in exchange for the acquisition of 1,080 acres of private lands in Montezuma County, Colorado (which represented an in-holding within the boundaries of the Monument). The Presidential Proclamation that designated the Monument in 2000 allows for the acquisition of such properties. The non-Federal lands offered in this exchange hold cultural, biological, geological, and riparian resources that are compatible with, and augment, other nationally important resources in the Monument. They also provide access to existing Monument lands.

The Sackman Land Exchange's 1,080 acres are proposed to be added to the potential Expanded McElmo RNA. Detailed analysis and public scoping covering this land exchange was conducted, and is described in the Sackman Land Exchange Environmental Assessment (CO-800-2004-072EA, BLM 2004a). The Notice of Proposed Exchange of Lands in Archuleta and Montezuma Counties, Colorado (COC-66156FD and COC-66156PT) was posted in the Pagosa Springs Sun on November 11, 2004.

The Sackman Land Exchange was finalized in 2008, and the area is being analyzed, along with the other proposed RNA areas, as part of the current planning process.

The total acreages of the existing/proposed ACECs/RNAs are as follows:

ACECs/RNAs	Acreages
Existing McElmo RNA	427
Proposed Expanded McElmo RNA	2,738
Sackman Land Exchange Property	1,055
Total Expanded McElmo RNA	3,793
Proposed Cannonball Mesa RNA	2,797
Proposed Sand Canyon RNA	1,864
Total existing RNA acres	427
Total proposed acres analyzed in DRMP/DEIS	7,826
Total proposed acres analyzed in Sackman Land Exchange EA	1,055
Total ACEC/RNA acres (including existing McElmo RNA and Sackman Land Exchange property)	8,881

Of the three newly proposed areas (Expanded McElmo, Cannonball Mesa, and Sand Canyon), all meet the relevance and importance criteria required for designation as an ACEC/RNA. This evaluation does not designate an area as an RNA. Potential RNAs are proposed for designation if analysis demonstrates that special management is required in order to protect the relevant and important values found within these areas. Actual designation of an RNA would occur when the Record of Decision (ROD) is signed and the final RMP is approved.

Authorities and Guidelines

In addition to all applicable laws, rules, regulations, policies, and guidelines, the following specifically guide the nomination process for ACECs/RNAs:

- The Federal Land Policy and Management Act (FLMPA), as amended:** The FLMPA provides for ACEC designation and establishes national policy for the protection of public land ACECs. Section 202(c)(3) of FLPMA requires the BLM to give priority to the designation and protection of ACECs in the development and revision of land use plans. (Land use plans in the BLM are known as Resource Management Plans (RMPs).)
- The Code of Federal Regulations (CFR):** 43 CFR 1610.7-2 establishes the process and procedural requirements for the designation of ACECs in RMPs and in RMP amendments. Areas having potential for ACEC/RNA designation and protection management are to be identified and considered throughout the resource management planning process (See Sec. 1610.4-1 through 1610.4-9). The inventory data is to be analyzed in order to determine whether there are areas containing resources, values, systems or processes, or hazards eligible for further

consideration for designation as an ACEC. In order to be a potential ACEC, relevance and importance criteria must be met (See ACEC/RNA Relevance and Importance Criteria below).

- **BLM Manual 1601 - Land Use Planning:** This manual states that the BLM will designate ACECs and identify goals, standards, and objectives for each area, as well as general management practices and uses. This includes all necessary constraints and mitigation measures. This direction is to be specific enough to minimize the need for subsequent ACEC management plans. ACECs must meet the relevance and importance criteria in 43 CFR 1610.7-2(a), and must require special management (43 CFR 1601.0-5(a)) in order to:
 - protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes; and/or
 - protect life and promote safety in areas where natural hazards exist.
- **BLM Manual 1613 - Areas of Critical Environmental Concern:** This manual provides policy and procedural guidance on the identification, evaluation, and designation of ACECs in the development, revision, and amendment of RMPs. It also clarifies the relationship of ACECs to other designations and provides procedural guidance on the monitoring and management of ACECs. The ACEC designation indicates to the public that the BLM recognizes that an area has significant values and that special management measures are established in order to protect those values. In addition, designation also serves as a reminder that significant value(s) and/or resource(s) exist that must be accommodated when future management actions and land use proposals are considered near, or within, an ACEC. Designation may also support a funding priority.
- **BLM Manual 1621 - Supplemental Guidance for Environmental Resources:** Designation of soil- and water-related ACECs (Section 1621.21) and scenic ACECs (Section 1621.41) are identified in this manual as possible determinations made in resource management planning supplemental program guidance for environmental resources.
- **BLM Manual 1622 - Supplemental Guidance for Renewable Resources:** Designation of priority habitat ACECs are identified in this manual as possible determinations made in resource management planning supplemental program guidance for renewable resources (Section 1622.11).
- **BLM Manual 1623 - Supplemental Guidance for Land Resources:** Designation of cultural resource ACECs are identified in this manual as possible determinations made in resource management planning (Section 1623.1). Designation of RNAs, Outstanding Natural Areas (ONAs), and Natural Hazard Areas (NHAs) as ACECs are identified as possible determinations made in resource management planning supplemental program guidance for land resources (Section 1623.31)

Special Designations

Three specific areas within the Monument are proposed for management as special designations, or Areas of Critical Environmental Concern (ACECs)/Research Natural Areas (RNAs). Special management is defined as management outside of standard or routine practices. Special management is usually needed when:

- current management or management activities proposed in the alternatives are not sufficient to protect the relevant and important resource(s); and/or
- the needed management action is considered unusual and/or outside of the normal range of management practices typically used; and/or
- the change in management is difficult to implement without ACEC designation; and/or
- if analysis determines that special management is required.

Areas of Critical Environmental Concern (ACECs)

BLM regulations define an ACEC as an area within the public lands where special management attention is required (when such areas are developed or used and/or where no development is required) in order to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources; and/or other natural systems or processes; and/or to protect life and safety from natural hazards.

Private lands and lands administered by other agencies may be located within the boundaries of ACECs; however, they are not subject to the prescribed management of the ACEC. An ACEC designation differs from other special management designations, such as Wilderness Study Areas (WSAs), in that designation by itself does not automatically prohibit or restrict other uses in that area. One exception to this is that a mining plan of operation is required for any proposed mining activity within a designated ACEC.

The ACEC designation is an administrative designation that is accomplished through the land use planning process. The designation is a record of significant values that must be accommodated when BLM considers future management actions and land use proposals. This is unique to the BLM in that no other agency uses this form of designation. The intent of Congress in mandating the designation of ACECs through FLPMA was to give priority to the designation and protection of areas containing truly unique and significant resource values.

The ACEC designation enables land managers to specifically address the relevant and important value(s) and/or hazard(s), and to formulate management prescriptions. Management of ACECs is focused on the resource or natural hazard of concern; thus, the BLM prescribes special management measures that are specific to those values. This is why what can, and what cannot, occur in different ACECs may vary dramatically from area to area.

Research Natural Areas (RNAs)

RNAs are a unique type of ACEC. RNAs are areas that are a part of a national network of special designations that contain important ecological and scientific values and resources that are managed for minimum human disturbance. The RNA program was created in order to:

- preserve examples of all significant natural ecosystems for comparison with those influenced by people;
- provide educational and research areas for ecological and environmental studies; and
- preserve gene pools of typical and endangered plants and animals.

As unique ACECs, RNAs are intended to represent the full array of North American ecosystems, including their biological communities, habitats, natural phenomena, and geological and hydrological formations. In RNAs, natural processes are allowed to predominate without human intervention. RNAs are primarily used for non-manipulative research and for gathering baseline data on relatively unaltered community types. Under certain conditions, deliberate manipulation may be used in order to maintain the unique features for which the RNA was established. RNAs can serve as excellent “controls” for similar communities that are being actively managed. In addition, RNAs may provide an essential network of diverse habitat types that will be preserved in their natural state for future generations.

The ACEC/RNA Identification and Evaluation Process

There are several steps in the identification and evaluation of potential ACECs/RNAs. These steps include:

- **Step 1:** The identification of areas that may meet the relevance and importance criteria.
- **Step 2:** The evaluation of potential ACECs/RNAs in order to determine if they meet the criteria.
- **Step 3:** The consideration of the potential ACECs/RNAs as alternative management scenarios are formulated and effects are analyzed in the RMP revision planning process.

When released, the DRMP/DEIS typically contains recommendations on which areas identified as potential ACECs are proposed for designation. Public comments are requested, and are then reviewed and considered. Adjustments are made, as necessary, before the proposed RMP/Final EIS is released. Actual designation of an ACEC/RNA occurs when the Record of Decision (ROD) is signed and the final RMP is approved.

The ACEC/RNA Nomination Process

ACECs/RNAs may be nominated or identified at any time; however, they may only be designated through the BLM's land use planning process. Recommendations from the public are generally solicited as part of the scoping process during development of a land use plan for a particular area. While compiling a list of areas to be considered, the BLM looks at:

- existing ACECs/RNAs;
- areas nominated by the public;
- areas nominated by staff;
- areas and resources identified through inventory and monitoring;
- adjacent designations of other Federal and State agencies; and
- information on relevance and importance obtained from internal and external sources, as appropriate.

Any individual or organization may nominate ACECs/RNAs by:

- submitting nominations for ACECs/RNAs (preferably during the public scoping period for on-going planning efforts);
- submitting information on why nominated ACECs/RNAs do, or do not, meet relevance and importance criteria; and/or
- submitting comments on the DRMP/DEIS.

Nominations for ACECs/RNAs may be submitted at any time, and are solicited as part of the scoping process during development of a land use plan. Nominations of ACECs/RNAs must address why the proponent believes that the nominated area meets the relevance and importance requirements defined in the Federal regulations at 43 CFR 1610.7-2.

RNA Relevance and Importance Criteria

Nominations for ACECs/RNAs must be evaluated in order to determine whether or not they meet the required relevance and importance criteria. A nomination must meet one or more of the relevance and importance criteria in order to be considered as a potential ACEC/RNA.

Relevance Criteria

An area meets the relevance criteria if it contains:

- a significant historic, cultural, or scenic value (including, but not limited to, rare or sensitive archeological resources, and religious or cultural resources important to Native Americans); and/or
- a fish and wildlife resource (including, but not limited to, habitat for endangered, sensitive, or threatened species; or habitat essential for maintaining species diversity); and/or
- a natural process or system (including, but not limited to, endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features); and/or
- natural hazards (including, but not limited to, areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the planning process that it has become part of a natural process.

Importance Criteria

The value, resource, system, process, or hazard described in the relevance section must have substantial significance and value in order to meet the importance criteria. This generally means that the value, resource, system, process, or hazard is characterized by the fact that:

- it has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially when compared to any similar resource; and/or
- it has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; and/or
- it has been recognized as warranting protection in order to satisfy national priority concerns, or to carry out the mandates of FLPMA; and/or
- it has qualities that warrant highlighting in order to satisfy public or management concerns about safety and public welfare; and/or
- it poses a significant threat to human life and safety, or to property.

Consideration of Potential ACECs/RNAs

In order to determine whether or not to create an ACEC/RNA, a BLM Interdisciplinary (ID) Team uses information gathered from both internal and external sources, including other Federal, State, and local government agencies; interested individuals and groups; research institutions; expert opinions; etc. Nominated areas that meet relevance and importance criteria are analyzed in detail during the RMP revision planning process. Each proposed ACEC/RNA is considered for designation in at least one of the management

alternatives. The need for special management attention, as well as the potential impacts of applying such management, is assessed in the environmental analysis. The Preferred Alternative identifies which potential ACECs/RNAs are proposed for designation.

Comments on Proposed ACECs/RNAs

A notice of all areas proposed for ACEC/RNA designation is published in the Federal Register, along with a Notice of Availability of the DRMP/DEIS, requesting public comment. The public may comment on any aspect of the ACEC analysis at this point in the process. These comments are then considered in preparation of the proposed RMP/Final EIS. After a 30-day protest period, a Record of Decision is prepared and the final RMP is approved.

Area Background

The Rare Lizard and Snake Area

On February 4, 1965, approximately 443 acres located near McElmo Canyon in Montezuma County, Colorado were withdrawn from mineral entry by Public Land Order No. 3530 (amended by Public Law 3701, in order to correct legal boundaries). This withdrawal established the creation of the Rare Lizard and Snake Area (also known as the McElmo Rare Lizard and Snake Area or Reptile Natural Area). In accordance with provisions of 43 CFR, subpart 2310, the withdrawal provided for “the protection of unique botanical, geological, or zoological characteristics and of irreplaceable scientific and recreational values” (BLM 1976).

The Rare Lizard and Snake Area, characterized by a series of rolling mesas and rocky outcroppings cut by southwesterly trending canyons, supports vegetation varying between sagebrush grassland to pinyon-juniper woodlands. The area is situated along the convergence of two major regions (the Colorado Plateau and the Great Basin) and contains an assemblage of herpetofauna found in this area. The area includes a “good representation of local conditions and contains an assemblage of amphibians and reptiles that is not duplicated elsewhere in Colorado” (BLM 1976). These rare species include the Desert spiny lizard (*Sceloporus magister*) and the king snake (*Lampropeltis getulus*). In addition, the area contains the rare longnose leopard lizard (*Gambelia wislizenii*) and the Mesa Verde nightsnake (*Hypsiglena torquata*), two reptiles that only occur in the desert areas of extreme western Colorado. In Colorado, the longnose leopard lizard is restricted to the west-central and southwest edge of the State (Hammerson 1999). It is possible that longnose leopard lizards may act as indicators of healthy, undisturbed shrublands in the arid Southwest (CNHP 2006). Considered to be rare in the Monument (Zortman 1968; Bury 1977), surveys have only uncovered a handful of individuals (Bury 1977; Lambert 2004).

In 1976, the BLM determined that the Rare Lizard and Snake withdrawal protected “valuable and unique surface resources” and a recommendation was made that the withdrawal be maintained (BLM 1976). At that time, the Montrose District was developing the San Juan/San Miguel Resource Management Plan, which would analyze and propose specific management objectives for the area.

In 1980/1981, a wilderness study and inventory was conducted to determine whether or not the area met the requirements and criteria to become a Wilderness Study Area (WSA). As a result of this inventory, it was determined that the area did contain ecological, geological, and other features of outstanding scientific, educational, scenic, and historical value. It did not, however, meet the full criteria to become a WSA (BLM 1980; BLM 1981).

The Anasazi Culture Multiple-Use Area and ACEC

Upon approval in 1985, the San Juan/San Miguel Resource Management Plan (BLM 1985) designated 156,000 acres, including the Rare Lizard and Snake Area, as the Anasazi Culture Multiple-Use Area and ACEC (BLM 1986). This designation was based on the fact that the area contains the largest known density of archaeological sites in the United States and holds evidence of cultures and traditions spanning thousands of years. This area offers an unparalleled opportunity for visitors to observe, study, and experience how cultures lived and adapted over time in the American Southwest. In addition, the area contains important “cultural, mineral, recreation, range, backcountry values, and wildlife resources” (BLM 1985).

The Anasazi Culture Multiple-Use ACEC (Anasazi ACEC) was established in order to provide elevated levels of protection for the cultural landscape and to preserve opportunities for other identified uses, including recreation, livestock grazing, oil and gas exploration/extraction, and protection of wildlife habitat (See DRMP/DEIS, Volume I, Chapter 3, Section 3.3., Special Designation).

The objectives of the designation as an ACEC were to identify, evaluate, preserve, develop, interpret, and utilize cultural, riparian, wildlife, mineral, range, recreation, and lands/realty resources, and to integrate cultural resource management with other resource uses in a multiple-use scheme (BLM 1986), including:

- **Cultural Resources:** Cultural resources management objectives included allowing traditional and experimental research by qualified institutions and individuals; promoting publication of such research; providing support to interested researchers; monitoring specific sites for deterioration in order to plan for future site stabilization efforts; and, via Cultural Resource Management Plans (CRMPs), identifying sites, site areas, and/or site groups of uses specified in the guidelines prescribed in BLM Manual 8110 (BLM 2004, Revised) - Identifying and Evaluating Cultural Resources (BLM 1986).
- **Riparian Systems and Watershed:** Management objectives for riparian systems included maintaining and/or improving riparian vegetation and adjacent alluvial floodplains; stabilizing and improving channel and stream banks; and reducing sediment and salt transportation to the McElmo Creek and to the Colorado River systems.
- **Wildlife:** Management objectives for wildlife included maintaining and/or enhancing wildlife habitat (game and non-game species) diversity, structure, and suitability; improving the availability and distribution of water resources; and increasing opportunities for wildlife-related recreation and educational activities.

- **Minerals:** Management objectives for mineral resources included allowing for mineral exploration and development in a manner that would minimize conflicts with present ACEC values and provide for site reclamation in accordance with all applicable ACEC guidelines.
- **Range:** Management objectives for range included maintaining and/or improving resource conditions, as well as custodial management designed to prevent resource deterioration.
- **Recreation:** Management objectives included focusing on interpretation and informational opportunities provided by the variety of cultural resources found within the area; and providing a unique recreation environment for the public to explore and enjoy.
- **Lands and Realty:** Management objectives for lands and realty included pursuing the acquisition of private in-holding within the ACEC boundary by means of exchange, or other means, whenever possible (BLM 1986).

The McElmo Research Natural Area

The McElmo RNA is the sole so-designated ACEC in the Monument. It was designated in March 1986 through the San Juan/San Miguel RMP (BLM 1985) and has the dual designation as an Instant Study Area (ISA). ISAs do not meet the acreage requirements to become Wilderness Study Areas (WSAs); however, they are managed as WSAs. The RNA consists of approximately 427 acres and is located in Bridge Canyon (See DRMP/DEIS, Map 8). The BLM, in cooperation with Fort Lewis College, designated the RNA in order to provide an area for herpetological research (the study of indigenous reptile species) and for habitat protection (See DRMP/DEIS, Volume I, Chapter 3, Section 3.3.3., Research Natural Areas). The primary goal for the McElmo RNA is to provide a natural and undisturbed setting for scientific research and public education as an "outdoor classroom."

The Canyons of the Ancients National Monument

Under Section 2 of the Antiquities Act of June 8, 1906 (34 Stat. 225, 16 U.S. Code [USC] 431), the President can establish as national monuments "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States."

On June 9, 2000, President Clinton issued a proclamation designating most of the Anasazi ACEC as the Canyons of the Ancients National Monument under the jurisdiction of the BLM. Presidential Proclamation Number 7317 (the Proclamation) states:

Containing the highest known density of archaeological sites in the Nation...natural resources and spectacular landforms...rugged and dissected geology...and wildlife species...I proclaim for the purpose of protecting the objects identified above...Canyons of the Ancients National Monument.

The management of the Monument is subject to the overriding purpose of protecting the objects described in the Proclamation. It is delineated to the south by McElmo Creek and the Ute Mountain Ute Reservation, the State border to the west, and includes the upper

reaches of many canyons at its north and east boundaries. The Monument encompasses a diverse landscape of deep canyons, alluvial plains, bottomlands, plateaus, and rugged uplands. The area within the boundaries of the Monument includes approximately 166,000 acres of BLM-administered land, approximately 16,600 acres of private land, and approximately 400 acres of Federal land managed by the National Park Service, as Hovenweep National Monument. The Monument designation does not apply to private lands; however, the Proclamation provides that if any of these lands within the outer boundaries are acquired into Federal ownership, they would become part of the Monument. In the absence of acquisition, the laws applicable to the use of private lands prior to the establishment of the Monument would continue to apply.

As part of the current planning process, there is a proposed expansion of the McElmo RNA (the Expanded McElmo RNA), as well as a proposal to establish the Cannonball Mesa RNA and the Sand Canyon RNA. The addition of RNA designations would add to a larger national system of lands protected for research and educational purposes. These areas would serve to protect natural conditions within them, thereby reducing ground-disturbance activities and the associated loss of wildlife habitat (especially for the longnose leopard lizard and herpetological resources), as well as possible erosion and sedimentation into nearby water systems (See DRMP/DEIS, Volume 1, Chapter 4, Section 4.3.3.3.)

Proposed ACECs/RNAs

The information provided below describes the four RNAs (one existing RNA and three proposed RNAs) covering approximately 8,881 acres. Upon approval of the final RMP, the existing McElmo RNA would continue its ACEC designation. The proposed ACECs/RNAs are located immediately north of, and adjacent to, McElmo Canyon, and include the:

- existing McElmo RNA;
- proposed Expanded McElmo RNA (including the Sackman Land Exchange property);
- proposed Cannonball Mesa RNA; and the
- proposed Sand Canyon RNA.

All of the ACEC/RNA units have the same values and use limitations. All legal locations are based on the New Mexico Principal Meridian and most acreages were calculated using the 1:24,000 scale Geographic Information System (GIS) ownership coverage for lands in the planning area.

Existing McElmo ACEC/RNA

General Information

Location: The existing McElmo RNA is located in Montezuma County, Colorado. It is approximately 25 miles west of the town of Cortez. To access the RNA, travel south of Cortez on Highway 491. Then, turn right (west) on County Road G (at the signs for the

airport and/or Hovenweep National Monument) and go approximately 24 miles on this paved route. The RNA is located north of County Road G in Bridge Canyon.

Background/Description: The McElmo RNA was designated by the BLM and the Colorado Department of Natural Resources. It was set aside specifically for research of rare reptiles and their habitat. The area's ecology, plant and animal species, and soils are all unique. The McElmo RNA includes three life zones: Great Basin sagebrush, pinyon-juniper woodland (*Pinusedulis*), and salt-desert shrub vegetation communities. This diversity is what accounts for the reptile and amphibian species living at the fringes of their suitable habitat. Species known to inhabit the RNA, and adjoining areas, include the desert spiny lizard (*Sceloporus magister*) and the king snake (*Lampropeltis getuius*). In addition, the rare longnose leopard lizard (*Gambelia wislizenii*) and the Mesa Verde nightsnake (*Hypsiglena torquata*) occur in this area. Other more common species also occur in the area including the Western whiptail lizard (*Cnemidophorus tigris*) and collared lizards (*Crotaphytus callaris*). (See the Appendix H for the Canyons of the Ancients RMP for a more complete list of species known to inhabit this area.)

USGS Quad Map: 7.5 minute quadrangle, Wickiup Canyon

Legal Description: PM 23, Township 36 North, Range 20 West, Sections 22 and 27

Elevation Range: 4,921 to 5,432 feet

Size: Approximately 427 acres

Relevance and Importance Criteria Information

Biodiversity Rank: B2. Very high biodiversity significance and the occurrence of a globally imperiled (G5) reptile.

Relevance Criteria: A natural process or system (including, but not limited to, endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features).

Importance Criteria: The existing McElmo RNA has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially when compared to any similar resource. It also has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

Findings: This existing McElmo RNA meets both the relevance and importance criteria for an S1-ranked sensitive species considered critically imperiled. It is critically imperiled in the nation or State due to extreme rarity (often 5 or fewer occurrences) or due to additional factor(s), such as very steep declines making it especially vulnerable.

The relevance and importance are established in the historic documents. The purpose of the McElmo RNA was to permanently set aside and protect, in a natural state, an area that affords research opportunities and public educational benefits.

The McElmo RNA also provides the opportunity to better protect rare lizard species that the BLM recognizes as sensitive species. Southwestern Colorado is on the edge of the range of the longnose leopard lizard (*Gambelia wislizenii*) and the desert spiny lizard. Although not rare within their range, this is the only part of Colorado in which they occur. In addition, the McElmo RNA provides educational opportunities in the spirit of the “outdoor laboratory” unique to the Monument.

As with many locations within the Monument, there are significant historic, cultural, or scenic values (including, but not limited to, rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

Proposed Expanded McElmo RNA/ACEC

General Information

Location: The proposed Expanded McElmo RNA is located adjacent to the existing McElmo RNA in Montezuma County, Colorado. It is approximately 25 miles west of the town of Cortez. To access the area, travel south of Cortez on Highway 491. Then, turn right (west) on County Road G (at the signs for the airport and/or Hovenweep National Monument) and go approximately 24 miles on this paved route. The area is located north of County Road G in Bridge Canyon.

Background/Description: The proposed Expanded McElmo RNA is adjacent to the existing McElmo RNA on the northern and southern boundaries. The ecology is the same as the ecology of the existing RNA. Plant and animal species, and soils, are all unique. The area includes three life zones: Great Basin sagebrush, pinyon-pine woodland (*Pinus edulis*), and salt-desert shrub vegetation communities. This diversity is what accounts for the proliferation of reptile and amphibian species living at the fringes of their suitable habitat. Species known to inhabit the area, and adjoining areas, include the desert spiny lizard (*Sceloporus magister*) and the king snake (*Lampropeltis getuius*). In addition, the rare longnose leopard lizard (*Gambelia wislizenii*) and the Mesa Verde nightsnake (*Hypsiglena torquata*) occur in this area. (See the Appendix H for the Canyons of the Ancients RMP for a more complete list of species known to inhabit this area.)

USGS Quad Map: 7.5 minute quadrangles, Wickiup Canyon and Ruin Point

Legal Description: PM 23, Township 36 North, Range 20 West, Sections 10, 14, 15, 22, 26, 27, 34, and 35

Elevation Range: 5,000 to 5,300 feet

Size: Approximately 2,738 acres

Relevance and Importance Criteria Information

Biodiversity Rank: B2. Very high biodiversity significance, and the occurrence of a globally imperiled (G5) reptile.

Relevance Criteria: A natural process or system (including, but not limited to, endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features).

Importance Criteria: The proposed Expanded McElmo RNA has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially when compared to any similar resource. It also has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

Findings: The proposed Expanded McElmo RNA meets both the relevance and importance criteria for an S1-ranked sensitive species considered critically imperiled. It is critically imperiled in the nation or State due to extreme rarity (often 5 or fewer occurrences) or due to additional factor(s), such as very steep declines making it especially vulnerable.

The relevance and importance are established in the historic documents. The purpose of the proposed Expanded McElmo RNA is to permanently set aside and protect, in a natural state, an area that affords research opportunities and public educational benefits. The expansion of the McElmo RNA (the proposed Expanded McElmo RNA) would provide a more comprehensive representation of the local biological conditions and diversity.

The proposed Expanded McElmo RNA would also provide the opportunity to better protect rare lizard species that the BLM recognizes as sensitive species. Southwestern Colorado is on the edge of the range of the longnose leopard lizard (*Gambelia wislizenii*) and the desert spiny lizard. Although not rare within their range, this is the only part of Colorado in which they occur. In addition, the proposed Expanded McElmo RNA would provide educational opportunities in the spirit of the “outdoor laboratory” unique to the Monument.

As with many sites within the Monument, there are significant historic, cultural, or scenic values (including, but not limited to, rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

The proposed Expanded McElmo RNA also includes the lands acquired through the Sackman Land Exchange property (BLM 2004a; Ecosphere Environmental Services, 2002):

Sackman Land Exchange Property

General Information

Location: The proposed Expanded McElmo RNA, including the Sackman Land Exchange property, is located adjacent to the existing McElmo RNA in Montezuma County, Colorado. It is approximately 25 miles west of the town of Cortez. To access the RNA, travel south of Cortez on Highway 491. Then, turn right (west) on County Road G (at the signs for the airport and/or Hovenweep National Monument) and go 24 miles on this paved route. The Sackman Land Exchange property is located north of County Road G in Yellow Jacket and Bridge Canyons.

Background/Description: The Sackman Land exchange parcels (1-3) are located adjacent to the existing McElmo RNA and would be included as part of the proposed Expanded McElmo RNA. The Environmental Assessment (CO-800-2004-072EA) identified the acquired lands as having values beneficial to the existing McElmo RNA. The ecology is the same as the ecology of the existing McElmo RNA. Plant and animal species, and soils, are all unique. The area includes three life zones: Great Basin sagebrush, pinyon-pine woodland (*Pinusedulis*), and salt-desert shrub vegetation communities. This diversity is what accounts for the proliferation of reptile and amphibian species living at the fringes of their suitable habitat. Species known to inhabit the area, and adjoining areas, include the desert spiny lizard (*Sceloporus magister*) and the king snake (*Lampropeltis getuius*). In addition, the rare longnose leopard lizard (*Gambelia wislizenii*) and the Mesa Verde nightsnake (*Hypsiglena torquata*) occur in this area. (See the Appendix H for the Canyons of the Ancients RMP for a more complete list of species known to inhabit this area.)

Parcel 3 includes riparian habitat along Yellow Jacket and Bridge Canyon. The riparian area surrounding the creek consists of cottonwoods of medium age, and a willow population. There may be riparian habitat suitable for the southwestern willow flycatcher (*Empidonax traillii extimus*) in Parcel 3.

USGS Quad Map: 7.5 minute quadrangles, Wickiup Canyon and Ruin Point

Legal Description: PM 23, Parcel 1: Township 36 North, Range 20 West, Sections 23 and 26; Parcel 2: Township 36 North, Range 20 West, Sections 27; and, Parcel 3: Township 36 North, Range 20 West, Sections 34 and 35.

Elevation Range: 4,800 to 5,320 feet

Size: Approximately 1,055 acres

Relevance and Importance Criteria Information

Biodiversity Rank: B2. Very high biodiversity significance, and the occurrence of a globally imperiled (G5) reptile.

Relevance Criteria: A natural process or system (including, but not limited to, endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features).

Importance Criteria: The Sackman Land Exchange property, included as part of the proposed Expanded McElmo RNA, has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially when compared to any similar resource. It also has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

Findings: The recently acquired property is very similar to the existing McElmo RNA and is a valuable addition to the Monument. The Sackman Land Exchange property, as included in the proposed Expanded McElmo RNA, meets both the relevance and importance criteria for an S1-ranked sensitive species considered critically imperiled. It is critically imperiled in the nation or State due to extreme rarity (often 5 or fewer

occurrences) or due to additional factors(s), such as very steep declines making it especially vulnerable.

There have been few Federal cultural resource inventories conducted on private lands, including the Sackman Land Exchange property; however, adjacent surveys on Federal lands have resulted in numerous significant sites. It is expected, as with many sites within the Monument, that there are significant historic, cultural, or scenic values (including, but not limited to, rare or sensitive archeological resources, and religious or cultural resources important to Native Americans).

The relevance and importance of this area are established in the historic documents. The intended purpose is to permanently set aside and protect, in a natural state, an area that affords research opportunities and public educational benefits. The expansion of the McElmo RNA (including the Sackman Land Exchange property) would provide a more comprehensive representation of the local biological conditions and diversity.

The proposed Expanded McElmo RNA, including the Sackman Land Exchange property, would also provide the opportunity to better protect rare lizard species that the BLM recognizes as sensitive species. Southwestern Colorado is on the edge of the range of the longnose leopard lizard (*Gambelia wislizenii*) and the desert spiny lizard. Although not rare within their range, this is the only part of Colorado in which they occur. In addition, the proposed Expanded McElmo RNA would provide educational opportunities in the spirit of the “outdoor laboratory” unique to the Monument.

Proposed Cannonball Mesa RNA/ACEC

General Information

Location: The proposed Cannonball Mesa RNA is located in Montezuma County, Colorado. It is approximately 22 miles west of the town of Cortez. To access the area, travel south of Cortez on Highway 491. Then, turn right (west) on County Road G (at the signs for the airport and/or Hovenweep National Monument) and go approximately 22 miles on this paved route. The area is located north of County Road G in Yellow Jacket Canyon.

Background/Description: Cannonball Mesa is an upland mesa within the Monument and is dominated by pinyon-pine (*Pinusedulis*) with intermixed sagebrush, saltbush, skunkbush (*Rhus trilobata*), and some juniper (*Sabina osteosperma*). The more mesic areas support cottonwood (*Populus angustifolia*), willow (*Salix*spp.), and tamarisk (*Tamarix ramosissima*). The area's ecology, plant and animal species, and soils are all unique. The dominant landscape feature is Cannonball Mesa. The mesa top is very slightly concave and poorly drained, creating unusually mesic conditions that have allowed for the development of a shrubland dominated by saltbrush (*Atriplex confertifolia*), greasewood (*Sarcobatus vermiculatus*), and galetta grass (*Hilaria jamesii*), classified as a cold desert shrubland (*Atriplex confertifolia/Hilaria jamesii*). The eastern flanks of Cannonball Mesa also support an unusual woodland dominated by forsellesia (*Forsellesia meionandra*), Utah juniper (*Juniperus osteosperma*), and mountain mahogany (*Cercocarpus montanus*). This community is classified as a Utah juniper/mountain mahogany woodland (*Juniperus osteosperma/Cercocarpus montanus*) (CNHP 2001).

The area includes three life zones: Great Basin sagebrush, pinyon-pine woodland (*Pinusedulis*), and salt-desert shrub vegetation communities. This diversity is what accounts for the proliferation of reptile and amphibian species living at the fringes of their suitable habitat. Species known to inhabit the area, and adjoining areas, include the desert spiny lizard (*Sceloporus magister*) and the king snake (*Lampropeltis getuius*). In addition, the rare longnose leopard lizard (*Gambelia wislizentii*) and the Mesa Verde nightsnake (*Hypsiglena torquata*) occur in this area. (See the Appendix H for the Canyons of the Ancients RMP for a more complete list of species known to inhabit this area.)

USGS Quad Map: 7.5 minute quadrangles, Battle Rock and Woods Canyon

Legal Description: PM 23, Township 36 North, Range 19 West, Sections 21, 22, 23, 28, 29, and 27

Elevation Range: 5,100 to 5,600 feet

Size: Approximately 2,797 acres

Relevance and Importance Criteria Information

Biodiversity Rank: B3. High biodiversity significance, and the occurrence of a globally imperiled (G5) reptile. This area contains two good occurrences of elements that are vulnerable on a global scale (G3), and two excellent occurrences of elements that are globally secure (G4) but imperiled (S2) or critically imperiled (S1) in the State of Colorado (CNHP 2001):

Element	Common Name	Global Rank	State Rank	Element Occurrence Rank
<i>Calochortus flexuosus</i>	Weak-Stemmed Mariposa Lily	G4	S1	A
<i>Calochortus flexuosus</i>	Weak-Stemmed Mariposa Lily			B
<i>Penstemon breviculus</i>	Little Penstemon	G3Q	S2	B
<i>Penstemon utahensis</i>	Utah Penstemon	G4	S2	A
<i>Juniperus osteosperma/Cercocarpus montanus</i>	Utah Juniper/Mountain Mahogany	G2Q	S2	E
<i>Atriplex confertifolia/Hilaria jamesii</i>	Cold Desert Shrublands	G3	S2	B

(Source: CNHP 2001)

Relevance Criteria: A natural process or system (including, but not limited to, endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features).

Importance Criteria: The proposed Cannonball Mesa RNA has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially when compared to any similar resource. It also has qualities

or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

Findings: The proposed Cannonball Mesa RNA meets both the relevance and importance criteria for an S1-ranked sensitive species considered critically imperiled. It is critically imperiled in the nation or State due to extreme rarity (often 5 or fewer occurrences) or due to additional factors(s), such as very steep declines making it especially vulnerable.

The relevance and importance are established in the historic documents. The purpose of the proposed Cannonball Mesa RNA is to permanently set aside and protect, in a natural state, an area that affords research opportunities and public educational benefits. The proposed Cannonball Mesa RNA would provide a more comprehensive representation of the local biological conditions and diversity.

The proposed Cannonball Mesa RNA would also provide the opportunity to better protect rare lizard species that the BLM recognizes as sensitive species. Southwestern Colorado is on the edge of the range of the longnose leopard lizard (*Gambelia wislizenii*) and the desert spiny lizard. Although not rare within their range, this is the only part of Colorado in which they occur. In addition, the proposed Cannonball Mesa RNA would provide educational opportunities in the spirit of the “outdoor laboratory” unique to the Monument.

As with many sites within the Monument, there are significant historic, cultural, or scenic values (including, but not limited to, rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

Proposed Sand Canyon RNA/ACEC

General Information

Location: The proposed Sand Canyon RNA is located in Montezuma County, Colorado. It is approximately 13 miles west of the town of Cortez. To access the area, travel south of Cortez on Highway 491. Then, turn right (west) on County Road G (at the signs for the airport and/or Hovenweep National Monument) and go approximately 12 miles on this paved route. Trailhead parking is an unimproved slickrock surface on the north (right) side of the route.

Background/Description: The Sand Canyon area is characterized by sandstone canyons and broad mesas. This southwestern corner of Colorado features a variety of prehistoric cliff dwellings and ruins. Its ecology, plant and animal species, and soils are all unique. The area includes three life zones: Great Basin sagebrush, pinyon-juniper woodland (*Pinusedulis*), and salt-desert shrub vegetation communities. This diversity is what accounts for the proliferation of reptile and amphibian species living at the fringes of their suitable habitat. Species known to inhabit the area, and adjoining areas, include the desert spiny lizard (*Sceloporus magister*) and the king snake (*Lampropeltis getuius*). In addition, the rare longnose leopard lizard (*Gambelia wislizenii*) and the Mesa Verde nightsnake (*Hypsiglena torquata*) occur in this area. (See the Appendix H for the Canyons of the Ancients RMP for a more complete list of species known to inhabit this area.)

USGS Quad Map: 7.5 minute quadrangles, Mud Creek

Legal Description: PM 23, Township 36 North, Range 18 West, Sections 23, 26, and 27.

Elevation Range: 5,270 to 5,900 feet

Size: Approximately 1,864 acres

Relevance and Importance Criteria Information

Biodiversity Rank: B2. Very high biodiversity significance, and the occurrence of a globally imperiled (G5) reptile. This area contains excellent (A ranked) occurrences of a globally imperiled (G2G3) plant species, and a good (B ranked) occurrence of a species that is vulnerable on a global scale (G3) and imperiled (S2) in the State of Colorado. It also contains a fair (C ranked) occurrence of a globally secure (G4) plant species that is critically imperiled (S1) in Colorado (CNHP 2001):

Element	Common Name	Global Rank	State Rank	Element Occurrence Rank	Federal Sensitive
<i>Calochortus flexuosus</i>	Weak-Stemmed Mariposa Lily	G4	S1	C	
<i>Penstemon breviculus</i>	Little Penstemon	G3Q	S2	B	
<i>Astragalus naturitensis</i>	Naturita Milkvetch	G2G3	S2S3	A	BLM

(Source: CNHP 2001)

Relevance Criteria: A natural process or system (including, but not limited to, endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features).

Importance Criteria: The proposed Sand Canyon RNA has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially when compared to any similar resource. It also has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

Findings: The proposed Sand Canyon RNA meets both the relevance and importance criteria for an S1-ranked sensitive species considered critically imperiled. It is critically imperiled in the nation or State due to extreme rarity (often 5 or fewer occurrences) or due to additional factors(s), such as very steep declines making it especially vulnerable.

The relevance and importance are established in the historic documents. The purpose of the proposed Sand Canyon RNA is to permanently set aside and protect, in a natural state, an area that affords research opportunities and public educational benefits. The proposed Sand Canyon RNA would provide a more comprehensive representation of the local biological conditions and diversity.

The proposed Sand Canyon RNA would also provide the opportunity to better protect rare lizard species that the BLM recognizes as sensitive species. Southwestern Colorado is on the edge of the range of the longnose leopard lizard (*Gambelia wislizenii*) and the desert spiny lizard. Although not rare within their range, this is the only part of Colorado in which

they occur. In addition, the proposed Sand Canyon RNA would provide educational opportunities in the spirit of the “outdoor laboratory” unique to the Monument.

As with many sites within the Monument, there are significant historic, cultural, or scenic values (including, but not limited to, rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

ACEC/RNA Evaluation Summary

A total of three potential ACEC/RNA areas were evaluated as part of the Monument’s RMP revision process. These areas included one area, the McElmo RNA, previously designated an ACEC/RNA in the San Juan/San Miguel RMP (BLM 1985). Nominations for the three proposed ACECs/RNAs were received from the public as part of the scoping process for the DRMP/DEIS and for the Sackman Land Exchange EA, as well as from Colorado Natural Heritage Program potential conservation areas, and areas nominated or expanded by BLM staff specialists. All three of the newly nominated areas meet the relevance and importance criteria and will, therefore, be considered for designation in the RMP revision, along with the continuation of the existing McElmo RNA.

Locations Considered as Potential ACECs/RNAs

Location Name	Values of Concern-Comments-Relevance	Biodiversity Significance and Importance	Acres of Public Land	Relevance and Importance Evaluation
Existing McElmo RNA	Habitat for the longnose leopard lizard (<i>Gambelia wislizenii</i>) is located here. Recommended as a Research Natural Area.	B2 – Very high	427	Existing
Proposed Expanded McElmo RNA Sackman Land Exchange Property	Habitat for the longnose leopard lizard (<i>Gambelia wislizenii</i>) is located here. Recommended as a Research Natural Area.	B2 – Very high	2,738 1,055 (Total 3,793)	Relevant and important resources
Proposed Cannonball RNA	Primarily for state listed plant species and unique plant associations including weak-stemmed mariposa lily, little penstemon, Utah juniper/mountain mahogany, and cold desert shrublands. Habitat for the longnose leopard lizard (<i>Gambelia wislizenii</i>) is also located here. Recommended as a Research Natural Area.	B3 – high	2,797	Relevant and important resources
Proposed Sand Canyon RNA	Primarily for state listed plant species including weak-stemmed mariposa lily, little penstemon and Naturita milkvetch. Habitat for the longnose leopard lizard (<i>Gambelia wislizenii</i>) is also located here. Recommended as a Research Natural Area.	B2 – Very high	1,864	Relevant and important resources
	Total acres considered prior to 2008 completion of the Sackman Land Exchange		7,826	
	Total acres considered including Sackman Land Exchange property		8,454	
	Total acres meeting relevance and importance criteria of a potential ACEC/RNA		8,454	
	Total acres of ACECs/RNAs including existing McElmo RNA		8,881	

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