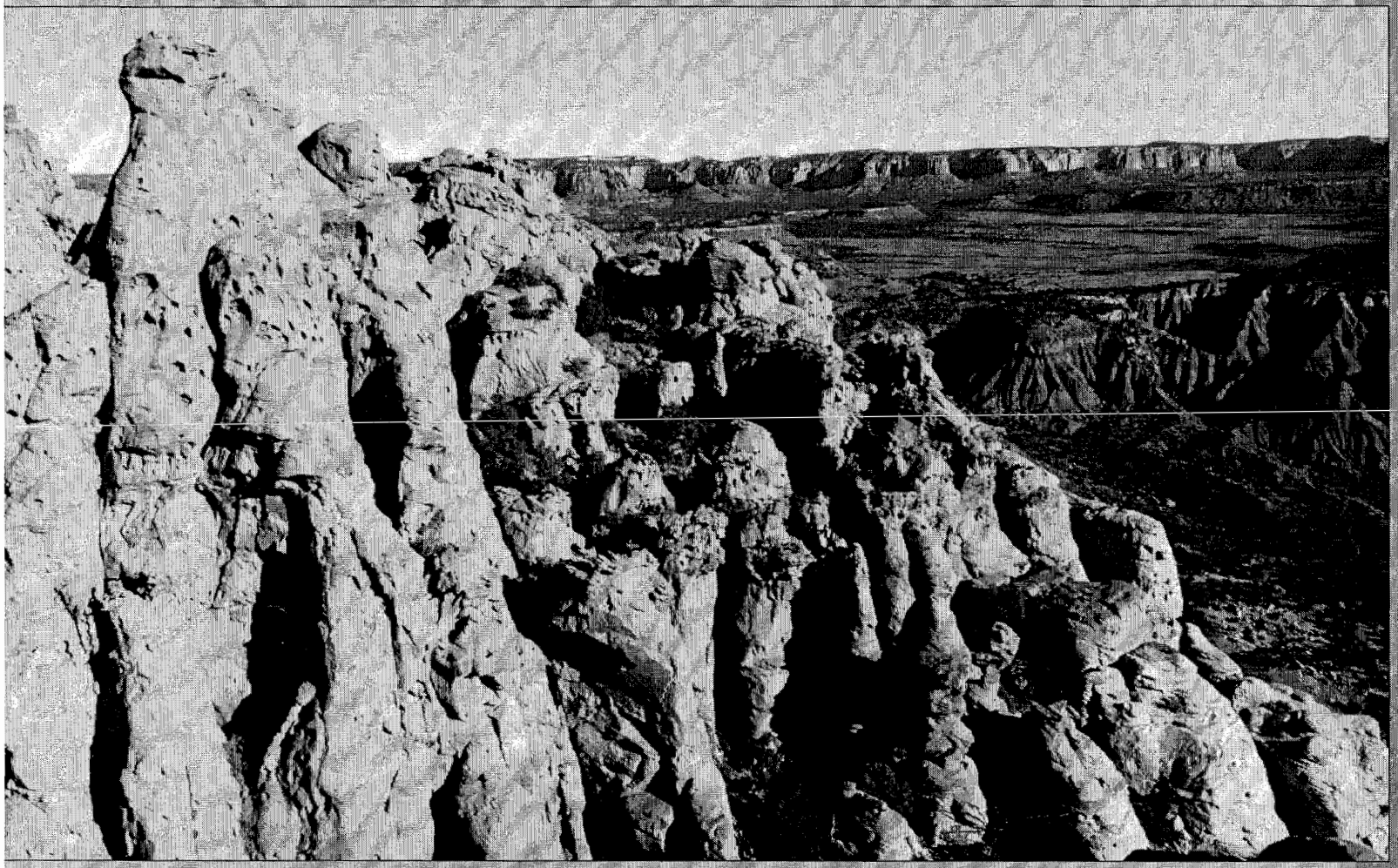


Grand Staircase-Escalante National Monument

Management Plan

GRAND STAIRCASE ESCALANTE NATIONAL MONUMENT

Establishment of the Grand Staircase-Escalante National Monument by the President of the United States of America
September 18, 1996
A PROCLAMATION

The Grand Staircase-Escalante National Monument's vast and austere landscape embraces a spectacular array of scientific and historic resources. This high, rugged, and remote region, where bold plateaus and multi-hued cliffs run for distances that defy human perspective, was the last place in the continental United States to be mapped. Even today, this unspoiled natural area remains a frontier, a quality that greatly enhances the monument's value for scientific study. The monument has a long and dignified human history: it is a place where one can see how nature shapes human endeavors in the American West, where distance and aridity have been pitted against our dreams and courage. The monument presents exemplary opportunities for geologists, paleontologists, archeologists, historians, and biologists.

The monument is a geologic treasure of clearly exposed stratigraphy and structures. The sedimentary rock layers are relatively undeformed and unobscured by vegetation, offering a clear view to understanding the processes of the earth's formation. A wide variety of formations, some in brilliant colors, have been exposed by millennia of erosion. The monument contains significant portions of a vast geologic stairway, named the Grand Staircase by pioneering geologist Clarence Dutton, which rises 5,500 feet to the rim of Bryce Canyon in an unbroken sequence of great cliffs and plateaus. The monument includes the rugged canyon country of the upper Paria Canyon system, major components of the White and Vermilion Cliffs and associated benches, and the Kaiparowits Plateau. That Plateau encompasses about 1,600 square miles of sedimentary rock and consists of successive south-to-north ascending plateaus or benches, deeply cut by steep-walled canyons. Naturally burning coal seams have scorched the tops of the Burning Hills brick-red. Another prominent geological feature of the plateau is the East Kaibab Monocline, known as the Cockscomb. The monument also includes the spectacular Circle Cliffs and part of the Waterpocket Fold, the inclusion of which completes the protection of this geologic feature begun with the establishment of Capitol Reef National Monument in 1938 (Proclamation No. 2246, 50 Stat. 1856). The monument holds many arches and natural bridges, including the 130-foot-high Escalante Natural Bridge, with a 100 foot span, and Grosvenor Arch, a rare "double arch." The upper Escalante Canyons, in the northeastern reaches of the monument, are distinctive: in addition to several major arches and natural bridges, vivid geological features are laid bare in narrow, serpentine canyons, where erosion has exposed sandstone and shale deposits in shades of red, maroon, chocolate, tan, gray, and white. Such diverse objects make the monument outstanding for purposes of geologic study.

The monument includes world class paleontological sites. The Circle Cliffs reveal remarkable specimens of petrified wood, such as large unbroken logs exceeding 30 feet in length. The thickness, continuity and broad temporal distribution of the Kaiparowits Plateau's stratigraphy provide significant opportunities to study the paleontology of the late Cretaceous Era. Extremely significant fossils, including marine and brackish water mollusks, turtles, crocodilians, lizards, dinosaurs, fishes, and mammals, have been recovered from the Dakota, Tropic Shale and Wahweap Formations, and the Tibbet Canyon, Smoky Hollow and John Henry members of the Straight Cliffs Formation. Within the monument, these formations have produced the only evidence in our hemisphere of terrestrial vertebrate fauna, including mammals, of the Cenomanian-Santonian ages. This sequence of rocks, including the overlaying Wahweap and Kaiparowits formations, contains one of the best and most continuous records of Late Cretaceous terrestrial life in the world.

Archeological inventories carried out to date show extensive use of places within the monument by ancient Native American cultures. The area was a contact point for the Anasazi and Fremont cultures, and the evidence of this mingling provides a significant opportunity for archeological study. The cultural resources discovered so far in the monument are outstanding in their variety of cultural affiliation, type and distribution. Hundreds of recorded sites include rock art panels, occupation sites, campsites and granaries. Many more undocumented sites that exist within the monument are of significant scientific and historic value worthy of preservation for future study.

The monument is rich in human history. In addition to occupations by the Anasazi and Fremont cultures, the area has been used by modern tribal groups, including the Southern Paiute and Navajo. John Wesley Powell's expedition did initial mapping and scientific field work in the area in 1872. Early Mormon pioneers left many historic objects, including trails, inscriptions, ghost towns such as the Old Paria townsite, rock houses, and cowboy line camps, and built and traversed the renowned Hole-in-the-Rock Trail as part of their epic colonization efforts. Sixty miles of the Trail lie within the monument, as does Dance Hall Rock, used by intrepid Mormon pioneers and now a National Historic Site.

Spanning five life zones from low-lying desert to coniferous forest, with scarce and scattered water sources, the monument is an outstanding biological resource. Remoteness, limited travel corridors and low visitation have all helped to preserve intact the monument's important ecological values. The blending of warm and cold desert floras, along with the high number of endemic species, place this area in the heart of perhaps the richest floristic region in the Intermountain West. It contains an abundance of unique, isolated communities such as hanging gardens, tinajas, and rock crevice, canyon bottom, and dunal pocket communities, which have provided refugia for many ancient plant species for millennia. Geologic uplift with minimal deformation and subsequent downcutting by streams have exposed large expanses of a variety of geologic strata, each with unique physical and chemical characteristics. These strata are the parent material for a spectacular array of unusual and diverse soils that support many different vegetative communities and numerous types of endemic plants and their pollinators. This presents an extraordinary opportunity to study plant speciation and community dynamics independent of climatic variables. The monument contains an extraordinary number of areas of relict vegetation, many of which have existed since the Pleistocene, where natural processes continue unaltered by man. These include relict grasslands, of which No Mans Mesa is an outstanding example, and pinon-juniper communities containing trees up to 1,400 years old. As witnesses to the past, these relict areas establish a baseline against which to measure changes in community dynamics and biogeochemical cycles in areas impacted by human activity. Most of the ecological communities contained in the monument have low resistance to, and slow recovery from, disturbance. Fragile cryptobiotic crusts, themselves of significant biological interest, play a critical role throughout the monument, stabilizing the highly erodible desert soils and providing nutrients to plants. An abundance of packrat middens provides insight into the vegetation and climate of the past 25,000 years and furnishes context for studies of evolution and climate change. The wildlife of the monument is characterized by a diversity of species. The monument varies greatly in elevation and topography and is in a climatic zone where northern and southern habitat species intermingle. Mountain lion, bear, and desert bighorn sheep roam the monument. Over 200 species of birds, including bald eagles and peregrine falcons, are found within the area. Wildlife, including neotropical birds, concentrate around the Paria and Escalante Rivers and other riparian corridors within the monument.

Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431) authorizes the President, in his discretion, to declare by public proclamation 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 to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

NOW, THEREFORE, I, WILLIAM J. CLINTON, President of the United States of America, by the authority vested in me by section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as the Grand Staircase-Escalante National Monument, for the purpose of protecting the objects identified above, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the document entitled "Grand Staircase-Escalante National Monument" attached to and forming a part of this proclamation. The Federal land and interests in land reserved consist of approximately 1.7 million acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from entry, location, selection, sale, leasing, or other disposition under the public land laws, other than by exchange that furthers the protective purposes of the monument. Lands and interests in lands not owned by the United States shall be reserved as a part of the monument upon acquisition of title thereto by the United States.

The establishment of this monument is subject to valid existing rights.

Nothing in this proclamation shall be deemed to diminish the responsibility and authority of the State of Utah for management of fish and wildlife, including regulation of hunting and fishing, on Federal lands within the monument.

Nothing in this proclamation shall be deemed to affect existing permits or leases for, or levels of, livestock grazing on Federal lands within the monument; existing grazing uses shall continue to be governed by applicable laws and regulations other than this proclamation.

Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the national monument shall be the dominant reservation.

The Secretary of the Interior shall manage the monument through the Bureau of Land Management, pursuant to applicable legal authorities, to implement the purposes of this proclamation. The Secretary of the Interior shall prepare, within 3 years of this date, a management plan for this monument, and shall promulgate such regulations for its management as he deems appropriate. This proclamation does not reserve water as a matter of Federal law. I direct the Secretary to address in the management plan the extent to which water is necessary for the proper care and management of the objects of this monument and the extent to which further action may be necessary pursuant to Federal or State law to assure the availability of water.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this eighteenth day of September, in the year of our Lord nineteen hundred and ninety-six, and of the Independence of the United States of America the two hundred and twenty-first.

William J. Clinton

United States Department of the Interior
Bureau of Land Management

Grand Staircase-Escalante National Monument

Approved Management Plan
Record of Decision

Prepared by

Bureau of Land Management
Grand Staircase-Escalante National Monument
Cedar City, Utah

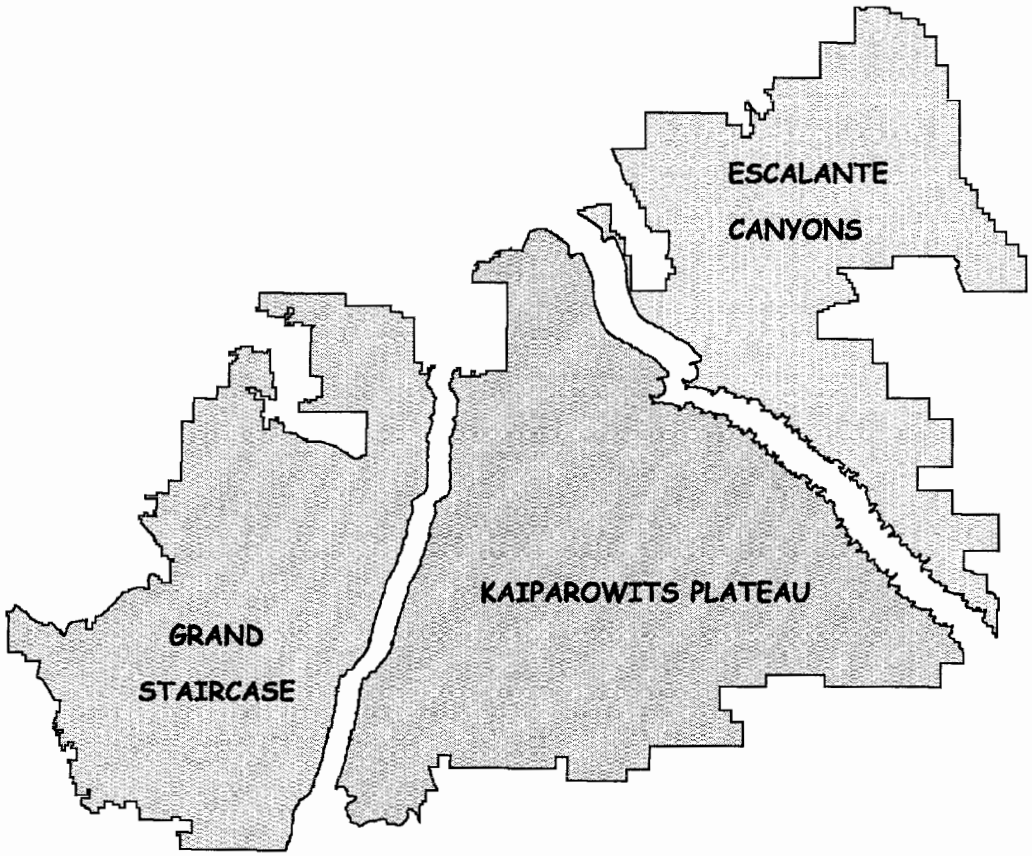
Signed November 1999

Effective February 2000

Overview

On September 18, 1996, Grand Staircase-Escalante National Monument was established by the President of the United States, under the authority of the 1906 Antiquities Act. The stunningly beautiful lands within this Monument contain spectacular treasures of natural and human history. This high, rugged, and remote region, where bold plateaus and multi-hued cliffs run for distances that defy human perspective, was the last place in the continental United States to be mapped.

From its spectacular Grand Staircase of cliffs and terraces, across the rugged Kaiparowits Plateau, to the wonder of the Escalante River Canyons, America's newest Monument spans nearly 1.9 million acres of land owned by the American public. The wild Southwestern desert country encompassed by the Monument remains a remote frontier. By the terms of the Presidential Proclamation and the provisions of this Management Plan it will remain so, serving as an outdoor laboratory where current and future generations can



Physiographic Provinces

study biological and earth sciences, prehistoric life and environments, and pioneer history.

To further the protection of Grand Staircase-Escalante National Monument, the President asked the Secretary of the Interior to pursue agreements with the State of Utah to acquire the school trust lands within the Monument, as well as with the holders of the two large coal leases in existence at the time of its establishment. In late 1997, Utah and the Department of the Interior successfully negotiated the largest state-federal land exchange in history, which was then ratified by Congress. This exchange transferred all state inholdings within the Monument, approximately 180,000 acres, to the American public. In addition, agreements to purchase coal leases from major lessees Andalex and Pacificorp in 1999 eliminated two threats of industrial development in this area. Both of these events greatly improved the ability to manage the lands within the Monument boundaries as an unspoiled natural area.

The Presidential Proclamation also directed the Bureau of Land Management (BLM), an agency of the Department of the Interior, to prepare a Management Plan for the Monument. The Proclamation and the Antiquities Act provide a clear mandate for this plan -- to protect the myriad historic and scientific resources in the Monument. To meet this objective, the Monument will be managed according to two basic principles. First and foremost, the Monument will remain protected in its primitive, frontier state. The BLM will safeguard the remote and undeveloped character of the Monument, which is essential to the protection of the scientific and historic resources.

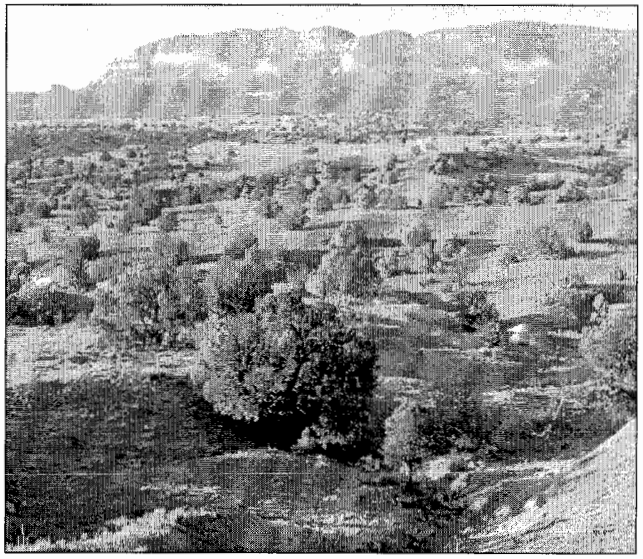
Second, the Monument will provide opportunities for the study of scientific and historic resources. In addition to the study of specific scientific resources and scientific disciplines, the Monument setting will allow study of key issues such as understanding ecological and climatic change over time, understanding the interactions between humans and their environment, improving land management practices, and achieving a properly functioning, healthy, and biologically diverse landscape. The BLM will support and encourage scientific study, as long as it does not conflict with the protection and preservation of Monument resources.

To achieve these priorities, visitor development in the Monument will be limited to minor facilities such as interpretive kiosks and pullouts, located in small areas on the periphery of the Monument. Major visitor centers will be located in nearby towns instead of within the Monument itself. Limiting development to the periphery will allow visitors to better understand the Monument's national treasures without jeopardizing the resources or the remote character of this special area.

Motorized access will also be limited. The Plan designates a road network, which will be left largely in its presently unimproved condition. The Plan also eliminates cross-country motorized travel. In doing so, the BLM will ensure that the remote, undeveloped nature of this landscape remains for generations to come.

While these strategies will protect Monument resources, they will also help meet another important objective - providing economic opportunities for local communities. By focusing visitor opportunities on the periphery of the Monument, visitors will stay overnight in the local communities, and the rugged nature of the interior of the Monument will be retained.

The designation of a management zone system will serve as the primary tool for managing visitation and other uses in a manner that will safeguard the Monument's resources. In brief, the Plan designates four management zones within the Monument:



Straight Cliffs (photo by Jerry Sintz)

The **Frontcountry Zone** (78,056 acres or 4 petcent of the Monument) is the focal point for visitation. This zone will offer day-use opportunities near towns adjacent to the Monument and to Highways 12 and 89, both of which cross the Monument. The Frontcountry Zone will accommodate the primary interpretation sites, overlooks, trails, and related facilities needed to highlight the Monument's vast array of resources.

The **Passage Zone** (39,037 or 2 percent of the Monument) contains secondary travel routes used as throughways and recreation destinations. The BLM will provide rudimentary facilities necessary for visitor safety and interpretation.

The **Outback Zone** (537,748 acres or 29 percent of the Monument) is intended for an undeveloped, primitive, and self-directed visitor experience while accommodating motorized and mechanized access on designated routes. Facilities will be rare and provided only when essential for resource protection.

The **Primitive Zone** (1,210,579 acres or 65 percent of the Monument) will offer an undeveloped, primitive, and self-directed visitor experience without motorized or mechanized access. The BLM will provide no facilities and will post only those signs necessary for public safety or resource protection.

Escalante River (Photo by Larry Vensel)

The BLM will allow camping in its three existing small developed campgrounds or in designated primitive camping areas in the Frontcountry and Passage Zones; allow primitive dispersed camping in the Outback and Primitive Zones; and require camping permits for overnight use in all zones. The Management Plan also addresses other recreational uses, such as climbing and special events, as well as other uses such as hunting, fishing, and livestock grazing which the Proclamation directed would continue under existing laws and regulations. The Plan also addresses valid rights which were recognized and protected in the Proclamation.

This Plan is the result of a unique collaborative planning process, involving State, tribal, local, and scientific participation, as well as participation by the general public. To ensure that the State of Utah's interests were represented on the Monument Planning Team, the Secretary invited the Governor to nominate five professionals to work as full fledged members of the team. In addition, from the outset of the planning process, the BLM provided numerous and meaningful opportunities for public participation and input.

During the planning process, the planning team conducted 30 public workshops, both to elicit initial input during the scoping process and to hear comments on the Dtaft Management Plan after its release. At these sessions, over 2,000 participants were able to interact one-on-one with the planning team, express the ways they valued the Monument, and share ideas about how they felt the Monument should be managed. The team held dozens of meetings with American Indian tribes, local, State, and Federal govetnment agencies, and private organizations to discuss planning issues of concern to each party.

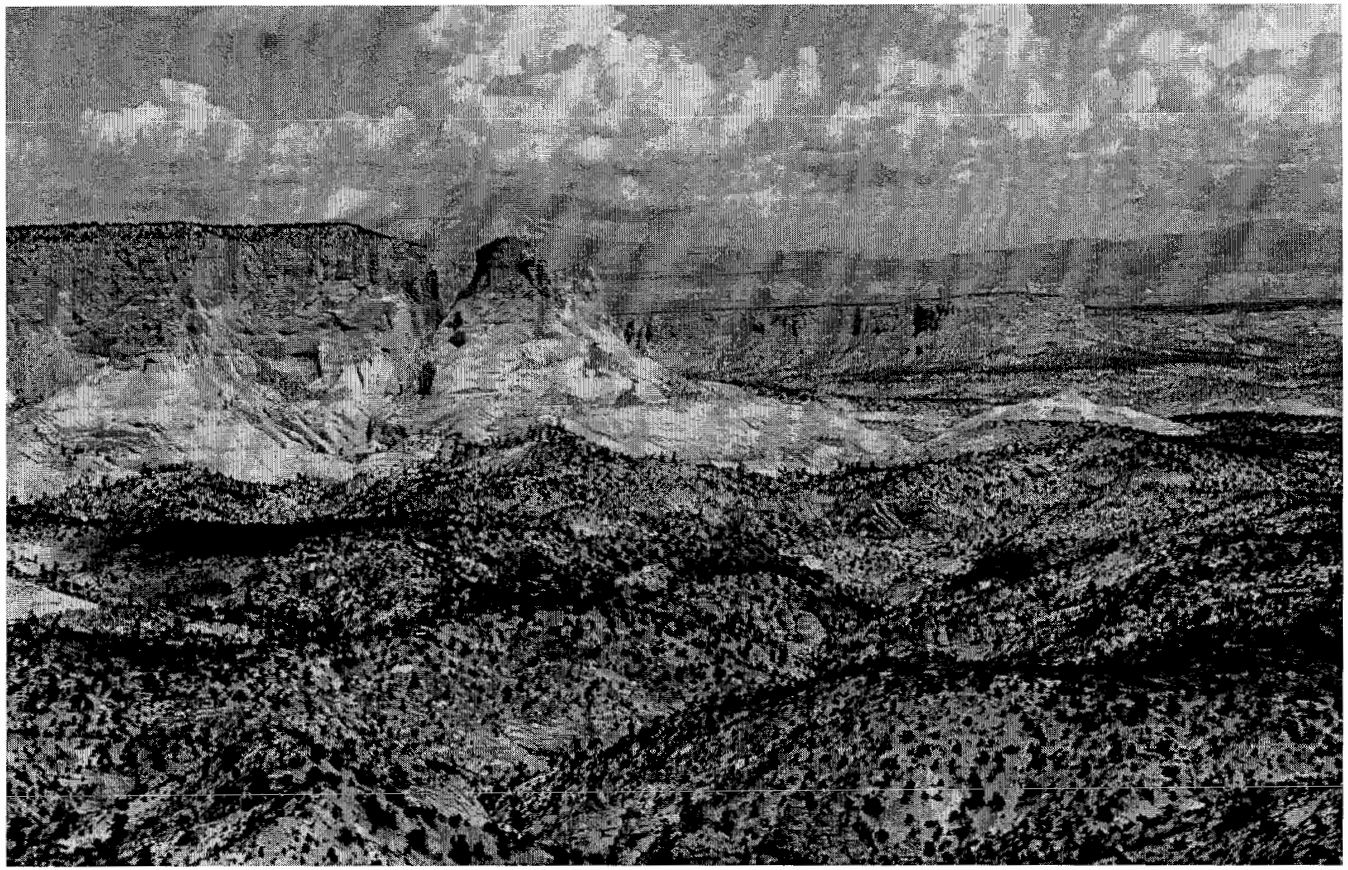
In November 1997, the BLM held a two-day science symposium to assess the state of science on Monument-related subjects. More than 230 people attended the conference, where researchers and scientists presented 50 papers dealing with archaeology, biology, ecology, paleontology, and general science. Ongoing public outreach efforts have also included the maintenance of a mailing list which has grown to more than 10,000 interested parties, as well as an Internet homepage (http://www.ut.blm.gov/monument), where the public can access up-to-date information and Monument-related documents and issues.

The Monument staff has also made special efforts to meet with representatives of local and State government to discuss issues of particular concern to the communities surrounding the Monument.

Visitor center locations, visitor management, and access were the topics of many meetings and discussions with local communities. Staff also had lengthy discussions with County officials over the complex and controversial issue of identifying a transportation network in the Monument that would both protect Monument resources and provide for the transportation needs of visitors and the surrounding communities.

The BLM is ultimately responsible for preparing a plan consistent with its legal mandates that reflects its collective professional judgement, incorporating the best from all of the competing viewpoints and ideas. The Approved Management Plan represents the culmination of these efforts.

The Proclamation directed the Secretary of the Interior to manage the Monument through the BLM, marking the first time in history that the Bureau has been given responsibility to manage a National Monument. The Bureau welcomes both the responsibility and the challenge, and recognizes that the conservation of America's priceless natural and cultural treasures is a central part of its mission as the nation's largest land management agency.



White Cliffs (Photo by Jerry Sintz)

Record of Decision Grand Staircase-Escalante National Monument Management Plan

This document records the decisions reached by the Bureau of Land Management (BLM) for managing approximately 1,870,800 acres of public lands administered by Grand Staircase-Escalante National Monument (GSENM). The decisions, which are summarized below, are more fully described in the Approved Management Plan in Chapter 2 of this document.

Decision

The decision is hereby made to approve the attached plan as the Management Plan for Grand Staircase-Escalante National Monument. This Plan was prepared in accordance with Presidential Proclamation 6920 establishing the Monument and under the regulations for implementing the Federal Land Policy and Management Act of 1976 (43 CFR 1600). An environmental impact statement was prepared for this Plan in compliance with the National Environmental Policy Act (NEPA) of 1969. This Plan is very similar to the one set forth in the Grand Staircase-Escalante National Monument Proposed Plan and Final Environmental Impact Statement published in July 1999. Specific management decisions and objectives for public lands under jurisdiction of Grand Staircase-Escalante National Monument are presented in Chapter 2 of this Management Plan. The major management emphases in the Approved Plan include:

- Management of uses to protect and prevent damage to Monument resources (archaeological, historic, biological, paleontological, and geologic resources).
- Facilitation of appropriate scientific research activities.
- Designation of a transportation system for the Monument and prohibition of all cross-country vehicle travel.
- Identification of protection measures for special status plant and animal species, riparian areas, and other special resources.
- Identification of measures to ensure water is available for the proper care and management of objects in the Monument.
- Accommodation of recreation by providing minor recreation facilities for visitors. Major visitor facilities will be located in surrounding communities in order to protect resources and promote economic development in the communities.
- Establishment of a Monument Advisory Committee (chartered under the Federal Advisory Committee Act) to advise managers via an adaptive management strategy for implementing the Plan.
- Commitments to work with local and State governments, Native American Indian tribes, organizations, and Federal agencies to manage lands or programs for mutual benefit consistent with other Plan decisions and objectives.
- Recommendation of approximately 252 miles of river segments as suitable for designation as Wild and Scenic Rivers.

Notice of Modification

The following modifications to the Proposed Plan are a result of protests BLM received on the Proposed Plan and as a result of recommendations made during the Governor's consistency review. Final decisions, terms, and conditions are described in detail of Chapter 2 of this Approved Plan.

- **Allocations in the Frontcountry Zone:** The Proposed Plan stated that recreation allocations would not be used in the Frontcountry Zone since it is the focal point for visitation. This decision has been modified to allow for allocations in the Frontcountry Zone in limited circumstances where other tools to protect resources prove ineffective. Since the Frontcountry Zone is the focal point for visitation, social encounters would not trigger such action.

- **Fuelwood Cutting:** The fuelwood cutting policy has been revised to clarify access provisions for this activity. As stated in the Proposed Plan, access off of designated routes will generally be allowed within 50 feet of the designated route, in designated fuelwood cutting areas. However, because fuelwood cutting is controlled by a permit and permits are issued to further overall management objectives, the BLM could authorize access on administrative routes and, in some cases, in areas more than 50 feet away from designated routes. These areas/provisions would be delineated in the permit prior to its issuance. This point is clarified in the Management Plan.

- **Wildlife Services (Animal Damage Control):** The Wildlife Services decisions in the Plan were clarified to emphasize that such provisions do not diminish the responsibility and authority of the State of Utah for management of fish and wildlife as

required by the Proclamation. The provisions in the Plan apply to the operations of the Animal and Plant Health Inspection Service (Wildlife Services) agency and are taken under the terms of the National agreement between the BLM and Wildlife Services, which states that "Animal and Plant Health Inspection Service (APHIS) - Animal Damage Control (ADC) shall conduct activities on BLM lands in accordance with APHIS - ADC policies, wildlife damage management plans, applicable State and Federal laws and regulations, and consistent with BLM Resource or Management Framework Plans." Control actions taken by the State of Utah, or actions taken under State law by private citizens, are not affected by this provision.

- **Wild and Scenic Rivers:** The Wild and Scenic River provisions in the Plan have been clarified with respect to the management of streams found suitable for recommendation to the National Wild and Scenic Rivers System. Streams recommended as suitable will be managed for protection of the resources associated with the stream. Such action will not entail any additional State water rights and will not result in a Federal reserved water right unless and until the Congress acts to officially designate the stream or stream segment as part of the National Wild and Scenic Rivers System. Upon such designation, if any, the Federal reserved water right thus established would, by law, be established with the priority date of the designation and would be junior to all preexisting water rights, in accordance with the existing State priority. Senior rights in any stream designated would be unaffected. In addition, if an agreement on water is reached between the BLM and the State of Utah similar to the agreement reached with Zion National Park, or if any other water agreement is reached with the State, segments of the rivers determined suitable for Wild and Scenic River designation in this Plan would be managed in accordance with this agreement.

- **Culinary Water for Henrieville Town:** The Utility Rights-of-Way and Water provisions in the Plan were modified with regard to the Town of Henrieville's culinary water supply, because the Town accesses upstream lands within the Monument for its culinary water. There is an existing small-scale diversion of groundwater out of the Monument for domestic water supply for Henrieville. The Plan does not prohibit the continuation of this diversion (which currently serves a population of approximately 160), nor its expansion, if necessary, to meet the municipal needs of population growth in Henrieville. Any proposed new groundwater diversion to meet Henrieville's municipal needs could be approved consistent with the Plan if the BLM and the State water engineer complete a joint analysis to determine that such development would not adversely impact springs or other water resources within the Monument, and the BLM completes the required NEPA analysis. Exceptions could be considered for other local community culinary needs if the applicant could demonstrate that the diversion of water will not damage water resources within the Monument or conflict with the objectives outlined in the Plan.

- **Transportation:** During the protest period, several requests were made to modify decisions for specific routes. Every route mentioned was reviewed and reevaluated by the BLM based on considerations in the Transportation and Access section of this Plan. The following modifications were made as a result of this review and are reflected on Map 2:

  - Grand Bench route (Route 262, approximately 3 miles) - will be open to the public for street legal motorized vehicle use to access the open route (Route 262) on Glen Canyon National Recreation Area (GCNRA) and associated destinations.
  - Sooner Rocks route (approximately 1 mile) - will be open to the public for street legal motorized vehicle use to access the camping destinations at Sooner Rocks.
  - Chimney Rock route (approximately 3 miles) - will be open to the public for street legal motorized vehicle use to access the destination of Chimney Rock.
  - Allen Dump route (off of the Egypt route, approximately 2 miles) - will be open to the public to GCNRA boundary for street legal motorized vehicle use. This route will be open to allow the public to access the National Park Service trailhead on GCNRA.
  - Timber Mountain loop (approximately 7 miles) - a loop off of the Timber Mountain road will be open to the public for motorized use, including ATVs. This is consistent with the desire to provide appropriate "loop" ATV routes in the Outback Zone.
  - Horse Canyon (approximately 1 mile) - a mapping error was corrected to show the route open to motorized use up to the choke point in the canyon. The remainder of the route will continue to be available for administrative use only.

The Grand Bench route, the Sooner Rocks route, the Allen Dump route, and the Horse Canyon route were identified as open to administrative use only in the Proposed Plan. The Chimney Rock route and the Timber Mountain loop were not identified for motorized use in the Proposed Plan, but will now be open as described above.

The discussion of R.S. 2477 assertions in footnote 1 of Chapter 2 of the Approved Plan has also been clarified to emphasize that nothing in the Plan extinguishes any valid existing rights-of-way in Grand Staircase-Escalante National Monument. Nothing in this Plan alters in any way any legal rights the Counties of Garfield and Kane or the State of Utah has to assert and protect R.S. 2477 rights, and to challenge in Federal court, or any other appropriate venue, any BLM road closures that they believe are inconsistent with their rights.

- **Grazing Permits:** A clarification has been made that authorizations for overnight camping and exceptions to group size limits could be provided for in valid grazing permits if the activity does not involve outfitter and guide operations or special events. These provisions may be necessary for the proper operation of a valid grazing permit and are more appropriately authorized within the terms of that permit rather than in recreational visitor permits. Campfire restrictions and other zone provisions will apply.

- **Water Developments:** As in the Proposed Plan, new water developments are restricted in the Approved Plan to the following purposes: for better distribution of livestock when deemed to have an overall beneficial effect on Monument resources or to restore or manage native species or populations. The Proposed Plan also stated that such developments could be done "only when there is no other means to achieve the above objectives." For clarification purposes, this wording has been modified in the Approved Plan to state that developments could be done when "a NEPA analysis determines this tool to be the best means of achieving the above objectives."

- **Filming:** Filming provisions have been changed from allowing filming, by permit, that meets the "minimum impact" standards to allowing filming, by permit, if it complies with zone requirements and other Plan provisions. The zone requirements (e.g., group size, equipment restrictions) have restrictions that are similar to the minimum impact standards, and thus are the appropriate means of managing filming within the Monument. This treats filming similarly to other activities with similar resource impacts.

Public Involvement

The BLM is committed to providing opportunities for meaningful participation in the resource management planning process. Throughout the preparation of this Plan, the BLM has maintained an extensive public participation process aimed at providing frequent opportunities for interaction with the public through a variety of media. The general public, representatives of Native American Indian tribes, organizations, public interest groups, and Federal, State, and local government agencies were invited to participate throughout the planning process. This participation included review of: proposed planning criteria, issues, Wild and Scenic River eligibility and suitability findings, Areas of Critical Environmental Concern, the Draft Management Plan/Draft Environmental Impact Statement (DEIS), and the Proposed Plan/Final Environmental Impact Statement (FEIS). These groups and individuals were kept informed through scoping workshops, a science symposium, planning update letters, Draft Plan open house sessions, an Internet homepage, Federal Register notices, news releases, various informational meetings, and distribution of the Draft and Proposed Plans. The BLM responded to comment letters on the Draft Plan/DEIS, and considered public comment when preparing the Proposed Plan/FEIS. The BLM also considered protests on the Proposed Plan when developing the Plan approved by this Record of Decision.

Alternatives Considered

Five alternatives for management of the Monument, including a No Action Alternative, were described in the Draft Management Plan/DEIS published in November 1998. The Proposed Plan/FEIS published in July 1999, was drawn from the alternatives laid out in the Draft Management Plan, applicable public comment, and management direction.

Alternative A (No Action Alternative), described the continuation of the interim management of the Monument, in which the provisions of the Proclamation and the Interim Guidance issued by the Director of the BLM are applied. In Alternative B (Preferred Alternative) the emphasis was on preservation of the Monument as

an unspoiled area, while recognizing its value as a scientific resource for a variety of research activities. Alternative C emphasized the exemplary opportunities for scientific research. Scientific research would be given priority over other uses. Alternative D emphasized preservation of the primitive, undeveloped nature of the Monument through the stewardship of intact natural systems. Alternative E emphasized and facilitated a full range of developed and undeveloped recreational opportunities for visitors, while relying heavily upon public education and visitor use management to protect resources.

Alternative D could be considered the environmentally preferable alternative because of its focus on maintaining the undeveloped nature of the Monument. However, the Preferred Alternative is considered the environmentally preferable alternative when taking into consideration the human (social and economic) environment, as well as the natural environment. Also, because the Preferred Alternative focuses more on scientific research, the environment is more likely to benefit from any resulting discoveries on improved management techniques than if the area were more restricted to scientific study, as under Alternative D.

Management Considerations for Selecting the Approved Plan

The alternatives described in the Draft Management Plan/DEIS and public comment and input provided throughout this planning process were considered in preparing the Proposed Plan. The Proposed Plan depicted a combination of decisions from the five alternatives considered in the Draft Management Plan/DEIS with emphasis on the Preferred Alternative (Alternative B).

This approach to managing the Monument was chosen because it: (a) most effectively accomplishes the overall objectives of protecting Monument resources and facilitating appropriate research, (b) best addresses the diverse community and stakeholder concerns in a fair and equitable manner, and (c) provides the most workable framework for future management of the Monument. Among the attributes that led to this determination are provisions for protecting Monument resources (archaeological, historic, paleontological, geologic, biological) including special features such as special status species and riparian areas; establishment of a solid research and adaptive management program that will be used to define and protect resources as knowledge increases and circumstances change; and provisions for visitor use in a manner consistent with the protection of Monument resources.

The Approved Plan is very similar to the Proposed Plan with minor revisions and clarifications stemming from protests and the Governor's consistency review.

Consistency Review

The Plan is consistent with plans and policies of the Department of the Interior and Bureau of Land Management, other Federal agencies, State governments, and local governments to the extent that the guidance and local plans are also consistent with the purposes, policies, and programs of Federal law and regulation applicable to public lands. The Governor of the State of Utah found that the Proposed Plan would not be inconsistent with State plans, programs, or policies in his letter dated November 2, 1999, if certain modifications were incorporated. These modifications were made and are listed under Notice of Modification.

Mitigation Measures

Mitigation measures have been built into the Plan. Sensitive resources are protected through resource allocations, route and cross-country vehicle closures, and limitations and restrictions placed on developments and other activities. All practicable means to avoid or minimize environmental harm were carried forth in the Plan. During the next tier of planning, which allows for more detailed and site-specific analysis, additional measures will be taken, as necessary, in order to mitigate subsequent impacts to the environment. Monitoring will tell how effective these measures are in minimizing environmental impacts. Additional measures to protect the environment may be taken during or following monitoring.

Plan Monitoring

During the life of the Approved Plan, the BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques and scientific principles. To the extent that such new information or actions address issues covered in the Plan, the BLM will integrate the data through a process called plan maintenance or updating. This process

includes the use of an adaptive management strategy. As part of this process, the BLM will review management actions and the Plan periodically to determine whether the objectives set forth in this and other applicable planning documents are being met. Where they are not being met, the BLM will consider adjustments of appropriate scope. Where the BLM considers taking or approving actions which would alter or not conform to overall direction of the Plan, the BLM will prepare a plan amendment and environmental analysis of appropriate scope in making its determinations and in seeking public comment. A more detailed discussion of implementation and the use of adaptive management is included in Chapter 3.

Implementation

Implementation of the Monument Management Plan will begin upon publication of this Record of Decision (ROD) and public notification via a Notice of Availability published in the Federal Register. Some decisions in the Plan require immediate action and will be implemented upon publication of the ROD and Approved Plan. Other decisions will be implemented over a period of years. The rate of implementation is tied, in part, to the BLM's budgeting process. Implementation of the Management Plan will occur in accordance with the implementation and adaptive management framework described in Chapter 3 of this Plan.

Availability of the Plan

Copies of the Record of Decision and Grand Staircase-Escalante National Monument Management Plan are available by request at the following locations: Grand Staircase-Escalante National Monument Kanab Office, 180 West 300 North, Kanab, UT 84741, (435) 644-4300; Grand Staircase-Escalante National Monument Escalante Office, P.O. Box 225, Escalante, UT 84726, (435) 826-4291; Bureau of Land Management, Utah State Office Public Room, 324 South State Street, 4th floor, (801) 539-4001.

Approval

In consideration of the foregoing, I approve the Grand Staircase-Escalante National Monument Management Plan.

Bruce Babbitt
Secretary of the Interior

Date

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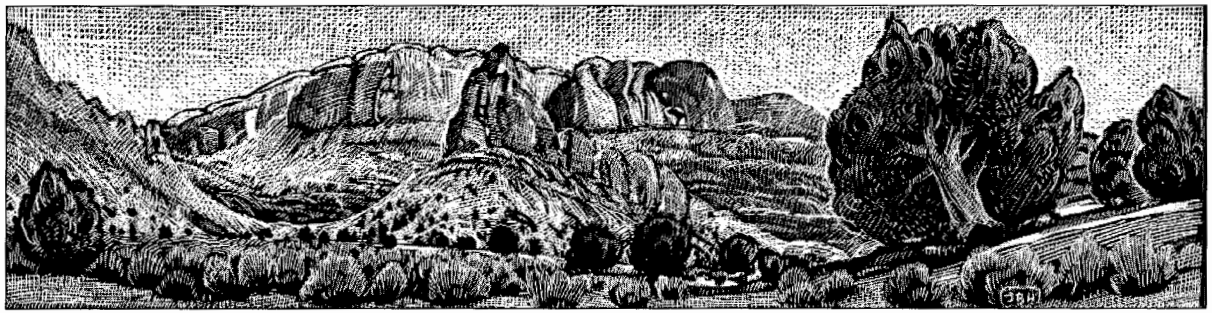
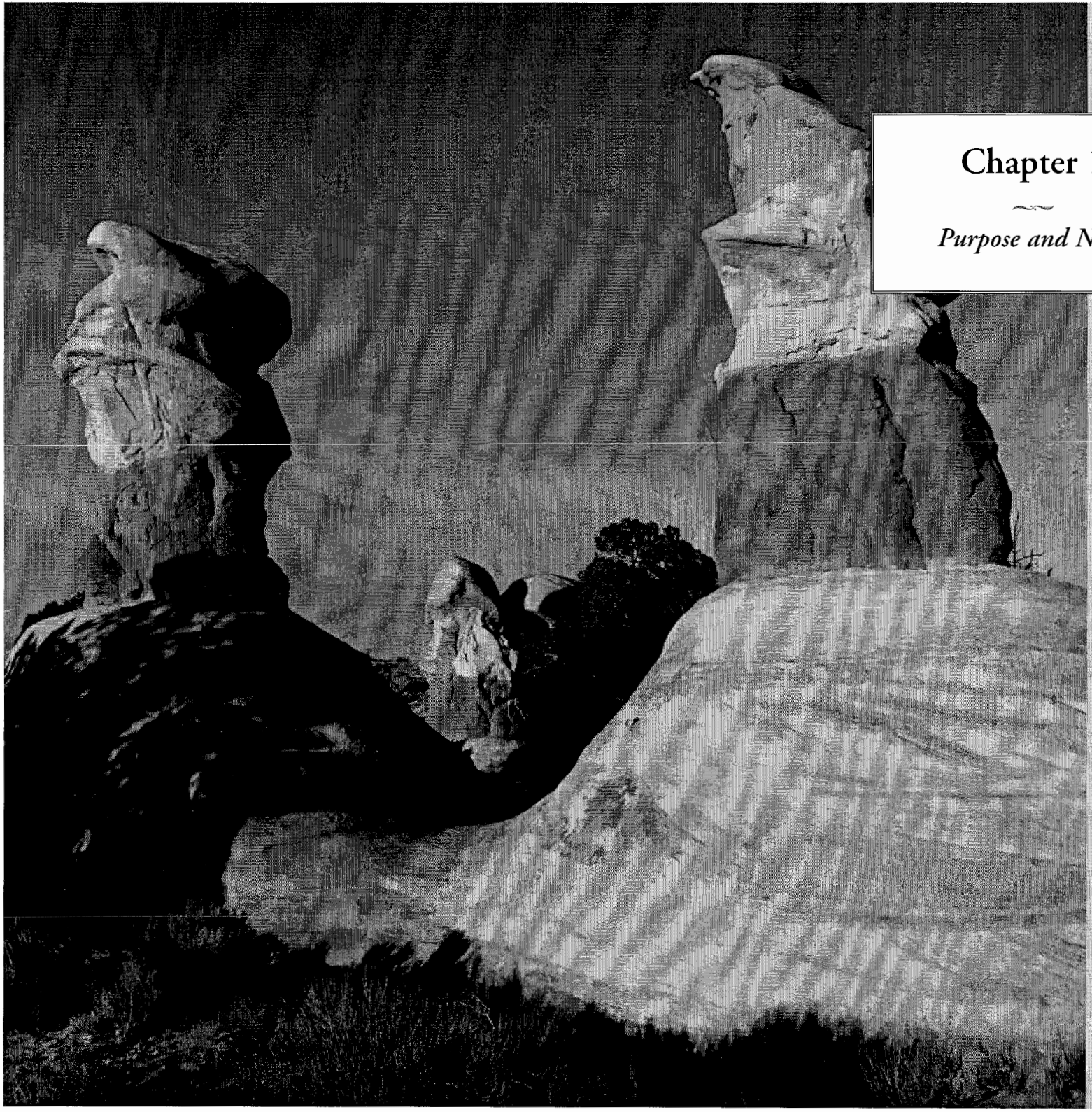




Chapter 1

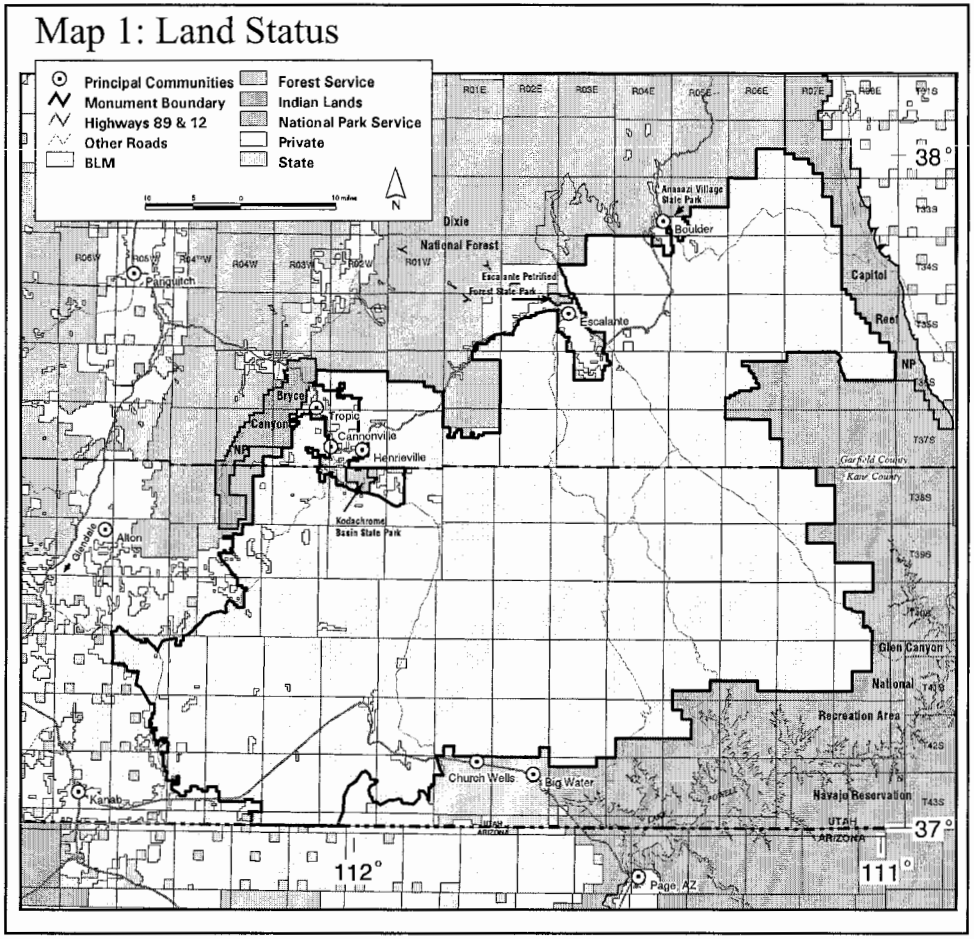
Purpose and Need

Introduction

Grand Staircase-Escalante National Monument (GSENM) was established on September 18, 1996 when President Clinton issued a Proclamation under the provisions of the Antiquities Act of 1906. Pursuant to the Proclamation, this Management Plan sets forth the general vision and objectives for management of public lands and associated resources within Grand Staircase-Escalante National Monument. This Plan supercedes the following documents for the decisions covered by this Plan: Vermilion Management Framework Plan (MFP) (1981), Escalante MFP (1981), and Paria MFP (1981).

Setting

The Monument includes about 1,870,000 acres of Federal land in south-central Utah (Map 1). There are approximately 15,000 acres of land within the Monument boundary that are privately owned. Approximately 68 percent of the Monument is in Kane County,



Map 1: Land Status

while the remaining 32 percent is in Garfield County. About 49 percent of Kane County and 18 percent of Garfield County lie within the Monument boundary. The Monument is primarily surrounded by Federal lands. Dixie National Forest borders the Monument to the north, Capitol Reef National Park to the east, Glen Canyon National Recreation Area to the east and southeast, Bryce Canyon National Park to the northwest, and other Bureau of Land Management (BLM) administered lands to the south and west. Kodachrome Basin State Park also adjoins the Monument.

Since designation of the Monument, two Federal laws have been passed which have affected its size. In May 1998, Secretary of the Interior Bruce Babbitt and Utah Governor Michael Leavitt negotiated a land exchange to transfer all State school trust lands within the Monument to the Federal government, as well as the trust lands in the National Forests, National Parks and Indian Reservations in Utah. On October 31, 1998 President Clinton signed the Utah Schools and Lands Exchange Act (Public Law 105-335) which legislated this exchange. The Utah Schools and Land Exchange Act resulted in the addition of 176,699 acres of State school trust lands and 24,000 acres of mineral interest to the Monument. On October 31, 1998, President Clinton also signed Public Law 105-355. Section 201 of this law adjusted the boundary of the Monument by including certain lands (a one-mile wide strip north of Church Wells and Big Water) and excluding certain other lands around the communities of Henrieville, Cannonville, Tropic, and Boulder. This law resulted in the addition of approximately 5,500 acres to the Monument.

Purpose and Need for Action

The Monument was created to protect a spectacular array of historic, biological, geological, paleontological, and archaeological objects. These treasures, individually and collectively, in the context of the natural environment that supports and protects them, are the Monument resources discussed throughout this document.

The Proclamation, which is the principal direction for management of the Monument, clearly dictates that the BLM manage the Monument for "the purpose of protecting the objects identified." All other considerations are secondary to that edict.

The Proclamation governs how the provisions of the Federal Land Policy and Management Act (FLPMA) of 1976 will be applied within the Monument. FLPMA directs the BLM to manage public land on the basis of multiple use and "in a manner that will protect the quality of scientific, scenic, historic, ecological, environmental, air and atmospheric, water resources, and archaeological values." The term "multiple use" refers to the "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment." Multiple use involves managing an area for various benefits, recognizing that the establishment of land use priorities and exclusive uses in certain areas is necessary to ensure that multiple uses can occur harmoniously across a landscape.

The Proclamation, FLPMA, the National Environmental Policy Act (NEPA) of 1969, and other mandates provide the direction for the preparation of a management plan for the Monument. Within this guidance, many decisions remain about how best to protect Monument resources and address the major issues surrounding Monument management. The Presidential Proclamation directed the Secretary of the Interior to prepare a plan in order to begin making those decisions. This Plan fulfills that directive by guiding management activities within the Monument and providing for the protection of Monument resources. It proposes to do so in a manner that creates opportunities for public discovery and education, sets a precedent for progressive public land stewardship, incorporates input from the scientific community and the public at large, and reflects the National significance of these resources.

The purpose of this Plan is to provide both a set of decisions outlining management direction and to create a framework for future planning and decision making. Its scope is necessarily broad, since it is a general framework document that will guide the overall management of activities within the Monument, as well as the use and protection of Monument resources. As in the case of any resource management plan, subsequent site specific and more detailed planning will take place for certain geographic areas and resources within the Monument in conformance with this Management Plan. The major management emphases in the Approved Plan include:

- Management of uses to protect and prevent damage to Monument resources (archaeological, historic, biological, paleontological, geologic resources).
- Facilitation of appropriate scientific research activities.
- Designation of a transportation system for the Monument and prohibition of all cross-country vehicle travel.

[illegible] not make SR 12 as safe as possible

Help BLM honor commitments w/

- Identification of protection measures for special status plant and animal species, riparian areas, and other special resources.
- Identification of measures to ensure water is available for the proper care and management of objects in the Monument.
- Accommodation of recreation by providing minor recreation facilities for visitors. Major visitor facilities will be located in surrounding communities in order to protect resources and promote economic development in the communities.
- Establishment of a Monument Advisory Committee (chartered under the Federal Advisoty Committee Act) to advise managers via an adaptive management strategy for implementing the Plan.
- Commitments to work with local and State governments, Native American Indian tribes, organizations, and Federal agencies to manage lands or programs for mutual benefit consistent with other Plan decisions and objectives.
- Recommendation of approximately 252 miles of river segments as suitable for designation as Wild and Scenic Rivers.

There are several areas for which major decisions have been deferred. For example, because Monument designation does not affect existing permits or leases for, or levels of, livestock grazing, grazing will ultimately be addressed after the completion of assessments for each grazing allotment and the preparation of new allotment management plans. Similarly, due to litigation and the timetable mandated by the Proclamation, this Plan does not offer recommendations for new Wilderness Study Areas or recommendations for legislative action regarding existing Wilderness Study Areas. This Plan also does not make specific decisions concerning valid existing rights that may be asserted in the future under various authorities. Instead, as outlined in Chapter 2, the BLM will periodically verify the status of valid existing rights. When any action is proposed concerning these assertions, the BLM will analyze all potential impacts in order to provide a basis for decision making.

General Direction

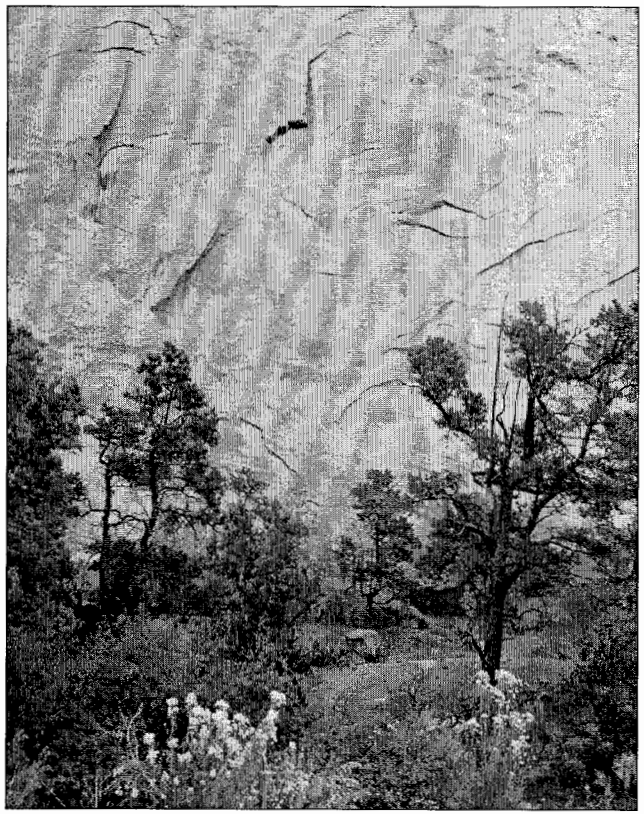
This Management Plan is founded on the directions outlined in the BLM 1997 Strategic Plan. All lands administered by the BLM, including Grand Staircase–Escalante National Monument, are managed to achieve this mission:

Sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations by:

- serving current and future publics;
- restoring and maintaining the health of the land;
- promoting collaborative land and resource management; and
- improving business practices and human resource management.

Overall Vision

Grand Staircase–Escalante National Monument is unique among the public lands managed by the BLM. Its size, resources and remote character provide a spectacular array of scientific, public education, and exploration opportunities. It also has a purpose, delineated in the Presidential Proclamation, that is more specific than other BLM administered lands. The following two basic precepts provide the overall vision for future management of this very special place.



Long Canyon (photo by Jerry Sintz)

1. First and foremost, the Monument remains a frontier. The remote and undeveloped character of the Monument is responsible for the existence and quality of most of the scientific and historic resources described in the Presidential Proclamation. Safeguarding the remote and undeveloped frontier character of the Monument is essential to the protection of the scientific and historic resources as required by the Proclamation.

2. Second, the Monument provides an unparalleled opportunity for the study of scientific and historic resources. In addition to the study of specific scientific resources, this setting allows study of such important issues as: understanding ecological and climatic change over time; increasing our understanding of the interactions between humans and their environment; improving land management practices; and achieving a properly functioning, healthy, and biologically diverse landscape. Scientific study will be supported and encouraged, but potentially intrusive or destructive investigations will be carefully reviewed to avoid conflicts with the BLM's responsibility to protect and preserve scientific and historic Monument resources.

Within these two basic precepts, the Proclamation and management policy specify that other activities can and should continue to occur. Four additional statements round out the overall vision for GSENM.

- While much of the Monument exhibits qualities where the Earth and its community of life show little evidence of human influence, it is also true that generations of people have used lands within the Monument for many different purposes. The Proclamation directed that the Monument remain open to certain specific uses under existing laws and regulations. These include valid existing rights, hunting, fishing, grazing and pre-existing authorizations. To the extent consistent with existing rights, these uses will be managed in a manner that protects Monument resources.

- Monument Management and staff will work with local communities to provide needed infrastructure development such as communications sites and utility rights-of-way. As with other uses, this type of development will be limited to small areas of the Monument. In addition, it must be done in a manner that will not cause serious impacts to protected resources or significantly change the undeveloped character of the Monument.

- While interpretation and recreation will be accommodated, and in some areas developed, the intention of these management activities will be to contribute to the protection and understanding of Monument resources. Developed recreational and interpretive sites will be limited to small areas of the Monument. At these sites visitors can experience, and come to better understand, the scientific resources of the Monument and the process and importance of scientific research in improving our knowledge of natural systems. This will be accomplished without causing serious impacts to the resources themselves. Undeveloped recreation will be accommodated as long as no significant impacts to Monument resources will occur. Limits on large groups, commercial uses, and even limits on overall numbers of individuals will be used when needed to prevent impacts to Monument resources.

- Finally, the short history of the Monument has already established a pattern for an inclusive and collaborative effort to protect, identify, assess, and where appropriate, research or interpret resources found in GSENM. The Monument staff will continue to work with local, state and Federal partners, scientists, Native American Indians, and the public to refine management practices that will insure protection, facilitate scientific and historic research, respect authorized uses, and allow appropriate visitation.

Public Participation and Collaboration

The BLM is committed to providing opportunities for meaningful participation in resource management planning processes. Effective planning processes provide opportunities for the public to become involved early, to comment on draft land use plans, and to ensure that the BLM has met the provisions of NEPA. The BLM has maintained an ongoing public participation process in the development of this Monument Management Plan.

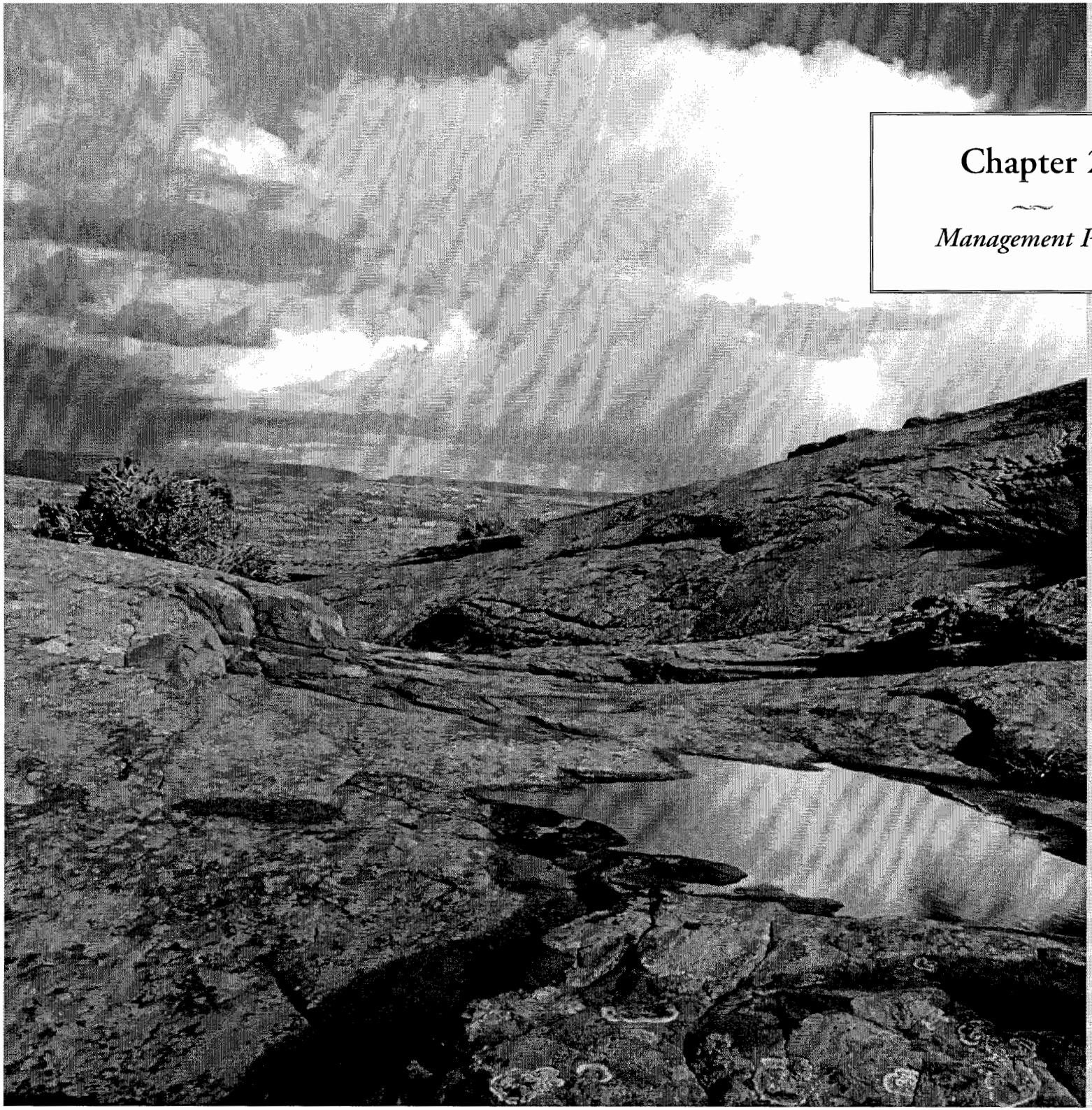
Throughout this planning process, extra effort has been expended to ensure meaningful public participation. Publications such as the visions kit and update letters were integral in the dissemination of information to a mailing list that has expanded to over 10,000

interested parties. Forums such as the science symposium, scoping workshops, and open house sessions provided an opportunity to gather and disseminate information on a more personal level.

Additionally, all of the information provided in printed publications and at the information meetings was available on the Monument's Internet homepage. This homepage also provided the draft and proposed documents on-line for quick and easy access to a broad audience.

To more fully include the State of Utah in the planning process, Secretary of the Interior Bruce Babbitt invited Governor Micheal Leavitt to nominate members to the Planning Team. The Governor proposed five professionals who became part of the Planning Team. These professionals include a geologist, paleontologist, historian, wildlife biologist, and a community planner. In addition, the State of Utah Automated Geographic Resource Center provided support through a cooperative agreement. The BLM also consulted with tribal officials throughout the planning process via information letters, telephone calls, meetings, and field trips.

In order to ensure that decisions are more meaningful and effective, the BLM intends to extend the collaborative and inclusive nature of the planning process into implementation of this Plan.



Chapter 2

Management Plan

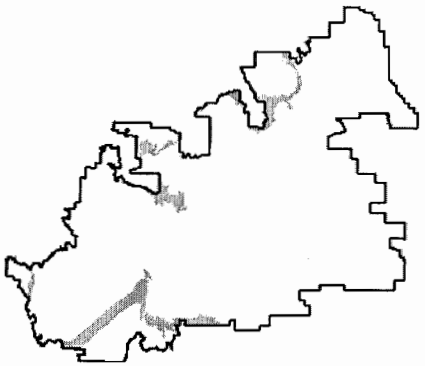
Introduction

This chapter describes objectives and actions aimed at fulfilling the management direction discussed in Chapter 1. These decisions are organized under five main headings: **Management Zone Descriptions, Management of Resources, Management of Visitors and Other Uses, Special Emphasis Areas, and Cooperation and Consultation.** The management zones are described in detail below, and provide the framework for many of the decisions and strategies described later. The **Management of Resources** section provides objectives and decisions for resources mentioned in the Proclamation and the Federal Land Policy and Management Act (FLPMA) of 1976. The **Management of Visitors and Other Uses** section outlines decisions relating to activities such as recreation, livestock grazing, science and research, and valid existing rights. The **Special Emphasis Areas** section outlines decisions relating to Wilderness, Areas of Critical Environmental Concern, Special Recreation Management Areas, and Visual Resource Management. Finally, the **Cooperation and Consultation** section outlines a strategy for working with adjacent land management agencies, local and State governments, Native American Indian tribes, and the scientific and education communities. Each of the decisions in this chapter is numbered to facilitate referencing such decisions in future documents.

Management Zone Descriptions

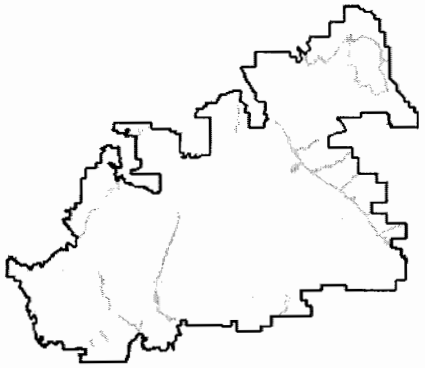
Management zones are used in this Plan to display various management emphases and strategies that will best fulfill the established purposes of the Monument and the overall vision described in Chapter 1. These zones, which are delineated by geographic area (Map 2 - in the envelop at the back of this document), provide guidance to help define permitted or excluded activities and any stipulations pertaining to them. In this context, zones are tools that guide decision making on permitting visitor uses and other activities within the Monument. The zone boundaries portrayed on Map 2 may not exactly correspond to on the ground geographic features.

The **Frontcountry Zone** (78,056 acres or 4 percent of the Monument) is intended to be the focal point for visitation by providing day-use opportunities in close proximity to adjacent communities and to Highways 12 and 89 which traverse the Monument. This zone will accommodate the primary interpretation sites, overlooks, trails, and associated facilities necessary to feature Monument resources. The zone boundaries were developed by locating a corridor along Highways 12 and 89, Johnson Canyon Road, and the portion of Cottonwood Canyon Road leading to Grosvenor Arch. The zone was then expanded or constricted to coincide with the dominant terrain features which provide identifiable boundaries on the ground. Existing destinations such as Grosvenor Arch, the Pahreah townsite, and the Calf Creek Recreation Area were included in order to provide for necessary improvements and to accommodate expected visitation. Lands close to the Town of Escalante were also included due to extensive visitor use. In delineating this zone, Wilderness Study Areas (WSAs), threatened and endangered species habitat, relict plant areas, riparian areas, and other sensitive resources were avoided whenever possible. Highway 89, from the western boundary to The Cockscomb, lacks dominant terrain to delineate this zone. For this reason, a one-mile buffer along each side of the highway was used.



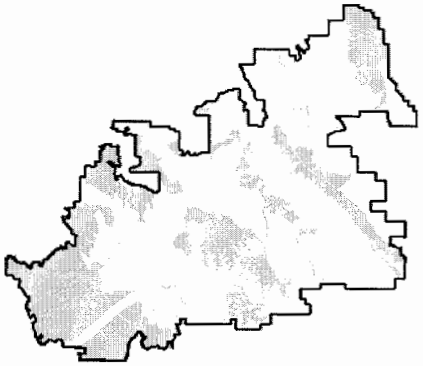
Frontcountry Zone

The **Passage Zone** (39,037 acres or 2 percent of the Monument) includes secondary travel routes which receive use as throughways and recreation destinations. While rudimentary facilities necessary for safety, visitor interpretation, and for the protection of resources will be allowed in this zone, the Bureau of Land Management (BLM) will generally avoid directing or encouraging further increases in visitation due to the condition of routes and distance from communities. The primary criterion for developing the zone boundaries was again dominant terrain. The boundary does not constrict closer than 100 feet to designated routes, and encompasses most obvious imprints of human activities such as trailheads, transmission rights-of-way, and potential resource interpretation sites within $^1/_2$ mile of the subject route. In many cases, dominant terrain was not available along route segments. In these cases, a 660 foot ($^1/_8$ mile) buffer was used. Again, WSAs, threatened and endangered species habitat, relict plant areas, riparian areas, and other sensitive resources were avoided whenever possible.



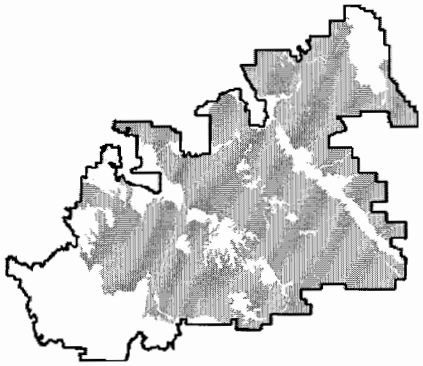
Passage Zone

The **Outback Zone** (537,748 acres or 29 percent of the Monument) is intended to provide an undeveloped, primitive and self-directed visitor experience while accommodating motorized and mechanized access on designated routes. Facilities will be rare and provided only when essential for resource protection. The remaining public routes not in the Frontcountry or Passage Zones are included in the Outback Zone. Dominant terrain was again a primary criterion for the zone boundary. The boundary does not constrict closer than 100 feet to the routes. WSAs were avoided wherever possible.



Outback Zone

The **Primitive Zone** (1,210,579 acres or 65 percent of the Monument) is intended to provide an undeveloped, primitive and self-directed visitor experience without motorized or mechanized access. Some administrative routes are included in this zone, which could allow very limited motorized access. Facilities will be non-existent, except for limited signs for resource protection or public safety. The zone is intended to facilitate landscape-scale research and therefore connects each of the three major landscapes (Escalante Canyons, Kaiparowits Plateau, and Grand Staircase), as well as linking low elevation areas to higher elevations. This zone is also intended to connect primitive and undeveloped areas on surrounding lands managed by other Federal agencies.



Primitive Zone

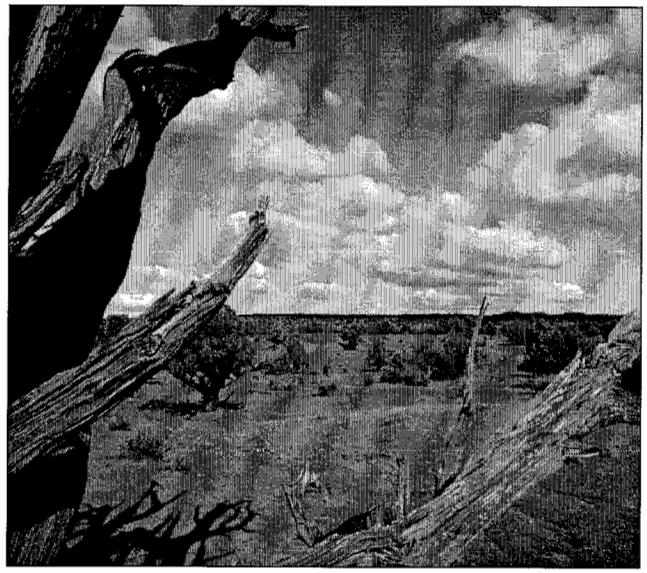
Management of Resources

This section outlines objectives and decisions for the natural, physical, and cultural resources mentioned in the Proclamation and FLPMA. Background information is provided for each of these resources in order to give a point of reference for the decisions that follow.

Air Quality

The existing air quality in and surrounding the Monument is typical of undeveloped regions in the western United States. Ambient pollutant levels are usually near or below the measurable limits. Exceptions include high, short-term, localized concentrations of particulate matter (primarily wind blown dust or smoke from wildland fires), ozone, and carbon monoxide.

The entire management area is designated as either attainment or unclassified for all pollutants and has also been designated as Prevention of Significant Deterioration (PSD) Class II. Nearby PSD Class I areas include Capitol Reef, Canyonlands, and Arches National Parks to the east and north, Bryce Canyon and Zion National Parks to the west, and Grand Canyon National Park to the south.



Wolverine Petrified Wood Area (photo by Jerry Sintz)

The BLM's objective with regard to air quality is to ensure that authorizations granted to use public lands and that the BLM's own management programs comply with and support local, State, and Federal laws, regulations, and implementation plans pertaining to air quality.

AIR-1 The Monument will continue to be managed as a Prevention of Significant Deterioration Class II area designated by the Clean Air Act. All BLM actions and use authorizations will be designed or stipulated so as to protect air quality within the Monument and the Class I areas on surrounding Federal lands.

AIR-2 Site specific project proposals affecting BLM and adjacent lands will be reviewed for compliance with existing air quality laws and policies. Mitigation will be incorporated into project proposals to reduce air quality degradation. Projects will be designed to minimize further degradation of existing air quality. New emission sources will be required to apply control measures to reduce emissions.

AIR-3 Management ignited fires will comply with the State of Utah Interagency Memorandum of Understanding requirements to minimize air quality impacts from resulting particulates (smoke). This procedure requires obtaining an open burning permit from the State prior to conducting a management ignited fire.

Archaeology

"...Archeological inventories carried out to date show extensive use of places within the monument by ancient Native American cultures...Many more undocumented sites that exist within the monument are of significant scientific and historic value worthy of preservation for future study..." (Proclamation 6920, 1996)

Monument lands contain an extensive array of varied, non-renewable prehistoric archaeological sites, including clusters of unique sites that represent contact between the Fremont and Anasazi, particularly in the Kaiparowits region. These "cultural

Rock Art (photo by BLM)

resources" are valued by Native American Indian tribes, local communities, the scientific community, private organizations and interested individuals from around the world. These sites represent an important record of prehistoric and historic cultures and events that have intrinsic value to contemporary Native American Indians who still have cultural, historic, and religious ties to these resources. Furthermore, these prehistoric sites provide opportunities to visitors for education and enjoyment.

The overall objective with respecr to archaeological resources is to:

- identify, document, and protect the array of archaeological resources in the Monument,
- manage uses to prevent damage to archaeological resources,
- increase public education and appreciation of archaeological resources through interpretation, and
- facilitate appropriate research on archaeological resources such that the Monument is recognized as a laboratory for the preservation, study and appreciation of cultural heritage.

ARCH-1 The BLM will continue to inventory and conduct project compliance for archaeological resources. This will be done in order to evaluate their potential for protection, conservation, research, or interpretation. Cultural surveys in high-use areas, such as along trails and open routes, will be prioritized to ensure protection of vulnerable resources. Beyond these areas, inventory and research efforts will be expanded to fill in the information gaps and complete research that will contribute to the protection of sites. Such research will be coordinated as part of the adaptive management framework discussed in Chapter 3. The BLM will use the information collected to create a better understanding of cultures and will work to showcase and preserve remnants of Native American Indian cultures within the Monument.

ARCH-2 Public education and interpretation will be emphasized to improve visitor understanding of archaeological resources and to prevent damage. Archaeological site etiquette information will be readily available to Monument visitors. Collaborative partnerships with Native American Indians, outfitters and guides, volunteers and universities will be pursued to document, preserve, study, monitor or interpret sites consistent with the overall objective of protecting archaeological resources.

ARCH-3 Traditional Cultural Properties are those sites recognized by contemporary Native American Indians as important to their cultural continuity. These sites will be identified, respected, preserved, and managed for continued recognized traditional uses. Consultation with appropriate Native American Indian communities will be a priority. Archaeological sites and Traditional Cultural Properties will be managed and protected from site degradation in accordance with appropriate laws and regulations.

Fish and Wildlife

"...The wildlife of the monument is characterized by a diversity of species...Wildlife, including neotropical birds, concentrate around the Paria and Escalante Rivers and other riparian corridors within the Monument..." (Proclamation 6920, 1996)

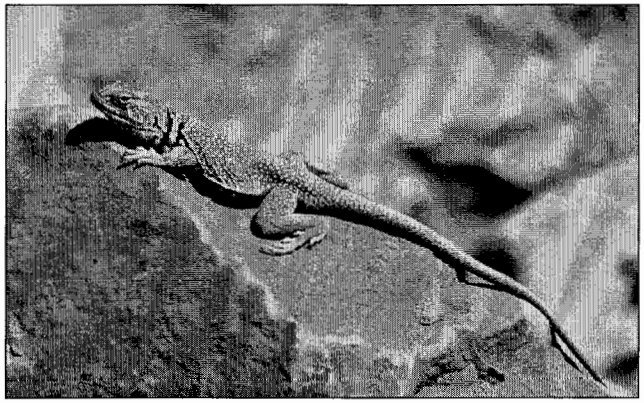
To date, 362 species of vertebrate animals and 1,112 species of invertebrates have been identified as occurring within the boundaries of Grand Staircase–Escalante National Monument (GSENM). Given this number of species, the vastness of the

Monument, and the Monument's connection to surrounding Federal lands, this area provides unique and relatively undisturbed habitat for wildlife. Encompassing nearly entire ecosystems within its boundaries, the Monument remains a refuge and a place to protect and study wildlife and associated habitats.

The Proclamation establishing the Monument states: "Nothing in this proclamation shall be deemed to diminish the responsibility and authority of the State of Utah for management of fish and wildlife, including regulation of hunting and fishing, on Federal lands within the Monument." At the same time, the Proclamation refers to the "outstanding biological resources" and " important ecological values" in the Monument. These resources, which encompass entire natural systems, including fish and wildlife habitat, are among those that the BLM has been given responsibility to manage and protect.

The BLM's objective in managing habitat is to:

- work in conjunction with the Utah Division of Wildlife Resources (UDWR) in managing fish, wildlife, and othet animals to achieve and maintain natural populations, population dynamics, and population distributions in a way that protects and enhances Monument resources,
- work cooperatively with the UDWR to reestablish populations of native species to historic ranges within the boundaries of the Monument, and to take needed actions to protect and enhance the habitat of these native species,
- manage uses to prevent damage to fish and wildlife species and their habitats,



Lizard (photo by Frank Jensen)

- increase public education and appreciation of fish and wildlife species through interpretation, and
- facilitate appropriate research to improve understanding and management of fish and wildlife resources within the Monument.

FW-1 To meet the above objectives, the BLM will manage habitats for the recovery or reestablishment of native populations through collaborative planning with local, State and Federal agencies, user groups, and interested organizations.

FW-2 The BLM will work with the UDWR to meet the requirements of Executive Order 11312 on Invasive Species.

FW-3 The BLM will continue to work with the UDWR to meet the goals described in adopted species management plans.

FW-4 The BLM will place a priority on protecting riparian and water resources as they relate to fish and wildlife, and will work cooperatively with the U.S. Forest Service to coordinate maintenance of fisheries and flows.

FW-5 The BLM will preserve the integrity of wildlife corridors, migration routes and access to key forage, nesting, and spawning areas by limiting adverse impacts from development in the Monument.

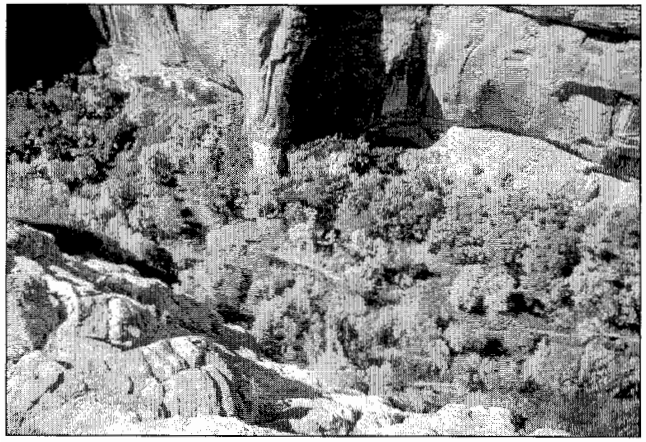
FW-6 All proposed projects will be required to include a site assessment for impacts to fish and wildlife species. Appropriate strategies will be used to avoid sensitive habitat (i.e., construct barriers). Seasonal restrictions on visitor use could be implemented to protect crucial habitat and migration corridors.

FW-7 Water developments may be constructed for wildlife purposes if consistent with the overall objectives for fish and wildlife and with the water development policy discussed in the Water section.

FW-8 The BLM will continue to coordinate with the UDWR and other organizations to inventory for wildlife and to evaluate needs for habitat protection. Inventory and

research efforts will be targeted to fill information gaps on habitat needs. Such research will be coordinated as part of the adaptive management framework discussed in Chapter 3.

FW-9 Public education and interpretation will be emphasized to improve visitor understanding of fish and wildlife species. Collaborative partnerships with volunteers and universities will be pursued to monitor and study biological resources consistent with the overall objective of protecting such resources.



Calf Creek Canyon (photo by Larry Vensel)

Special Status Animal Species

In addition to the objectives listed above, the objective of the BLM's habitat management program is to work with State, local, and Federal partners to minimize or eliminate the need for additional listing of species under the Endangered Species Act, and to contribute to the recovery of species already listed as such. The BLM will take measures to promote the recovery and conservation of all special status animal species within the Monument (including Federally listed endangered and threatened species, candidate species, and State sensitive species). This will be in accordance with applicable Endangered Species Act of 1973 regulations (50CFR402) and BLM policy (6840 Manual, IM UT No. 97-66). Federally listed animal species are discussed in detail below. There are currently no candidate animal species present within the Monument.

The BLM has consulted with the U.S. Fish and Wildlife Service (USFWS) throughout the planning process. On September 16, 1999, the BLM received a letter regarding the Proposed Management Plan. This letter concurred with the determination that actions in the Plan will not adversely affect listed species and will likely be beneficial to most, if not all, of those species (see Appendix 1 for consultation history). Consultation and coordination with the USFWS will be ongoing throughout implementation of this Plan for activities potentially affecting threatened and endangered species and their habitats.

SSA-1 The BLM will continue to ensure that authorized actions do not jeopardize the continued existence of any special status animal species or result in the destruction or adverse modification of critical habitats.

SSA-2 Consultation with the USFWS will occur when activities are proposed in areas with listed or candidate species. Coordination with the U.S. Forest Service, the UDWR, and the National Park Service will occur in areas where species cross jurisdictional lines. The BLM will work with these agencies to develop recovery plans, when needed, and to implement existing recovery plans for all listed species.

SSA-3 Surface disturbing research activities will generally not be allowed in threatened or endangered species habitat. All scientific research projects in close proximity to listed species populations or habitat will be evaluated by Monument biologists, the USFWS, and appropriate experts prior to initiation to determine impacts to these populations or habitat. Any research project that may have an effect on populations of listed species will be coordinated with the USFWS and appropriate permits and Section 7 consultation will be completed as determined necessary. Projects which provide new information and understanding of listed species, their populations, and/or their habitat, may be allowed after approval by the BLM and the review and issuance of permits by the USFWS. All projects will be evaluated on a case-by-case basis.

SSA-4 Fuelwood cutting is restricted to designated areas, none of which occur in known nesting or roosting habitat. These areas are small in size and are unlikely to affect foraging activities of raptors or other listed species. Future identification of fuelwood cutting areas will consider listed animal populations and habitats prior to designation.

SSA-5 Vegetation Restoration methods (as described in the **Vegetation** section) will not be allowed in areas where special status species roost or nest (unless consultation with USFWS indicates no effect or a beneficial effect to species).

SSA-6 There will be an active noxious weed control program in the Monument (see the **Noxious Weed Control** section for related decisions). This program will focus on areas where habitat, including special status animal species habitat, is being lost due to changes in the water table and changes in vegetation structure and composition caused by noxious weeds. This weed control program will include the use of volunteer groups, BLM employees, county personnel, contractors, and adjacent agency personnel when appropriate. This program will target species in a prioritized manner. Priorities for weed control may include: invasiveness of the species, extent of invasion, sensitivity of the area being invaded, and accessibility. Special status animal species habitat jeopardized by noxious weed invasions will be a high priority for control efforts.

SSA-7 BLM law enforcement personnel and increased field presence of BLM personnel will concentrate efforts in areas with special status species habitat in order to curb non-compliance activities. The BLM is pursuing cooperative agreements with each of the Sheriff departments in Kane and Garfield Counties to facilitate shared law enforcement and support for enforcing established closures.

SSA-8 Livestock grazing allotments will be evaluated, and grazing as it relates to all endangered species will be addressed during this process. Evaluations will incorporate the latest research and information in the protection of species. Section 7 consultation will be conducted for all allotments that may affect listed species during the individual allotment evaluations. This process will provide protection for listed and sensitive species as the evaluation will be site specific for each of the allotments.

SSA-9 As described in the **Water** section, priority will be to maintain natural flows and flood events. The measures described in that section will be initiated to accomplish this goal. In addition, the maintenance of instream flows will provide adequate water for natural structure and function of riparian vegetation, which serves as habitat for many special status animal species.

The following additional measures will be applied to specific listed species in order to promote the protection and recovery of these species. Other measures may be implemented and some may be terminated, as deemed necessary through evaluation of monitoring data in conjunction with the adaptive management framework in Chapter 3.

Endangered Fish

SSA-10 The Colorado pikeminnow (*Ptychocheilus lucius*) and razorback sucker (*Xyrauchen texanu*) are found in the Colorado River system and were more prevalent prior to the construction of Glen Canyon Dam. There are no known records of these two fish within the boundaries of the Monument, and recent surveys have not located these species in the Escalante River. Activity level environmental assessments will be required before the use of any chemical substances that may reach Lake Powell through the Escalante River.

Bald Eagle (Haliaeetus leucocephalus)

The Northern States Bald Eagle Recovery Plan for the bald eagle was prepared in 1983, providing a strategy for the recovery of this species. Successful recovery of this species in much of its original range (most of North America) has initiated efforts to remove this species from the threatened species list. Regardless of the results of these efforts, the wintering habitat of this species in the Monument will be protected from actions that may contribute to its decline, and actions that promote recovery and conservation will be encouraged.

SSA-11 If recreation activities (e.g., hiking, camping, backpacking) are determined to impact known roost

sites, allocations and/or group size restrictions or other measures will be implemented to reduce disturbance. If allocations and group size limits are implemented, they will be developed in accordance with the **Group Size** and **Recreation Allocation** provisions of this Plan.

SSA-12 Trail construction will generally be limited to the Frontcountry and Passage Zones. Project level assessments and consultation with the USFWS will be completed before construction of any trails that are in close proximity to eagle roost sites. Designated primitive camping areas, picnic areas, and trailheads will not be located in areas of known roost sites for bald eagles. Every effort will be made to protect potential roosting areas in the Monument from human disturbance activities.

SSA-13 The use of poisons for Wildlife Services (Animal Damage Control) purposes will not be permitted in the Monument due to safety concerns and potential conflicts with Monument resources including bald eagles. All control will be coordinated with Wildlife Services, as described in the **Wildlife Services** section of this chapter. Control actions by the State of Utah, or actions taken under State law by private citizens, are not affected by this provision.

Bald Eagle (photo by BLM)

Peregrine Falcon (Falco peregrinus)

An American Peregrine Falcon Recovery Plan (Rocky Mountain Southwest Populations) was prepared in 1984 which outlined the recovery of this species in this part of the country. Due in large part to recovery efforts, they now breed from non-Arctic Alaska to southern Baja California, central Arizona and Mexico (locally), and their eastern limit presently follows the eastern front of the Rocky Mountains. The return of this species to much of its historic range has prompted efforts to remove the peregrine from the endangered species list [Federal Register (Vol. 63, No. 165) August 26, 1998, pp. 45446-45463]. On August 25, 1999 the peregrine falcon was removed from the endangered species list [Federal Register (Vol. 64, No. 164) August 25, 1999, pp. 46542-46558]. Regardless, peregrine falcon habitat in the Monument will be protected from actions that may contribute to the decline of this species. Actions which promote recovery and conservation will be encouraged.

SSA-14 If recreation activities (e.g., hiking, camping, backpacking) are determined to impact known nest sites, allocations and/or group size restrictions or other measures will be implemented to reduce disturbance. If allocations and group size limits are implemented, they will be developed in accordance with the **Group Size** and **Recreation Allocation** provisions of this Plan.

SSA-15 Trail construction will generally be limited to the Frontcountry and Passage Zones. Project level assessments and consultation with the USFWS will be completed before construction of any trails within 1 mile of falcon nest sites. Designated primitive camping areas, picnic areas, and trailheads will not be located within 1 mile of known falcon nests, unless consultation with USFWS determines that impacts to nesting birds will not occur. This 1 mile buffer is recommended in the "Utah Field Guide for Raptor Protection from Human and Land Use Disturbances" (USFWS, 1999).

SSA-16 Criteria for designation of climbing areas will be established for the Monument. These criteria will not allow climbing areas to be designated in known peregrine falcon nest sites. If new sites are identified as occupied for nesting in areas designated for climbing, seasonal closures will be established in those areas to assure that disturbance of nesting activities does not occur.

Mexican Spotted Owl (Strix occidentalis lucida)

A recovery plan for the Mexican spotted owl was prepared by the Southwest Region of the USFWS in 1995. No critical habitat has been designated for the spotted owl. Spotted owls and their habitat within the Monument will be protected from impacts which might contribute to their decline and actions which promote recovery and conservation will be encouraged.

SSA-17 Fires have played only a small role in the recent history of vegetation in the Monument. Thus, the potential for large fires, which will remove foraging habitat for the owl, are minimal. Fire suppression activities may have a greater impact than allowing fire to burn in an area. With this in mind, suppression activities will be evaluated by fire resource advisors prior to implementation to provide appropriate protection measures in spotted owl habitat.

SSA-18 If recreation activities (e.g., hiking, camping, backpacking) are determined to impact known nest sites, allocations and/or group size restrictions or other measures will be implemented to reduce disturbance. If allocations and group size limits are implemented, they will be developed in accordance with the **Group Size** and **Recreation Allocation** provisions in this Plan.

SSA-19 Trail construction will generally be limited to the Frontcountry and Passage Zones. Project level assessments and consultation with the USFWS will be completed before construction of any trails that are in close proximity to owl nest sites. Designated primitive camping areas, picnic areas, and trailheads will not be located within 1/2 mile of known spotted owl nesting, unless consultation with USFWS determines that impacts to nesting birds will not occur. This 1/2 mile buffer is recommended in the "Utah Field Guide for Raptor Protection from Human and Land Use Disturbances" (USFWS, 1999).

SSA-20 Criteria for designation of climbing areas will be established for the Monument. These criteria will not allow climbing areas to be designated in known Mexican spotted owl nest sites. If new nest sites are identified in areas designated for climbing, seasonal closures will be established in those areas to assure that disturbance of nesting activities does not occur.

SSA-21 A comprehensive inventory for spotted owls in the Monument was begun in 1999. This is a multi-year project that will look at occurrence of owls, current habitat, and potential habitat (i.e., habitat that is potential if modifications were made to that habitat). After the surveys are completed, the BLM will designate protected activity centers in accordance with the recovery plan. Activities such as recreational use in these protected areas may be limited (as described in SSA-18) to help protect this species.

Southwestern Willow Flycatcher (Empidonax traillii extimus)

For the purposes of the Endangered Species Act, all breeding southwestern willow flycatchers in GSENM are endangered southwestern willow flycatchers. Non-breeding southwestern willow flycatchers confirmed outside the June 22 to July 10 window may or may not be endangered willow flycatchers. No recovery plan has been prepared for this species, but efforts are underway to complete a recovery plan. Critical habitat was not designated for this species when it was listed. Actions which promote the recovery and conservation of this species and habitat will be encouraged.

SSA-22 A comprehensive inventory for southwestern willow flycatcher populations in the Monument was begun in 1999. This is a multi-year project that will look at occurrence of southwestern willow flycatchers, current habitat, and habitat that is potential if modifications are made. This inventory will help to identify some of the impacts that are occurring in the area, which will help the BLM determine when and where limits on activities (such as recreational use) need to be implemented to protect the southwestern willow flycatcher.

California Condor (Gymnogyps californianus)

On October 16, 1996 the USFWS reintroduced the California condor into northern Arizona/southern Utah and designated this population as nonessential and experimental under section 10(j) of

the Endangered Species Act [Federal Register (Vol. 61, No. 202) October 16, 1996, pp. 54044-54060]. The purpose of this population is to establish a second non-captive population, spatially disjunct from the southern California population as part of the recovery for this species. An agreement between the counties in Utah and the USFWS outlines a positive working relationship, and stipulates that reintroduction would not impact current or future land use planning.

SSA-23 Although Section 7 consultation is not required for this species, the USFWS and the BLM agree that it is appropriate and desirable to discuss this species. Efforts will be made to protect potential habitat for this species and to limit activities which may be detrimental to their existence in cooperation with the counties and the USFWS.

Kanab Ambersnail (Oxyloma hadeni kanabensis)

A recovery plan for the Kanab ambersnail was prepared in 1995. In Utah, the ambersnail is known to exist in two small populations in Kanab Creek and a new location near the "Best Friends Sanctuary" just outside Kanab (Meretsky, personal communication, 1998). Although Kanab Creek is a drainage not connected to the Monument, there is the potential for this species to occur within the Monument. Surveys for this species were initiated in 1999. Surveys are being conducted in potential habitat, moist seeps, and along water courses in the Monument.

SSA-24 Actions will be taken to improve identified habitat as consistent with the recovery plan objectives. Actions may include assuring flows in appropriate streams and seeps by removing non-native plants affecting the water table and reducing impacts from visitors and/or livestock. Surveys will also identify current habitat and habitat that is potential if modifications are made.

Geology

"...The monument is a geologic treasure of clearly exposed stratigraphy and structure..." (Proclamation 6920, 1996)

Ranging in age from Permian through Quaternary, the sedimentary rocks and surficial deposits within the Monument record nearly 270 million years of the geologic history. These geologic strata are important for the outstanding research opportunities that they present and for the scenic beauty that they create.

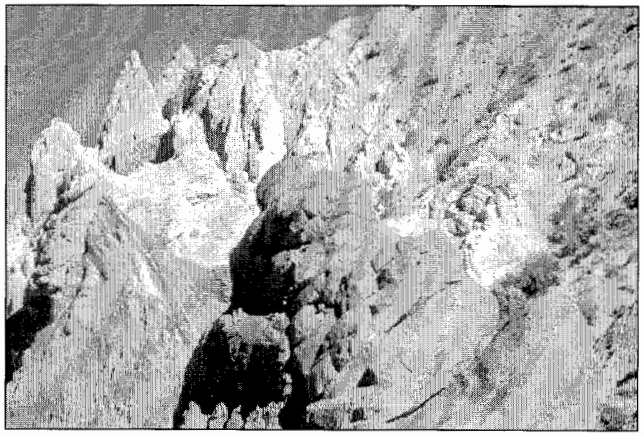
The overall objective with respect to geologic resources is to:

- manage uses to prevent damage to the geomorphologic features (small-scale expressions of geological processes) and manage uses to minimize activities in high-hazard areas,
- increase public education and appreciation of geologic resources through interpretation, and
- facilitate appropriate geologic research to improve understanding of geologic processes within the Monument.

GEO-1 Efforts to inventory and assess the potential for geologic hazards as they might relate to visitor safety, visitor facilities, rights-of-way, communication sites, and transportation routes will continue.

GEO-2 Visitor activities could be restricted in high-hazard areas or in areas where damage to sensitive geomorphologic features may occur. Examples include restrictions on camping in known flood channels, debris basins,or sensitive soil areas.

GEO-3 The design or placement of designated primitive camping areas, trailheads, or communication structures may be



Formations near Cottonwood Road (photo by Jerry Sintz)

affected by geologic hazards. Prior to construction of any of these facilities, surveys will be conducted to assess impacts to geologic resources in the Monument.

History

"...The monument has a long and dignified human history; it is a place where one can see how nature shapes human endeavors in the American West, where distance and aridity have been pitted against our dreams and courage..." (Proclamation 6920, 1996)

Pahreah Townsite (photo by Jerry Sintz)

The distances, aridity, cliffs, and terraces have indeed shaped the communities which are located on the periphery of the Monument. It is, in fact, these factors that severely limited historic era settlement *within* the boundaries of GSENM and produced the landscape we see today. The Monument is surrounded by a number of communities that were established between the 1860s and the 1880s by Mormon settlers looking for new resources and lands to support their families. Early Mormon pioneers left many historic objects. These include trails, inscriptions, remnants of old towns (such as the Old Pahreah townsite), cabins, and cowboy line camps. They also constructed and traversed the renowned Hole-in-the-Rock Trail as part of their epic colonization efforts. Mormon settlers built homes, developed dams, reservoirs and irrigation systems, and established cemeteries around and within the Monument. Evidence of many of these still exists.

While many of the historic sites within the Monument are well known, many of the physical characteristics of the sites, the oral histories and folklore of the sites and landscapes remain largely undocumented. The overall objective with respect to historic resources is to:

- identify, document, and protect the historic resources of the Monument,
- manage uses on the Monument to prevent damage to historical resources,
- increase public education and appreciation of historic resources through interpretation, and
- facilitate appropriate research on historic resources so that the Monument is recognized as an outdoor classroom and laboratory for the preservation, study, and appreciation of cultural heritage.

HIST-1 In order to protect important historic resources, the BLM will continue to inventory the Monument to identify historic resources and to evaluate their potential for conservation, research, or interpretation. This will include efforts to evaluate historic and cultural properties for nomination to the National Register of Historic Places. Surveys in high-use areas such as along trails and open routes will be prioritized to ensure protection of vulnerable resources. Beyond these areas, inventory and research efforts will be expanded to fill in the information gaps and complete research that will contribute to protection of sites. Such research will be coordinated as part of the adaptive management framework discussed in Chapter 3.

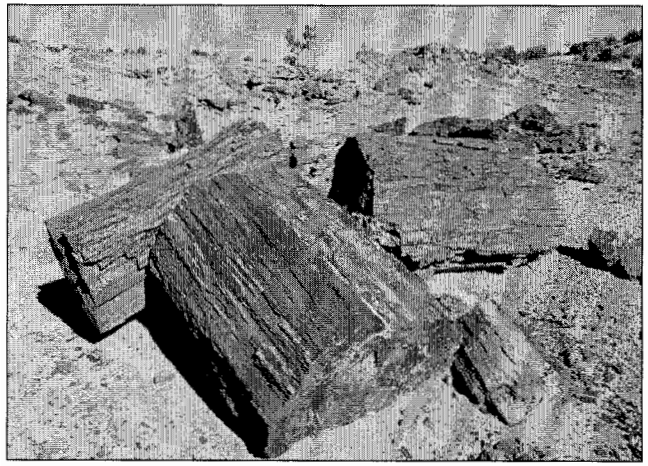
HIST-2 All proposed projects will be required to include a site inventory for historic resources, and appropriate strategies will be used to protect sensitive sites. This will include avoiding the site altogether, restricting access to the sensitive resource (i.e., construct barriers), interpreting the resource, stabilizing the resource, or as a last resort, excavating and curating the resource.

HIST-3 The BLM will establish continuing collaborative programs with local communities, organizations, local and State agencies, Native American Indian communities, outfitters and guides, volunteers, and other

interested parties. This will be done in order to identify, inventory, monitor, and develop and implement plans for the restoration, stabilization, protection, and/or interpretation of appropriate sites and resources within the Monument. The collaborative programs will include the continuation of the current Oral History Program in cooperation with local communities. The Oral History Program focuses on the collection of histories from local residents and people knowledgeable about the region. The BLM will use the information collected to create a better understanding of cultures and communities and will work to showcase the histories of the local communities as part of the "long and dignified history" of the Monument.

Paleontology

"...The monument includes world class paleontological sites..." (Proclamation 6920, 1996)



Wolverine Petrified Wood Area (photo by Larry Vensel)

Monument lands contain widespread and varied paleontological resources. Paleontological sites contain a wealth of information about prehistoric life and environments during the last part of the Paleozoic Era (about 270 million years ago) as well as throughout the Mesozoic Era (245 to 66 million years ago). The sequence of rocks found on the Kaiparowits Plateau contains one of the best and most continuous records of Late Cretaceous terrestrial life in the world. Monument paleontological resources are important to members of the scientific community as well as academic institutions, private organizations, and other interested individuals from around the world. These sites also provide opportunities to visitors for education and enjoyment.

The overall objective with respect to paleontological resources is to:

- protect the abundant paleontological resources in the Monument from destruction or degradation,
- manage uses to prevent damage to paleontological resources in the Monument,
- increase public education and appreciation of paleontological resources through interpretation, and
- facilitate appropriate paleontological research to improve understanding of paleontological resources within the Monument.

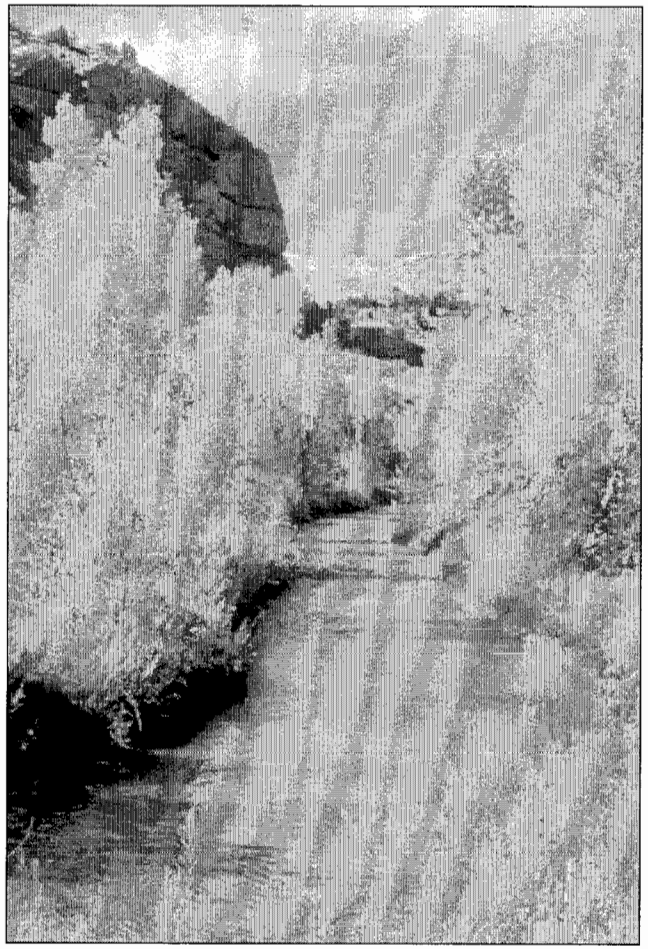
PAL-1 The BLM will continue to inventory the Monument for paleontological resources and evaluate their potential for protection, conservation, research, or interpretation. High-use areas within the Monument will have high priority for inventory efforts. Beyond high-use areas, inventory and research efforts will be expanded to fill in the information gaps on formations and other information needs. Such research will be coordinated as part of the adaptive management framework discussed in Chapter 3.

PAL-2 A monitoring program will be used to assess management needs of sensitive sites and areas. All proposed projects will be required to include a paleontological site inventory, and appropriate strategies will be used to avoid sensitive sites, restrict access to the sensitive resource (i.e., construct barriers), or as a last resort, excavate and curate the resource.

PAL-3 Public education and interpretation will be emphasized to improve visitor understanding of paleontological resources and to prevent damage. Collaborative partnerships with volunteers, universities, and other research institutions will be pursued to document, preserve, monitor or interpret sites consistent with the overall objective of protecting paleontological resources.

Riparian

"...Wildlife, including neotropical birds, concentrate around the Paria and Escalante Rivers and other riparian corridors within the monument...." (Proclamation 6920, 1996)



Escalante River (photo by Jerry Sintz)

Riparian areas, though totaling less than 1 percent of the total lands in the Monument, are some of the most productive, ecologically valuable, and utilized areas. The Riparian-Wetland Initiative for the 1990s established National goals and objectives for managing riparian-wetland resources on public lands. One goal is to provide the widest variety of vegetation and habitat diversity for wildlife, fish, and watershed protection.

The overall objective with respect to riparian resources within the Monument is to manage riparian areas so as to maintain or restore them to properly functioning conditions and to ensure that stream channel morphology and functions are appropriate to the local soil type, climate, and landform.

Besides the general provisions that are provided elsewhere for use management, the following provisions apply to riparian areas. These provisions provide for the protection of these areas, as recognized in the Proclamation:

RIPA-1 Special status species habitat and ecological processes will be evaluated in all future riparian assessments.

RIPA-2 All segments of riparian habitat previously inventoried will be reassessed as part of the grazing allotment assessments. Furthermore, riparian areas that have not been previously evaluated will be scheduled for assessment within three years commencing on the first July 1 following approval of the Plan, as part of the grazing evaluation schedule.

RIPA-3 Monitoring of riparian resource conditions will be established to determine when actions should be taken to ensure movement towards proper functioning condition on all riparian stream segments in the Monument.

RIPA-4 Communication sites, and utility rights-of-way will avoid riparian areas whenever possible.

RIPA-5 Vegetation restoration methods (described in the **Vegetation** section of this chapter) will not be allowed in these areas, unless needed for removal of noxious weed species ot restoration of disturbed sites. In these circumstances, consultation with the GSENM Advisory Committee will be used to determine the most appropriate control and restoration methods to ensure proper protection.

RIPA-6 The noxious weed control program will target invasive species such as tamarisk and Russian olive, which will improve riparian functioning condition.

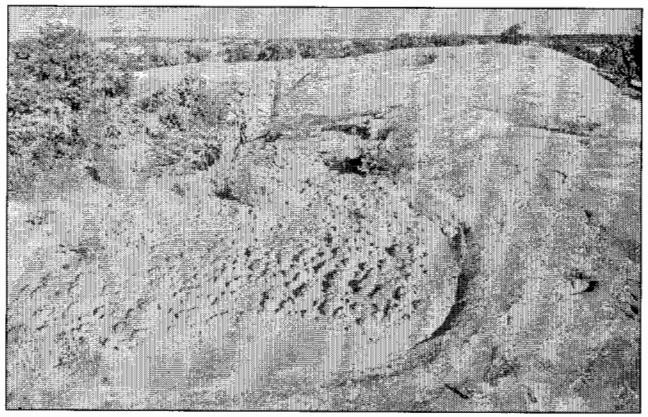
RIPA-7 New recreation facilities will be prohibited in riparian areas, except for small signs for resource protection.

RIPA-8 Trails will be kept out of tipatian areas wherever possible. Where this is not possible, trails will be designed to minimize impacts by placing trails away from streams, using soil stabilization structures to prevent erosion, and planting native plants in ateas where vegetation has been removed.

RIPA-9 Group size limits, beyond the restrictions provided in the various zones, may be imposed in these ateas.

Soils and Biological Soil Crusts

"...Fragile cryptobiotic crusts, themselves of significant biological interest, play a critical role throughout the monument, stabilizing the highly erodible desert soils and providing nutrients for plants..." (Proclamation 6920, 1996)



Biological Soil Crusts (photo by Kelly Rigby)

Conservation of soil resources is important, as soil, combined with water, provides the base of support for life within the Monument. Soils in arid and semiarid regions are particularly critical to sustaining ecosystems because they can be more vulnerable to degradation from a number of natural and artificially induced disturbances.

Often referred to as cryptobiotic, cryptogamic, microbiotic, or cyanobacterial-lichen soil crusts, biological soil crusts consist of lichens, mosses, and algae usually binding a matrix of clay, silt, and sand. Biological soil crusts are formed by living organisms and their by-products, creating a surface crust of soil particles bound together by organic materials (USDA, 1997). Biological soil crusts, which are widespread but not pervasive, play an important ecological role in the Monument in the functioning of soil stability and erosion, atmospheric nitrogen fixation, nutrient contributions to plants, soil-plant-water relations, seedling germination, and plant growth.

The overall objective with respect to soil resources within the Monument is to:

- manage uses to prevent damage to soil resources and to ensure that the health and distribution of fragile biological soil crusts is maintained or improved,
- increase public education and appreciation of soils and biological soil crusts through interpretation, and
- facilitate appropriate research to improve understanding and management of soil resources and biological soil crusts.

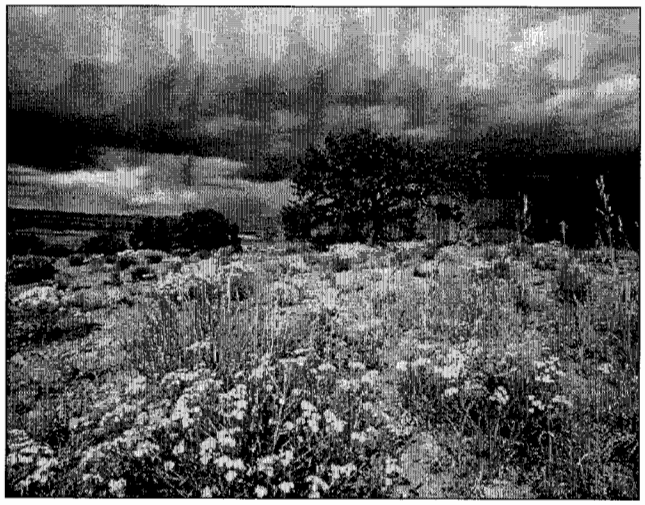
SOIL-1 The BLM will apply procedures to protect soils from accelerated or unnatural erosion in any ground-disturbing activity, including route maintenance and restoration. The effects of activities such as grazing developments, mineral exploration or development, or water developments will be analyzed through the preparation of project specific National Environmental Policy Act (NEPA) documents. This process will include inventories for affected resources and the identification of mitigation measures.

SOIL-2 Priot to any ground disturbing activity, the potential effects on biological soil crusts will be considered and steps will be taken to avoid impacts on their function, health, and distribution. Long-term research toward preservation and restoration of soils will be part of the adaptive management framework described in Chapter 3.

Further research will be conducted on these crusts, and the results interpreted for management and education purposes.

Vegetation

"...The blending of warm and cold desert floras, along with the high number of endemic species, place this area in the heart of perhaps the richest floristic region in the Intermountain West..." (Proclamation 6920, 1996)



Escalante Desert (photo by Frank Jensen)

The blending of three floristic provinces in the Monument provides the potential for a high degree of plant diversity. Steep canyons, limited water, seasonal flood events, unique and isolated geologic substrates, and large fluctuations in climatic conditions have all influenced the composition, structure, and diversity of vegetation associations of this region. The potential is great for research on many aspects of these vegetation associations, and protection of these areas is a primary concern in the management of the Monument.

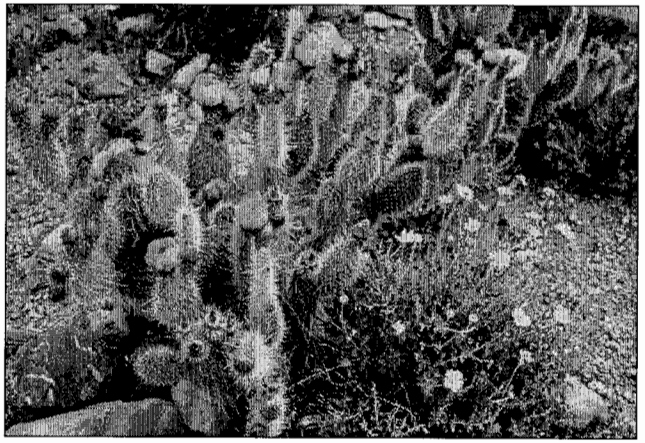
With this in mind, the Monument will be managed to achieve a natural range of native plant associations. Management activities will not be allowed to significantly shift the makeup of those associations, disrupt their normal population dynamics, or disrupt the normal progression of those associations.

Additionally, the BLM will work to:

- increase public education and appreciation of vegetation through interpretation,
- facilitate appropriate research to improve understanding and management of vegetation, and
- protect unique vegetation associations such as hanging gardens and relict plant associations

VEG-1 The BLM will place a priority on the control of noxious weed species and prevent the introduction of new invasive species in conjunction with Kane and Garfield Counties and the adjacent U.S. Forest Service and National Park Service units. Further, in keeping with the overall vegetation objectives and Presidential Executive Order 11312, native plants will be used as a priority for all projects in the Monument (see the **Noxious Weed Control** section for related decisions).

VEG-2 The BLM will continue to coordinate with other organizations to inventory the Monument and evaluate the need for vegetation protection strategies. Such research will be coordinated as part of the implementation and adaptive management framework outlined in Chapter 3, and the



Cactus (photo by Jerry Sintz)

results will be interpreted for management and public education purposes.

VEG-3 All proposed developments or surface disturbing activities will be required to include a site assessment for impacts to vegetation. Appropriate strategies will be used to avoid sensitive vegetation associations, and restoration provisions will be included in projects (see the **Restoration and Revegetation** section for related decisions).

Special Status Plant Species

In addition to the vegetation management objectives stated previously, the BLM will take measures to promote the recovery and conservation of all special status plant species within the Monument (including Federally listed endangered and threatened species, candidate species, and State sensitive species). This is in accordance with applicable Endangered Species Act of 1973 regulations (50 CFR 402) and BLM policy (6840 Manual, IM UT No. 96-69). Federally listed plant species are discussed in detail below. There are currently no candidate plant species present within the Monument. The BLM will continue to ensure that actions authorized do not jeopardize the continued existence of any special status plant species or result in the destruction or adverse modification of critical habitats.

The BLM has consulted with the USFWS throughout the planning process. On September 16, 1999, the BLM received a letter regarding the Proposed Management Plan. This letter concurred with the determination that actions in the Plan will not adversely affect listed species and will likely be beneficial to most, if not all, of those species (see Appendix 1 for consultation history). The USFWS found that the Plan will affect, but is not likely to jeopardize the continued existence of, the Ute ladies'-tresses, provided the conservation measures in the Biological Assessment and this Management Plan are taken. Consultation and coordination with the USFWS will be ongoing throughout implementation of this Plan for activities potentially affecting threatened and endangered species and their habitats.

SSP-1 The BLM will continue to consult with the USFWS to ensure that actions authorized by the BLM do not jeopardize the continued existence of any Federally listed plant species or result in the destruction or adverse modification of critical habitats. Coordination with the U.S. Forest Service, the Utah Division of Wildlife Resources' Natural Heritage Program, and the National Park Service will also occur in areas where plant species cross jurisdictional lines. The BLM will work with these agencies to develop recovery plans, when needed, and to implement existing recovery plans for all listed species.

SSP-2 No exceptions for cross-country vehicular travel will be made in known habitat or locations of sensitive plant species.

SSP-3 Surface disturbing research activities will generally not be allowed in threatened or endangered plant species habitat. All scientific research projects in close proximity to listed species populations or habitat will be evaluated by Monument biologists, the USFWS, and appropriate experts prior to initiation to determine impacts to these populations or habitat. Any research project which may have an effect on populations of listed species will be coordinated with the USFWS and appropriate permits and Section 7 consultation will be completed as determined necessary. Projects which provide new information and understanding of listed species, their populations and/or their habitat, may be allowed after approval by the BLM and the review and issuance of permits by the USFWS. All projects will be evaluated on a case-by-case basis.

SSP-4 The allotment evaluation process will address the protection of endangered species, including the incorporation of the latest research and information in the protection of these species, consistent with the BLM-wide grazing permit review process. Section 7 consultation will be conducted for all allotments that may affect listed species.

SSP-5 Future fuelwood cutting areas will not be designated in listed plant populations (see the **Forestry Products** section for related decisions).

SSP-6 Areas with threatened or endangered plants will be targeted for noxious weed control activities as a first priority. BLM employees or contractors with appropriate certification will be responsible for use of chemicals in noxious weed

removal efforts, and will take precautions to prevent possible effects to non-target species.

SSP-7 Public education about protection of these species will be an integral part of projects and will be provided in interpretive displays and handouts at project sites and visitor centers around the Monument. Information will also be included on the Monument website.

SSP-8 BLM law enforcement personnel and increased field presence of BLM personnel will concentrate efforts in areas with special status species habitat in order to curb non-compliance activities. The BLM is pursuing cooperative agreements with each of the Sheriff departments in Kane and Garfield Counties to facilitate shared law enforcement and support for enforcing established closures.

SSP-9 Communication sites, utility rights-of-way, and road rights-of-way will not be permitted in known special status species populations. As permits are granted for these sites and rights-of-way, surveys will be completed to determine the presence of special status species in the area. If they are found, these activities will be moved to another location.

SSP-10 Reseeding or surface disturbing restoration after fires will not be allowed in areas with special status plant species. Natural diversity and vegetation structure will provide adequate regeneration. Management ignited fires will also not be allowed in these areas unless consultation with the USFWS indicates that fire is necessary for the protection and/or recovery of listed species.

The following additional measures will be applied to specific listed species in order to promote the protection and recovery of these species. Other measures may be implemented and some may be terminated, as deemed necessary through evaluation of monitoring data in conjunction with the adaptive management framework described in Chapter 3.

Jones' Cycladenia (Cycladenia humilis var. jonesii)

SSP-11 There are oil and gas leases in the area where Jones' Cycladenia grows, some of which have been suspended. These leases expire by the year 2003 if no action is taken to develop them. There is limited potential for the development of these leases prior to their expiration. Stipulations to prevent impacts to these populations through avoidance or other conservation measures (after consultation with the USFWS) will be placed on any permits to drill for oil and gas. There are currently no mining or mineral operations in the area that will affect this population of plants or its habitat.

SSP-12 Inventories to locate new populations of this species will be conducted to provide more accurate information on distribution and to facilitate protection and recovery.

Kodachrome Bladderpod (Lesquerella tumulosa)

SSP-13 As described in the Transportation and Access section, cross-country vehicle travel is prohibited. There is one route open in the Kodachrome bladderpod area. This route will be open to street legal vehicles only.

SSP-14 Physical barriers as well as "closed" signs may be placed in strategic locations to prevent access into areas where the Kodachrome bladderpod grows. Restoration in closed areas may occur to eliminate impacts and return the area to pre-disturbance condition. Monitoring will continue in order to determine effects of closures and to measure the resilience of the population.

SSP-15 Additional monitoring sites will be developed in strategic locations to measure impacts to the population, following established protocols. If, through monitoring, impacts to the population from visitors are identified, visitor allocations or other measures will be imposed to eliminate any further impacts from increased visitation and use. Group size and numbers of groups allowed in the area, as well as the types of activities allowed, could be limited.

SSP-16 Trails, parking areas, or other recreations facilities will not be allowed in the Kodachrome bladderpod population.

SSP-17 Camping, overnight stays, and campfires will not be allowed in the Kodachrome bladderpod population.

Ute Ladies'-tresses (Spiranthes diluvialis)

SSP-18 The information in the Water section describes a strategy fot assuring water availability. Under that strategy, priority will be to maintain natural flows and flood events. In addition, the maintenance of instream flows will provide adequate water for natural structure and function of riparian vegetation. Ute ladies'-tresses relies on these natural flood events to colonize new areas and maintain healthy and viable populations.

SSP-19 Surveys for this species were initiated the 1999 growing season and results of this survey will be used to determine any further actions.

SSP-20 Appropriate actions will be taken to prevent trampling of the plants by visitors in high-use areas. These actions may include replanting native vegetation or construction of barriers.

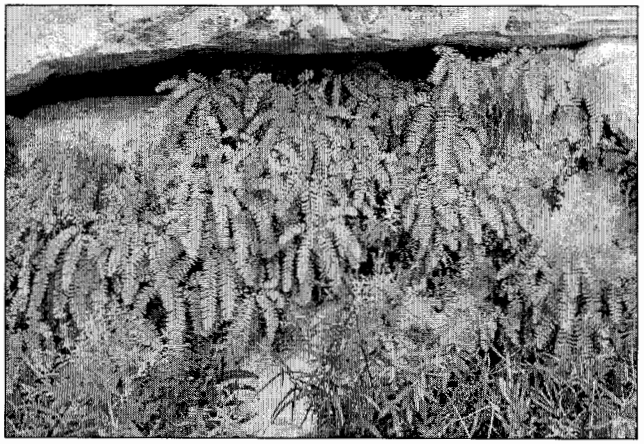
SSP-21 Areas may be closed if necessary to protect these plants. Barriers will be constructed and restoration work initiated to stabilize the soil and banks and provide the best possible habitat for this plant.

SSP-22 No expansion of current or new facilities will be permitted where this plant grows.

SSP-23 Existing trails in areas where this plant grows will be relocated away from the plants and potential habitat when possible. These protection measures apply to current as well as future potential habitat areas for this species.

SSP-24 Interpretive materials will be developed to educate the public about Ute ladies'-tresses and the actions being implemented to protect it.

SSP-25 Restoration of the current social trails in known populations will be initiated, including obliteration of the trail by planting native species, and moving soil to return the area to its natural grade. Group size restrictions, allocations, or other measures will be initiated if continued monitoring indicates that visitor use in the area is causing impacts.



Ferns, Death Hollow (photo by Jerry Sintz)

Relict Plant Communities and Hanging Gardens

Relict plant communities are areas that have persisted despite the pronounced warming and drying of the interior west over the last few thousand years (Betencourt, 1984) and/or have not been influenced by settlement and post-settlement activities (such as domestic livestock grazing). This isolation, over time and from disturbance, has created unique areas that can be used as a baseline for gauging impacts occurring elsewhere in the Monument and on the Colorado Plateau.

Hanging gardens occur where ground water surfaces along canyon walls from perched water tables or from bedrock fractures. The existence of hanging gardens is dependent on a supply of water from these underground water sources. The geologic and geographic conditions for hanging gardens exist throughout southern Utah (Welsh and Toft, 1981), including in the Monument. Due to the conditions of isolation produced in hanging gardens, there is a potential for unique species in these areas.

In addition to the general provisions provided elsewhere for use management, the following provisions apply to hanging gardens and relict areas. These provisions provide for the protection of these areas, as recognized in the Proclamation:

RHG-1 Vegetation restoration methods (described in the next section) will not be allowed in these areas, unless needed for removal of noxious weed species. In these circumstances, consultation with the GSENM Advisory Committee will be used to determine the most appropriate control methods to ensure proper protection.

RHG-2 No new water developments will be authorized in these areas. Maintenance activities will be allowed if these resources are not affected.

RHG-3 Surface disturbing research will not be allowed in these areas.

RHG-4 Parking areas or other recreation facilities will not be allowed in these areas.

RHG-5 Camping, overnight stays, and campfires in these areas will not be allowed.

RHG-6 Group size limits may be imposed in relict plant areas to restrict use beyond the restrictions provided in the various zones. Most of these areas occur in the Primitive Zone which has limits of 12 people and 12 pack animals.

RHG-7 Pack animals will not be allowed in relict plant areas.

RHG-8 Communication sites and utility rights-of-way will not be allowed in these areas.

RHG-9 Inventories, modeling, and field investigations for both relict plant communities and hanging gardens will be conducted. Current information on the location of these associations in the Monument is largely anecdotal and may change following consideration of inventory data.

Vegetation Restoration Methods

A variety of vegetation restoration methods may be used to restore and promote a natural range of native plant associations in the Monument. Methods and projects which do not achieve this objective or which irreversibly impact Monument resources will not be permitted. Vegetation restoration methods fall into four broad categories: mechanical, chemical, biological, and management ignited fires. Each of these methods will be used in accordance with the overall vegetation objectives discussed above, and progress towards these objectives will be monitored as part of the adaptive management framework described in Chapter 3.

RM-1 Mechanical methods, including manual pulling and the use of hand tools (e.g., chainsaws, machetes, pruners) may be allowed throughout the Monument.

RM-2 The use of machinety (e.g., roller chopping, chaining, plowing, discing) may be allowed in all zones except the Primitive Zone. Chaining has been used in the past to remove pinyon and juniper prior to reseeding with perennial grasses. Due to the potential for irreversible impacts to other Monument resources, such as archaeological sites and artifacts, and paleontological resources, this treatment method will not be used to remove pinyon and juniper. It may be allowed to cover rehabilitation seed mixes with soil after wildfires only where:

- noxious weeds and invasive non-native species are presenting a significant threat to Monument resources or watershed damage could occur if the burned area is not reseeded,
- it can be demonstrated that Monument resources will not be detrimentally affected (i.e., completion of full archaeological, paleontological, threatened and endangered species and other resource clearance and consultation),
- it is determined that seed cover is necessary for the growth of the native species proposed for seeding, and
- other less surface disturbing measures of covering seed are not available or cannot be applied in a timely mannet.

Visual impacts of chaining will also be minimized near routes and other points of concern by covering the native seed mix with harrows or light chains. The GSENM Advisory Committee will be consulted before the use of machinery for treatments is permitted.

RM-3 Livestock grazing after native seedings are established will be modified to ensure the survival of the native plants. The livestock exclusion period required to allow full establishment of seeded native species and recovery of surviving native plants after a wildfire may be more than

two years. Site evaluation will be required to determine when the native seedings should be grazed again and the effectiveness of the current or new grazing system on the persistence of native plants.

RM-4 Chemical methods will generally be restricted to the control of noxious weed species, and are discussed in that section. The use of chemicals may also be allowed in conjunction with research projects and must lead to the achievement of the overall vegetation objectives. These activities will be approved as determined appropriate through consultation with the GSENM Advisory Committee.

RM-5 Biological control will be used exclusively for control of noxious or exotic weed species.

RM-6 Management ignited fire is the vegetation restoration method most likely to be used in the Monument. This method will be used when fire has been documented to historically occur in an area, and where various factors have prevented natural fire cycles from occurring. In these circumstances, management ignited fites may be used, and will attempt to simulate natural fire intensity and timing. Specific objectives for all management ignited fires will be developed prior to its use in the Monument. All fire activities will be conducted and coordinated with appropriate fire management personnel, as provided for in the Color Country Interagency Fire Management Area annual operating plan.

RM-7 With all of the methods described above, vegetation monitoring plots will be established to determine the effectiveness of the treatments in achieving management objectives and to provide baseline data of overall change. This monitoring will include species frequency, density, and distribution data, and will be part of the overall adaptive management framework described in Chapter 3.

Noxious Weed Control

NW-1 The BLM will control noxious weeds in accordance with National and State policies and directives. Control of noxious weeds is also a priority to achieve the overall vegetation objectives stated above.

NW-2 Projects will be designed in conjunction with Kane and Garfield Counties and adjacent U.S. Forest Service and National Park Service staffs. With this strategy the BLM hopes to control noxious weed species and prevent introduction of new invasive species into the Monument and surrounding ecosystems.

NW-3 An array of methods will be used as appropriate for the control of specific noxious weed species. These methods include: the use of chemicals (aerial spraying, hand spraying, and painting), hand cutting, biological control agents, and manual pulling. Each of these methods has a place in the control of these invasive species and will be evaluated for their effectiveness as eradication projects are designed.

NW-4 BLM employees or contractors with appropriate certification will be responsible for use of these chemicals and will take precautions to prevent possible effects to non-target plant species.

NW-5 Aerial chemical applications may only be used in limited circumstances where:

- accessibility is so restricted that no other alternative means is available,
- it can be demonstrated that non-target sensitive species or other Monument resources will not be detrimentally affected, and
- noxious weeds are presenting a significant threat to Monument resources.

The GSENM Advisory Committee will be consulted before the aerial application of chemicals is permitted.

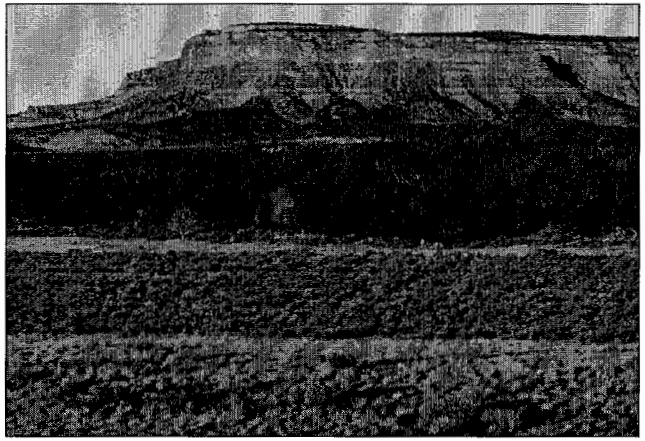
NW-6 The noxious weed control program will target species in a prioritized manner. Priorities for weed control may include: invasiveness of the species, extent of invasion, sensitivity of the area being invaded, and accessibility. Areas with special status species habitat will have a high priority for weed removal. Project level environmental assessments or other NEPA analysis will be completed prior to noxious weed removal project initiation.

NW-7 In addition to strategies for control of established noxious weeds, it is also imperative to reduce the introduction of

noxious weed species as stated in Presidential Executive Order (EO 11312) on invasive species. Cooperative programs established for control of these species will also help identify potential new invasions before area-wide establishment has occurred. There are two policies which will help to reduce potential noxious weed introduction.

- First, the BLM requires that all hay used on BLM lands be certified weed free. This is a statewide policy which applies to the Monument, as well as all other BLM lands in the State of Utah.
- Second is the requirement that all machinery that has been used outside the Monument be cleaned prior to use in the Monument. This provision generally applies to contract equipment used for projects such as construction of facilities and firefighting equipment. Both of these provisions will help reduce the introduction and spread of noxious weed species in the Monument.

NW-8 For major removal projects, monitoring plots will be established in key areas to determine effectiveness of methods and presence of noxious weed species. All projects will contain restoration and/or revegetation protocols to minimize re-colonization of treated areas by noxious weed species. Monitoring in these areas will be part of the adaptive management framework described in Chapter 3.



Vermilion Cliffs (photo by Jerry Sintz)

Forestry Products

FP-1 Fuelwood harvesting, post cutting, and Christmas tree cutting will be allowed by permit only within designated areas (Map 3). Commercial fuelwood cutting will be limited and authorized in designated areas only. There are currently two forestry product areas located in the Monument: Rock Springs Bench area and Buckskin Mountain area.

FP-2 Additional areas may be designated to meet the overall vegetation management objectives, but will not be allowed outside already disturbed areas. All cutting areas will be designated under a permit system, with maps provided to assure compliance.

FP-3 In general, the off-highway vehicle restrictions discussed in the Transportation and Access sections will apply to forestry product areas (i.e travel will be allowed only on designated routes and vehicles will be permitted to pull no more than 50 feet off designated routes in the Outback Zone). However, because forestry product collection activities are controlled by a permit and permits are issued to further overall management objectives, the BLM could authorize access on administrative routes and, in some cases, in areas more than 50 feet away from routes. These areas/provisions will be delineated in the permit prior to its issuance.

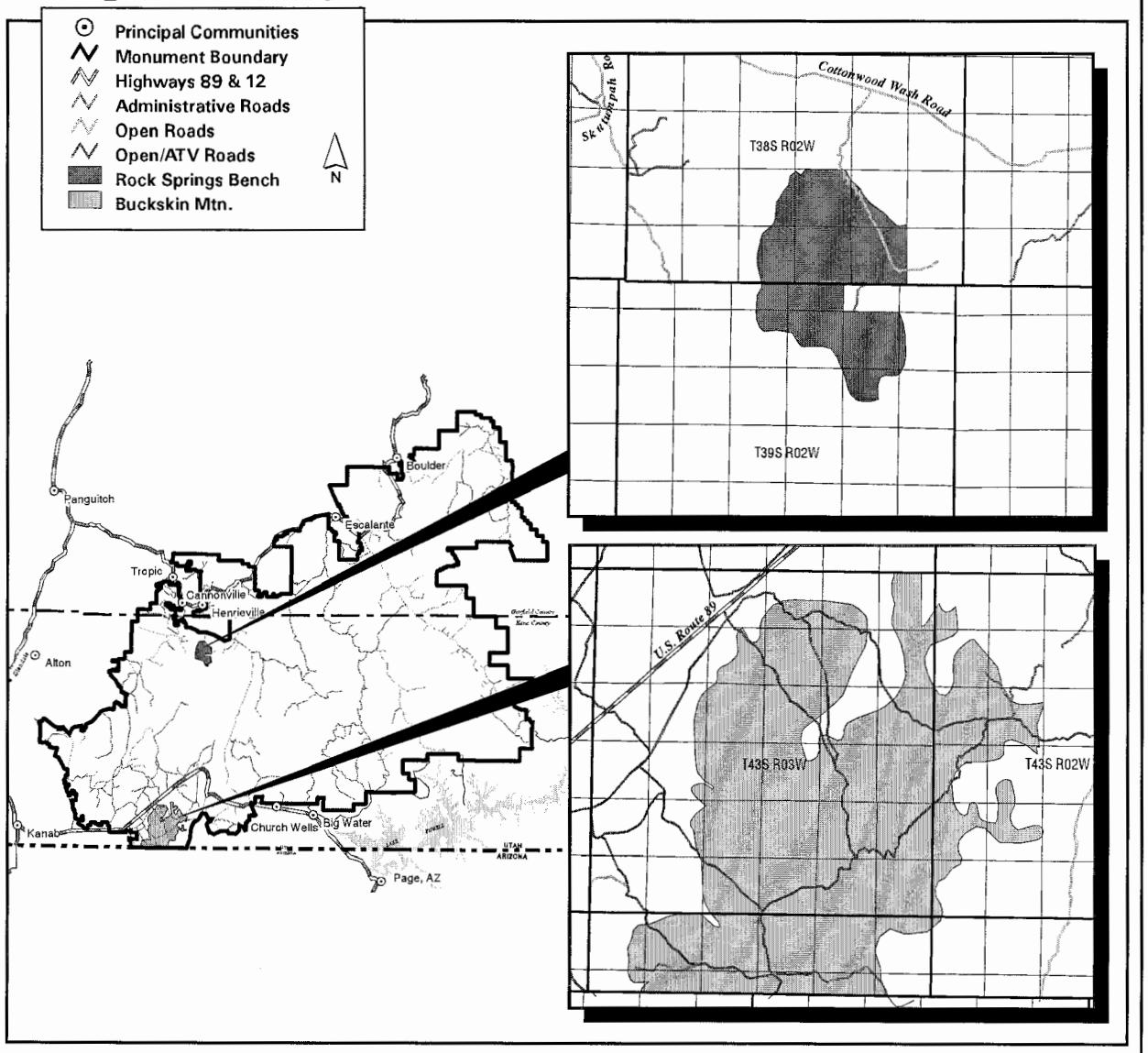
FP-4 No commercial timber harvesting is authorized within the Monument.

Native Vs. Non-native Plants

NAT-1 In keeping with the overall vegetation objectives and Presidential EO 11312, native plants will be used as a priority for all projects in the Monument.

NAT-2 Non-native plants may be used in limited, emergency situations where they may be necessary in order to protect Monument resources by stabilizing soils and displacing noxious weeds. This use will be allowed to the extent that

Map 3: Forestry Product Areas



it complies with the vegetation objectives, Presidential EO 11312, and the *Standards for Rangeland Health and Guidelines for Grazing Management for BLM Lands in Utah* (1997). In these situations, short-lived species (i.e., nurse crop species) will be used and will be combined with native species to facilitate the ultimate establishment of native species.

NAT-3 All projects proposed in the Monument will contain a restoration or revegetation component and will budget for the cost of seeding with native species. All planning for projects, in all except limited, emergency situations, will use native species, and the use of non-native species will not be analyzed as an alternative.

NAT-4 Non-native plants may be used for restoration related research if the use is consistent with and furthers the overall vegetation management objectives, including NAT-2 above, and after consultation with the GSENM Advisory Committee.

NAT-5 Non-native plants will not be used to increase forage for livestock and wildlife.

NAT-6 Monitoring plots will be established in any areas where non-native plants are used in order to document changes in vegetation structure and composition and will be an integral part of the adaptive management framework described in Chapter 3.

Reseeding after Fires

SEED-1 When deciding whether to reseed after fires, there are many factors that should be considered. The overriding consideration is the vegetation management objective and priority to use native plants. In trying to make the determination of whether seeding will help attain these objectives, there are other considerations: (1) the structure and diversity of vegetation in the area before it burned, and (2) the presence of noxious weeds in the area and the likelihood of such weeds increasing as a result of a fire. Areas with high species diversity and little potential for noxious weed spread will not be reseeded. Areas that had little diversity and little potential for noxious weed invasion will be seeded with native species exclusively. Areas of low diversity and high potential for noxious weed invasion will most likely be seeded, and non-native/native seed mixes could be used if it was determined that timing was critical and non-native species will help prevent weed spread. Each fire will have to be evaluated on a case-by-case basis to determine the appropriate actions to meet the established vegetation management objectives. Actions may change over time as a result of new research or other information in accordance with the adaptive management framework outlined in Chapter 3. If seeding with non-natives is deemed necessary, it will be in accordance with the provision stated above (short-lived, nurse crop species with natives in the mix).

SEED-2 The use of aircraft in reseeding operations may be allowed in areas as appropriate. In areas with raptor species, timing will be appropriate to eliminate impacts to these species.

Restoration and Revegetation

Restoration and revegetation will both be used in the Monument and, although they can be similar in implementation, are very different concepts. As such, they will be discussed separately and used in situations where appropriate.

Restoration is the process of returning disturbed areas to a natural array of native plant and animal associations. Although this may sound easy, success rates are low and restoration to pre-disturbance condition is often difficult if not impossible to achieve. In order to maximize the success of restoration, projects are most often in areas away from development, with little use, where restoring the natural processes and functions of the vegetation is desired. Restoration not only denotes the return of the vegetation to the site, but also the return of the entire system functions that existed prior to disturbance. This includes the return of soil characteristics, water relations, associated wildlife, and non-dominant plants that are often omitted from most projects.

Revegetation is the process of putting vegetation back in an area where vegetation previously existed. In this case, the species, their

density, and their location in relation to one another may or may not simulate natural conditions. The objective of revegetation projects is to stabilize areas that are disturbed, often from overuse by human activities, and to prevent further degradation of a site. Revegetation is also used to reduce the visual contrast between the disturbed area and the existing landscape where use will prevent a return to predisturbance conditions. This type of project often uses native species that are easy to establish, drought tolerant, and simple to propagate.

REV-1 Many factors will be considered when deciding to implement a revegetation or restoration strategy. Each project and area to be treated will be evaluated to determine the appropriate strategy. The following general guidelines can be applied to determine which strategy is the most appropriate and how it will be implemented in order to be consistent with the overall vegetation management objectives.

1. Restoration will be the goal whenever possible (i.e., an attempt will be made to return disturbed areas to conditions which promote a natural array of native plant and animal associations).

2. Species used in both restoration and revegetation projects will comply with the non-native plant policy described above (i.e., native plants will be used as a priority).

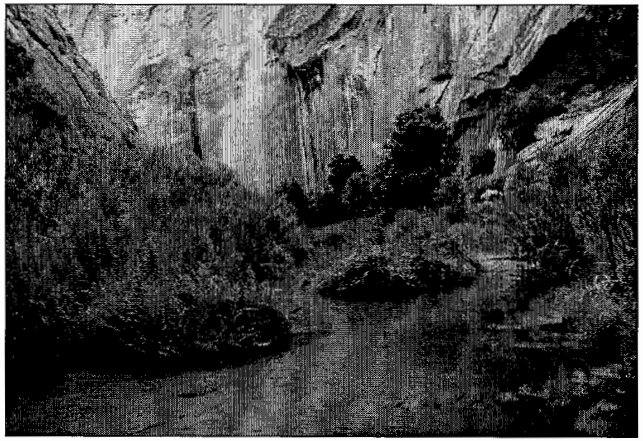
3. Revegetation strategies will be used in areas of heavy visitation, where site stabilization is desired.

4. Restoration provisions will be included in all surface disturbing projects including provisions for post restoration monitoring of the area. Costs for these activities will be included in the overall cost of the project and will come out of the entire project budget.

5. Priority for restoration or revegetation will be given to projects where Monument resources are being damaged. These sites will likely be in areas near development and/or heavy visitor use. Although these areas are more likely to be candidates for revegetation projects, careful evaluation of disturbed sites needs to be conducted to include desired future condition of an area. Restoration or revegetation of areas receiving heavy use may include limits on visitor use in order to promote recovery.

Water

"...with scarce and scattered water sources, the monument is an outstanding biological resource..." (Proclamation 6920, 1996)



Death Hollow (photo by Jerry Sintz)

The Proclamation establishing the Monument directs the Secretary of the Interior "to address in the management plan the extent to which water is necessary for the proper care and management of the objects of this Monument and the extent to which further action may be necessary pursuant to Federal or State law to assure the availability of water."

The BLM's objective with respect to water resources will be to:

- ensure that appropriate quality and quantity of water resources are available for the proper care and management of the objects of the Monument,
- increase public education and appreciation of water resources through interpretation, and
- facilitate appropriate research to improve management of water resources.

Strategy For Assuring Water Availability

Where water is needed for visitor facilities, the BLM may obtain appropriative water rights under Utah State law where the BLM meets Utah State law requirements. Campground, visitor, sanitary,

and other administrative uses are clearly "beneficial uses of water" under Utah State law, for which water rights may be granted by the Utah State Engineer. Furthermore, none of the four administrative basins established by the Utah State Engineer has yet been closed to new appropriations because they are not considered fully appropriated. Utah State law also allows the United States and the BLM, as the land owner/managing entity, to obtain such water rights in its own name, rather than the actual users (i.e., the visitors).

Instream flows are another matter. Instream flow is important to a number of Monument resources, and its continued availability is necessary for their proper care and management. Our review to date strongly suggests that both currently and into the reasonably foreseeable future, sufficient water will continue to be available for these purposes. This is for several reasons. First, much of the water important to the Monument falls as precipitation within the Monument or on adjacent Federal lands, and is not subject to appropriation by others. Its continued availability for Monument resources can be safeguarded by appropriate Federal land management policies. Second, in those relatively few places where opportunities exist for appropriation under State law upstream from, or on private inholdings within the Monument, both current and reasonably foreseeable appropriations do not significantly threaten the continued availability of water in the Monument. Third, Federal law may already provide some protection, as discussed below.

For all these reasons, the BLM believes a sound strategy for assuring the continued availability of water for Monument resources is as follows:

WAT-1 *Ensure that land management policies protect water resources.* Since much of the water important to the Monument falls as precipitation within the Monument, its continued availability can be ensured by appropriate land management policies within the Monument. The BLM will exercise its existing land management authorities to protect and maintain all available water and natural flows in the Monument. Several decisions described in other sections of this Plan are designed to meet this objective. These include the following:

- Major visitor centers and facilities will be located outside of the Monument in local communities where there will be access to municipal water systems.
- The need for water for visitor facilities within the Monument will be minimal because the only facilities provided will be a relatively small number of modest pullouts, toilets, parking areas, trailheads, and picnic sites. Most of these sites do not require water, including most toilet facilities which could use other technologies. In the limited cases where water is needed for a visitor facility, the acquisition of State appropriative water rights (discussed above) should be possible.
- New water developments for other uses could be permitted for the following purposes: better distribution of livestock when deemed to have an overall beneficial effect on Monument resources, or to restore or manage native species or populations. These developments could only be done when a NEPA analysis determines this tool to be the best means of achieving the above objectives and only when the water development will not dewater springs or streams.
- In general, diversions of water out of the Monument will not be permitted. There is an existing small-scale diversion of groundwater out of the Monument for the domestic water supply of the nearby town of Henrieville. This Plan does not ptohibit the continuation of this diversion, nor its expansion, if necessary, to meet the municipal needs of population growth in Henrieville. Any proposed new groundwater diversion to meet Henrieville's municipal needs could be approved, consistent with the Plan, if the BLM and the Utah State Engineer complete a joint analysis to determine that such development would not adversely impact springs or other water resources within the Monument, and the BLM completes the usual NEPA analysis. Exceptions could be considered for other local community culinary needs if the applicant could demonstrate that the diversion of water will not damage water resources within the Monument or conflict with the objectives of this Plan.

WAT-2 *Monitor to ensure water flowing into the Monument is adequate to support Monument resources.* The purpose of the above measures is to protect water that originates in the Monument or water after it enters the Monument

boundary. While these measures are currently considered adequate to ensure the continued availability of water to support Monument resources, the BLM will also assess whether the water flows coming into the Monument continue to be adequate. This will be part of an overall strategy to assess the status of water resources within the Monument. The BLM will work with the Water Resources Division of the U.S. Geological Survey, the Utah Department of Natural Resources, and others to gather comprehensive information concerning precipitation, surface water flows, and subsurface water flows into and out of the Monument. This could include establishing additional stream-gauging stations at selected locations, and continued inventorying of water sources such as seeps, springs, and wells. Established climate-data stations will be an integral part of the hydrologic monitoring network. Some of the main objectives of water resource investigations will include, but will not be limited to:

- Conceptualizing the surface and ground-water systems, and their interactions at the regional (Monument) scale.
- Subdividing the Monument into smaller-scale hydrologic "compartments" on the basis of hydrologic and geologic attributes. Attributes, among others, could include surface-water drainage areas, aquifer systems, precipitation zones, hydraulic conductivity of surficial deposits and bedrock.
- Cataloging and classifying hydrologic attributes of the compartments, and establishing appropriate long-term monitoring programs to collect spring and stream discharge and water chemistry data.
- Quantifying hydrologic processes such as surface-water and ground-water exchange, and precipitation, runoff, and sediment transport relationships within each compartment. In addition to new stream and spring monitoring stations, the existing network of climate stations will serve to gather appropriate data.
- Determining direct and indirect effects of humans on hydrologic attributes of each compartment and subsequent effects on Monument resources.

Recognizing that all components of this strategy can not be implemented at once and that measures to protect water that originates in the Monument are currently considered adequate, the priority in such a data collection effort will be to collect data on flows entering the Monument. This will be done in order to ensure sufficient base and peak flows to support Monument resources.

WAT-3 *Pursue other options for assuring water availability, if needed.* At any point that the above data collection and assessment effort suggests that adequate water to protect Monument resources is not entering the Monument, or that water is otherwise being depleted to the detriment of the Monument, other measures for assuring water availability will be taken. These measures could include:

- Cooperation with other Federal agencies that may already have Federal reserved water rights. Glen Canyon National Recreation (GCNRA) is a Federal reservation and has a Federal reserved water right (as yet unquantified) which could indirectly provide adequate protection to the Monument resources. If the United States successfully establishes a Federal reserved water right for GCNRA, that water right would have a priority date of about 1965. The Monument will benefit from this water right, because some of the water necessary to satisfy the GCNRA's water needs will pass through the Monument. The BLM will begin discussions with GCNRA to quantify this water right.

- Initiate discussions with the Utah State Engineer (Utah Division of Water Rights), Utah Division of Water Resources, and State and local water users to identify how nearby communities could secure water supplies for expected future growth without interfering with the water flows needed for Monument resources. These discussions will include negotiations toward an agreement between the State and local water users similar to the agreement recently reached for Zion National Park. The Zion agreement (reached between the Department of the Interior, the State of Utah, and local water users) allows additional future non-Federal development of water that could affect the Park, but caps it, and protects the continuation of "spike" or flood events in the Park environment. The BLM will explore

options with the State of Utah and local communities, perhaps based on the Zion National Park model, for securing local water needs without jeopardizing the water needs of the Monument. If such an agreement is reached, or if any other agreement is reached with the State under the options below, segments of rivers determined to be suitable for Wild and Scenic River designation in this Plan would be managed in accordance with that agreement.

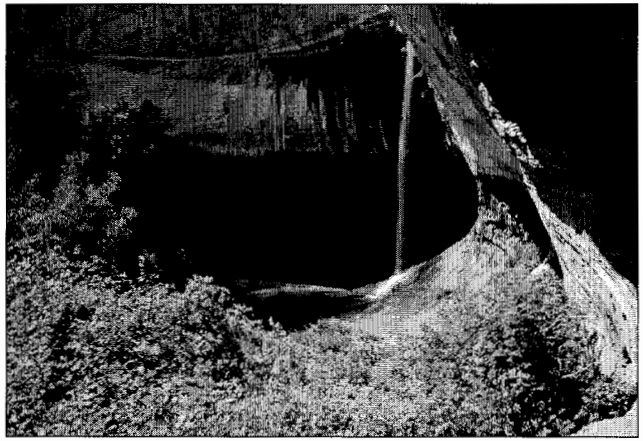
- Other options are available to the BLM for assuring water availability. These are summarized below.

  Appropriative Water Rights Under State Law - options in this category include: Pursuing a cooperative agreement between the BLM and one of the State agencies authorized to acquire and hold an instream flow right (where the State agency has a similar interest in protecting a particular resource); approaching the Utah State Engineer with a request to use his authority to protect natural flows in the Monument by denying water rights applications where the water would serve a more beneficial purpose by remaining in the channel; and, converting BLM held water rights that may no longer be needed for grazing to wildlife rights after an appropriate proceeding to change the water right in the Office of the State Engineer.

  Federal Reserved Water Rights - The Grand Staircase-Escalante National Monument Proclamation does not reserve water as a matter of Federal law. It does not, however, abolish or defeat the BLM's claims to Federal-law-based water rights under other reservations or proclamations. Options in this category include: Public water reserves; Wild and Scenic Rivers (upon designation by Congress, or the Secretary of the Interior upon application of the Utah Governor); Congressional reservation of unappropriated water; and, by Presidential Proclamation.

Strategy for Assuring Water Quality

Section 303(d) of the Federal Clean Water Act addresses water bodies and courses that are not "fishable, or swimable." A 303(d) body of water is one that has been identified as possibly being in violation of State water quality standards. Section 303(d) requires each State to identify such waters and to develop total maximum daily loads (TMDL) for them, with oversight from the U.S. Environmental Protection Agency. The TMDL is a quantitative assessment of water quality problems, contributing sources, and load reductions or control actions needed to restore and protect bodies of water. The following list shows 303(d) waters within the Monument and their associated load problems [Utah Department of Environmental Quality (UDEQ), Utah Division of Water Quality (UDWQ), *Utah's 1998 303(d) List of Waters, Table 1-b*]:



Upper Calf Creek Falls (photo by Larry Vensel)

- Paria River (from Arizona State line to headwaters-tributaries -- total dissolved solids, sediment)
- Escalante River (from Lake Powell to Calf Creek – total phosphorous, sediment)
- Escalante River (from confluence of Calf Creek to headwaters – sediment)
- Calf Creek (confluence with Escalante River to headwaters – temperature, total dissolved solids, sediment)

WAT-4 The BLM will request that the State of Utah accelerate development of TMDLs for 303(d) waters in the Monument.

WAT-5 The BLM will continue to develop a water quality monitoring program at 60 sites in conjunction with the

UDWQ to ensure that State and Federal water quality standards are met. In addition, the BLM will develop a comprehensive water quality monitoring program to ensure the protection of Monument resources and visitor safety. The BLM will continue to work with UDEQ/UDWQ as water quality improvement programs and TMDLs are developed.

WAT-6 Water quality monitoring will be implemented when ground disturbance or other factors could adversely affect water quality. Mitigation will be required if adverse effects are detected.

Management of Visitors and Other Uses

This section outlines decisions for managing uses in the Monument, including uses such as recreational activities, science and research, and livestock grazing. These management actions are aimed at meeting the resource protection objectives described earlier in this chapter.

Camping

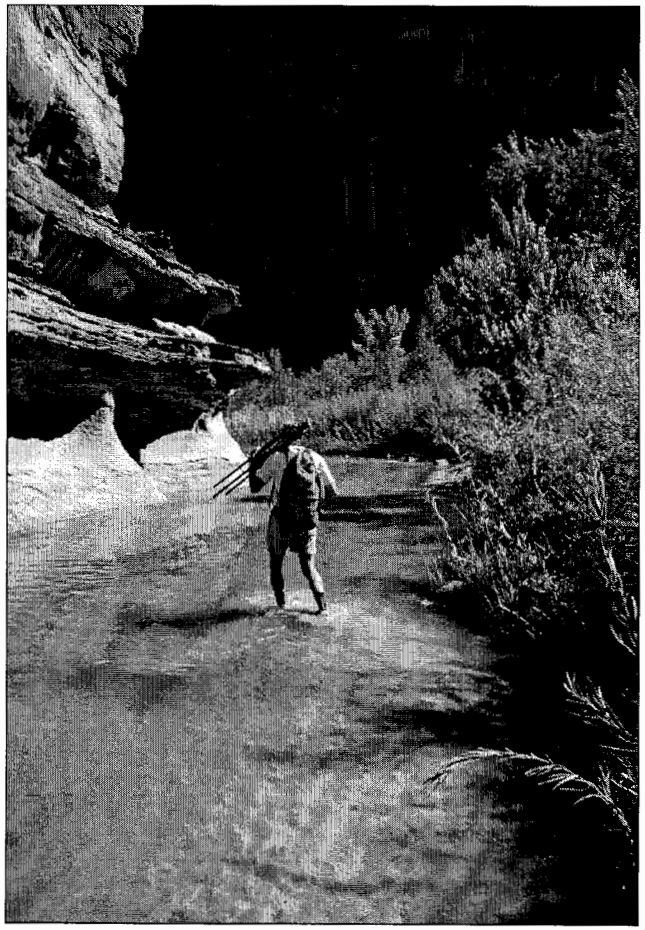
CAMP-1 Camping in developed campgrounds or in designated primitive camping areas will be allowed in the Frontcountry and Passage Zones. Dispersed primitive camping will not be allowed in these zones.

CAMP-2 Dispersed primitive camping will be allowed in the Outback and Primitive Zones, but primitive camping could be limited to certain designated areas in these zones if resource damage occurs.

CAMP-3 Permits will be required for overnight use in all zones.

CAMP-4 Designated primitive camping areas are places where the BLM has identified and designated areas for camping use. These areas will not have any developments, other than a small sign or barriers to delineate the site.

CAMP-5 Motorized or mechanized vehicles may pull off designated routes no more than 50 feet for direct access to dispersed camping areas in the Outback Zone, except in WSAs, threatened and endangered plant areas, relict plant areas, riparian areas, or other areas identified. Visitors will be encouraged to use existing disturbed areas for pulling off routes to access camping areas and are required to leave existing vegetation intact. In the Frontcountry and Passage Zones, vehicles will be confined to using designated pullouts and will not be allowed to pull off the route, except as provided for in emergencies (see **Emergency and Management Exceptions** for related decisions).



Escalante River (photo by Kelly Rigby)

CAMP-6 Campfires will not be allowed in the Escalante and Paria/Hackberry Canyons, No Mans Mesa, and other relict plant areas as they are identified. Campfires will also be prohibited in archaeological sites, rock shelters, or alcoves Monument-wide.

CAMP-7 Campfires will be allowed only in designated fire grates, designated fire pits, or mandatory fire pans in the Frontcountry and Passage Zones, and wood collection for campfires will not be permitted. In the Outback and Primitive Zones, fire pans will be encouraged and dead and down wood may be collected in areas where campfires are allowed.

Climbing

CLMB-1 Climbing will not be allowed in archaeological sites, on natural bridges or arches, or within identified threatened and endangered species nesting areas.

CLMB-2 Climbing areas may be seasonally closed to assure that disturbance to raptor nesting activities does not occur.

CLMB-3 The BLM will work with the public to identify climbing areas and develop specific management plans for them. Criteria for designation of climbing areas will be established for the Monument.

CLMB-4 Climbing will be subject to zone and other specific management restrictions.

Collections

COL-1 Collection of Monument resources, objects, rocks, petrified wood, fossils, plants, parts of plants, animals, fish, insects or other invertebrate animals, bones, waste, or other products from animals, or of other items from within the Monument will be prohibited. Exceptions could include: collections authorized by permit in conjunction with authorized research or management activities; the collection of small amounts of fruits, nuts, and berries for personal, non-commercial use; the collection of certain natural materials by Native American Indians under BLM permit; the collection of antlers or horns as provided for by UDWR regulations; and the collection of dead and down wood for immediate use in campfires, where campfires are allowed. The above prohibitions shall not be deemed to diminish the responsibility and authority of the State of Utah for management of fish and wildlife, including the regulation of hunting and fishing, on Federal lands within the Monument.

Commercial Filming

FILM-1 Filming may be approved in all zones if the activity complies with the zone requirements and Plan provisions. Permits for commercial filming will be required and the preparation of a project-level NEPA document (BLM Manual 2920) may be required.

Competitive and Special Events

EVENT-1 Special events may be approved, under permit, if the event meets other zone requirements and Plan provisions.

EVENT-2 Special events will be permitted in accordance with the requirements of the most restrictive zone that the event encounters.

EVENT-3 No competitive events will be allowed.

Emergency and Management Exceptions

EMERG-1 In emergency circumstances, vehicles may pull immediately off designated routes (see **Transportation and Access** for related decisions).

EMERG-2 Limited exceptions to the general management provisions may be granted by the Monument Manager. These exceptions may allow off-highway vehicle use, aircraft landing, motorized or mechanized access on closed routes, or use of mechanized equipment in closed areas. Exceptions may be made in emergencies, or where clearly essential to serve Monument management purposes. Exceptions may be made in cases such as carrying out search and rescue operations,

fire prevention and control, and other uses where justified. Certain authorized users may be given motorized access not given to the general public for specific, authorized uses as described in the **Administrative Routes and Authorized Users** section in this chapter.

Facilities

Visitor Facilities in the Gateway Communities

FAC-1 In an effort to protect Monument resources and provide economic opportunities in the local communities, major facilities and the services associated with them will be located in these communities, outside the Monument. These include a Monument headquarters in Kanab, an Interagency Office in Escalante, and visitor contact stations in Cannonville, Glendale, and Big Water. Their precise locations will be based on factors such as the availability of infrastructure; economic considerations, including market feasibility; the availability of financing; and managerial concerns. These determinations will be made by the communities and the BLM. Any construction activities associated with these sites are contingent upon funding by Congress. Monument staff will also be available at the Paria Contact Station and at the Anasazi State Park in Boulder.

Visitor Facilities in the Monument

FAC-2 All facilities and signs will be consistent with the Monument Interpretive Plan, the Monument Facilities Master Plan, and the Monument Architectural and Landscape Theme (all in the process of development).

FAC-3 The Monument Facilities Master Plan will address and be consistent with the Americans with Disabilities Act of 1973, the Rehabilitation Act of 1973, and the Architectural Barriers Act of 1968.

FAC-4 All projects causing surface disturbance will be subject to NEPA analysis and the standard stipulations described in Appendix 2.

FAC-5 No projects or activities that result in permanent fills or diversions in, or placement of permanent facilities on special flood hazard areas (as designated by the Federal Emergency Management Agency), will occur within the Monument.

FAC-6 All facilities and parking areas will be designed to be unobtrusive and to meet the visual resource objectives (see the Visual Resource Management section for related decisions).

FAC-7 The development of water may be provided in limited circumstances, where necessary for visitor safety or resource protection, in the Frontcountry or Passage Zones. The provision of water at sites within the Monument will be vety limited because the only facilities provided will be modest pullouts, parking areas, trailheads, picnic sites, toilets, and primitive camping areas. These sites do not require water, including most toilets which could use other technologies.

Bridge Across Calf Creek (photo by BLM)

Frontcountry Zone:

FAC-8 As the focal point for visitation, visitor day-use facilities and signs will be added as necessary for visitor use, safety, and the protection of sensitive resources, in addition to

existing facilities. These facilities could include pullouts, parking areas, trailheads, trails, toilets, fences, and picnic areas. Day-use areas could include vault toilets, picnic tables, interpretive kiosks, and in some cases, interpretive trails which will be universally accessible but not paved. Most day-use parking areas will be paved, but those off of unpaved roads, such as Grosvenor Arch and the Paria Movie Set, will remain unpaved. Most parking areas will be small, accommodating 10 to 20 cars. Construction of small spur routes or trails may be allowed to access parking areas or other facilities.

FAC-9 Scenic overlooks and other sites that have been developed along Highway 12 will be maintained. Some of the parking areas will be better delineated with barriers or fences to prevent further expansion. Additional wayside exhibits may be developed for some of the existing sites to stimulate further learning and protect resources. The BLM will look for appropriate opportunities to highlight Monument resources along Highways 12 and 89, and around the communities of Boulder, Escalante, Henrieville, Cannonville, Tropic, Church Wells, and Big Water. The Monument will work with communities, visitors, and other interested publics to develop sites. Up to 15 of these sites could be developed in the Frontcountry Zone, and specific projects will go through the NEPA process with full public involvement.

FAC-10 Calf Creek and Whitehouse Campgrounds are the only developed campgrounds in the Frontcountry Zone. Dispersed primitive camping will not be allowed in this zone, although up to 10 designated primitive camping areas (without amenities) may be identified for individuals or groups. Most of these will be designated in areas already used for camping. These areas could accommodate 2-5 vehicles with a few areas large enough for group camping. Camping areas will be designated with a small sign and barriers. Toilets, water, tables or other amenities will not be provided at these sites.

Passage Zone:

FAC-11 The condition of routes and distance from communities in the Passage Zone makes it a secondary zone for visitation. Similar facilities as allowed in the Frontcountry Zone could be provided for resource protection, visitor safety, or for the interpretation of Monument resources. Information kiosks approximately the size of two 3 foot by 5 foot panels will be located at major trailheads (e.g., The Gulch, Deer Creek, and Dry Fork), and smaller kiosks or signs will be located at less used trailheads. Rarely used trailheads will be identified with a small sign.

FAC-12 Existing parking areas may be better delineated with barriers to prevent further expansion. Parking areas could accommodate up to 30 vehicles, but most will be designed for fewer than 10 cars. Construction of small spur routes or trails may be allowed to access parking areas or other facilities. Trails and parking areas will not be paved.

FAC-13 Existing destinations such as Devils Garden and Dance Hall Rock will be maintained. A better delineated parking area and toilets could be considered for Dance Hall Rock. A fully accessible trail that blends in with the terrain could be considered for Devils Garden.

FAC-14 Up to 17 parking areas or pullouts (scenic overlooks) could be designated in this zone. These are generally areas that are already used for parking, and delineating them with natural barriers or fences will prevent further resource damage. Interpretive kiosks or signs could be provided at these sites as discussed above.

Wolverine Petrified Wood Area (photo by Kelly Rigby)

FAC-15 The existing Deer Creek Campground will be the only developed campground in this zone. Dispersed primitive camping will not be allowed, although up to 25 designated primitive camping sites may be identified for individuals or groups. Most of these will be designated in areas already used for camping. These areas could accommodate 2-5 vehicles with a few camping areas large enough for groups. Camping areas will be designated with a small sign and barriers. Toilets, water, tables or other amenities will not be provided.

Outback Zone:

FAC-16 Small signs to educate the public about a particular resource or safety hazard may be installed at limited sites, but these sites will not be promoted in literature. Facilities such as designated parking areas, toilets, or fences could be allowed for protection of resources in limited cases, only where other tools to protect resources are ineffective.

FAC-17 Trails could be delineated if necessary to prevent widespread impacts from multiple trails.

FAC-18 Dispersed primitive camping will be allowed in this zone, but certain areas could be closed and certain areas could be designated for camping if resource damage is occurring.

Primitive Zone:

FAC-19 Limited signs could be allowed for resource protection or public safety. Small directional signs may be needed, but these will be kept to an absolute minimum and will be rare.

FAC-20 Trails could be delineated only if necessary to prevent widespread impacts from multiple trails.

FAC-21 No water, toilets, or other visitor amenities or facilities will be provided.

FAC-22 Dispersed primitive camping will be allowed in this zone, but certain areas could be closed and certain areas could be designated for camping if resource damage is occurring.

Fees

FEE-1 The Monument has been approved to develop a fee demonstration program. Public input will be sought prior to the design and implementation of any fee system.

FEE-2 Existing use fees will continue to be charged.

Fences

FENCE-1 Fences may be used in certain circumstances to protect Monument resources, to manage visitor use, and to manage livestock, consistent with the Proclamation. They will be designed and constructed in accordance with visual resource management objectives and the Monument Facilities Master Plan (see the **Visual Resource Management** section for related decisions).

Group Size

GROUP-1 There will be no limit on group size in the Frontcountry Zone.

GROUP-2 Group size will be limited to 25 people in the Passage and Outback Zones.

GROUP-3 Permits for groups over 25 people will be considered in the Passage and Outback Zones, if the number of people and the activities proposed are consistent with the protection of Monument resources. Appropriate NEPA analysis will be prepared on areas where permits could be authorized. These permits will require that adequate sanitation and trash collection are provided, and that activities take place in areas where resources will not be damaged.

GROUP-4 In the Primitive Zone, group size will be limited to 12 people and 12 pack animals. Within the Paria River corridor in the Primitive Zone, permits could be approved for groups over 12 people up to a maximum of 25 people.

GROUP-5 In order to protect Monument resources, it may become necessary to place limits on the overall numbers of people and/or pack animals allowed, or to further restrict group sizes in areas where resource damage is occurring (see the **Recreation Allocation** section for related decisions).

Livestock Grazing

The Presidential Proclamation establishing the Monument addressed livestock grazing with the following statement: "Nothing in this proclamation shall be deemed to affect existing permits or leases for, or levels of, livestock grazing on Federal lands within the monument: existing grazing uses shall continue to be governed by applicable laws and regulations other than this proclamation."

There is a substantial body of law and regulation governing grazing on public lands. In addition, the Utah State Director for the BLM has developed Standards for Rangeland Health and Guidelines for Grazing Management which were approved by the Secretary of the Interior on May 20, 1997 (Appendix 3). The Utah Standards and Guidelines apply to grazing management statewide, including those lands within the Monument.

This section describes how grazing uses within the Monument shall be managed, in keeping with applicable laws and regulations, and with the statewide Standards and Guidelines. It describes a process for grazing management and a schedule for completion of this process Monument-wide.

Statutes and Regulations

The BLM's grazing regulations were revised in August 1995. A new subpart directed each BLM State Director to develop "Standards and Guidelines for Grazing Administration." A Standard is a minimum resource condition to be achieved on BLM lands, and a Guideline is an acceptable or best management grazing practice that will be applied in order to achieve the Standards. In Utah, the State Director developed the Standards and Guidelines in consultation with the statewide Utah Resource Advisory Council. The Secretary of the Interior approved the "Standards for Rangeland Health and Guidelines for Grazing Management for BLM Lands in Utah" on May 20, 1997. Local plans and decisions may be more detailed than the Utah Standards and Guidelines, but must be in conformance with the Standards and be consistent with the Guidelines.

GRAZ-1 Grazing Management Process

The following process will be followed so that grazing management conforms with the grazing regulations and Utah's Standards and Guidelines. In this process, each grazing allotment will be assessed, and new allotment management plans will be developed, consistent with the BLM-wide grazing permit renewal process.

Cowboys (photo by Kelly Rigby)

Step 1: Assessment

All allotments will be assessed in accordance with the guidelines and guidance issued by the BLM. All available data will be used to make an overall assessment of rangeland health, including ecological processes, watershed functioning condition, water quality conditions, special status species, and wildlife habitat conditions for each allotment, as described in the Utah Standards for Rangeland Health, in light of the Fundamentals of Rangeland Health at 43 CFR § 4180.1.

Priorities for completing the assessments and implementing needed changes will be set using the following criteria:

- presence of values that are regulated by operation of law such as water quality, threatened and endangered or sensitive plant and animal species
- areas at high risk of becoming degraded, or high public interest areas
- permit renewal schedule

Step 2: Determination of Rangeland Health and Evaluation of Existing Grazing Management

The GSENM Manager shall determine rangeland health for each allotment according to the Utah Standards and Guidelines for Grazing Administration, in light of the Fundamentals of Rangeland Health. The GSENM Manager determines whether or not assessment results show that each allotment is achieving or making significant progress toward the Utah Standards.

To the extent any assessment result is found to be inconsistent with the Standards, the GSENM Manager shall determine whether or not existing livestock grazing practices or levels of use are significant factors in such inconsistency. The GSENM Manager shall take appropriate action under 43 CFR Subparts 4120, 4130, and 4160 as soon as practicable, but not later than the start of the next grazing year, upon determining that existing grazing management practices or levels of grazing on public lands need to be modified to conform with Utah Standards and Guidelines.

Step 3: Develop Allotment Management Plans

The compatibility of grazing with other land uses will be evaluated in allotment management plans (AMP), and the results of the evaluation will be consistent with all applicable legal authorities, including FLPMA, the Taylor Grazing Act (TGA), the Public Rangelands Improvement Act, 43 CFR Part 4180, Utah Standards and Guidelines, and National Wildlife Federation v. BLM, 140 Interior Board of Land Appeals (IBLA) 85 (1997). AMPs may be developed on an individual basis, or may be developed for a group of allotments where similar ecosystems or land uses exist. These AMPs may include integrated activity planning, addressing a range of non-grazing issues within the plan area.

Mandatory Content For AMPs

In addition to all other applicable legal authority, all AMPs shall be prepared in accordance with 43 CFR § 4120.2, and shall ensure that the following conditions exist:

1. Watersheds are in, or are making significant progress toward properly functioning physical condition. This must include their upland, riparian-wetland, and aquatic components. Soil and plant conditions must support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform, and must also maintain or improve water quality, water quantity, and timing and duration of flow.

2. Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow are maintained, or there is significant progress toward their attainment in order to support healthy biotic populations and communities.

3. Water quality complies with State water quality standards, and achieves or is making significant progress toward achieving established BLM management objectives such as meeting wildlife needs.

4. Habitats are, or are making significant progress toward being restored or maintained for Federal threatened and endangered species, Federal candidate species, and other special status species.

Allotment management plans shall designate lands that are available for livestock grazing. Grazing permits or leases shall specify the types and levels of use authorized, including livestock grazing and suspended use. Grazing permits will also include any administrative access granted for operation of the permit, and may include other authorizations (such as overnight camping or group size exceptions) necessary for operation of the permit.

No allotments will be converted from cows and horses to domestic sheep within at least a 9 mile buffer of bighorn sheep habitat, except where topographic features or other barriers prevent physical contact. This is in order to prevent the spread of disease from domestic sheep to desert bighorn sheep. Other BLM guidelines or policy in regard to domestic and wild stock interactions will also apply.

Regarding conservation use, on September 1, 1998, the U.S. Court of Appeals for the Tenth Circuit decided Public Lands Council v. Babbitt, 167 F.3d 1287 (10th Circuit 1999). The case resolved the Government's appeal of an adverse U.S. District Court order enjoining the application of four separate grazing provisions in 43 CFR Part 4100. The Court of Appeals reversed the District Court's order on three of the four provisions. The only grazing provisions now enjoined are those providing that "conservation use" is a permissible use for a grazing permit.
AMPs will include a monitoring program in conjunction with the adaptive management framework (Chapter 3). The monitoring program will be designed to periodically observe and collect data to evaluate the effects of management actions prescribed in the AMP, and to evaluate the effectiveness of those actions in:

- meeting the management objectives stated in the AMP;
- achieving the conditions described as the Fundamentals of Rangeland Health (43 CFR 4180.1);
- meeting the Utah Standards for Rangeland Health, as indicated by the factors described therein; and
- ensuring that grazing use is not causing unacceptable resource degradation.

Optional Content for AMPs

Grass Bank Allotments/Pastures

The BLM's grazing regulations provide for increasing and decreasing the total number of animal unit months (AUMs) of specified livestock grazing (43 CFR 4110.3-1 and 4110.3-2). The setting aside of lands for future grazing use within the Monument to offset potential future reductions in existing allotments or to facilitate research in grazing methods is what the BLM refers to in this document as a grass bank. The BLM may designate grass banks on public lands within the Monument that are not apportioned to any grazing permittee or lessee. Grass banks shall meet the requirements of the Utah Standards and Guidelines in light of the Fundamentals of Rangeland Health, and they shall contain forage that may be apportioned on a sustained yield basis to qualified applicants for livestock grazing consistent with multiple-use management objectives. The BLM may consider making grass bank forage available on an emergency, nonrenewable basis under 43 CFR 4110.3-1(c). Should an allotment or a portion of an allotment become available through a voluntary relinquishment or an operation of law, it will be considered for grass banking.

The BLM is not obligated to graze the grass bank allotment annually, and use of the grass bank by qualified applicants, permittees, or lessees is within the discretion of the BLM.

Science

The geology, soils, and erosional characteristics in the Monument and the resulting plant communities provide opportunities to test, validate, and develop

management methods, criteria, or techniques which will lead to improved grazing practices. Similarly, the Monument may present opportunities for testing new partnership arrangements with grazing permittees and interested publics that will lead to improved grazing practices. It will be the policy of the Monument to encourage the use of the special characteristics of the Monument to facilitate such testing or research using scientific methods where appropriate.

Schedule

The 3-step Grazing Management Process described above, and all associated NEPA documents, shall be completed within the 3 years commencing on the first July 1 following the approval of the Monument Management Plan.

Night Skies

NS-1 The BLM will seek to prevent light pollution within the Monument. No actions will be proposed within the Monument that will contribute to light pollution. The BLM will also work closely with the surrounding communities to minimize light pollution.

Outfitter and Guide Operations

OG-1. Outfitter and guide operations will be allowed throughout the Monument in compliance with the constraints of the zones and other Plan provisions

OG-2. Training will be provided on an annual basis to keep outfitters and guides current on appropriate research studies occurring in the Monument.

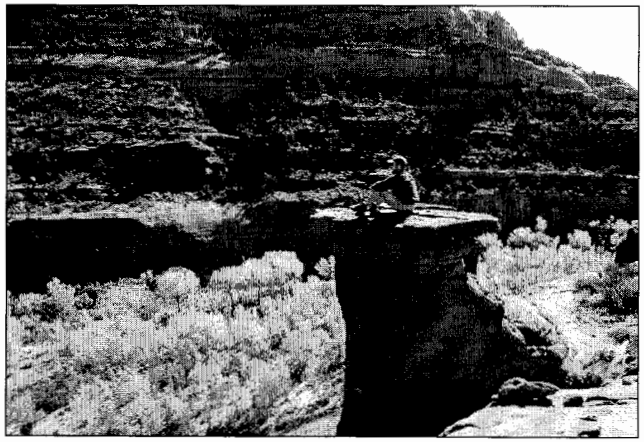
OG-3. Outfitters and guides will be strongly encouraged to incorporate interpretive/educational components into their trips.

Recreation Allocations

ALLO-1 The Monument will use the following indicators to determine when and where visitor allocations need to be made: (1) resource damage (e.g., proliferation of campsites, human waste problems, social trailing or vandalism to historical, archaeological, paleontological sites, or destruction of biological soil crusts), (2) conflicts with threatened and endangered plant or animal species, and/or (3) the number of social encounters become unacceptable.

ALLO-2 Inventories, surveys, and studies will establish baseline data for Monument resources. These data will be used to set up an ongoing monitoring program and to prioritize areas that require more restrictive management. This will be done as part of the adaptive management framework (Chapter 3) with consultation from the GSENM Advisory Committee. When it is determined that critical indicators have been approached or exceeded, the Monument will go through a public process to determine allocations for specific areas. Total numbers of people and group size will be considered. The BLM will consult with Glen Canyon National Recreation Area and the Escalante Ranger District of Dixie National Forest if allocation is determined necessary for the Escalante Canyons.

ALLO-3 The Monument will work closely with the UDWR throughout the public process as they administer and regulate hunting, fishing, and the permits issued for these activities.



Long Canyon (photo by Frank Jensen)

ALLO-4 As the focal point for visitation, there will generally be no allocation in the Frontcountry Zone other than directing individuals to selected sites chosen for their interpretive values. However, allocations may be allowed in limited circumstances where other tools to protect resources are proving ineffective. Since the Frontcountry Zone is the focal point for visitation, social encounters will not trigger such action, but resource damage could if other tools are ineffective at protecting resources.

ALLO-5 Allocation is possible in the Passage Zone for the protection of sensitive resources or visitor experience. The most likely places that allocation will occur is at trailheads in order to limit the number of people accessing the primitive areas.

ALLO-6 Allocation is moderately likely for the protection of sensitive resources or visitor experience in the Outback Zone. The first step will be designating primitive camping areas. Limiting the number of people in specific areas could also be used if other measures are ineffective.

ALLO-7 Allocation is highly likely in the Primitive Zone for the protection of sensitive resources or visitor experience. Based on current visitor use, it is anticipated that allocations could be needed for the Escalante Canyons, Fiftymile Mountain, and Hackberry Canyon as soon as 2001. Additional areas meeting the criteria, as outlined in ALLO-1, will also be considered.

ALLO-8 In developing allocation plans for areas, efforts will be made to coordinate with other resource planning efforts (e.g., research, grazing allotment management plans), as discussed in the implementation and adaptive management framework in Chapter 3. This type of integrated activity planning will lead to more comprehensive planning efforts for specific areas and to better decision making.

Recreational Stock Use

STOCK-1 Horses or other pack animals will not be allowed in relict plant communities, archaeological sites, rock shelters, or alcoves.

STOCK-2 Sheep species will not be allowed for pack use.

STOCK-3 Recreational stock are limited to 12 animals in the Primitive Zone.

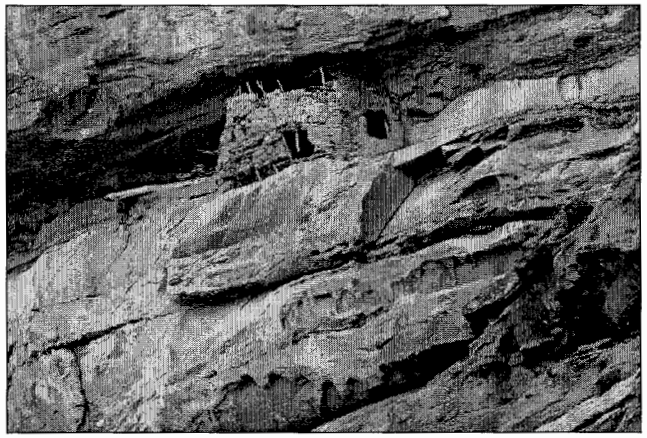
STOCK-4 The BLM requires that all hay used on BLM lands be certified weed free.

Science and Research

Focus of Science and Research

The primary purpose for establishing GSENM is to protect the scientific and historic resources described in the Proclamation. Unparalleled opportunities for study of these resources are available throughout the Monument. In addition to the study of specific scientific resources, this setting allows study of such important issues as: understanding ecological and climatic change over time; increasing our understanding of the interactions between humans and their environment; improving land management practices; and achieving a properly functioning, healthy, and biologically diverse landscape. Science will be supported and encouraged, but intrusive or destructive investigations will be carefully reviewed to avoid conflicts with the BLM's responsibility to protect and preserve scientific and historic Monument resources. Information gathered through the research program will be used to improve management practices and protect resources. For example, baseline inventories for hanging gardens can identify areas that are sensitive and areas that may be affected by proposed activities. This will allow the BLM to take appropriate measures for the protection of these resources. A comprehensive and integrated research and science program will ensure that scientific resources are not only available for current research opportunities, but that certain scientific resources are preserved in place for future study.

SCI-1 Monument management priorities and budgets will focus on a comprehensive understanding of the resources of the Monument while assisting in the development of improved and innovative land management, restoration, and rehabilitation practices. The natural, physical, and social sciences, including the study of history will each play an essential role in science and research activities. Research projects will have a multi-scale and interdisciplinary approach when possible. Recreation and other uses will be managed to complement science and research objectives.



Dwelling (photo by Jerry Sintz)

SCI-2 The first priority for conducting BLM-sponsored research will be to study, collect, or record scientific information that is most at risk of being damaged or lost through disturbance or the passage of time, including oral histories and ethnologies related to the Monument area. The second priority will be to continue gathering baseline data on the biological, physical, cultural, and social sciences within the Monument. A third priority will be to conduct applied research regarding the management of natural systems, including disturbance and recovery strategies.

Education and Outreach

SCI-3 The BLM will encourage researchers to incorporate a public outreach/education component into projects. Educators and students will have the opportunity to participate in research activities where appropriate. The BLM will involve communities in science and education activities.

SCI-4 Research sites and visitor centers will emphasize scientific interpretation. Results of scientific research and inventory data will be disseminated through interpretive displays, publications, forums, and public exhibition of objects and artifacts.

SCI-5 The BLM is currently working on an interpretive plan for the Monument. Themes for the various visitor contact stations will be identified as well as appropriate onsite and offsite interpretation areas and topics.

SCI-6 The BLM will play a role in developing educational programs for grades Kindergarten through 12, emphasizing the area's scientific and cultural resources. The BLM will cooperate with colleges and universities in undergraduate and graduate programs as resources permit. Outreach efforts such as Monument-sponsored science publications and field schools will be incorporated into management programs to the extent possible. In addition to normal avenues for research publications (scientific journals, symposia proceedings, etc.), the BLM will help facilitate the transfer of research information to the public through periodic science forums and Monument-sponsored publications.

Management of Science and Research Activities

SCI-7 Researchers will have to comply with the decisions in this Plan. However, some science and research activities may require the use of equipment, surface disturbance, and/or personnel which could exceed the management prescriptions outlined for visitors and other users. Except where specifically prohibited (e.g., in relict plant areas, wildlife protected activity centers), the BLM will consider exceptions to the Plan prescriptions during the special-use permitting process for extremely high-value research opportunities, especially for those opportunities that may not be available elsewhere. Research projects focused on protecting resources at risk will also be considered for exceptions to zone prescriptions. The GSENM Advisory Committee will be consulted on whether research proposals which require restricted activities warrant the requested exceptions. Evaluation will consider whether the proposed research can be permitted in a manner consistent with the protection of Monument resources, and whether the methods proposed are the minimum necessary to achieve the desired research objective.

SCI-8 All research and related educational activities will require special-use permits.

SCI-9 All research will meet Monument data collection standards to be established by the Monument Manager with the advice of the GSENM Advisory Committee, and will provide information that feeds directly into the adaptive management framework.

Transportation and Access

Public Access

TRAN-1 This Plan designates the route system for the Monument. The transportation map (Map 2, in the back of the document) shows routes that will be open for public use and those available for administrative use only (see the **Administrative Routes and Authorized Users** section for related decisions). Any route not shown on Map 2 is considered closed upon approval of this Plan, subject to valid existing rights.[1] The specific routes shown open for public use are based on a variety of considerations including what is needed to protect Monument resources, implement the planning decisions, and provide for the transportation needs of surrounding communities. The basic philosophy in determining which routes will be open was to determine which routes access some destination (e.g., scenic overlook, popular camping site, heavily used thoroughfare) and present no significant threat to Monument resources. These routes will be open for public use. Routes that were not considered necessary or desirable (for resource protection purposes) will not be kept open for motorized and mechanized public access. In the event that Title 5 rights-of-way are issued or in the event of legal decisions on RS 2477 assertions, routes will be governed under the terms of these actions.

TRAN-2 Cross-country motorized travel will be prohibited in accordance with 43 CFR 8340 Off-Road Vehicle (OHV) regulations. Use on designated routes is allowed. OHV designations will be either "closed" (in the Primitive Zone) or "limited to designated routes" (in the Frontcountry, Passage, and Outback Zones) (Map 2). These designations are consistent with standard BLM designations provided for in BLM Manual 8340. Vehicles may pull off routes no more than 50 feet for parking and camping in the Outback Zone, except where prohibited (see the **Camping and Forestry Products** section for related decisions). No off-highway vehicle play areas will be designated in the Monument.

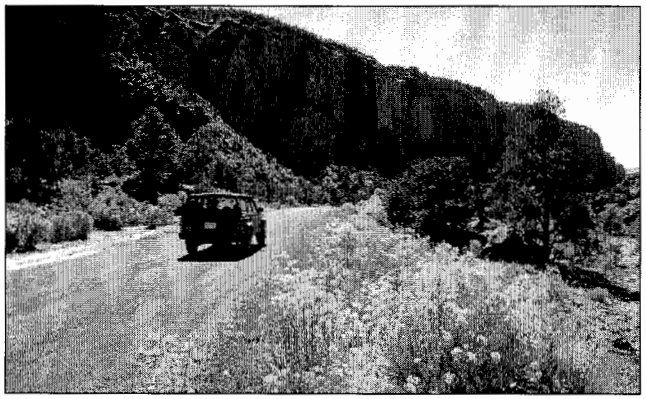
TRAN-3 Use of bicycles is limited to designated routes and cross-country travel is not allowed.

TRAN-4 Street legal motorized vehicles, including four-wheel-drive and mechanized vehicles (including bicycles), will be allowed on approximately 908 miles of routes designated open in the Frontcountry, Passage, and Outback Zones (Map 2). In order to display all open routes, this mileage number includes sections of Highways 12 and 89 within the Monument. No routes will be designated open in the Primitive Zone.

TRAN-5 Non-street legal all-terrain vehicles (ATVs) and dirt bikes will be restricted to those routes designated as open for their use. Non-street legal ATVs and dirt bikes will be allowed on approximately 553 miles of the 908 miles of routes designated open to street legal vehicles in the Frontcountry, Passage, and Outback Zones; no routes will be designated open to these vehicles in the Primitive Zone.

[1] Some government entities may have a valid existing right to an access route under Revised Statutes (R.S.) 2477, Act of June 26, 1866, ch. 262, § 8, 14 Stat. 251 [codified as amended at 43 U.S.C. § 932 until repealed in 1976 by the Federal Land Policy and Management Act of 1976 (FLPMA), Public Law 94-579, Section 706(a), Stat. 2744, 2793 (1976)], which granted "[the right-of-way for the construction of highways over public lands, not reserved for public uses.]" As described in the United States Department of Interior, Report to Congress on R.S. 2477 (June 1993), claims of rights-of-ways under R.S. 2477 are contentious and complicated issues, which have resulted in extensive litigation. See e.g, Sierra Club v. Hodel, 848 F.2d 1068 (10th Cir. 1988); Southern Utah Wilderness Alliance v. Bureau of Land Management, Consolidated Case No. 2:96-CV-836-S (D. Utah, filed Oct. 3, 1996, pending). It is unknown whether any R.S. 2477 claims would be asserted in the Monument which are inconsistent with the transportation decisions made in the Approved Plan or whether any of those R.S. 2477 claims would be determined to be valid. To the extent inconsistent claims are made, the validity of those claims would have to be determined. If claims are determined to be valid R.S. 2477 highways, the Approved Plan will respect those as valid existing rights. Otherwise, the transportation system described in the Approved Plan will be the one administered in the Monument. Nothing in this Plan extinguishes any valid existing right-of-way in the Grand Staircase Escalante National Monument. Nothing in this Plan alters in any way any legal rights the Counties of Garfield and Kane or the State of Utah has to assert and protect R.S. 2477 rights, and to challenge in Federal court or other appropriate venue, any BLM road closures that they believe are inconsistent with their rights.

TRAN-6 All zones will allow hikers, horses, and pack animals, except where noted elsewhere to protect resources.



Burr Trail (photo by Jerry Sintz)

Maintenance

TRAN-7 With the exception of those segments listed below, open routes may be maintained within the disturbed travel surface area as of the date of this Plan; no widening, passing lanes, or other travel surface upgrades could occur. Deviations from the current maintenance levels will be allowed as follows (subject to Wilderness Study Area Interim Management Policy, BLM Manual H-3550-1):

- Hole-in-the-Rock Road: Allow stabilization of washout prone areas, primarily along the southeastern end, to prevent erosion and sediment loading in drainages.
- Smoky Mountain Road: Allow stabilization in the Alvey Wash section to prevent erosion and sediment loading in drainages.
- Cottonwood Wash Road: Allow stabilization of washout prone areas, primarily along the southern section, to prevent erosion and sediment loading in drainages.
- Skutumpah Road: Allow new crossing for safety at Bull Valley Gorge, and stabilization of washout prone areas, primarily along the northern section, to prevent erosion and sediment loading in drainages.

TRAN-8 In the event that Title 5 rights-of-way are issued, or in the event of legal decisions on RS 2477 assertions, maintenance activities will be governed under the terms of those actions.

TRAN-9 The BLM will continue to work with the Utah Department of Transportation (UDOT) on issues related to route maintenance for Highways 12 and 89. This will cover maintenance and safety work activities. Any new ground disturbance will require site-specific environmental analysis.

Trails

TRAN-10 In the Frontcountry Zone, a full range of trails could be developed and maintained in order to provide opportunities for visitors.

TRAN-11 In the Passage Zone, trails could be developed and maintained where needed for protection of Monument resources or for public safety.

TRAN-12 Trails may only be developed or maintained in the Outback and Primitive Zones where necessary to protect Monument resources.

TRAN-13 The BLM will work with UDOT to explore the possibility of developing bicycle lanes or parallel bicycle routes along Highways 12 and 89.

TRAN-14 The Great Western Trail is proposed to traverse the Monument in the Grand Staircase section. The BLM is currently working with adjacent agencies to select an appropriate route through the Monument that is consistent with the objectives in this Plan. The route currently identified will be on existing routes designated open to ATVs in this Plan. This process may require further NEPA analysis.

Administrative Routes and Authorized Users

TRAN-15 The BLM will be responsible for administrative routes which will be limited to authorized users. These are existing routes that lead to developments which have an administrative purpose, where the BLM or some permitted user must have access for regular

maintenance or operation. These authorized developments include such things as powerlines, cabins, weather stations, communication sites, spring developments, corrals, and water troughs. Routes designated open for certain administrative purposes (approximately 182 miles) are shown on Map 2. Access will be strictly limited and will only be granted for legitimate and specific purposes. Maintenance will be the minimum required to keep the routes open for limited use by high clearance vehicles. If the administrative purpose of the route ceases, the route will be evaluated for closure following public notification and opportunity to comment. Authorized users could include grazing permittees, researchers, State or Federal agencies, Native American Indians accessing recognized traditional cultural properties, and others carrying out authorized activities under a permit or other authorization.

TRAN-16 Beyond the routes shown on Map 2, the BLM will work with any individual operating within the Monument under existing permits or authorizations to document where access must continue in order to allow operation of a current permit or authorization. Routes that go only to BLM range monitoring and study areas will not be maintained, but periodic vehicular access to these sites will be granted for required range monitoring uses.

Road Restoration Strategy

TRAN-17 The BLM's strategy for restoring routes that will no longer be available for public or administrative motorized use in the Monument will be phased over a period of years. This will be accomplished as rapidly as funding permits. It is anticipated that this could take as many as ten years. Each year, a percentage of the Monument's base budget will be used to restore routes in areas that are easily accessible to the public and that involve sensitive resources in immediate danger of being degraded. Generally, routes in the Frontcountry and Passage Zones will be closed first. However, there may be routes in the Outback and Primitive Zones that will be considered on a case-by-case basis.

The proposal for restoration will include:

- not repairing washed out routes
- natural barriers, such as large boulders
- dead and down wood to obscure route entry ways
- fences
- ripping up the route bed and reseeding with vegetation natural to that area
- replacing gates with a fence if area has a fence in place
- visitor education and information

Each route will be looked at individually, and the best, least intrusive method will be used based on the geography, topography, soils, hydrology, and vegetation. The first several hundred feet of select routes identified for closure could be left open to provide pull-out areas or camping opportunities, preventing new ground disturbance elsewhere.

Enforcement

TRAN-18 The BLM's strategy to keep vehicles on designated travelways will be to hire additional staff including law enforcement personnel to patrol by foot, horse, and vehicle.

TRAN-19 Maps and signs will be used to help educate the public about routes that are open and closed. The information will be on the Monument website, at the visitor centers/contact stations, and sent to the media.

TRAN-20 The BLM is pursuing cooperative agreements with the Sheriff departments in Kane and Garfield Counties to facilitate shared law enforcement and support for enforcing established closures.

TRAN-21 The BLM will continue to work with the counties, the State, the communities, and others to communicate correct information about the transportation network to the visiting public and to residents.

TRAN-22 A volunteer program that will assist in educating visitors about access and other issues will also be developed.

TRAN-23 Monument staff will be scheduled to patrol on a regular basis throughout the year. Additional patrols will be added for intense use periods.

Aircraft Operations

Congress has delegated monitoring and control of the National Airspace System to the Federal Aviation Administration (FAA). At the present time, airspace over the Monument is subject to numerous aviation regulations designed to establish a safe operating environment for all aircraft.

TRAN-24 The Department of Defense operates two Military Training Routes across the Monument. The BLM will work with the Department of Defense to ensure that military training routes are appropriate to Monument management.

TRAN-25 The BLM will work cooperatively with aircraft operators, adjacent land managing agencies, and the FAA to direct overflights to appropriate management zones.

TRAN-26 The only active airstrip inside the Monument is the New Home Bench airstrip near Boulder, which is located partially on U.S. Forest Service and partially on BLM lands. No other airstrip would be permitted in the Monument.

TRAN-27 A number of entities holding rights-of-way or permits, State agencies, and the BLM use aircraft for patrolling, monitoring, maintenance, and repair functions. Necessary aircraft operations for rights-of-way holders, permittees, and other agencies will be documented in the appropriate permit, authorization or a Memorandum of Agreement. Landing of aircraft for these purposes will be limited to the minimum necessary to meet the required maintenance or repair function.

TRAN-28 Natural ambient sound is an important component of the resource and visitor experience. Studies on the effects of noise utilizing both visitor surveys and sound measuring instruments will be completed to determine what the noise baseline is for various areas within the Monument. Studies will be coordinated for areas that border adjacent National Parks.

Utility Rights-of-Way and Communication Sites

Monument managers are committed to working with nearby communities and other land management agencies to pursue management activities which cooperatively accomplish the objectives of each agency within the constraints of Federal law.

LAND-1 The BLM will work with local communities and utility providers to identify short and long-term community needs for infrastructure which could affect Monument lands and resources.

LAND-2 Community projects which require public lands access or use will be subject to necessary project level NEPA analysis.

LAND-3 The BLM will work with the sponsor of a project to meet Monument Plan objectives for protecting resources. Alternative locations for projects will be identified when unavoidable conflicts arise. In order to protect Monument resources, such projects will be focused in appropriate zones as discussed below.

LAND-4 In general, proposals for diverting water out of the Monument will not be permitted. Exceptions could be made as discussed previously in WAT-2 of the **Water** section in this chapter.

LAND-5 In the Frontcountry and Passage Zones, communication sites and utility rights-of-way will be allowed, but will have to meet visual resource objectives (see the **Visual Resource Management** section for related decisions).

LAND-6 In the Outback Zone, communication sites and utility rights-of-way will be allowed within the constraints of the zone, where no other reasonable location exists, and will meet the visual objectives (see the **Visual Resource Management** section for related decisions).

LAND-7 In the Primitive Zone, utility rights-of-way will not be permitted. In cases of extreme need for local (not regional) needs and where other alternatives are not available, a plan amendment could be considered for these facilities in the Primitive Zone. Communication sites will only be allowed in the Primitive Zone for safety purposes and where no other alternative exists.

Rights-of-Way

LAND-8 The following criteria and/or stipulations apply to the management of all rights-of-way in the Monument where they are allowed:

1. Bury new and reconstructed utility lines (including powerlines up to 34.5 kilovolts) unless: visual quality objectives can be met without burying; geologic conditions make burying infeasible; or burying will produce greater long-term site disturbance.

2. All reconstructed and future powerlines must meet non-electrocution standards for raptors. If problems with existing powerlines occur, corrective measures will be taken.
3. Construct all powerlines using non-reflective wire. Steel towers will be constructed using galvanized steel. Powerlines will not be high-lined unless no other location exists.

4. Strobe lights will not be allowed at any communication site. Other methods will be used to meet aircraft safety requirements.

5. Communication site plans will be prepared for all existing or new sites before any new uses or changes in use occur.

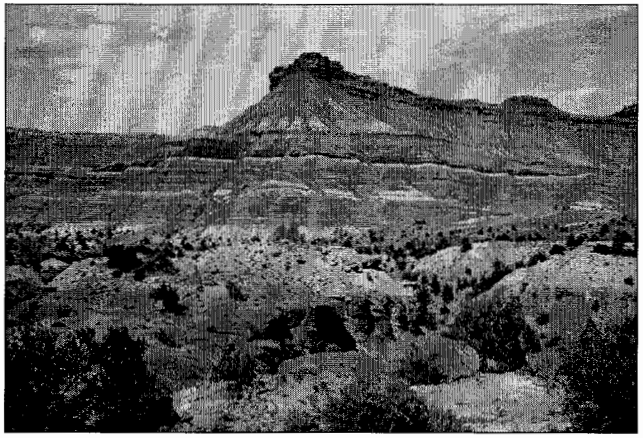
6. A Monument-wide feasibility study will be prepared to determine the most appropriate location for new communication sites.

LAND-9 Per Public Law 105-355, signed by President Clinton on October 31, 1998, a utility corridor was designated along Highway 89 in Kane County, including that portion of Highway 89 within the Monument. The utility corridor extends 240 feet north from the center line of the highway, and 500 feet south from the center line of the highway. Location of the proposed Lake Powell to Sand Hollow water pipeline within this utility corridor is a possibility. Subsequent NEPA analysis will be required.

LAND-10 The BLM will authorize only one access route to private land parcels unless public safety or local ordinances warrant additional routes. Private land owners will be required to coordinate the development of access routes across public lands in order to prevent a proliferation of routes. Rights-of-way may be allowed when necessary to exercise valid existing rights.

Valid Existing Rights and Other Existing Authorizations

The Proclamation establishing the Monument states: "The establishment of this monument is subject to valid existing tights." This sentence reflects the President's intention to honor rights that existed prior to the establishment of the Monument. Before it was established, the lands within GSENM were subject to various authorizations, some giving "rights" to the holders and some of which could be construed as providing valid, but lesser, interests.



Vermilion Cliffs (photo by Kelly Rigby)

Valid existing rights (VERs) are those rights in existence within the boundaries of GSENM when the Monument was established on September 18, 1996. Valid existing rights were established by various laws, leases, and filings under Federal law, and for leases on lands acquired by the United States from Utah, under Utah State law. This section describes such VERs within the Monument, addresses how VERs will be verified, and explains how applications and notices filed after completion of this Plan on existing mining claims will be addressed. Also addressed are the lesser interests or other authorizations that existed prior to September 18, 1996; a discussion of how those authorizations will be handled subsequent to approval of the Plan is also included.

Energy and Mineral Activities (Including Hardrock, Oil, Gas, and Coal)

The Proclamation establishing the Monument withdrew all Federal lands and interests in lands within the Monument from entry, location, selection, sale, leasing, or other disposition (except for exchanges that further the protective purposes of the Monument) under the public land laws, including the mineral leasing and mining laws. Thus, no new Federal mineral leases or prospecting permits may be issued, nor may new mining claims be located within the Monument. Authorization for activities on existing mineral leases and mining claims, according to the Proclamation, will be governed by VERs.

With respect to oil and gas leases, mineral leases, and mining claims "valid existing rights" vary from case to case, but generally involve rights to explore, develop, and produce within the constraints of laws and regulations.

Within the Monument, there are currently 68 Federal mining claims covering approximately 2,700 acres, 85 Federal oil and gas leases encompassing more than 136,000 acres, and 18 Federal coal leases on about 52,800 acres. Newly acquired Utah School and Institutional Trust Lands Administration (SITLA) mineral and oil and gas leases are discussed below in the section titled **Acquired School and Institutional Trust Lands**.

VER-1 The BLM will verify whether VERs are present in each of these cases by periodically reviewing the files related to existing mining claims and leases. This will help ensure that required actions, filings, and fees are in full compliance with the law. This process, known as adjudication, will continue for the life of each VER. With regard to mining claims and millsites located under the Mining Law of 1872, the BLM will initiate a validity examination process to verify the VERs of claimants before such claimants conduct surface disturbing activities greater than casual use. Valid mining claims require existence on September 18, 1996, of a discovery of a valuable mineral deposit, as well as a continuing discovery to the date of the validity examination and thereafter. For previously approved operations, the BLM will conduct validity examinations. For new proposals, except as described in the next sentence, the BLM will (1) withhold approval of plans of operations under 43 CFR 3802 or 3809 until the validity examination process is complete and the claims are determined to be valid; and (2) inform persons who have written the BLM that they intend to commence notice-level operations under 43 CFR 3809 that such operations cannot commence until the BLM completes its validity examination process and has verified that there are VERs. Until the validity examination process is complete, the BLM may allow notice-level operations or approve a plan of operations under 43 CFR 3809 for operations on unreclaimed previously disturbed areas, which are limited to taking samples to confirm or corroborate mineral exposures that are physically disclosed and existing on the mining claim. BLM may deny plans of operations without the performance of a validity examination if such denial is consistent with BLM regulations and policy.

In addition, VERs may be examined in the field for compliance with laws and regulations. The BLM will continue to monitor oil and gas activities through its Inspection Program.

Once a VER is verified, the process used to address applications or notices filed under that VER (such as an application to drill on an oil or gas lease, or a plan of operations or notice filed on a mining claim) will vary by commodity and regulation. However, for all applications and notices, the BLM will use a NEPA analysis to determine potential impacts on the Monument resources that this Plan is required to protect. Once such analysis

is completed, the BLM will take the following actions on a case-by-case basis:

1. If the analysis indicates no impact to Monument resources, or indicates impacts to resources, but determines that the impacts are consistent with the Proclamation and this Plan, the proposed operation can proceed in accordance with applicable regulations, standards and stipulations.

2. If analysis and documentation indicate that, under the laws, regulations, and stipulations discussed above, a proposal may have impacts that are not in conformance with the Proclamation and this Plan, the BLM will take the following actions on a case-by-case basis:
   A. Work with the applicant to find alternatives or modifications to the proposal that will either:
      1. Cause no adverse impacts to Monument resources, or
      2. Minimize such impacts through special stipulations or other permit conditions, consistent with the applicant's rights.
   B. If unable to prevent or minimize adverse impacts as described in 2(A), disapprove the proposed action if disapproval is consistent with the applicants' rights. For persons with rights within WSAs within the Monument, the BLM will also be guided by its July 5, 1995, Interim Management Policy and Guidelines for Lands Under Wilderness Review.

Other Existing Rights or Interests

There are situations, unrelated to minerals, in which the BLM has authorized some use of public land, or has conveyed some limited interest in public land. The authorization may be valid, existing when the Monument was designated, and may convey some "right" or interest. Many rights-of-way[2], easements[3], and leases[4] granted on public land are in this category. They vary from case-to-case, but the details of each one are specified in the authorizing document.

VER-2 These authorizations, where they are valid and existed when the Monument was established, will be recognized in the Monument and their uses will be allowed subject to the terms and conditions of the authorizing document. Where these uses conflict with the protection of Monument resources, and where legally possible, leases, permits, or easements will be adjusted to eliminate or minimize adverse impacts.

VER-3 The Materials Act of 1947 specifically excludes the disposal of mineral materials from National Monuments. As a result, free use permits or contracts for mineral materials authorized under this Act will not be renewed.

VER-4 Some mineral material sites are authorized under Title 23 U.S.C. Section 107 (1998), which provides for the appropriation of lands or interests in lands for highway purposes. Unlike free use permits or contracts for sale of mineral materials that are issued for a fixed term, Title 23 rights-of-way continue indefinitely. The BLM does not resume jurisdiction over the land covered by the rights-of-way until the lands are returned to the BLM upon a determination by the Federal Highway Administration that the need for the material no longer exists. Existing Title 23 rights-of-way within the Monument are inconsistent with the protection of Monument resources. The BLM will request closure of those sites from the Federal Highway Administration and will work with the Federal Highway Administration to find suitable replacement sources of mineral material.

[2] A "right-of-way" refers to the public lands authorized to be used or occupied pursuant to a right-of-way grant. A right-of-way grant authorizes the use of a right-of-way over, upon, under or through public land for construction, operation, maintenance and termination of a project (from 43 U.S.C. Section 1761-1771, 43 CFR Ch. II, 2800.0-5).

[3] An easement is a non-possessory, non-exclusive interest in land which specifies the rights of the holder and the obligation of the Bureau of Land Management to use and manage the lands in a manner consistent with the terms of the easement (43 U.S.C. 1732, 1733, 1740; 43 CFR 2920.0-5).

[4] A lease is an authorization to possess and use public land for a fixed period of time (43 CFR 2920.0-5).

Non-Federal Land Inholdings

There are approximately 15,000 acres of private land within the boundary of the Monument. They are not Monument lands, but their presence has implications for Monument lands, because landowners generally have rights to reasonable access to their lands across public lands. The Proclamation does not alter that.

VER-5 Owners of non-Federal land surrounded by public land managed under FLPMA are entitled to reasonable access to their land. Reasonable access is defined as access that the Secretary of the Interior deems adequate to secure the owner reasonable use and enjoyment of the non-Federal land. Such access is subject to rules and regulations governing the administration of public land.[5] In determining reasonable access, the BLM has discretion to evaluate and will consider such things as proposed construction methods and location, reasonable alternatives, and reasonable terms and conditions as are necessary to protect the public interest and Monument resources.

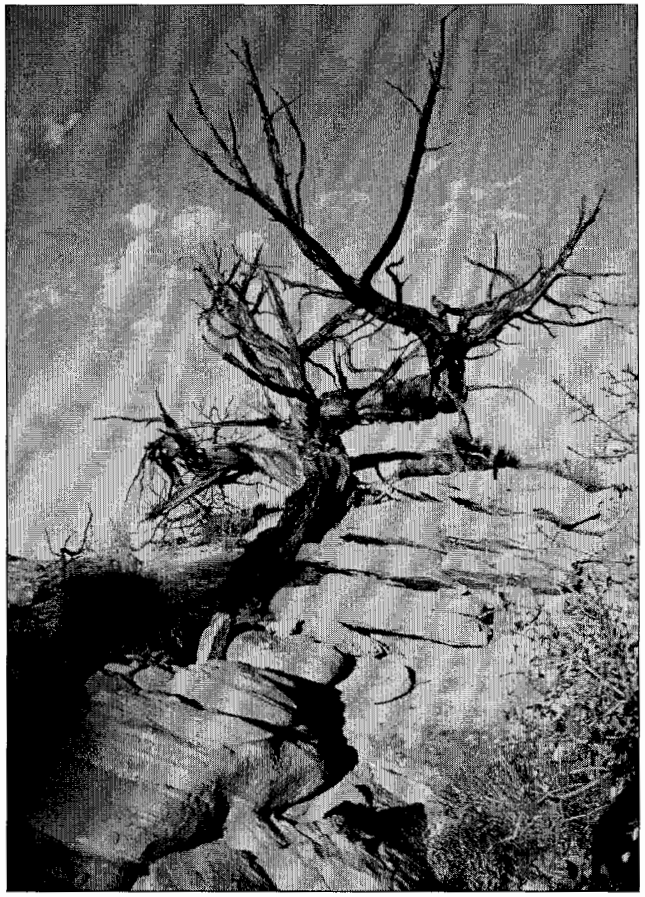
VER-6 The BLM will consider land exchanges and acquisitions so long as the current owner is a willing participant and so long as the action is in the public interest, and is in accordance with other management goals and objectives of this Plan. The action must also result in a net gain of objects and values within the Monument, such as wildlife habitat, cultural sites, riparian areas, live water, threatened or endangered species habitat, or areas key to the maintenance of productive ecosystems. The action may also meet one or more of the following criteria:

- ensures the accessibility of public lands in areas where access is needed and cannot otherwise be obtained;
- is essential to allow effective management of public lands;
- results in the acquisition of lands which serve a National priority as identified in National policy directives.

All land exchanges and acquisitions will be subject to VERs as determined by the BLM.

Other Land Use Authorizations

VER-7 There are a variety of other land use authorizations which were in effect at the time of the Proclamation, and which, although they involve no "rights," are being



Snags (photo by Jerry Sintz)

[5] Alaska National Interest Lands Conservation Act of 1980 (16 U.S.C. 3210). The courts have found that this provision applies nationally. Also found in BLM Manual 2800.06B.

continued in the Monument. Outfitter and guide permits are an example. These permits authorize certain uses of public land for a specified time, under certain conditions, without conveying a right, title, or interest in the land or resources used. Such permits will be recognized in the Monument and fulfilled subject to the terms and conditions of the authorizing document. If at any time it is determined that an outfitter and guide permit, other such permit, or any activities under those permits, are not consistent with the Approved Monument Management Plan, then the authorization will be adjusted, mitigated, or revoked where legally possible.

VER-8 Grazing permits are also in this category. Grazing permits or leases convey no right, title, or interest in the land or resources used. Although the Proclamation specifically mentions livestock grazing, it does not establish it as a "right" or convey it any new status. The Proclamation states that "grazing shall continue to be governed by applicable laws and regulations other than this proclamation," and says that the Proclamation is not to affect existing permits for, or levels of, livestock grazing within the Monument. Other applicable laws and regulations govern changes to existing grazing permits and levels of livestock grazing in the Monument, just as in other BLM livestock grazing administration programs. Management of livestock grazing is addressed previously in the Livestock Grazing section of this chapter.

Acquired School and Institutional Trust Lands

On October 31, 1998, President Bill Clinton signed into law the Utah Schools and Lands Exchange Act of 1998 (Public Law 105-335), ratifying a May 8, 1998 Agreement to Exchange Utah School Trust Lands Between the State of Utah and the United States of America (Agreement). Under this Act, the State inholdings within the Monument were transferred to the United States, along with the mineral interest on approximately an additional 24,000 acres. The lands contain numerous interests of varying types (e.g., leases, permits, licenses) held by third parties. The conveyance occurred on January 8, 1999. Section 5(A) of the Agreement provides that any lands and interests in lands acquired by the United States within the exterior boundaries of Grand Staircase-Escalante National Monument under the Agreement shall become part of the Monument and shall be subject to all laws and regulations applicable to the Monument.

The conveyance by the State of Utah to the United States was subject to all VERs, existing authorizations, and other interests outstanding in third parties found acceptable under the Attorney General's title regulations, including:

- valid existing water rights owned by private parties;
- all leases, permits, and contracts for grazing of domestic livestock, and the related terms and conditions of the State's user agreements;
- title to, or any interest in, any range improvement held by any private party on such lands;
- all rights-of-way and special use agreements; and
- existing surface and mineral leases.

The Agreement provides express assurances that the United States will accept the transferred lands subject to VERs found acceptable under the Attorney General's title regulations. Specifically, Section 6 makes clear that nothing contained in the Agreement will impair valid existing water rights owned by private parties. All terms and conditions of existing State grazing permits will be honored. Moreover, ranchers who rely on the State section to meet Federal base property requirements for Federal grazing permits will be able to continue to use the former State section to qualify as base property. The agreement also includes a provision ensuring that nothing expands or diminishes pre-existing rights-of-way under State or Federal law. Finally, mineral leases will remain in force and subject to their existing terms.

VER-9 The BLM will be acting in place of the State in administering all valid existing authorizations for the remainder of the applicable term in accordance with State laws and regulations. As part of such administration, BLM decisions will be subject to those Federal laws which are ordinarily attached to Federal decisions (e.g., the National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act). Renewal of any lease, permit, or contract will occur if provided for under the terms of the lease, permit, or contract. Upon expiration of any grazing lease or permit, the holder shall be entitled to a

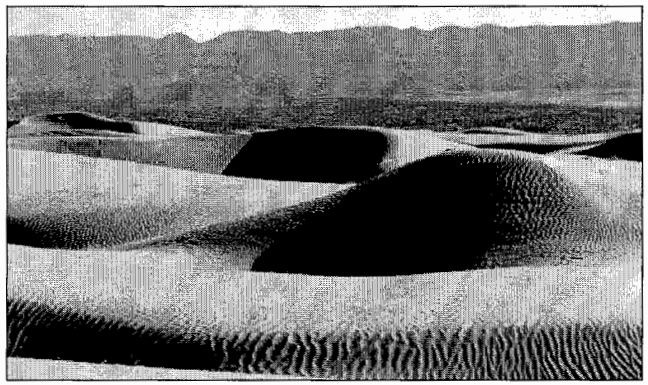
preference right to renew such lease or permit to the extent provided by Federal law. This provides a priority to the holder of the expiring lease or permit against other applicants, but does not guarantee that a renewal will occur. [Public Lands Council v. Babbitt, 158 F.3rd 1160, 1171 (10th Cir 1998)]

Vending

VEND-1 Vending within the Monument will be occasional, infrequent, and may be allowed by permit on a case-by-case basis in the Frontcountry and Passage Zones, in association with approved special events or recreation sites. Generally, permits could be issued to provide services needed at recreation sites (such as firewood sales at campgrounds) and services that are commonly offered in conjunction with permitted special events. Criteria and/or stipulations to protect Monument resources will be included in all permits. Concessionaire sales and on-going vending permits are not included in this provision, except where contracts between concessionaires and the Monument are used to provide services to visitors in the Frontcountry and Passage Zones.

VEND-2 Vending will not be allowed in the Outback or Primitive Zones.

VEND-3 The BLM will work with UDOT to regulate vendors along Highways 12 and 89.



Dunes (photo by Jerry Sintz)

Water-Related Developments (Non-Culinary)

WDEV-1 Water developments can be used as a management tool throughout the Monument for the following purposes: better distribution of livestock when deemed to have an overall beneficial effect on Monument resources, including water sources or riparian areas, ot to restore or manage native species or populations. They can be done only when a NEPA analysis determines this tool to be the best means of achieving the above objectives and only when the water development would not dewater streams or springs. Developments will not be permitted to increase overall livestock numbers. Maintenance of existing developments can continue, but may require NEPA analysis and must be consistent with the objectives of this Plan.

Wildfire Management

FIRE-1 Vegetation in the Monument generally evolved with fire as a minor part of the ecosystem, as is evident from the flora and soil characteristics. Periodic fires did occur in the Monument, but little information is known about the frequency or size of these fires. The objective of the fire management program will be to allow fire to play its natural role in the ecosystem. Management ignited fires may be initiated in areas where fire suppression has disrupted natural fire regimes. Decisions relating to the use of management ignited fire as a tool are found in the Vegetation Restoration Methods section of this chapter. Specific objectives for management ignited fire will be developed prior to its use and with recommendations from the GSENM Advisory Committee.

FIRE-2 For all fire activities, the Monument is part of the Color Country Interagency Fire Management Area. This area includes Iron, Washington, Beaver, Kane, and Garfield Counties in Utah, and the BLM Arizona Strip Field Office lands of Mohave County in Arizona. This area was established to share resources in southwestern Utah and northwestern Arizona. An operating plan outlining agency responsibilities and organizational structure for suppression activities is updated annually.

Specific zoned areas and policies have been established to indicate how suppression activities will be managed in specific areas of the Monument. Most of the Monument is included in zones that have little fire suppression activity. Some full suppression zones occur within the Monument, found in areas where protection of structures and property are a concern. Protection of other resources is fully integrated into the fire management strategies for all of the zones in southern Utah and northern Arizona. Changes in specific zone strategies may be updated on an annual basis to assure appropriate action is taken for fire suppression in a given area. All changes in zones and activities will be coordinated with the Color Country Fire Management Area staff following established processes.

FIRE-3 Heavy equipment use is allowed through authorization of the Monument Manager.

FIRE-4 A designated fire resource advisor familiar with WSA issues will be consulted on all fires within the Monument that involve WSAs.

Wildlife Services

WS-1 Wildlife Services (formerly Animal Damage Control) activities within the Monument will be limited to the taking of individual coyotes within the immediate vicinity after verified livestock kills, where reasonable livestock management measures to prevent predation had been taken and had failed. Reasonable livestock management measures could include preventative measures to control predation, such as managing where calving occurs, in order to develop improved land management practices.

WS-2 No traps, poisons, snares, or M44s will be allowed in the Monument due to safety concerns and potential conflicts with Monument resources.

WS-3 Consistent with the Proclamation, the above provisions do not diminish the responsibility and authority of the State of Utah for management of fish and wildlife. These provisions apply to the operations of the Animal and Plant Health Inspection Service (Wildlife Services) agency and are taken under the terms of the national agreement between the BLM and Wildlife Services, which states that "APHIS-ADC shall conduct activities on BLM lands in accordance with APHIS-ADC policies, wildlife damage management plans, applicable State and Federal laws and regulations, and consistent with BLM Resource or Management Framework Plans." Control actions taken by the State of Utah, or actions taken under State law by private citizens are not affected by this provision.

Withdrawal Review

The Proclamation establishing the Monument states: "All Federal lands and interests in lands within the boundaries of this Monument are hereby appropriated and withdrawn from entry, location, selection, sale, leasing, or other disposition under the public land laws..." The Proclamation also states: "Nothing in this Proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the National Monument shall be the dominant reservation." This statement refers to any lands within the Monument that have been removed or withdrawn from operation under some or all of the public land laws (such as mining and/or mineral leasing laws) by statute or Secretarial order prior to the Proclamation. These withdrawals were imposed to achieve a variety of purposes, and they remain in effect until specifically revoked, or otherwise expire. Many were established priot to the enactment of FLPMA in 1976. Table 1 summarizes all existing withdrawals in the Monument.

Table 1. Withdrawals/Classifications

Number	Type	Acres
248	Public Water Reserves	12,035
10	Reclamation Withdrawals	17,496
3	Recreation Classifications	7,940
1	Withdrawal for Federal Energy Regulatory Commission (FERC) Project #2219	132
1	Withdrawal for FERC Project #2642	57
1	Wolverine Petrified Wood Area	1,520
1	Escalante Canyons Outstanding Natural Area (ONA)	1,160
1	Devils Garden ONA	640
1	North Escalante Canyon ONA	5,800
1	The Gulch ONA	3,430
1	Phipps-Death Hollow ONA	34,300
1	Calf Creek Recreation Area	5,835
1	Deer Creek Recreation Area	640
1	Dance Hall Rock Historic Site	640

WR-1 The BLM will continue to review withdrawals within the Monument to determine their consistency with the intent of the withdrawal. Any withdrawals no longer meeting their intended purpose will be terminated under Section 204 (l) of FLPMA.

Where appropriate, existing withdrawals could also be modified or revoked under Section 204 (a) of FLPMA to implement the objectives of this Plan.

Special Emphasis Areas

This section describes decisions for special emphasis areas such as Wilderness Study Areas and for special management tools such as Visual Resource Management. Like the decisions described throughout the rest of this chapter, these decisions are designed to contribute to the overall management direction and resource objectives in this Plan.

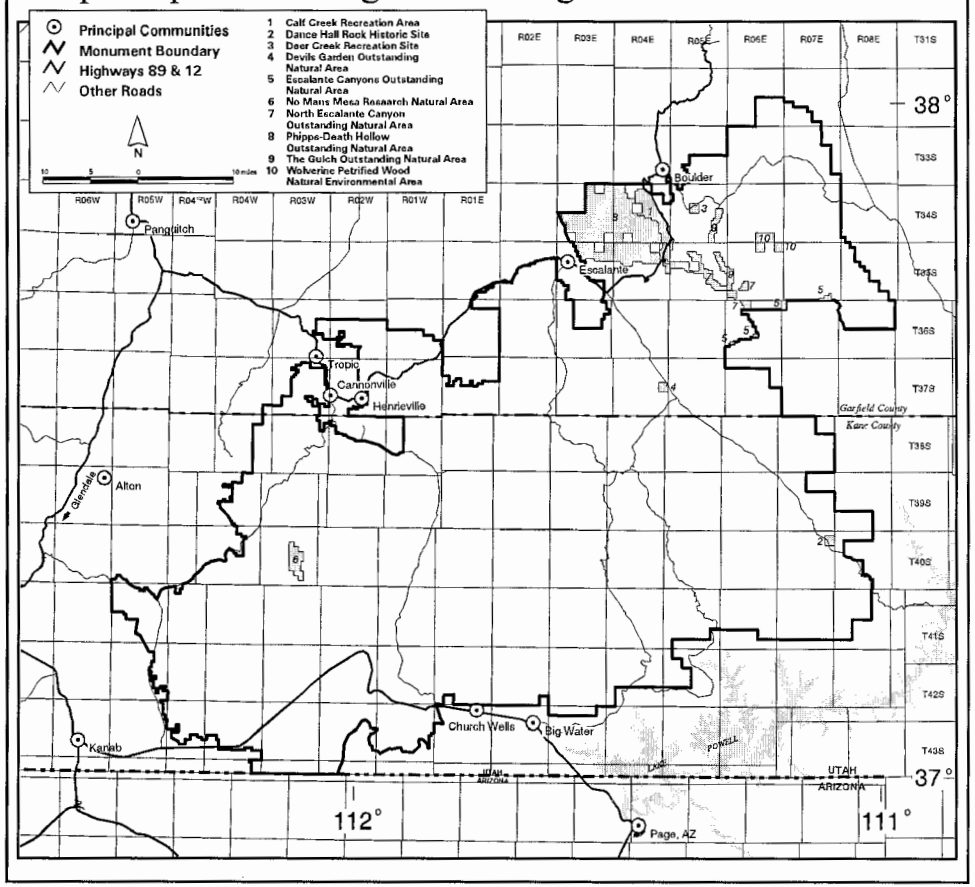
Areas of Critical Environmental Concern

ACEC-1 No Areas of Critical Environmental Concern (ACECs) are designated in the Monument Management Plan. After careful evaluation of the resources recognized in ACEC nominations, it was determined that their protection will be substantially equivalent under either Monument authority or ACEC designation.

Special Management Designations

SMA-1 All existing special management designations are consistent with the Proclamation and the objectives of this Plan. The following designations (Map 4) will continue:

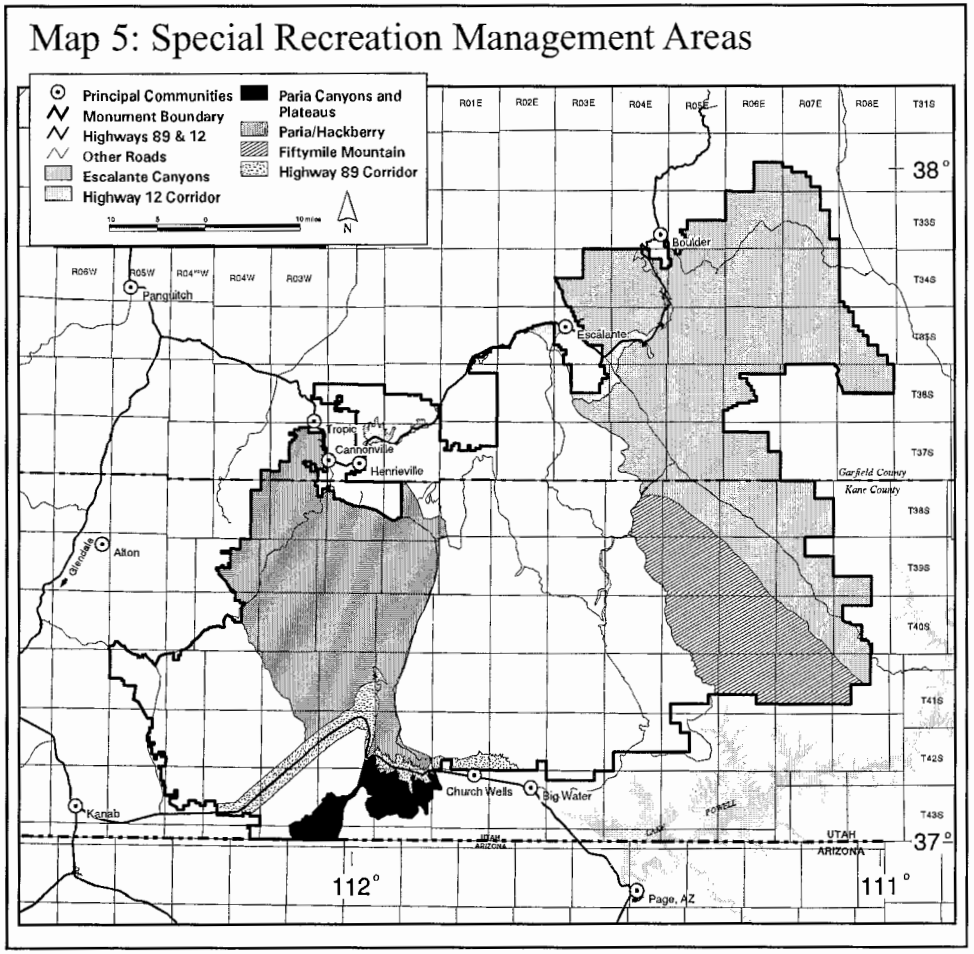
Map 4: Special Management Designations



- Calf Creek Recreation Area
- Deer Creek Recreation Site
- Devils Garden Outstanding Natural Area
- Dance Hall Rock Historic Site
- Escalante Canyons Outstanding Natural Area (tracts 2, 3, 4 are included in North Escalante Canyon/The Gulch ISA and Tract 1 and 5 are separate)
- North Escalante Canyon Outstanding Natural Area
- The Gulch Outstanding Natural Area
- Phipps-Death Hollow Outstanding Natural Area
- No Mans Mesa Research Natural Area
- Wolverine Petrified Wood Natural Environmental Area

Special Recreation Management Areas

Special Recreation Management Areas (SRMA) are areas where more intensive recreation management may be needed because the area will be a focal point for visitation (Highway 12 and 89 corridors) or because recreational uses within the area need to be closely managed or limited to prevent conflicts with Monument resources (Escalante Canyons, Paria/Hackberry, and Fiftymile Mountain).



SRMA-1 The Escalante Canyons, Paria/Hackberry, and Paria Canyons and Plateaus will continue to be managed as Special Recreation Management Areas. Fiftymile Mountain, the Highway 12 Corridor, and the Highway 89 Corridor will also be SRMAs (Map 5). Management objectives for these areas are outlined below. Management of these areas will be accomplished through subsequent integrated activity plans as discussed in Chapter 3.

SRMA-2 Escalante Canyons SRMA

The boundary of this SRMA will follow the geographical

topography including all the tributaries to the main Escalante Canyon. It will include trailheads for all the popular routes into the canyons. Activities in this SRMA include backpacking, canyoneering, non-motorized boating, and equestrian use. The overall recreation experience will continue to be primitive, uncrowded, and remote. Overall social encounters will remain low compared to other southwest canyon hiking opportunities. However, a range of social encounters will be available. Potential permit systems could address general public, commercial, and administrative users.

SRMA-3 Paria/Hackberry SRMA

This area is bordered on the west by Kitchen Canyon Road, on the east by Cottonwood Canyon Road corridor, on the south by the confluence of Hackberry/Cottonwood Creeks and the Paria River, and on the north by Dixie National Forest, excluding the Skutumpah corridor. Activities in this SRMA include backpacking, canyoneering, and equestrian use. The overall recreation experience will continue to be primitive, uncrowded, and remote. Equestrian opportunities will be emphasized in Paria Canyon, while backpacking opportunities will be emphasized in Hackberry Canyon. Potential permit systems could address general public use and commercial users.

SRMA-4 Paria Canyons and Plateaus SRMA

This area encompasses Buckskin Mountain, West Clark Bench, and Cedar Mountain to connect to the BLM Arizona Strip's "Canyons and Plateaus of the Paria Resource Conservation Area." These areas are located south of Highway 89, with the Monument boundary marking the east boundary. Activities in this SRMA include canyoneering, equestrian use, backpacking, hiking, hunting, and scenic touring along the House Rock Valley Road. The overall recreation experience will continue to be primitive, uncrowded and remote. Overall social encounters will remain low compared to other southwest canyon hiking opportunities. However, a range of social encounters occur. Management of this SRMA will be in coordination with the Kanab and the Arizona Strip Field Offices.

SRMA-5 Fiftymile Mountain SRMA

This areas includes the geographical area called Fiftymile Mountain including trail access points. Activities in this SRMA include equestrian use, backpacking, and hunting. The recreation experience will be primitive, uncrowded, and remote. Visitors will not be encouraged to go to this area and commercial outfitting will be extremely limited.

SRMA-6 Highway 12 Corridor SRMA

This area encompasses the Highway 12 corridor located in the Monument, including the Calf Creek Campground and Interpretive Trail. Activities in this SRMA include scenic driving, day-use hiking, camping, equestrian use, road bicycling, scenic and interpretive viewing. The recreation experience will focus on learning about geology, history, archaeology, biology, and paleontology, in addition to scenic viewing. Short interpretive trails and scenic overlooks will be developed to encourage visitors to learn more about these Monument resources. Opportunities will accommodate all visitors. Information stations located in Boulder, Escalante, and Cannonville will disseminate educational materials to further information about these resources.

SRMA-7 Highway 89 Corridor SRMA

This area encompasses the Highway 89 corridor within the Monument, including the Paria Movie Set, the old Pahreah townsite, and the Paria Contact Station. Activities in this SRMA include scenic driving, day-use hiking, camping, road and mountain bicycling, scenic and interpretive viewing. The recreation experience will focus on learning about geology, history, archaeology, biology, and paleontology, in addition to scenic viewing. Short interpretive trails and scenic overlooks will be developed to encourage visitors to learn more about these Monument resources. Opportunities will accommodate all visitors. This corridor will be coordinated with the Vermilion Cliffs Highway Project.

Visual Resource Managment

The wealth of landforms, geology, colors, elevation changes, and vegetation types in the Monument contribute to its outstanding scenery. The BLM's objective will be to preserve these spectacular scenic assets in "this high, rugged, remote region, where bold plateaus and multi-hued cliffs run for distances that defy human perspective..." (Proclamation 6920, 1996)

Visual Resource Management (VRM) will be used as one tool to meet this objective (other visual resource requirements are discussed below). An inventory of visual resources, using the procedures specified in the BLM's Visual Resource Inventory Manual H-8410-1, was updated after the Monument was established. The updated visual inventory classes were developed using higher sensitivity ratings due to the high visibility and sensitivity of visual resources in the Monument.

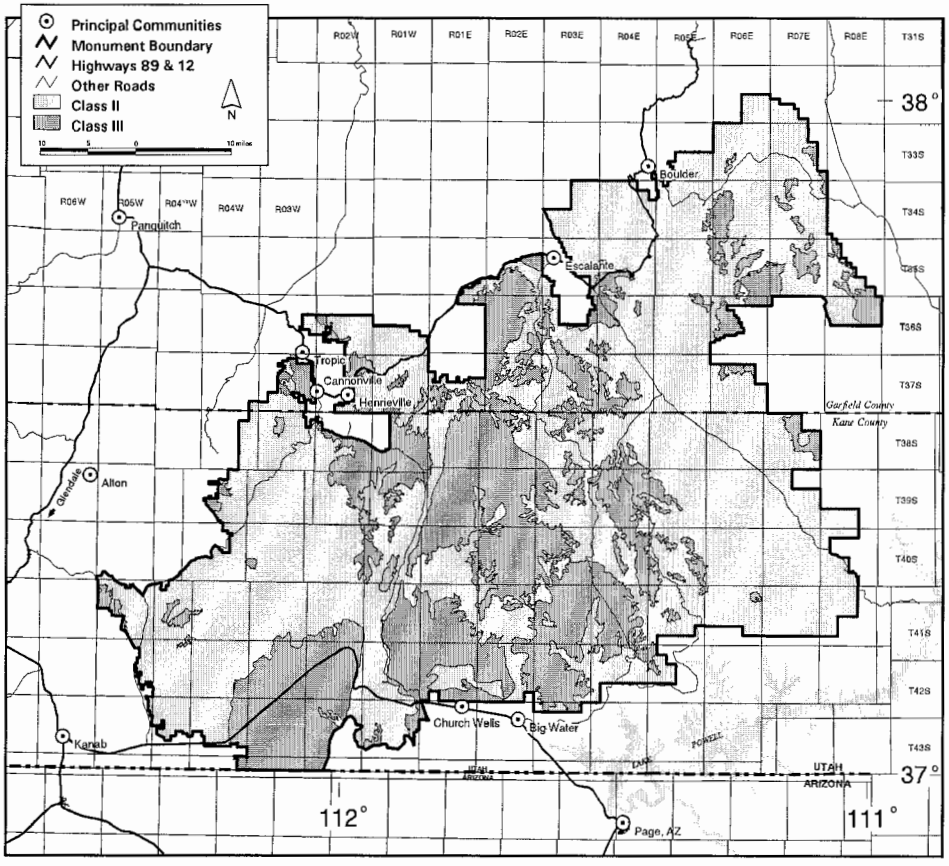
VRM-1 Utilizing the results of the visual resource inventory and other resource allocation considerations, 68 percent of the lands within the Monument will be assigned to VRM Class II and 32 percent of the lands within the Monument will be assigned to VRM Class III, as shown on Map 6.

The VRM class objectives are as follows:

Class II: The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must tepeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III: The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.

Map 6: Visual Resource Management Classes



Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the landscape.

VRM-2 All proposed actions must consider the importance of visual values and must minimize the impacts the project may have on these values. While performing an environmental analysis for projects, the visual resource contrast rating system will be utilized as a guide to analyze potential visual impacts of the proposal. Projects will be designed to mitigate impacts and conform to the assigned VRM Class objective and other objectives including: (1) using natural or natural appearing material as a priority, (2) meeting restoration/revegetation objectives, and (3) complying with the Monument Facilities Master Plan.

VRM-3 Some types of projects such as valid existing rights, or ingress to private land may be allowed on a case-by-case basis in Class II or III areas. Visual resource impacts in these instances will be minimized by such measures as screening, painting, project design, relocation, or restoration.

VRM-4 The Monument Manager may allow temporary projects, such as research projects, to exceed VRM standards in Class II and III areas, if the project terminates within two years of initiation. Rehabilitation will begin at the end of the two year period. During the temporary project, the Manager may require phased mitigation to better conform with prescribed VRM standards.

VRM-5 The VRM classes acknowledge existing visual contrasts. Existing facilities or visual contrasts will be brought into VRM class conformance to the extent practicable when the need or opportunity arises (i.e., rights-of-way renewals, mineral material site closures, abandoned mine rehabilitation).

VRM-6 If areas are designated as Wilderness or designated a wild section of a National Wild and Scenic River, they will be reassigned to VRM Class I.

Wild and Scenic Rivers

WSR-1 Approximately 252[6] miles of river segments have been determined suitable and will be recommended for Congressional designation into the National Wild and Scenic River System (NWSRS). The suitable river segments include: Escalante River 1, 2, 3; Harris Wash; Lower Boulder Creek; Slickrock Canyon; Lower Deer Creek 1, 2; The Gulch 1, 2, 3; Steep Creek; Lower Sand Creek and tributary Willow Patch Creek; Mamie Creek and west tributary; Death Hollow Creek; Calf Creek 1, 2, 3; Twenty-five Mile Wash; Upper Paria River 1, 2; Lower Paria River 1, 2; Deer Creek Canyon; Snake Creek; Hogeye Creek; Kitchen Canyon; Starlight Canyon; Lower Sheep Creek; Hackberry Creek; Lower Cottonwood Creek; and Buckskin Gulch. The suitable segments are shown on Maps 7 and 8. Rationale for suitability determinations for all segments are found in Appendix 4.

WSR-2 Those streams found suitable will be managed for protection of the resources associated with the stream. Such action will not entail any additional state water rights and will not result in a Federal reserved water right unless Congress acts to officially designate the stream or stream segment as part of the NWSRS. Upon such designation, if any, the Federal reserved water right thus established would, by law, be established with the priority date of the designation and would be junior to all preexisting water rights, in accordance with the existing state priority system. Senior rights in any stream designated would be unaffected.

WSR-3 River segments determined non-suitable will be managed under the direction and prescriptions of this Plan.

[6] The 223 mile figure that was reported in the Proposed Plan/FEIS was incorrect. The figure in the Proposed Plan should have been 252, the same as the number reported in this Plan.

Wilderness Study Areas

Wilderness preservation is part of the BLM's mandate. Pursuant to this mandate, certain areas within the Monument have been identified for Wilderness review. The purpose of these areas, referred to as Wilderness Study Areas (WSAs), is to protect potential wilderness values until further study is completed, recommendations on their suitability for Wilderness designation are made, and legislation takes effect to designate them as part of the National Wilderness Preservation System or release them from further study or protection.

The Monument contains 16 WSAs, totaling approximately 881,997 acres[7], or about 47 percent of the BLM acres in the Monument (Table 2 and Map 9). These WSAs were identified in a 1978-80 inventory as having wilderness character and thus worthy of further study to determine their suitability for designation as part of the National Wilderness Preservation System. In 1990, the Utah Statewide Final Environmental Impact Statement analyzed the suitability of the WSAs for designation, and in 1991, the Utah Statewide Wilderness Study Report made suitability recommendations to Congress. Further recommendations on wilderness suitability are outside the scope of this Plan.

Table 2. Wilderness Study Areas

Name	Acres*
Phipps-Death Hollow Instant Study Area (ISA)	42,731
Steep Creek Wilderness Study Area (WSA)	21,896
North Escalante Canyons/The Gulch ISA	120,204
Carcass Canyon WSA	47,351
Scorpion WSA	35,884
Escalante Canyons Tract 1 ISA	360
Escalante Canyons Tract 5 ISA	760
Devils Garden ISA	638
The Blues WSA	19,030
Fiftymile Mountain WSA	148,802
Death Ridge WSA	63,667
Burning Hills WSA	61,550
Mud Spring Canyon WSA	38,075
The Cockscomb WSA	10,827
Paria/Hackberry and Paria/Hackberry 202 WSA	135,822
Wahweap WSA	134,400

* WSA/ISA acres are total BLM acres from the Utah Statewide Wilderness Study Report, October 1991.

Total acres reported elsewhere in this Plan were generatedby a Geographic Information System (GIS) and may vary from those reported here.

In response to an ongoing debate over whether additional lands in Utah should have been designated for wilderness study as part of the original inventory process under section 603 of FLPMA, a subsequent inventory of BLM lands was begun in 1996 and was completed in early 1999. This effort inventoried areas covered in proposed legislation before Congress at that time (HR 1500 and HR 1745). Out of 3.1 million acres inventoried, the BLM found 2.6 million acres with wilderness characteristics (in addition to the existing WSAs in the State), of which 457,049 acres are within the Monument. In March 1999, the BLM began a planning process under Section 202 of FLPMA to consider whether to include any of these additional lands in new Section 202 WSAs. The 202 process is being carried out separately from the planning process for the Monument. Thus, recommendations on wilderness suitability for these areas are beyond the scope of this Plan.

WSA-1 Existing WSAs in the Monument will be managed under the BLM's Interim Management Policy (IMP) and Guidelines for Lands Under Wilderness Review (BLM Manual H-8550-1) until legislation takes effect to change their status. The major objective of the IMP is to manage lands under wilderness review in a manner that does not impair their suitability for designation as wilderness. In general, the only activities permissible under the IMP are temporary uses that create no new surface disturbance nor involve permanent placement of structures. Temporary, non-disturbing activities, as well as activities governed by valid existing rights, may generally continue in WSAs.

WSA-2 Actions allowed under the IMP will also be subject to other BLM laws and policies that govern the use of public land, including management prescriptions or other restrictions developed in this Plan (where they are consistent with the IMP). It is important to note that some uses and activities described in this Plan may not

[7] The reported WSA acres differ between the FEIS and this Plan because split estate acres (i.e. where the BLM owns the surface rights and another party owns the subsurface rights) were mistakenly not reported in the FEIS.

be achievable under the IMP. Where conflicts occur between the zone prescriptions and IMP, IMP will take precedence until action is taken by Congress to either designate the WSAs as Wilderness or release them from further protection. This Plan and zone prescriptions will apply to all public land within the Monument if Congress releases them from WSA status.

Cooperation and Consultation

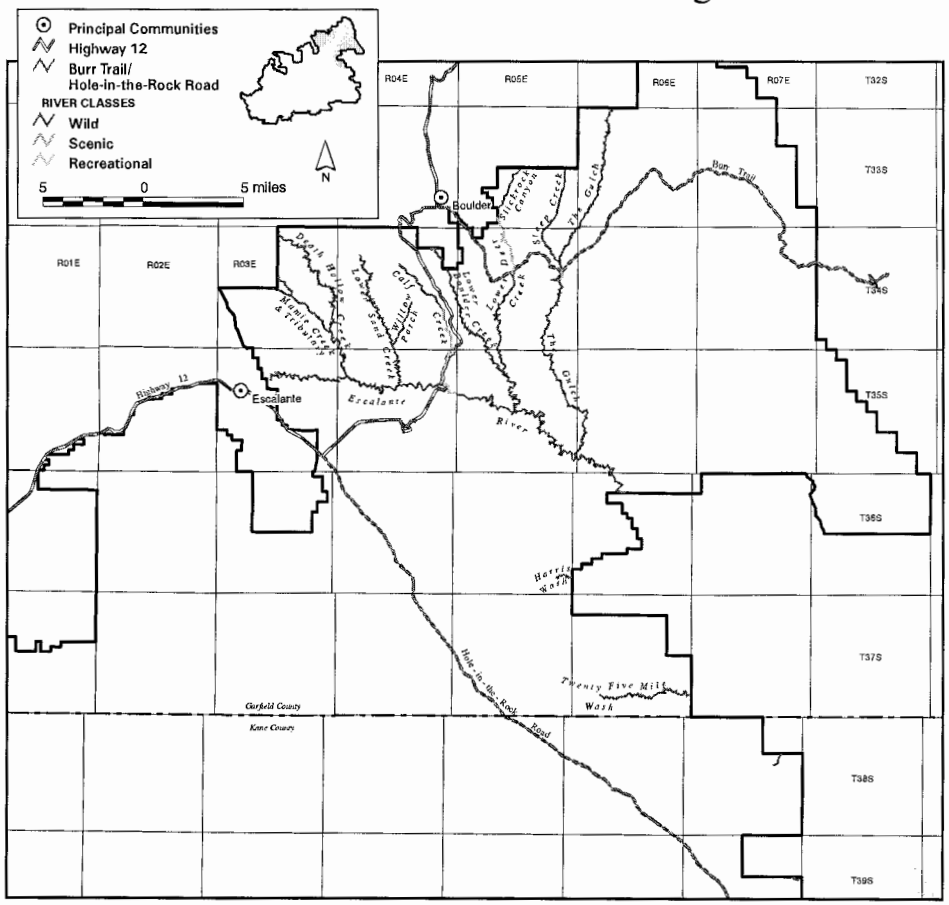
The BLM recognizes that social, economic, and environmental issues cross land ownership lines. Extensive cooperation during the planning stage and beyond is also needed to address issues of mutual interest. In keeping with the concepts brought forward in the implementation and adaptive management framework in Chapter 3, the BLM will also engage in a collaborative management process throughout implementation of this Plan.

Cooperation with Communities, State and Federal Agencies

COMM-1 The BLM will form innovative partnerships with local and State governments, Native American Indian tribes, qualified organizations, and appropriate Federal agencies to manage lands or programs for mutual benefit consistent with the goals and objectives of this Management Plan.

COMM-2 The BLM will work with communities, counties, State and other Federal agencies, and interested organizations in seeking nontraditional sources of funding including challenge cost-share programs, grants, in-kind contributions, and allowable fee systems to support specific projects needed to achieve Plan objectives.

Map 7: Escalante Drainage
Wild and Scenic Rivers Suitable Segments

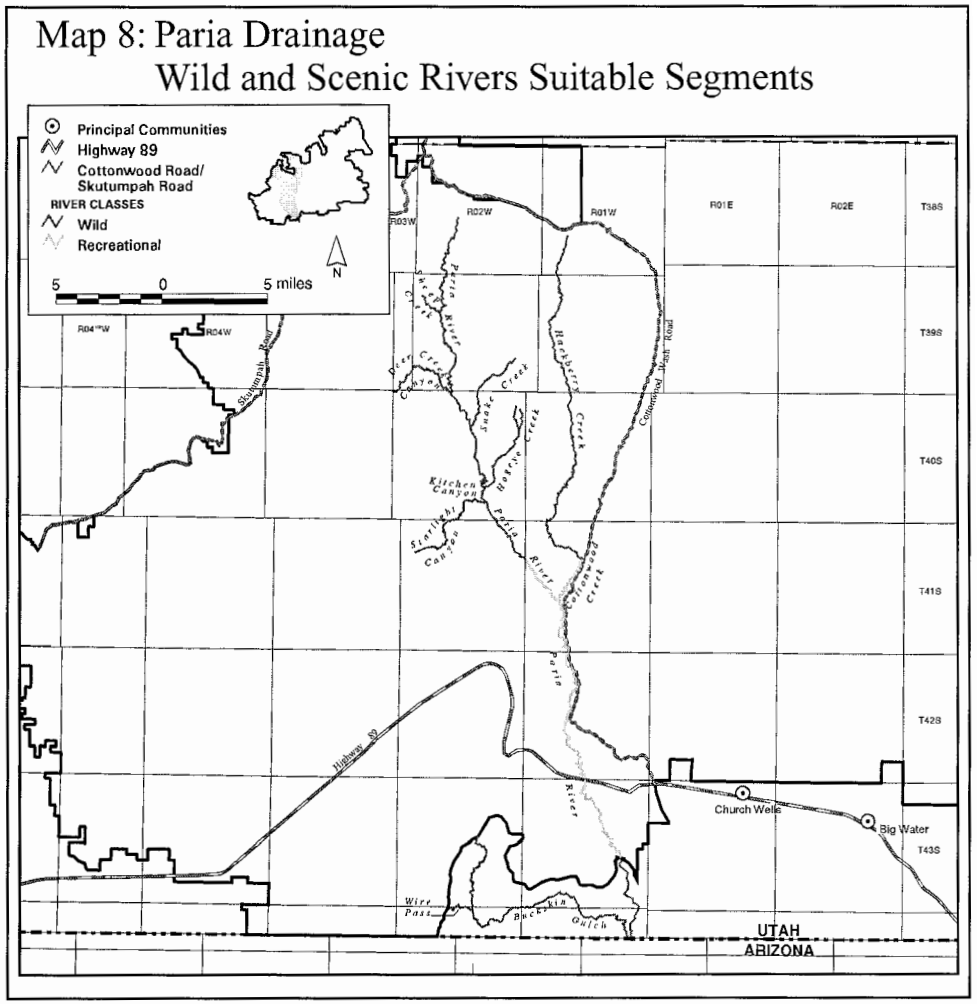


COMM-3 The BLM will consider, where appropriate, contracting with private sector businesses, nonprofit organizations, academic institutions, or State and local agencies to accomplish essential studies, monitoring, or project development.

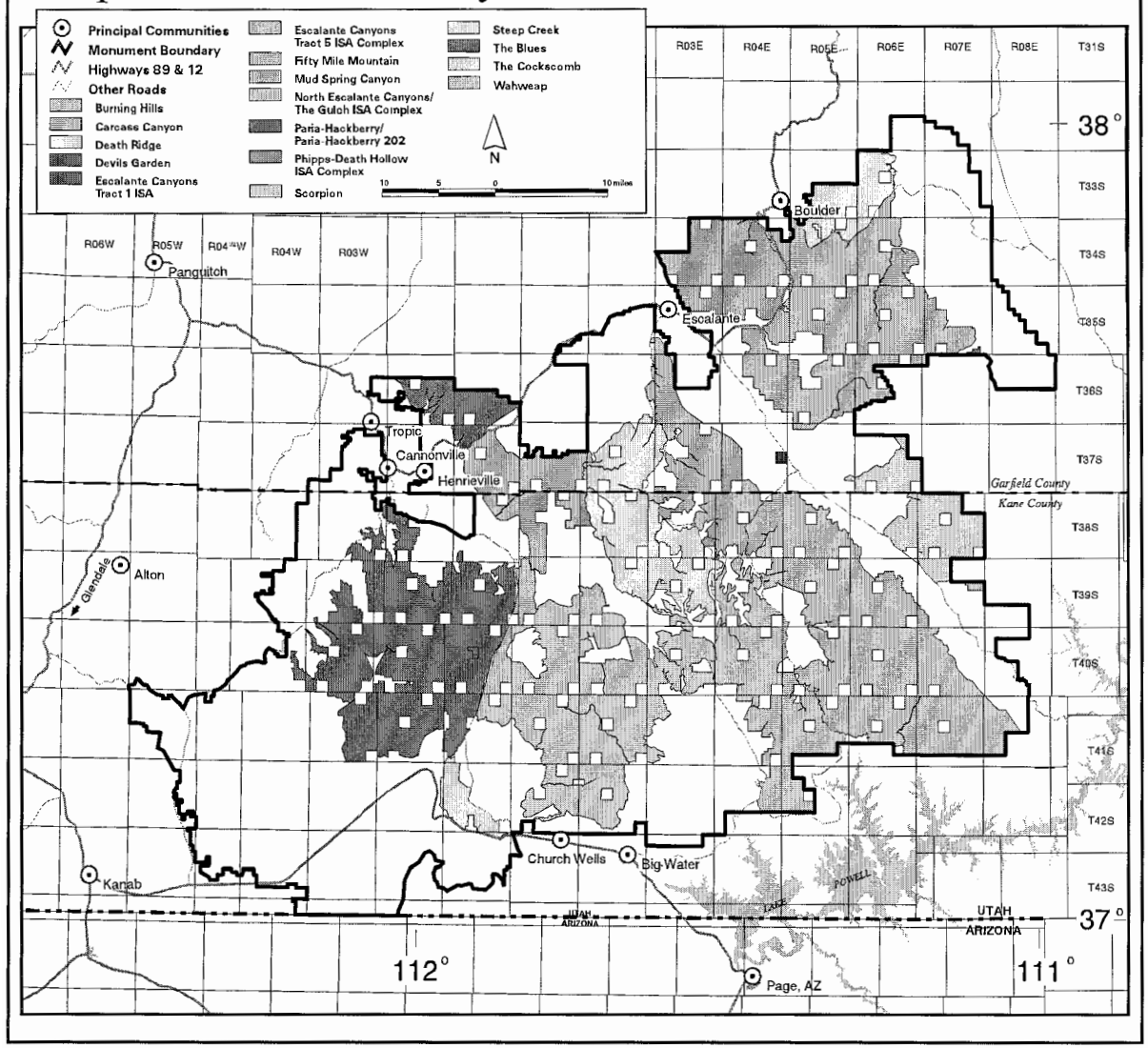
COMM-4 The BLM will increase the use of citizen and organizational volunteers to provide greater monitoring of resource conditions and to complete on-the-ground developments for resource protection, effective land management, and human use and enjoyment.

COMM-5 Where it is found to be mutually advantageous, the BLM will enter into cooperative agreements or memorandums of understanding with Federal, State, local, tribal, and private entities to manage lands or programs consistent with the goals and policies of this Management Plan. Such agreements could provide for the sharing of human or material resources, the management of specific tracts of lands for specific purposes, or the adjustment of management responsibilities on prescribed lands. This would be done in order to eliminate redundancy and reduce costs.

COMM-6 Non-profit organizations, citizens and user groups that have adequate resoutces and expertise could enter into cooperative agreements to assist in the management of public lands in the Monument. Assistance could include, but would not be limited to, resource monitoring, site cleanups, and the construction of authorized projects.



Map 9: Wilderness Study Areas



Consultation with Native American Indians

Although limited in the recent past, use by Native American Indians of the Monument and its resources has been extensive for centuries prior to European contact. Native American Indians continue to use this area for plant collection and pilgrimages, and many places within the Monument are considered important to the continuity of their contemporary cultures.

CNA-1 Consultation with the following tribal groups will continue: Hopi, Zuni, Navajo, Kaibab Paiute, Paiute Tribes of Utah, San Juan Paiute, and Ute.

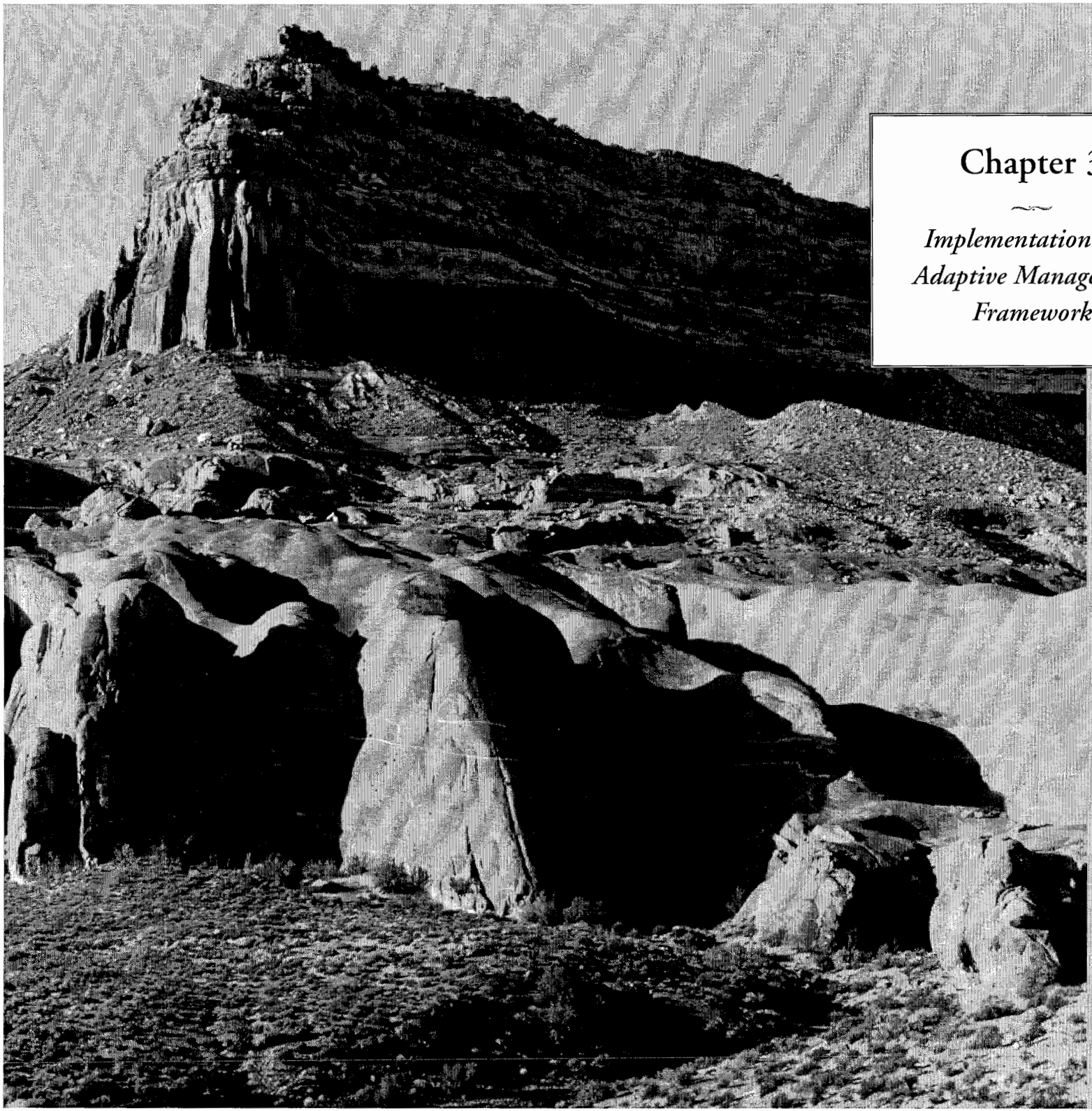
CNA-2 The BLM will continue its agreements to collect ethnographic data with the Hopi and the Kaibab Paiute. The BLM will expand this effort to the other tribal groups and expand the breadth of this program.

GSENM Advisory Committee

ADV-1 A Grand Staircase-Escalante National Monument Advisory Committee (chartered under the Federal Advisory Committee Act) will be established to advise Monument managers on science issues and the achievement of Management Plan objectives. This committee will serve solely as an advisory committee, making recommendations to Monument management. Monument management will evaluate all Advisory Committee recommendations, but will ultimately be responsible for making all final decisions.

ADV-2 The ptimary purpose for the establishment of this committee is to aid in achievement of the Management Plan objectives, through participation in the adaptive management program. In this capacity it will have several tasks: (1) Review evaluation reports produced by the Management Science Team (comprised of the Assistant Monument Managers for Biological Sciences, Cultural and Earth Sciences, and Visitor Services) and make recommendations on protocols and projects to meet overall objectives. These evaluations will be completed regularly (see Chapter 3, Implementation and Adaptive Management Framework) and will compile monitoring data and assess the extent to which Management Plan objectives are being met.
(2) Review appropriate research proposals and make recommendations on project necessity and validity.
(3) Make recommendations regarding allocation of research funds through review of research and project proposals as well as needs identified through the evaluation process above. (4) Could be consulted on issues such as protocols for specific projects (i.e., vegetation restoration methods) or standards for excavation and curation of artifacts and objects. This Committee will meet at least twice a year to accomplish the tasks outlined above.

ADV-3 This Committee will be comprised primarily of scientists, reflecting its science focus. There will be eight scientists covering the areas of archaeology, paleontology, geology, botany, wildlife biology, history, social science, and systems ecology. In addition to scientists, there will be seven other Committee members: one local elected official from both Kane and Garfield Counties, one from State or tribal government, one from the environmental community, one educator, one from the outfitter and guide community operating within the Monument, and one from the ranching community operating within the Monument. These additional members will facilitate communication with adjacent agencies and stakeholders and provide insight into community and stakeholder concerns. Further details regarding frequency of meetings and selection of Committee members will be developed in the charter establishing this Committee.



Chapter 3

Implementation and Adaptive Management Framework

Introduction

During the life of the Approved Plan, the Bureau of Land Management (BLM) expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques and scientific principles. Further, while this Plan contains general direction and context for the entire Monument and makes decisions on specific actions for some issues (e.g., access restrictions), many management actions necessary to achieve broad-scale objectives (e.g., achieving a natural range of native vegetation associations) may require further analysis and additional planning. To the extent that such new information or actions address issues covered in the Plan, the BLM will integrate the data through a process called plan maintenance or updating. As part of this process, the BLM will review management actions and the Plan periodically to determine whether the objectives set forth in this and other applicable planning documents are being met. Where they are not being met, the BLM will consider adjustments. Where the BLM considers taking or approving actions which will alter or not conform to overall direction of the Plan, the BLM will prepare a plan amendment and environmental analysis in making its determinations and will seek public comment.

This chapter describes the expected types and levels of analysis and planning that will "step-down" broad-scale information and decisions in this Plan to site-specific actions. It also provides a framework for developing a specific monitoring and evaluation program which will measure the conditions and trends in the Monument. The information developed through the monitoring process will be used to assess management strategies and then alter decisions, change implementation, or maintain current management direction as appropriate.

This chapter is intended to provide a framework to guide implementation of planning decisions. New objectives or standards are not proposed here, but an implementation process is described which will increase the likelihood of meeting management direction and objectives described in the Plan. This is the start of this process and is intended to provide insight into expected implementation actions. It is anticipated that further refinements of this process will be necessary as implementation proceeds. This chapter is composed of four main sections:

- Time Frames for Implementation
- Linking Broad-scale Decisions and Information to Finer Levels: Subsequent Analysis and Decision Making
- Framework for Monitoring, Evaluation, and Adaptive Management.
- Consultation, Coordination, and Collaboration

Time Frames for Implementation

Implementation of decisions made through this planning process will occur in several phases. Although the use of the word "phase" implies sequential steps, some of the phases will be implemented concurrently to reduce the time involved in making the transition from current operations to Plan decisions and directions. The various phases involved in implementation include:

- *Pending/Ongoing Actions:* Generally, any ongoing, short-term activity will not be changed as a result of new direction. Short-term activities where National Environmental Policy Act (NEPA) analysis has been completed and decisions are pending will be screened to ensure there are no conflicts with the decisions in the Approved Plan/Record of Decision. Existing, longer-term permitted activities will be brought into compliance with the decisions as described below under *Longer-Term Actions.*

- *Immediate Actions:* Actions where implementation will begin in the immediate future (i.e., within the first year) are included in this category. These include actions such as implementing off-road vehicle closures, designating primitive camping areas, initiating a public information program, establishing criteria for new outfitters and guides, and other immediate actions to implement specific decisions in the Plan. The subsequent assessment and activity planning processes described below will also need to be developed and refined in the immediate term, including setting geographic priorities for subsequent analysis and planning. The monitoring and adaptive management process will also need to be initiated, including establishing coordination efforts and priorities for monitoring and research programs.

- *Longer-Term Actions:* This phase includes actions which are needed to implement decisions over the planning horizon

(between 1-15 years). In addition to ongoing regulatory requirements, the major part of this effort will include subsequent ecosystem analysis and integrated activity planning on a finer-scale. This step-down (or hierarchical) process is designed to ensure that actions prescribed to meet broad-scale goals and objectives in this Plan consider local conditions and vice versa. The subsequent planning involved in this process will address existing, long-term permitted activities that need to be brought into compliance with plan decisions, subject to valid existing rights. The actual time frames for compliance will need to be outlined and prioritized during the *Immediate Actions* time-frame above. In addition, the monitoring and adaptive management strategy will be implemented over this longer-term phase, which may lead to changes in the Plan through an amendment or revision process that considers information specific to finer-scale conditions. This process is discussed in more detail in the sections below.

Linking Broad-Scale Decisions and Information to Finer Levels

This Plan contains general direction and context for the entire Monument and makes decisions on specific actions for some issues (e.g., access restrictions). Still, many management actions necessary to achieve broad-scale objectives (e.g., achieving a natural range of native vegetation associations) may require further analysis and additional decisions. This additional analysis will:

- Validate, refine, or add-to information concerning current and historical resource conditions;
- Address issues not appropriately addressed at the broad scale;
- Prioritize restoration efforts to maximize the likelihood of meeting management goals and objectives;
- Guide the type, location, and sequence of appropriate management activities;
- Identify monitoring and research needs.

This section provides an outline of the expected types and levels of analysis and planning that will "step-down" broad-scale information and decisions in the Plan to site-specific actions. This step-down process is designed to ensure that broad-scale decisions are viewed within the context of site-specific conditions, and that site-specific decisions are made within the context of broad-scale goals and objectives.

Pinyon (photo by Jerry Sintz)

Hierarchy of Analysis

Several steps are envisioned to implement the broad-level decisions made in this Plan. While these steps may occur sequentially, it is likely that they will occur simultaneously because the need for further assessment before project implementation varies in different areas. Many actions can take place immediately (as described in **Time Frames for Implementation**), while others will be considered and scheduled through subsequent assessments and planning efforts. The process envisioned includes the following steps:

- *Monument-Wide Review:* The first step toward linking decisions to finer scales is to review existing information for the Monument to help set the context and priorities for subsequent analysis and decision making. The broad overview of existing information will help identify appropriate subunits (e.g., physiographic provinces or watersheds) and establish priorities for "taking closer looks" within them. Priorities will be based on a combination of ecological priorities (i.e., considering biophysical and socio-economic resource conditions, risks to key resources, and opportunities to protect areas with, or restore them to, properly functioning condition) and collaborative priorities (i.e., existing deadlines, court mandated actions, collaborator availability to participate in subsequent analyses or actions).

- *Sub-unit Ecosystem Assessments:* The review discussed above should identify priority areas where finer-scale assessments are

considered necessary for scheduling and designing activities to achieve overall Plan objectives. Such assessments will develop a "place based" analysis that provides context for site-scale planning and actions to implement decisions (see *Subsequent Planning* below). Assessments will focus on interpreting existing information and trends and identifying information gaps. Such analysis will also help refine overall objectives or desired future conditions to the specific conditions in the sub-unit and will characterize the situation and trends in relation to the desired future condition. If the situation or trend is negative, the assessment will set the stage for identifying the management necessary to move towards desired future conditions. The *Subsequent Planning* processes described below will be significantly enhanced by the context provided in these assessments.

- *Subsequent Planning:* Based on the broad-scale objectives in the Plan, and in some cases the assessments discussed above, finer-scale planning may need to be completed in order to implement decisions. Such planning could come in the form of Landscape Plans, Activity Plans, and/or Project-level Plans.

  Where the sub-unit ecosystem assessments indicate a need (e.g., an assemblage of issues throughout the sub-unit that could be most efficiently resolved at this scale), landscape-level planning (i.e., integrated activity plans corresponding to the sub-unit assessments) may be done. The purpose of operational planning at the landscape (e.g., watershed, physiographic province, or other ecosystem unit) level is to determine the mix of activities and projects needed to resolve local issues while meeting the broad-scale objectives in this Plan. This planning level is important in these situations because it provides for the development of projects and activities for different programs in conjunction with one another, allowing more effective consideration of cumulative effects. For example, planning for recreation, restoration, and grazing (i.e., incorporating allotment management plans into the integrated activity plans) can be done for a sub-unit to implement integrated decisions and projects. Planning at this level can be a key component of the adaptive management process (described below), because it will incorporate new information as applied across the Monument and could be modified as monitoring and evaluation suggest changes.

  Where planning at the broader sub-unit level is not feasible or necessary, activity plans (i.e., planning specific to a particular resource program, such as a Fee Management Plan or a Special Recreation Management Plan) and site-specific project planning will also be used to implement decisions. Under the hierarchy of analysis and planning outlined above, the site-specific scale of analysis acts as a safety net for those issues overlooked or appropriately excluded at broader scales, and provides site-specific information for determining effects. This level of analysis has been used extensively since the inception of NEPA, and has been proven successful at identifying and addressing local issues and concerns. However, as a stand-alone assessment process, it has often been ineffective at addressing broad-scale issues. The site-specific analysis process will be significantly enhanced where context from broader scales (e.g., watershed or other ecosystem unit) of analysis can be brought to bear for cumulative effects.

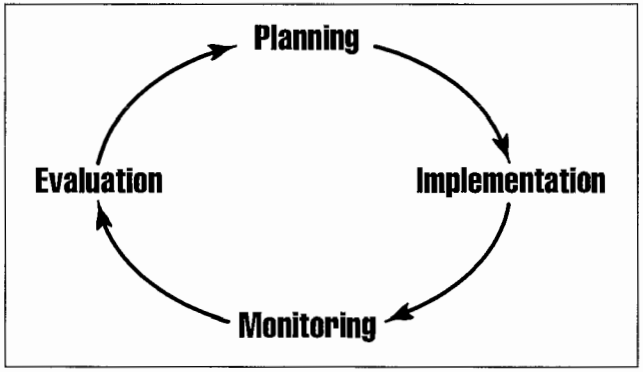
Compliance with the National Environmental Policy Act

The Approved Monument Management Plan/Record of Decision provides the compliance with NEPA for the broad-scale decisions in this Plan, although some implementation actions may require additional NEPA analysis. The BLM will continue to prepare Environmental Assessments (EAs) and Environmental Impact Statements (EISs) where appropriate as part of the planning and decision making processes described above.

Framework for Monitoring, Evaluation, and Adaptive Management

Adaptive management, as defined here, is a formal process for continually improving management policies and practices by learning from the outcomes of operational programs and new scientific information. Under adaptive management, plans and activities are treated as working hypotheses rather than final solutions to complex problems.

This approach builds on common sense, experimentation, and learning from experience, which is then used in the implementation of plans. The process generally includes four phases: planning,



Adaptive Management Process

implementation, monitoring, and evaluation. The planning and implementation phases are discussed above. This section focuses on monitoring and evaluation, which will lead to changes in planning and implementation activities.

This section provides a framework to develop a specific monitoring and evaluation program which will measure the conditions and trends in the Monument. The information developed through the monitoring process will be used to assess management strategies, alter decisions (which may require a plan amendment), change implementation, or maintain current management direction.

Monitoring

An initial step in developing a monitoring strategy is to define the questions which need to be answered in order to evaluate the attainment of broad-scale management goals and objectives in the Plan. These questions can be used to focus the monitoring strategy on appropriate issues and avoid gathering information which has limited value in answering pertinent questions. The questions will also be used to help design a system that can be implemented within agency budgets.

Technical and scientific staffs, in consultation with managers, need to play a key role in designing a monitoring strategy. The first step will be to select key monitoring elements and indicators that can be statistically sampled and can provide desired data at a reasonable cost. A standard core set of data elements will be collected. Core data, including data necessary to evaluate achievement of Utah's Standards and Guides for Rangeland Health, are the minimum set of variables to be collected at all scales. Standardized measurement and reporting protocols will be determined because of the essential need for consistency. Where possible, monitoring protocols will be designed to integrate existing monitoring efforts, and will address multiple questions. Also, the design will allow flexibility to add data elements in order to answer new questions/objectives raised in subsequent sub-unit or site-specific planning.

Determining the specific monitoring approach for any question depends on knowledge of detailed information on existing conditions. For example, trend assessment requires first gathering baseline or status information. Projects for collection of baseline information are being conducted in the Monument currently. Landscape scale vegetation assessments, overviews for paleontology, history and archaeology, Monument-wide surveys for special status species, collection of meteorological data at weather stations, and visitor use inventories are just a few of the multi-year projects that have occurred or are continuing. Data from these projects are integral to monitoring trends. A monitoring strategy must also identify other techniques (remote sensing, sample-based studies, modeling) that may be necessary to get a complete picture of structure and pattern of Monument resources. Successful implementation of large-scale monitoring may require a combination of approaches.

As mentioned above, the design of the monitoring program will allow flexibility to add data collection needs identified through the ecosystem assessments and planning processes. Ecosystem assessments and planning, however, should also incorporate monitoring and evaluation information to ensure that the latest information is used in management actions.

Evaluation

Evaluation is the next key component of the adaptive management process. Evaluation is the process in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound. This portion of the adaptive management strategy examines the monitoring data and uses it to draw conclusions on whether management actions are meeting stated goals and objectives and, if not, why. The conclusions are used to make recommendations on

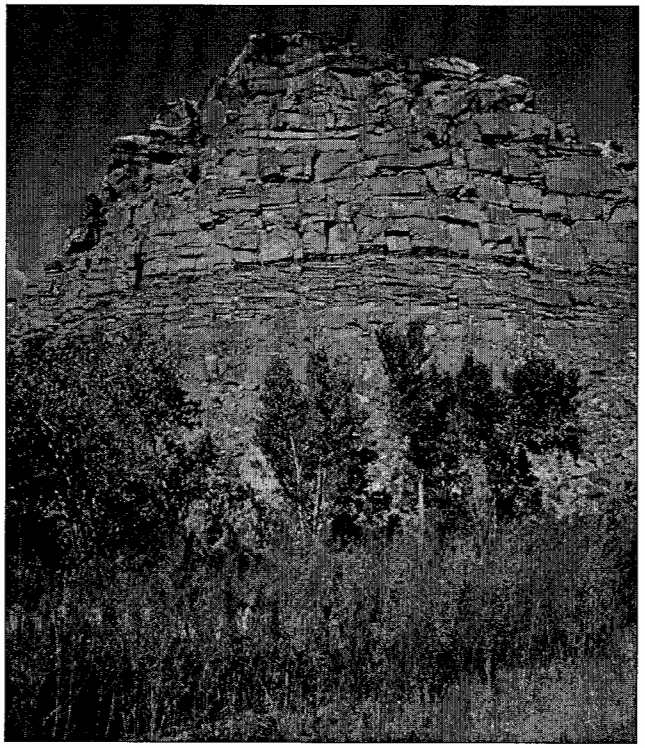
whether to continue current management strategies or to make changes in management practices to meet Plan goals and objectives.

An evaluation schedule needs to be set in advance to ensure that: evaluations are conducted at intervals that allow for corrections in management direction before crises develop; monitoring data is gathered in advance to be used in the evaluation process; and the appropriate evaluation team is assembled to conduct the evaluation. Management evaluations made too frequently will not detect changes in ecosystems because cost-effective monitoring systems cannot detect changes at this scale. On the other hand, if ecosystem management evaluations are not conducted, or are delayed for too long, irreversible changes may take place without detection. To avoid this problem, two periodic management evaluations are proposed. The first is an implementation evaluation, conducted every two years, that will compare expected outcomes of projects to actual results. This evaluation will ensure that monitoring results are incorporated into ongoing assessments and planning. The second is an evaluation conducted approximately evety five to ten years comparing the overall rate and degree of movement towards broad-scale objectives and desired future conditions. These evaluation steps will be carried out by the Monument Science Team, in consultation with the Grand Staircase-Escalante National Monument (GSENM) Advisory Committee.

Adaptive Management

The evaluation process will generate new information that needs to be incorporated into management actions. Ongoing sub-unit assessments and integrated activity planning will also uncover new information that can be used to make changes to projects, strategies, objectives, and monitoring elements. New information may result in any of the following:

- Concluding that management actions are moving the landscape towards the broad-scale objectives in the Plan. In this case, management actions are affirmed and may not need to be adjusted.
- Concluding that further research needs to be initiated or that actions must be adjusted to more efficiently achieve broad-scale objectives of the Plan. If new information or research demonstrates better ways to achieve plan objectives, changes in activity planning and project implementation can be made (i.e., plan maintenance). NEPA analysis may be required depending upon the nature of the management changes.
- Concluding that broad-scale objectives should be altered based on new information. If the new information indicates reconsideration of Plan objectives, a plan amendment could be considered to reexamine targeted future conditions and pathways to reach those conditions.



Hackberry Canyon (photo by Jerry Sintz)

Role of the Management Science Team and the GSENM Advisory Committee

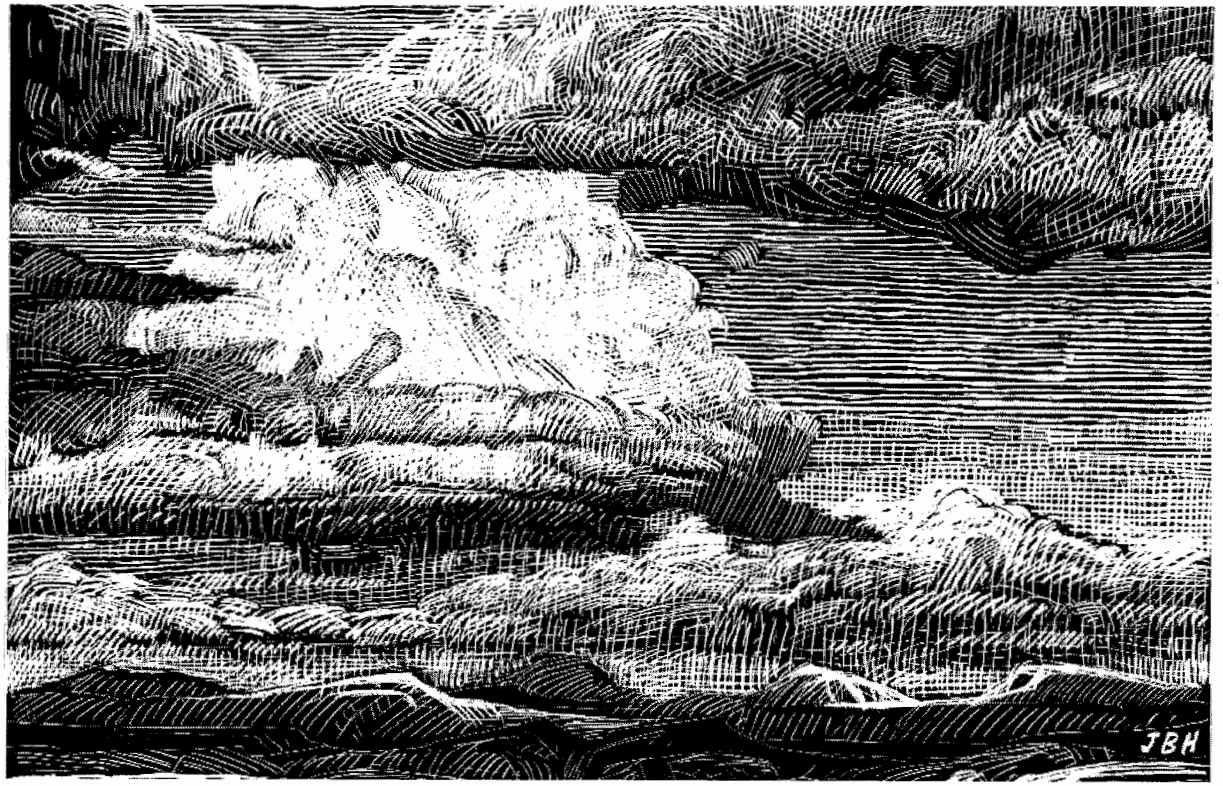
The Management Science Team (comprised of the Assistant Monument Managers for Biological Sciences, Cultural and Earth Sciences, and Visitor Services) will be responsible for developing monitoring and adaptive management protocols and ensuring that

documentation is sufficient to facilitate feedback into the adaptive management process. This team will also be responsible for ensuring that monitoring results and other new information (based on sub-unit assessments) are compiled and evaluated according to the two evaluation phases discussed above.

The credibility of an adaptive management process rests in part on the routine application of an outside check on the use of technical and scientific information, including monitoring. Independent reviews can provide verification that plans, evaluation, and changes in management strategy are consistent with current scientific concepts. The GSENM Advisory Committee discussed in Chapter 2 of this Plan will be used in this role to evaluate compiled monitoring data in the evaluation phases discussed above, and will make recommendations to management regarding changes to projects, strategies or objectives. The majority of the committee members will be scientists, reflecting the Advisory Committee's science focus. There will be eight scientists representing the areas of archaeology, paleontology, geology, botany, wildlife biology, history, social science, and systems ecology. In addition, there will be seven members representing other agencies, local communities, interest groups, and users of the Monument.

Consultation, Coordination, and Collaboration

This Plan has been prepared with close coordination and collaboration with other Federal agencies; state, local and tribal governments; and other interested parties. Collaborative approaches to implementation are necessary to assure success. While the BLM retains the responsibility and authority for land



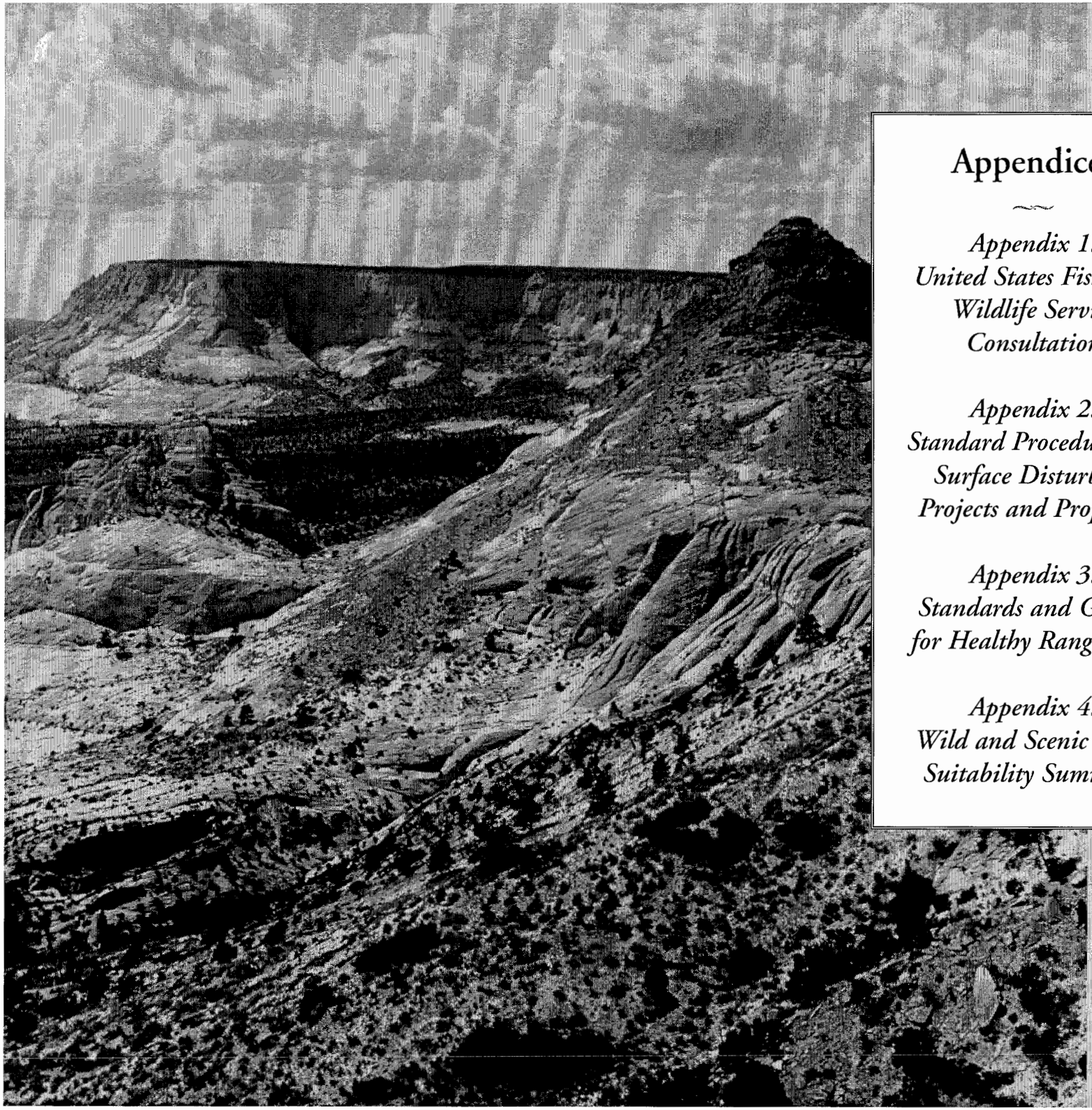
management decisions, these decisions are more meaningful, effective, and longer lasting if done in a collaborative and open process. Therefore, close working relationships between management and regulatory agencies need to be developed and maintained. In addition, others outside of the BLM (e.g., state and local agencies, universities, volunteers) should be involved in subsequent analysis, monitoring, evaluation, research, and adaptive management processes.

A major component that will be used to involve other agencies and the public in subsequent analysis, monitoring, research and adaptive management is the GSENM Advisory Committee described above. Other efforts will include forming partnerships to complete assessments, establish baseline data, monitor, and modify management actions as a result of these processes.

Relationship to Other Agency Plans

Local, State, other Federal agencies, and Indian tribes in the immediate region routinely prepare plans that establish goals and direction for land use, economic development, or resource management within their jurisdictions. Many of these plans bear directly on or are significantly affected by BLM plans for managing public lands. Under this Plan, BLM will collaborate with such agencies and tribes on planning implementation and achieving consistency with other approved plans to the extent that they are determined consistent with federal laws, regulations, and policies. The principles of community-based planning will be employed where timing, mutual interest, and the availability of resources are appropriate to address economic, ecologic, and land use issues of concern. The following list of plans relates to the management of lands in or around the Monument and will be given consideration as implementation proceeds.

- Bryce Canyon National Park General Management Plan
- Capitol Reef National Park General Management Plan
- Glen Canyon National Recreation Area General Management Plan
- Dixie National Forest Land and Resource Management Plan
- Garfield County General Plan
- Kane County General Plan
- Kane County Water Conservancy Master Plan



Appendices

Appendix 1:
United States Fish and Wildlife Service Consultation

Appendix 2:
Standard Procedures for Surface Disturbing Projects and Proposals

Appendix 3:
Standards and Guides for Healthy Rangelands

Appendix 4:
Wild and Scenic River Suitability Summary

United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
LINCOLN PLAZA
145 EAST 1300 SOUTH, SUITE 404
SALT LAKE CITY, UTAH 84115

In Reply Refer To
(CO/KA/NE/UT)

September 16, 1999

RECEIVED
SEP 17 1999
GRAND STAIRCASE-ESCALANTE
NATIONAL MONUMENT

MEMORANDUM

TO: Monument Manager, Bureau of Land Management, Grand Staircase-Escalante National Monument, 337 South Main, Suite 010, Cedar City, UT 84720

FROM: Field Supervisor, Utah Field Office, U.S. Fish and Wildlife Service, Ecological Services, Salt Lake City, Utah

SUBJECT: Endangered Species Act Compliance For the Proposed Management Plan on the Grand Staircase-Escalante National Monument, July 1999

We have reviewed the Final Environmental Impact Statement for Proposed Management Plan (PMP) for the Grand Staircase-Escalante National Monument with special emphasis on impacts to listed Endangered and Threatened Species. As stated in the PMP, we concur with your determination that actions proposed in the PMP will not adversely affect any listed species and will likely be beneficial to most, if not all, of those species.

Should you have any questions or need anything further please contact Larry England or Lucy Jordan, of my staff, at 801-524-5001

Rul E Harris

United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
LINCOLN PLAZA
145 EAST 1300 SOUTH, SUITE 404
SALT LAKE CITY, UTAH 84115

In Reply Refer To
(CO/KS/NE/UT)
(6-UT-99-F-002)

May 19, 1999

Memorandum

To: Monument Manager, Bureau of Land Management, Cedar City, Utah

From: for Field Supervisor, Fish and Wildlife Service, Salt Lake City, Utah

Subject: Biological Opinion for the Draft Management Plan for the Grand Staircase-Escalante National Monument

This memorandum constitutes our biological opinion on the subject action in response to your March 11, 1999 letter with attached biological assessment requesting initiation of formal interagency consultation under Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) and the Interagency Cooperation Regulations (50 CFR 402).

Your biological assessment states that Alternatives B (the preferred alternative), C, D, and E (Alternative A is the no action or no management change alternative) are not likely to adversely affect the bald eagle, peregrine falcon, Mexican spotted owl, southwestern willow flycatcher, California condor, Kanab ambersnail, Jones' cycladenia, and Kodachrome bladderpod . Furthermore, the actions described for each species would likely be beneficial to the recovery and conservation of these species. The endangered fish endemic to the Colorado River, the Colorado pikeminnow and razorback sucker are not known from waters within the Monument nor are any actions covered by the Draft Management Plan expected to affect these species or their critical habitat. The Ute ladies'-tresses may be affected by alternatives B, C, D and E but would not be adversely affected. To ensure that Ute ladies'-tresses is not aversely affected the Bureau will implement several conservation measures to provide protection to the species.

BIOLOGICAL OPINION

Based upon the best scientific and commercial information that is currently available, it is the Service's biological opinion that the implementation of alternatives B, C, D, and E of the Draft Grand Staircase - Escalante Management Plan (Plan) are not likely to jeopardize the continued existence and will likely enhance the conservation and recovery of the following species:

bald eagle (*Haliaeetus leucocephalus*)
peregrine falcon (*Falco peregrinus*)

Mexican spotted owl (*Strix occidentalis lucida*)
southwestern willow flycatcher (*Epidonax traillii extimus*)
California condor (*Gymnogyps californianus*)
Kanab ambersnail (*Oxyloma haydeni kanabensis*)
Jones' cycladenia *Cycladenia humilis jonesi*)
Kodachrome bladderpod (*Lesquerella tumulosa*).

The implementation of the Plan will not affect the following species:

Colorado pikeminnow (*Ptychocheilus lucius*)
razorback sucker (*Xyrauchen texanus*)

The implementation of the Plan will affect the following species but is not likely to jeopardize the continued existence of the following species provided that the Conservation Measures described in this document are implemented. These Conservation Measures will contribute to the conservation and recovery of the species and eliminate any adverse impacts to the species and its habitat. These Conservation Measures are, also, included in the biological assessment.

Ute ladies'-tresses (*Spiranthes diluvialis*)

PROJECT DESCRIPTION

The Draft Management Plan for the Grand Staircase Escalante National Monument (Monument) identifies those criteria which will guide management direction of the natural resources of the Monument including: vegetation management, livestock grazing management, off-highway vehicle use management, water use management, and recreation management.

Basis for Opinion - Ute Ladies'-tresses Orchid

The Ute ladies'-tresses orchid (*Spiranthes diluvialis*) was listed as a threatened species on January 17, 1992 under the authority of the Endangered Species Act.

Spiranthes diluvialis is a perennial, terrestrial orchid that typically grows in relatively low elevation riparian, spring, and lake side wetland meadows. Populations of *S. diluvialis* are known from three general areas of the interior western United States: near the base of the eastern slope of the Rocky Mountains in southeastern Wyoming and north-central and central Colorado; in the upper Colorado River basin; and in the Bonneville Basin along the Wasatch Front and westward in the eastern Great Basin.

The Colorado River Basin populations of *S. diluvialis* occur almost exclusively in riparian meadows. The principal populations of the species in this area are in the Uinta Basin and along the Green and Yampa Rivers in adjacent Daggett County Utah and Moffat County Colorado. As described in the biological assessment Ute ladies'-tresses populations occur within the riparian meadows along Deer Creek. The population at Deer Creek within the Escalante - Grand

Staircase National Monument is a significant outlier population and the only viable population within the Colorado Plateau outside of the immediate vicinity of the Uinta Basin.

Spiranthes diluvialis is endemic to moist soils or wet meadows near springs, lakes, or perennial streams. The range in elevation of known S. diluvialis occurrences is from 1311 to 2134 meters (4,300 to 7,000 feet) (Stone 1993). Most of the western occurrences are along riparian edges, gravel bars, old oxbows, high flow channels and backwater areas, and moist to wet meadows along perennial streams. Jennings (1990) and Coyner (1989, 1990) observed that *S. diluvialis* seems to require "permanent sub-irrigation", indicating a close affinity with floodplain areas where the water table is near the surface throughout the growing season and into the late summer or early autumn. Soils in occupied habitat are always damp to the surface during the flowering period. This observation has been corroborated by ground water monitoring research conducted in Dinosaur National Monument (Martin & Wagner 1992) and in Boulder, Colorado (T. Naumann, City of Boulder Open Space Department, pers. comm., 1993).

Spiranthes diluvialis occurs primarily in areas where the vegetation is relatively open and not overly dense or overgrown (Coyner 1989, 1990 and Jennings 1989, 1990). A few populations in eastern Utah and Colorado are found in riparian woodlands, but *S. diluvialis* seems generally intolerant of shade, preferring open, grass, sedge, and forb-dominated sites instead. Typically, the vegetation is composed of a mixture of obligate-wetland and facultative-wetland species. Plants usually occur as small scattered groups and occupy relatively small areas within the riparian system (Stone 1993).

Spiranthes diluvialis appears to be well adapted to disturbances caused by water movement through flood plains over time (T. Naumann, City of Boulder Open Space Department, pers. comm., 1992, L. Riedel, National Park Service, pers. comm., 1994). The species often grows on point bars and stream edges where sediment deposition and re-vegetation is occurring following recent scour events. *Spiranthes diluvialis* is tolerant of flooding and flood disturbance. For example, point bars and backwater areas (old oxbows, side channels, etc.) are often flooded for several months in the spring during snowmelt.

Very little is known about the life history and demography of *S. diluvialis*. Many orchid species remain below ground for several years in a symbiotic relationship with a mycorhizal fungus. When mature, they may not emerge aboveground every year. *Spiranthes diluvialis* first appears aboveground as a rosette of thickened grasslike leaves that is very difficult to distinguish from other vegetation. A distinctive flower stalk appears in late summer (July through September), and location, identification, and population size estimates are typically determined then. Some individuals remain under ground or do not flower each year. Thus, fluctuations in numbers of observed flowering individuals do not necessarily correspond to population fluctuations or indicate habitat alterations.

CONSERVATION MEASURES

The following conservation measures are stated, in the Grand Staircase - Escalante National Monument Planning Office's "BIOLOGICAL ASSESSMENT FOR THREATENED AND

ENDANGERED SPECIES FOR GRAND STAIRCASE - ESCALANTE NATIONAL MONUMENT DRAFT ENVIRONMENTAL IMPACT STATEMENT AND DRAFT MANAGEMENT PLAN".

1. The Bureau will implement an active noxious weed program in the Monument. Areas with threatened or endangered plants will be targeted for this activity as a first priority.

2. Priorities for grazing evaluation will be given to allotments with sensitive riparian and listed species.

3. Grazing as it relates to all endangered species will be addressed during this process and will incorporate the latest research and information in the protection of species. Monitoring plots will be installed and read monthly to determine density and presence of Ute ladies'-tresses as well as impacts in this area.

4. If impacts are documented from grazing uses, fences and/or barriers will be established to prevent entry by people or cattle.

5. Water management priority in Deer Creek will be to maintain natural flows and flood events

6. Surveys for *S. diluvialis* will be completed during this next growing season (1999) and results of this survey will be used to determine recreation management actions.

7. If plants are found to be growing in the campground, appropriate actions will be taken to prevent trampling of the plants by visitors to the campground area. These actions may include replanting native vegetation or construction of barriers.

8. Individual campground sites may be closed if necessary to protect these plants in the campground. Barriers will be constructed and restoration work initiated to stabilize the soil and banks in the campground area and provide the best possible habitat for this plant.

9. No expansion that proposes further impact to the riparian area will be considered, as it would increase the potential for impacts to this population.

10. The existing trail in Deer Creek will be relocated out of the riparian area for a length of 1.5 miles below the crossing with the Burr Trail when possible.

11. Barriers will be placed on the creek side of the trail to ensure compliance.

12. Interpretive signs and brochures will be provided along the trail and at the parking area to educate the public about the species and the actions that are being implemented to protect it.

13. Restoration of the current social trail will be initiated, including obliteration of the trail by planting native species, and moving soil to return the area to its natural grade. Group numbers

and allocations may be initiated along this trail if continued monitoring indicates that impacts from visitor use in the area is still causing impacts.

CONCLUSION

This concludes our biological opinion on the impacts of proposed project. This opinion was based upon the information described herein. If new information becomes available, new species listed, or any project change which alters the implementation and operation of the project from that which is described in the biological assessment and which may affect any endangered or threatened species in a manner or to an extent not considered in this biological opinion (see 50 CFR 402.16), formal Section 7 consultation should be re-initiated.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
LINCOLN PLAZA
145 EAST 1300 SOUTH, SUITE 404
SALT LAKE CITY, UTAH 84115

GRAND STAIRCASE
ESCALANTE
MAY 0 1 1998
NATIONAL MONUMENT
Bureau of Land Management

In Reply Refer To
(CO/KS/NE/UT)

April 30, 1998

A. Jerry Meredith, Monument Manager
Bureau of Land Management
Grand Staircase-Escalante National Monument
337 South Main Street, Suite 010
Cedar City, Utah 84720

Subject: Endangered and Threatened Species Consultation for the Grand Staircase-Escalante National Monument, Garfield and Kane Counties, Utah

Dear Mr. Meredith:

The U.S. Fish and Wildlife Service (Service) received your letter on April 6, 1998 requesting a list of threatened and endangered species which may occur in the area of influence of the subject proposed action. The following species occur in Garfield and/or Kane Counties, and may occur in the subject project's area of influence:

Common Name	Scientific Name	Status
Bald Eagle	*Haliaeetus leucocephalus*	Threatened
California Condor	*Gymnogyps californicus*	Endangered[1]
Colorado Squawfish	*Ptychocheilus lucius*	Endangered
Jones Cycladenia	*Cycladenia humilis* var. *jonesii*	Threatened
Kodachrome Bladder Pod	*Lesquerella tumulosa*	Endangered
Mexican Spotted Owl	*Strix occidentalis lucida*	Threatened
Peregrine Falcon	*Falco peregrinus*	Endangered
Razorback Sucker	*Xyrauchen texanus*	Endangered
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	Endangered
Ute Ladies'-tresses	*Spiranthes diluvialis*	Threatened

In addition, the Service requests that you survey for Kanab ambersnail (*Oxyloma haydeni kanabensis*) where suitable habitat conditions exist within the Monument. Although this species has not been documented within the boundaries of what is now the Grand Staircase-Escalante National Monument, it may occur there.

[1]Experimental, Nonessential Population

Only a Federal agency can enter into formal Endangered Species Act (ESA) section 7 consultation with the Service. A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment by giving written notice to the Service of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

The draft Environmental Impact Statement should be reviewed and a determination made if the proposed alternative may affect any listed species or its critical habitat. A determination also should be made if the proposed alternative is likely to jeopardize a proposed species or result in the destruction or adverse modification of any proposed critical habitat. If the determination is "may affect" for listed species, formal ESA section 7 consultation should be requested by the Federal agency to the Field Supervisor at the address given above. In addition, if a determination is made that the proposed alternative may jeopardize proposed species or result in the destruction or adverse modification of proposed critical habitat, the Federal agency must confer with this office. At that time, the Federal agency should provide this office with a copy of a biological assessment or any other relevant information that was used in reaching its conclusion.

Your attention is also directed to section 7(d) of the ESA, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their actions on any endangered or threatened species.

The Service looks forward to working with you to further recovery of threatened and endangered species of plants and wildlife found within the Monument. If further assistance is needed, please contact Ted Owens, Wildlife Biologist, of this office at telephone (801) 524-5001.

Sincerely,

for Reed E. Harris
Field Supervisor

Introduction

This appendix is a compilation of the standard procedures for mitigating surface disturbing activities that have been described throughout this Plan. It is designed to provide an understanding of how proposed mitigation in this Plan will apply to specific projects or proposals. These standards are not intended to describe the criteria used to determine whether projects will be approved. Instead, they discuss standard procedures for locating, designing, and stipulating projects where they could be allowed. These standards are general in nature, and do not necessarily cover all concerns or issues that may need to be addressed in specific National Environmental Policy Act (NEPA) documents. Site-specific stipulations will be developed as part of the permitting process for any project authorization or land use/restoration activity.

Project-Level NEPA Documentation and Inventories

All proposed surface disturbing activities will be evaluated using NEPA and associated Bureau of Land Management/Monument Management guidance. This process requires that the project site be surveyed for potential impacts to resources (discussed below) and that an interdisciplinary approach be used to analyze and document such impacts. Monument staff with primary NEPA compliance responsibilities will review the project with managers, and document NEPA compliance prior to initiating or approving any surface disturbance.

The Monument Plan calls for an on-going inventory, assessment, and monitoring process which will continue to identify and document the presence of sensitive resources. The results of these processes will be employed during project-level NEPA documentation.

Major Resources of Concern

This section includes a listing of major resources within the Monument that should be given careful attention through a site inventory at any proposed project or activity site. Site inventories will be conducted by qualified resource specialists for each resource. If such resources are found at a site, actions will be taken as described below for each resource. Additional actions to protect resources may be identified through the NEPA process.

Geology: If geologic hazards or sensitive geomorphologic features (e.g., arches, natural bridges) are identified during site inventories, the project will be moved or modified to prevent conflicts or damage.

Paleontology: Areas found to have unique paleontological resources will be avoided. In other cases where ubiquitous fossils are present, samples may be taken to record their presence and the proposed activity may be allowed. Measures will be taken to minimize impacts on the remaining paleontological resources.

Cultural (Archaeological and Historic) Resources: In the event that archaeologic or historic artifacts are identified during site inventories, the location of the proposed project will be moved to avoid impacts. Where avoidance is not possible, other measures to protect the sensitive resource (e.g., construction of barriers, interpretation) will be used. Efforts to excavate and curate the resource may be taken as a last resort. Consultation with appropriate Native American Indian communities, and/or the State Historic Preservation Officer will be required. Consultation with local communities will also be a priority.

Riparian: Specific restrictions on projects in riparian areas include:

- New recreation facilities will be prohibited in riparian areas, except for small signs for resource protection.
- Trails will be kept out of riparian areas wherever possible. Where this is not possible, or where a trail is necessary to prevent the proliferation of social trails, trails will be designed to minimize impacts by placing them away from streams, using soil stabilization structures to prevent erosion, and planting native plants in areas where vegetation has been removed.
- All other projects will need to avoid riparian areas wherever possible.
- Vegetation restoration treatments will not be allowed in these areas, unless needed for removal of noxious weed species or restoration of disturbed sites.

Soils (including biological soil crusts): If sensitive soil resources are identified, project locations or design will be modified to minimize impacts to sensitive soil crusts.

Fish and Wildlife: If sensitive wildlife or wildlife habitat is identified, the location of the proposed project may be moved or the project modified to reduce impacts. Seasonal closures or restrictions may be required. Non-electrocution standards for raptors on all new and reconstructed powerlines will be required. Standards for protection of special status species (discussed below) will be required.

Vegetation (including hanging gardens and relict plant communities): If sensitive vegetation is identified, sites may be moved to avoid impacts, or project design modified to reduce impacts. Standards for protection of special status plant species (discussed below) will be required. Specific restrictions on projects include:

- No facilities and surface disturbance will be allowed in hanging garden or relict plant areas.
- No vegetation restoration methods will be allowed in hanging gardens or relict plant areas unless needed for noxious weed removal.
- Use of certain types of machinery is prohibited in the Primitive Zone as described in the **Vegetation Restoration Methods** section of Chapter 2.
- Chaining and pushing will only be allowed in limited circumstances after wildfires (not for management ignited fires) as described in the **Vegetation Restoration Methods** section of Chapter 2.

Special Status Animal and Plant Species: In cases where special status species may be affected by a project, the project will be relocated or modified to avoid species or their habitat in consultation with the United States Fish and Wildlife Service (USFWS). Specific restrictions include:

- Surface disturbing projects or activities (such as designated fuelwood cutting areas) will not be allowed in identified special status plant populations.
- Surface disturbing research will generally not be allowed in special status species habitat, except where deemed appropriate in consultation with the USFWS.
- Surface disturbing projects or activities will not be allowed within $^1/_2$ mile of Mexican spotted owl nests or within 1 mile of peregrine falcon nests unless USFWS consultation shows no impacts will occur.
- Surface disturbing projects or activities will not be allowed in areas of known bald eagle roost sites unless consultation with the USFWS shows no impacts will occur.
- No designated climbing areas will be allowed within known sensitive species nesting areas.
- Use of chemical substances that may affect the Colorado pikeminnow or the razorback sucker downstream may not be used.

Water Resources: Impacts to water resources will be assessed for all projects. Specific restrictions include:

- Water developments can be used as a management tool throughout the Monument for the following purposes: better distribution of livestock when deemed to have an overall beneficial effect on Monument resources, including water sources or riparian areas, or to restore or manage native species or populations.
- Water developments can be done only when a NEPA analysis determines this tool to be the best means of achieving the above objectives and only when the water development would not dewater streams or springs.
- Developments will not be permitted to increase overall livestock numbers.
- Maintenance of existing developments can continue, but may require NEPA analysis and must be consistent with the objectives of this Plan.
- Water may not be diverted out of the Monument except as described in WAT-2 for the town of Henrieville or for other local communities if the applicant demonstrates no effect on Monument resources.
- Water quality protection measures will be required for all projects, including subsequent monitoring.

Air Quality: All specific proposals will be reviewed for compliance with existing laws and policies regarding air quality and will be designed not to degrade existing quality. Specific procedures include:

- Coordinating with the Utah Department of Environmental Quality if an emission permit is required.
- Management ignited fires must comply with the State of Utah Interagency Memorandum of Understanding requirements to minimize air quality impacts from resulting particulates. This procedure requires obtaining an open burning permit from the State prior to conducting a management ignited fire.

Other Considerations

Commercial Filming: Filming activities must comply with zone requirements and Plan provisions. Permits for commercial filming will be required and the preparation of a project-level NEPA document may also be required.

Floodplains: No projects or activities resulting in permanent fills or diversions will be allowed in Federal Emergency Management Agency designated special flood hazard areas.

Monument Facilities Master Plan: All projects, facilities, and signs must be consistent with the Monument Interpretive Plan, the Monument Facilities Master Plan, and the Monument Architectural and Landscape Theme (all in the process of development). The Monument Facilities Master Plan will address compliance and consistency with the Americans with Disabilities Act of 1973, the Rehabilitation Act of 1973, and the Architectural Barriers Act of 1968.

Native Plant Policy: Native plants will be used as a priority for all projects in the Monument. There are limited, emergency situations where it may be necessary to use non-native plants in order to protect Monument resources (i.e., to stabilize soils and displace noxious weeds). This use may be allowed in the following circumstances:

- The use complies with vegetation objectives, Executive Order 11312, and the Standards for Rangeland Health and Guidelines for Grazing Management for BLM Lands in Utah.
- Short-lived species (i.e., nurse crop species) are used in combination with native species to facilitate the ultimate establishment of native species
- Non-natives will not be used to increase forage for livestock or wildlife.
- Monitoring plots must be established to document changes in vegetation structure and composition.

Reseeding After Fires: Each fire will be evaluated on a case-by-case basis to determine the appropriate actions to meet the established vegetation management objectives, including the following considerations:

- Areas that had little diversity and little potential for noxious weed invasions will be seeded exclusively with native species.
- Areas of low diversity and high potential for noxious weed invasion will most likely be seeded, and non-native/native seed mixes may be used if consistent with the non-native plant policy.
- The use of aircraft in reseeding operations may be allowed in areas as appropriate (timing will be evaluated to eliminate conflicts with raptor species).

Restoration/Revegetation: Each project and area must be evaluated to determine appropriate restoration or revegetation strategies. General guidelines include:

- Restoration will be the goal wherever possible.
- Species used in both restoration and revegetation must comply with the non-native plant policy described above.
- Revegetation strategies will be used in areas of heavy visitation, where site stabilization is desired.
- Restoration/revegetation provisions will be included in all surface disturbing projects including provisions for post restoration monitoring of the area. Costs for these acrivities will be included in the overall cost of the project.
- Priority for restoration and revegetation will be given to projects where Monument resources are being affected.

Rights-of-Way: The following criteria apply to the management of all rights-of way in the Monument where they are allowed:

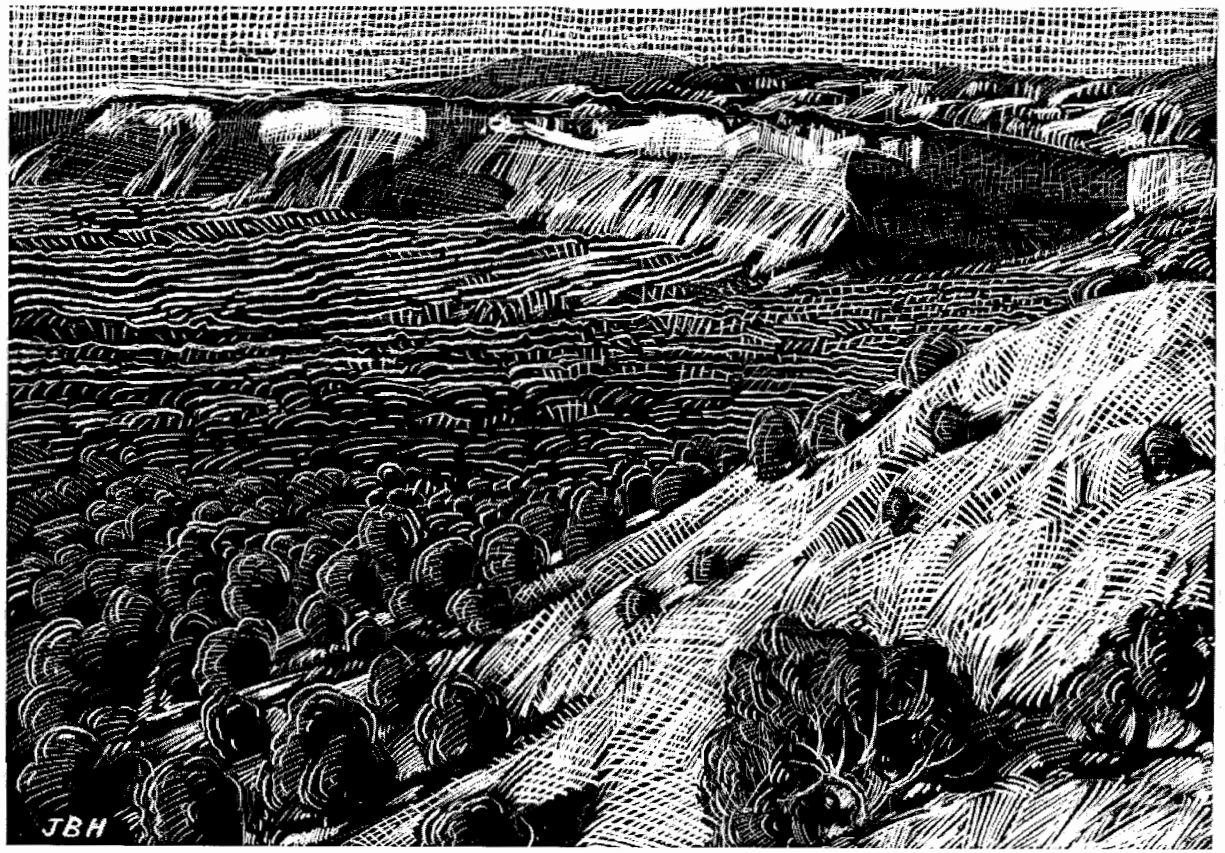
- All new and reconstructed utility lines (including powerlines up to 34.5 kilovolts) will be buried unless: visual quality objectives can be met without burying; geologic conditions make burying infeasible; or burying would produce greater long-term site disturbance.
- All reconstructed and future powerlines must meet non-electrocution standards for raptors. If problems with existing powerlines occur, corrective measures will be taken.
- All new powerlines will be constructed using non-reflective wire. Steel towers will be constructed using galvanized steel. Powerlines will not be high-lined unless no other location exists.
- Strobe lights will not be allowed at any communication site. Other methods will be used to meet aircraft safety requirements.
- Communication site plans will be prepared for all existing and new sites before any new uses or changes in use occur.
- A Monument-wide feasibility study will be prepared to determine the most appropriate location(s) for new communication sites.

- Only one access route to private land parcels will be authorized unless public safety or local ordinances warrant additional routes.
- Private land owners will be required to coordinate the development of access routes across public lands in order to prevent a proliferation of routes.

Route Maintenance: Most routes will be maintained within the existing travel disturbance, except as provided for in the **Transportation and Access** section of Chapter 2. Erosion control structures may be necessary during or after maintenance activities.

Visual Resources: All proposed actions must consider the importance of the visual values and must minimize the impacts the project may have on these values. All projects must be designed to be unobtrusive and follow these procedures:

- The visual resource contrast rating system will be used as a guide to analyze potential visual impacts of all proposed actions. Projects must be designed to mitigate impacts and conform to the assigned Visual Resource Management (VRM) class.
- Natural or natural appearing materials will be used as a priority
- Restoration and revegetation objectives must be met.
- The Monument manager may allow temporary projects, such as research projects, to exceed VRM standards if the project terminates within two years of initiation. Phased mitigation may be required during the project to better conform with prescribed VRM standards.



- Existing facilities will be brought into VRM class conformance to the extent practicable when the need or opportunity arises, such as during reconstruction.

Wild and Scenic Rivers: All proposed actions must be evaluated to determine potential impacts on outstandingly remarkable values for river segments recommended as suitable. Projects will be relocated or modified to avoid impacts to identified outstandingly remarkable values.

Wilderness Concerns (including Wilderness Study Areas (WSAs) and areas with Wilderness Character): Existing WSAs will be managed under the BLM's Interim Management Policy and Guidelines for Lands Under Wilderness Review.

Areas that were found to have wilderness characteristics during the BLM's 1999 reinventory will not be managed as WSAs, unless designated as WSAs under the Section 202 Planning Process. In the meantime, the BLM will continue to give careful consideration before acting affirmatively on any proposals for activities within these areas. In NEPA processes, BLM will continue to evaluate the potential for harm to wilderness characteristics, and proposed actions may be modified or the "no action" alternative will be considered if actions were deemed to have the potential to negate the areas's eligibility for wilderness designation by Congress.

Weeds: Control of noxious weeds is a priority in order to achieve the overall vegetation management objectives. Implications for weed management must be considered in all projects. Specific considerations include:

- Chemical treatment methods will generally be restricted to control of noxious weed species. BLM employees or contractors with appropriate certification will be responsible for use of chemicals and will take precautions to prevent possible effects to non-target plant species. Use of such chemicals will not be allowed near special status plant populations.
- Biological control methods will be used only for the control of noxious or exotic weed species.
- Aerial chemical applications may only be used in limited circumstances where: accessibility is so restricted that no other alternative means is available; it can be demonstrated that non-target sensitive species or other Monument resources will not be detrimentally affected; and noxious weeds are presenting a significant threat to Monument resources.
- All hay used on BLM lands must be certified weed free.
- All machinery that has been used outside of the Monument must be cleaned prior to use within the Monument.
- All projects will contain restoration/revegetation protocols to minimize re-colonization of treated areas by noxious weed species.

Introduction

The following policies, practices, and procedures will be implemented in order to ensure that Bureau of Land Management (BLM) lands are healthy. The concept of healthy rangelands expresses the BLM's desire to maintain or improve productivity of plant, animal (including livestock), soil, and water resources at a level consistent with the ecosystem's capability.

In order to meet society's needs and expectations for sustained production and conservation of natural resources from BLM rangelands, use of these lands must be kept in balance with the land's ability to sustain those uses. Identifying that balance requires an understanding and application of ecological principles that determine how living and non-living components of rangelands interact. Recognition of the inter-dependence of soil, water, plants, and animals (including livestock) is basic to maintaining healthy rangelands and is the key element in BLM's proposed Standards and Guidelines.

The policies, practices, and procedures contained in this document are referred to as Standards and Guidelines. Standards and Guidelines will apply to all uses of BLM land for forage, including livestock, wildlife, wild horses, and burros.

Standards describe desired ecological conditions that the BLM intends to attain in managing BLM lands, whereas Guidelines define practices and procedures that will be applied to achieve Standards. While Standards will initially be applied to grazing, it is the BLM's intent to eventually apply these Standards to all rangeland uses that have the ability to affect or be affected by the ecological characteristics of rangelands.

Fundamentals of Rangeland Health

The BLM has defined four Fundamentals of Rangeland Health, which are the basic ecological principles underlying sustainable production of rangeland resources. These Fundamentals are embodied in the BLM's new Grazing Regulations (43 CFR, Part 4100), which became effective in August of 1995. These four Fundamentals of Rangeland Health, which also serve as the basis for Standards and Guidelines for Grazing Management, are as follows:

1. Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian/wetland, and aquatic components; soil and plant conditions support water infiltration, soil moisture storage, and release of water that are in balance with climate and landform, and maintain or improve water quality, water quantity, and timing and duration of flow.

2. Ecological processes, including the hydrologic cycle, nutrient cycles, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.

3. Water quality complies with state water quality standards and achieves, or is making progress toward achieving, established BLM management objectives, such as meeting wildlife needs.

4. Habitats are, or are making significant progress towards being, restored or maintained for Federal threatened and endangered species, Federal proposed, Federal candidate, other special status species, native species, and for economically valuable game species and livestock.

By developing Standards and Guidelines based on the Fundamentals listed above, and by applying those Standards and Guidelines to BLM land management, it is the BLM's intent to achieve the following:

1. Promote healthy, sustainable rangeland ecosystems that produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, wild horse and burro habitat, clean water, clean air, etc.

2. Accelerate restoration and improvement of public rangelands to properly functioning condition, where appropriate.

3. Provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy rangelands.

4. Ensure that BLM land users and stakeholders have a meaningful voice in establishing policy and managing BLM rangelands.

Standards and Guidelines

Standards are descriptions of the desired condition of the biological and physical components and characteristics of rangelands. Standards:

- are measurable and attainable;
- comply with various Federal and state statutes, policies, and directives applicable to BLM rangelands; and
- establish goals for resource condition and parameters for management decisions.

Indicators are features of an ecosystem that can be measured or observed in order to gain an understanding of the relative condition of a particular landscape or portion of a landscape. Indicators will be used by the rangeland manager to determine if Standards are being met. The indicators proposed for use are commonly accepted and used by members of the rangeland management profession in monitoring rangelands. Methods and techniques for evaluating these indicators are also commonly available. In using these terms, it should be recognized that not every indicator applies equally to every acre of land or to every ecological site. Additional indicators not listed below may need to be developed for some rangelands depending upon local conditions.

Similarly, because of natural variability, extreme degradation, or unusual management objectives, discretion will be used in applying Standards. Judgements about whether a site is meeting or failing to meet a Standard must be tempered by a knowledge of the site's potential. Examples of this are thousands of acres of the Great Basin in western Utah where native perennial grass species' have been replaced by cheatgrass, an annual exotic species. It will be difficult and expensive to return all those areas to their natural potential because they have been greatly altered. It may not even be feasible to restore such areas from such an altered state to a state similar to "natural" conditions.

Site potential is determined by soil, geology, geomorphology, climate, and landform. Standards must be applied with an understanding of the potential of the particular site in question, as different sites have differing potentials.

Guidelines are management approaches, methods, and practices that are intended to achieve a Standard. Guidelines:

- typically identify and prescribe methods of influencing or controlling specific public land uses;
- are developed and applied consistent with the desired condition and within site capability; and
- may be adjusted over time.

It should be understood that these Standards and Guidelines are to be applied in making specific grazing management decisions. However, it should also be understood that they are considered the minimum conditions to be achieved. Flexibility must be used in applying these policy statements because ecosystem components vary from place to place and ecological interactions may be different.

Standards and Guidelines for use on BLM Land in Utah are described in the following pages. Standards and Guidelines, once approved by the Secretary of the Interior, will be implemented through subsequent Resource Management Plans (RMPs) and other decisions by BLM officials involving matters related to management of grazing. Where applicable, the statewide Guidelines may be adopted as terms and conditions for grazing permits and leases. Additional Guidelines may be identified and implemented through subsequent RMPs and activity plans to address local situations not dealt with by the statewide Guidelines.

Standards for Rangeland Health

Standard 1. Upland soils exhibit permeability and infiltration rates that sustain or improve site productivity, considering the soil type, climate, and landform. This is indicated by:

a. Sufficient cover and litter to protect the soil surface from excessive water and wind erosion, promote infiltration, detain surface flow, and retard soil moisture loss by evaporation;
b. The absence of indicators of excessive erosion such as rills, soil pedestals, and actively eroding gullies; and
c. The appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community (DPC), where identified in a land use plan conforming to these Standards, or (2) where the DPC is not identified, a community that equally sustains the desired level of productivity and properly functioning ecological processes.

Standard 2. Riparian and wetland ateas are in properly functioning condition. Stream channel morphology and functions are appropriate to soil type, climate and landform. This is indicated by:

a. Streambank vegetation consisting of, or showing a trend toward, species with root masses capable of withstanding high streamflow events, vegetative cover adequate to protect stream banks and dissipate streamflow energy associated with high-water flows, protect against accelerated erosion, capture sediment, and provide for groundwater recharge;
b. Vegetation reflecting: DPC, maintenance of riparian and wetland soil moisture characteristics, diverse age structure and composition, high vigor, large woody debris when site potential allows, and providing food, cover, and other habitat needs for dependent animal species;
c. Re-vegetating point bars, lateral stream movement associated with natural sinuosity, channel width, depth, pool frequency, and roughness appropriate to landscape position; and
d. Active floodplain.

Standard 3. Desired species, including native, threatened, endangered, and special-status species, are maintained at a level appropriate for the site and species involved. This is indicated by:

a. Frequency, diversity, density, age classes, and productivity of desired native species necessary to ensure reproductive capability and survival;
b. Habitats connected at a level to enhance species survival;
c. Native species re-occupy habitat niches and voids caused by disturbances unless management objectives call for or maintenance of non-native species;
d. Habitats for threatened, endangered, and special-status species managed to provide for recovery and move species toward de-listing; and
e. Appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the DPC, where identified in a land use plan conforming to these Standards, or (2) where the DPC is not identified, a community that equally sustains the desired level of productivity and properly functioning ecological processes.

Standard 4. The BLM will apply and comply with water quality standards established by the State of Utah (R.317-2) and the Federal Clean Water and Safe Drinking Water Acts. Activities on BLM lands will fully support the designated beneficial uses described in the Utah Water Quality Standards (R.317-2) for Surface and Groundwater. This is indicated by:

a. Measurement of nutrient loads, total dissolved solids, chemical constituents, fecal coliform, water temperature and other water quality parameters; and
b. Macro invertebrate communities that indicate water quality meets aquatic objectives.

Guidelines for Grazing Management

1. Grazing management practices will be implemented which:
   a. Maintain sufficient residual vegetation and litter on both upland and riparian sites to protect the soil from wind and water erosion and support ecological functions;
   b. Promote attainment or maintenance of proper functioning condition riparian/wetland areas, appropriate stream channel morphology, desired soil permeability and infiltration, and appropriate soil conditions and kinds and amounts of plants and animals to support the hydrologic cycle, nutrient cycle and energy flow;
   c. Meet the physiological requirements of desired plants and facilitate reproduction and maintenance of desired plants to the extent natural conditions allow;
   d. Maintain viable and diverse populations of plants and animals appropriate for the site;
   e. Provide or improve, within the limits of site potentials, habitat for threatened or endangered species;
   f. Avoid grazing management conflicts with other species that have the potential of becoming protected or special status species;
   g. Encourage innovation, experimentation and the ultimate development of alternatives to improve rangeland management practices; and
   h. Give priority to rangeland improvement projects and land treatments that offer the best opportunity for achieving the Standards.

2. Any spring and seep developments will be designed and constructed to protect ecological process and functions and improve livestock, wild horse, and wildlife distribution.

3. New rangeland projects for grazing will be constructed in a manner consistent with the Standards. Considering economic circumstances and site limitations, existing rangeland projects and facilities that conflict with the achievement or maintenance of the Standards will be relocated and/or modified.

4. Livestock salt blocks and other nutritional supplements will be located away from riparian/wetland areas, other permanently located, or other natural water sources. It is recommended that the locations of these supplements be moved every year.

5. The use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands, non-intrusive, non-native plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, (c) cannot achieve ecological objectives as well as non-native species, and/or (d) cannot compete with already established non-native species.

6. When rangeland manipulations are necessary, the best management practices, including biological processes, fire, and intensive grazing will be utilized prior to the use of chemical or mechanical manipulations.

7. When establishing grazing practices and rangeland improvements, the quality of the outdoor recreation experience is to be considered. Aesthetic and scenic values, water, campsites, and opportunities for solitude are among those considerations.

8. Feeding of hay and other harvested forage (which does not refer to miscellaneous salt, protein, and other supplements), for the purpose of substituting inadequate natural forage, will not be conducted on BLM lands other than in (a) emergency situations where no other resource exists and animal survival is in jeopardy, or (b) situations where the Authorized Officer determines such a practice will assist in meeting a Standard or attaining a management objective.

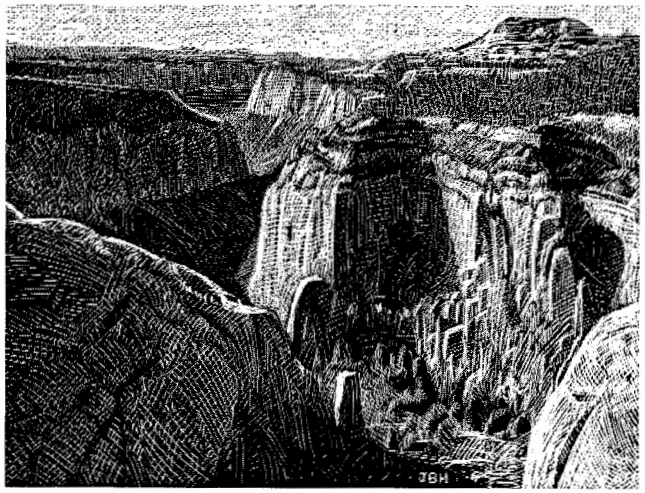
9. In order to eliminate, minimize, or limit the spread of noxious weeds, (a) only hay cubes, hay pellets, or certified weed-free hay will be fed on BLM lands, and (b) reasonable adjustments in grazing methods, methods of transport, and animal husbandry practices will be applied.

10. To avoid contamination of watet sources and inadvertent damage to non-target species, aerial application of pesticides will not be allowed within 100 feet of a riparian/wetland area unless the product is registered for such use with the Environmental Protection Agency.

11. On rangelands where a Standard is not being met, and conditions are moving toward meeting the Standard, grazing may be allowed to continue. On lands where a Standard is not being met, conditions are not improving toward meeting the Standard or other management objectives, and livestock grazing is deemed responsible, administrative action with regard to livestock will be taken by the Authorized Officer pursuant to CFR 4180.2(c).

12. Where it can be determined that more than one kind of grazing animal is responsible for failure to achieve a Standard, and adjustments in management are required, those adjustments will be made to each kind of animal, based on interagency cooperation as needed, in proportion to their degree of responsibility.

13. Rangelands that have been burned, reseeded, or otherwise treated to alter vegetative composition will be closed to livestock grazing as follows: (a) burned rangelands, whether by wildfire or prescribed burning, will be ungrazed for a minimum



of one complete growing season following the burn; (b) rangelands that have been reseeded or otherwise chemically or mechanically treated will be ungrazed for a minimum of two complete growing seasons following treatment.

14. Conversions in kind of livestock (such as from sheep to cattle) will be analyzed in light of Rangeland Health Standards. Where such conversions are not adverse to achieving a Standard, or they are not in conflict with land BLM use plans, the conversion will be allowed.

Monitoring and Assessment

The determination of whether or not a particular grazing unit, pasture or allotment is meeting a Standard will be made by the Authorized Officer based on rangeland assessments and monitoring. Monitoring the indicators will be in the form of recorded data from study sites or transects. It may be supplemented by visual observations and other data by BLM or other agency personnel, ranchers, interested public, wildlife agency personnel, or other resource data.

Assessments are the interpretation of data, observations, and related research findings. Assessments are the usual basis for prescribing grazing adjustments or practices. In some cases, such as with threatened or endangered species, Section 7 consultation with the U. S. Fish and Wildlife Service under the Endangered Species Act will occur. In all cases, conformance with Standards and Guidelines is a local decision based on local circumstances involving a collaborative process with affected interests

Should an assessment determine that an allotment is not meeting a Standard and/or significant progress toward meeting a Standard is not occurring, the next step is to determine the cause of failing to meet the Standard. If that determination reveals that grazing is involved or partially responsible, the Authorized Officer, with involvement of the interested parties, will ptescribe actions that ensure progress toward meeting the Standard. Those actions may be a part of an activity plan, a coordinated management plan, or an administrative decision. Corrective management actions will be based on actual on-the-ground data and conditions.

(Standards for Rangeland Health and Guidelines for Grazing Management for BLM Lands in Utah, USDI, BLM, May 1997)

Introduction

This Plan makes Wild and Scenic River (WSR) suitability recommendations as required by section 5(d)(1) of the WSR Act. WSR designations can be made only by Congress, or the Secretary of the Interior upon application of a State Governor. As described in the Draft Management Plan/Draft Environmental Impact Statement (DEIS), representatives from Grand Staircase-Escalante National Monument (GSENM), Bryce Canyon National Park, Glen Canyon National Recreation Area, and Dixie National Forest worked together to discuss suitability recommendations made in this document. Land managers responsible for managing the various segments came to consensus on segments which overlapped jurisdictions. They also made decisions for segments that were under their own jurisdictions. Those segments lying within GSENM, as well as Bureau of Land Management (BLM) river segments found eligible between the Monument boundary and the Arizona State line, are assessed in this report. Glen Canyon National Recreation Area, Dixie National Forest, and Bryce Canyon National Park are currently working on suitability assessments for the segments within their jurisdictions.

Input was given by Kane County Water Conservancy District, the office of the Governor of Utah, the Utah Division of Natural Resources, and the Utah Division of Water Resources, pursuant to the statewide Memorandum of Understanding (MOU) described in the DEIS. All meetings held in regards to the MOU were open and announced to the public.

The suitability assessment is divided into two parts for GSENM. The first part assesses the Escalante River system, which includes the main stem of the Escalante River and many of its tributaries. The second part assesses the Paria River system and several of its tributaries. Tables at the end of this Appendix summarize the information presented in the text for each of the suitable segments.

Escalante River System

The Escalante River System begins on the Aquarius Plateau. The river system extends from the top of Boulder Mountain south into the Colorado River (Lake Powell). The river system lies within the Colorado Plateau Physiographic Province, Canyonlands, and Southern High Plateaus subprovinces. Dominant vegetation zones change with elevation and precipitation levels. Headwaters begin in the Montane Zone, which contains forests of ponderosa pine, Douglas fir, Engelmann spruce, and blue spruce. The Piñon and Juniper Zone follows, blending eventually with the Sagebrush Zone, and ending in the lower Shadscale Zone. It flows through the Plateau Uplands water province and is in the Escalante River Drainage Basin.

Although the main stem of the Escalante begins northwest of the town of Escalante, most of the flow comes from its side tributaries such as Boulder Creek, Pine Creek, Death Hollow, Sand Creek, The Gulch, and Calf Creek. These tributaries are located downstream from the town of Escalante. Boulder Creek and Deer Creek flow through or near the town of Boulder.

The headwaters of the Escalante River are composed of several tributaries in the Escalante Ranger District of Dixie National Forest. From there, the river flows through the BLM-managed GSENM, and then enters Glen Canyon National Recreation Area. It ends at Coyote Gulch, near Lake Powell. This suitability assessment covers that portion of the river and its major tributaries within the boundaries of GSENM.

The Escalante River was first identified by the Departments of the Interior and Agriculture as a candidate "inventory" river to be studied as a possible addition to the Narional Wild and Scenic River System on September 11, 1970. It was later identified as part of the Nationwide Rivers Inventory by the National Park Service.

As prescribed in the WSR Act and by BLM policy, the area included in this evaluation is the river area and its adjoining tributaries within the river corridor. Generally, the corridor width cannot exceed an average of 320 acres per mile, which is usually measured approximately 1/4 mile from the mean high-water mark on both sides of the channel. Corridor boundaries for Federally designated and administered WSRs may vary based on a number of conditions, but are usually delineated by legally identifiable lines (survey or property lines). They may also be identified by some form of on-the-ground physical features (i.e., topography, natural or man-made features such as canyon rims, roads, etc.), which provide the basis for protecting the river's identified values and practicality in managing those values.

Suitability Recommendations

About 140 miles are recommended suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS). The suitable

river segments include: Escalante River 1, 2, 3; Harris Wash; Lower Boulder Creek; Slickrock Canyon; Lower Deer Creek 1, 2; The Gulch 1, 2, 3; Steep Creek; Lower Sand Creek and tributary Willow Patch Creek; Mamie Creek and west tributary; Death Hollow Creek; Calf Creek 1, 2, 3; Twenty-five Mile Wash (refer to Table A4.1).

The following segments are recommended as non-suitable and are released from further WSR consideration: the upper part of Harris Wash, Dry Hollow Creek, Cottonwood Canyon, Blackwater Canyon, Lamanite Arch Canyon,
Water Canyon, west fork of Steep Creek, Lower Horse Canyon, Wolverine Creek, Little Death Hollow, unnamed tributary west of Calf Creek, Phipps Wash and tributaries, and the upper part of Twenty-five Mile Wash and north tributary.

Cottonwood Canyon, Wolverine Creek, Little Death Hollow, Phipps Wash, Cottonwood Creek, parts of Harris Wash, side canyons into the Gulch, Water Canyon, Blackwater Canyon, Lamanite Arch Canyon, Dry Hollow Creek, and the unnamed tributary west of Calf Creek were determined non-suitable because the quality of river characteristics in these segments will not significantly enhance nor contribute to the NWSRS. Nevertheless, these rivers will be managed for their values under the Proclamation and this Plan.

Lower Horse Canyon, while eligible, was determined to be non-suitable because of management conflicts (one of the suitability criteria identified in BLM Manual Section 8351). An existing water diversion in that segment of the river could be used in the future to remove livestock grazing from the riparian area, which would conflict with WSR status.

Characteristics Which do or do not Make the Area a Worthy Addition to the NWSRS

The segments identified in this report are on the Colorado Plateau Physiographic Province, Canyonlands and High Plateaus subprovinces. Currently, there are no designated components of the NWSRS within this province. The Escalante River and Calf Creek Falls were specifically listed as objects of historic or scientific interest when the Monument was designated.

Those segments of the Escalante River System recommended as suitable are worthy additions to the NWSRS based on the following outstandingly remarkable values:

- **Scenic:** Throughout the spectacular Escalante River system, rugged canyons, colorful outcroppings, and imposing cliff faces provide unique opportunities for sightseeing and photography. The river has carved a sheer-walled canyon that reaches depths of 1,100 feet.

- **Recreational:** The Escalante River and major tributaries provide outstanding opportunities for hiking, backpacking, boating, visiting cultural sites, photography and nature viewing. The canyons and colorful sandstone outcroppings, known as slickrock, attract visitors from throughout the United States and other countries. Water sources are plentiful in the Escalante Canyons, allowing easier travel. Canyons with similar geology are difficult to experience in other parts of the Colorado Plateau due to lack of water.

- **Geological:** Colorful canyon walls composed of layers of sandstone, siltstone, and limestone record the geologic past, including extensive sand dunes, invasions by seaways, and deposits made by broad river systems. Tens of thousands of years of weathering and erosion have resulted in the formation of numerous natural bridges and arches throughout the river corridor area. The canyons vary in width from a mile to only inches wide. These narrow canyons are commonly called slot canyons and number in the hundreds in this river system. Although these features are common to the Colorado Plateau, the number and variety of natural bridges, arches, and slot canyons make this area distinctive and exceptional.

- **Riparian:** The river segments provide unique riparian corridors through an otherwise arid region. A variety of wildlife species, both aquatic and terrestrial, rely upon the river for habitat. The riparian area contains occupied or suitable habitat for numerous sensitive or special status animal and plant species. The Escalante River System is home to 8 amphibian species, 190 bird species, 54 mammal species, 20 fish species, and 20 reptile species. Among these are the threatened and endangered southwestern willow flycatcher, Mexican spotted owl, and wintering bald eagles.

- **Historic:** The Escalante River system has provided water for humans in a relatively arid environment for at least 10,000 years. Prehistoric Native American Indian sites are prolific throughout the system. It continues to provide water for humans today.

Other values that support the addition of portions of the Escalante River system to the NWSRS are significant paleontological values, including fossil trackways and petrified wood that would be enhanced and protected by designation.

The Escalante River, Boulder Creek, Deer Creek, Sand Creek, Twenty-five Mile Wash, Calf Creek, The Gulch, Steep Creek, Coyote Gulch, Harris Wash, Mamie Creek and Death Hollow were also included in *A Citizen's Proposal to Protect the Wild Rivers of Utah.*

Current Uses and Land Ownership Concerns

- **Energy and Minerals:** There are 2 oil and gas leases within the study area near the confluence of Phipps Wash and the Escalante River (at T35S, R5E, S18), and an active lease on a small portion of Mamie Creek. There are no mining claims, mineral sites, or coal leases in the river area.

- **Water Resource Developments, Water Rights, and Instream Flow:** Existing water developments and rights held on the river area are associated with livestock, agricultural and domestic use. Ninety-nine surface, 6 underground, and 8 spring water rights within 1 mile of each stream course in the Monument are on record with the State of Utah. Of these, the BLM holds the rights to 40 surface, 0 underground, and 4 springs. The Utah Division of Water Rights reports a total of 1.55 cfs surface diversions in the Escalante River, Calf Creek, Lower Deer Creek, and The Gulch. Most of the surface diversions are located on private land or on segments classified as Recreational. WSR designation would not affect these existing water rights as they are senior to any rights acquired through designation.

  There is some concern from local water conservancy districts and potential users over the possible effects designation could have on proposed or potential projects. These concerns should be addressed by Congress upon WSR designation. No action taken in this Plan or any WSR recommendation can establish an appropriation or Federal reserved water right. Only Congress, passing legislation designating a WSR may establish a Federal reserved water right. If Congress creates a reserved right, the BLM or the State of Utah may establish instream flows necessary to meet the purposes of the designation. Such a reserved right would, by law, be established with the priority date of the designation and would be junior to all preexisting water rights in accordance with the existing State priority system.

- **Forestry, Agriculture, and Livestock Grazing:** There are no forested lands within the study area. Agriculture in the form of irrigated farmlands occurs near the communities of Escalante and Boulder. These areas of agricultural use are not within the study area. However, farming has an impact on the river study area. On private land, water is diverted out of the channels to irrigate the farmland and the runoff returns to the river bed. When this water returns, it can carry residues of agricultural chemicals, nutrients, and salts.

  Livestock grazing is permitted on public lands throughout the river area. There are 13 allotments in the study area. Grazing along the river and on the uplands is primarily a fall/winter/spring operation. The rivers provide a significant source of water in this area for livestock. Grazing will continue to be governed by applicable laws and regulations.

  Several fences cross the rivers within their corridors. These include allotment boundary fences, pasture fences, and State section line fences. If not removed after use, these wire fences typically wash out or are taken up during high flows but are rebuilt each year as flows recede or grazing operations start up for the season. Although some landowners and ranchers expressed concerns that they would not be able to maintain these fences with designation, neither the WSR recommendations made in this Plan nor designation by Congress would affect the ability of landowners or ranchers to maintain fences.

- **Recreation Use and Facilities:** The Escalante River and major tributaries provide outstanding opportunities for recreational activities. These include hiking (canyoneering), backpacking, bird-watching, photography, viewing cultural sites, camping, and nature study. Recreational use is estimated to be 29,300 visits per year (based on 1997 RMIS data). Developed or semi-developed trailheads and trails are located at Calf Creek Lower and Upper Falls, Deer Creek, Escalante River outside of the town of Escalante, Highway 12, Harris Wash, and The Gulch.

  The BLM operates Calf Creek Campground along Calf Creek, and Deer Creek Campground along Deer Creek. These sites

received a total of 30,210 visits in FY 1997. Access to Calf Creek Falls, Deer Creek, and other river-based activities is available at these sites.

- **Transportation/Utility Facilities:** Utah State Route 12 travels over the Escalante at the dividing point between segments 1 and 2. Along tributaries, dirt roads approach the water's edge and in some places, ford the river bed. An overhead utility line crosses the river near State Route 12. Another line crosses Lower Sand Creek near its northern end. WSR designation would not affect the ability to maintain these lines.

- **Private and Commercial Development:** Protective management for suitable segments only applies to BLM managed lands. Private and commercial development is not affected by for river management on public lands.

Resources and Uses That Would be Enhanced or Curtailed by Designation

This section describes resources and uses that could be affected by designation of a Wild and Scenic River. As mentioned above WSR designations can be made only by Congress, or the Secretary of the Interior upon application of a State Governor.

- **Scenic:** Deep, narrow canyons, colorful rock walls, numerous interesting geologic features, and waterfalls provide exceptional opportunities for sightseeing and photography. During a BLM visual resources inventory, the river corridors were determined to have scenic quality A. This indicates that scenic qualities of the landforms, vegetation, and waterform are extremely high, with great variety and distinction.

- **Recreational:** The Escalante River and major tributaries provide outstanding opportunities for hiking, backpacking, photography, and nature viewing. The canyons and colorful sandstone outcrops, known as slickrock, attract visitors from throughout the United States and other countries. Canyons of the Escalante and its tributaries are well known for canyoneering (seeking out and hiking narrow slot canyons).

- **Geological:** The Colorado Plateau is a region of generally horizontal geologic strata where plateaus and mesas are separated by deep canyons. The meandering Escalante River has become deeply incised or entrenched into the Jurassic Navajo Sandstone in some places. Small side canyons within the 1/4 mile boundaty to segments such as Little Death Hollow or the Escalante River are called slot canyons. Colorful canyon walls composed of layers of sandstone, siltstone, and limestone record times in the geologic past of extensive sand dunes, invasions by seaways, and deposits made by btoad river systems. Tens of thousands of years of weathering and erosion have resulted in the forming of natural bridges and arches, water carved alcoves, rincons, and oxbows throughout the river area.

- **Wildlife and Riparian Habitat:** The river and tributaries provide riparian corridors through an otherwise semi-arid region that support a wide variety of wildlife. As typical of wetland areas, the diversity of plants and animals around the washes and streams is greater than in the surrounding uplands. Various animal species rely upon the outstandingly remarkable riparian and habitat values of the river area for food, water and other requirements. The Escalante river supports a variety of fish species. Special status animal species include bald eagles, southwestern willow flycatcher, and the Mexican spotted owl. The riparian area is potential habitat for spotted bat, Townsend's big-eared bat, and golden eagle. Canyons of the Escalante could provide habitat for the recently reintroduced California condor. Other wildlife include bighorn sheep, mule deer, raccoons, bats, reptiles, amphibians, waterfowl, raptors, neotropical species, and other birds.

- **Vegetative Composition Varies Depending on the Zone:** Riparian communities associated with the river are composed largely of tamarisk stands with narrow corridors of native willows, ash, bulrushes, cattails, and cottonwoods. Mature cottonwood and willow galleries occur along the Escalante, and at scattered springs in tributaries. Stretches that receive disruptive, scouring floods on a regular basis may remain in a disclimax successional stage. Other vegetation includes rushes, sedges, and a variety of grasses and forbs. Algal mats are found in some quiet pools. Upland vegetation is described as a mixture of desert shrub, sagebrush, piñon and juniper, grasslands, mountain shrub, and coniferous woodlands. The distribution of these associations is determined largely by elevation and precipitation.

- **Cultural (Historic and Prehistoric) Resources:** There is evidence to suggest that cultural properties and features

representing the entire time span of human occupation of the region are present along or immediately adjacent to the study area. This should not be surprising since water is necessary to all human activity. The probable span of use of the riverine habitat began about 11,000 years ago. Numerous prehistoric sites can be attributed to several Native American Indian cultures: Anasazi and Fremont, Hopi, Zuni, Paiute, and possibly Navajo. The riverine system continues to be important to modern societies. Cultural properties likely to be encountered along the river could include rock art sites, agricultural features, storage cists, rock shelters, habitations, artifact scatters, and pioneer-era homesteads, ranches, and travel routes. These cultural properties exhibit a challenge in balancing conservation and utilization, but also offer great opportunities for scientific study, education, and interpretation.

- **Wilderness Study Areas:** Eighty-two percent of the Escalante River and major tributaries run through Wilderness Study Areas (WSA) or Instant Study Areas (ISA). The river and/or tributaries flow through Phipps-Death Hollow ISA Complex, North Escalante Canyons/The Gulch ISA Complex, Escalante Canyons Tract 5 ISA Complex, Steep Creek WSA, and Scorpion WSA. There are no designated wilderness areas in the study area.

- **Streamflow and Water Quality:** The Escalante River and tributaries meet the definition of free-flowing. A mean flow of 11.4 cfs is recorded at the USGS gauging station located at the Escalante River/Pine Creek confluence and 22.5 cfs are recorded in Boulder Creek above the Escalante River. Data was collected from 1950-1955 which showed a mean flow of 82.2 cfs at the mouth. High flows typically occur during the spring runoff period and as a result of summer thundershowers. Scouring of the river beds as a result of high flows can affect channel morphology and riparian ecosystems.

  Utah Division of Water Quality has classified the Escalante River and tributaries from Lake Powell to the confluence with Boulder Creek as 2B–protected for secondary contact recreation (boating, wading), and 3C–protected for non-game fish and other aquatic life. The Escalante River and tributaries from the confluence of Boulder Creek to the headwaters and Deer Creek and tributaries, from the confluence with Boulder Creek to headwaters are classified as 2B–protected for secondary contact recreation (boating, wading), 3A–protected for cold water fish and other cold-water aquatic life, and 4–protected for agricultural use.

  The Utah Division of Water Quality defines anti-degradation segments as high quality waters with exceptional recreational or ecological significance or waters that require protection and are to be maintained at their existing quality. New point sources are prohibited and non-point sources shall be controlled to the extent feasible through best management practices. Calf Creek, Sand Creek, Mamie Creek, and Deer Creek are anti-degradation stream segments.

Designation would not significantly restrict, foreclose, or curtail any activities currently occurring or proposed within the Escalante River System.

Federal, Public, State, Tribal, Local, or Other Interests

Garfield County was primarily concerned about the effect that WSR designation would have on their proposal for Wide Hollow reservoir, which is located above the suitable WSR segments. The existing reservoir currently holds about 1,100 acre feet although it originally held 2,400 acre feet when it was built in 1956. The county is proposing a new location for the reservoir because the existing location has filled with sediments. The proposed reservoir will be located on BLM land outside of the Monument boundary. Subsequent environmental analysis will be required on any specific reservoir proposal to determine the potential impacts, including impacts on Monument resources and outstandingly remarkable values for segments recommended as suitable downstream.

Garfield County is also concerned that the segments immediately downstream from Hole-in-the-Rock Road would curtail the ability to improve that road. Since the upper part of Harris Wash, which is the only segment immediately adjacent to the road, is considered non-suitable for this Plan, there should be no effect on the maintenance of the Hole-in-the-Rock Road.

Another concern expressed by Garfield County was for private landowners. It was suggested that the BLM exclude river segments on private land from being suitable. Private

landowners have 0.9 acres along the Escalante River upstream and downstream of the Highway 12 bridge and 1.7 miles along Deer Creek upstream of the Burr Trail. Under the WSR Act, designation neither gives nor implies government control of private lands within the river corridor. Although Congress (or the Secretary of the Interior upon request of the Governor for 2(a)(ii) rivers) could include private lands within the boundaries of the designated river area, management restrictions would not apply.

Escalante and Boulder are the only communities within the river area. It is anticipated that these communities would be most affected by possible designation of the river. Much of the economy of Escalante is dependant on agriculture and the scarce water supplies available. The viability of Escalante is dependant of the continuation of existing water diversions (Franson and Noble). These diversions are upstream from the river study area.

Native American Indian tribes are concerned about rock art in the canyons. WSR designation may contribute to the protection of the rock art and surrounding area.

Ability to Manage

The Escalante River system is considered to be manageable based on the current level and type of activities taking place, and adequate staff and funding would be available to carry out management of a designated WSR. The free-flowing character and outstandingly remarkable values identified in the determination of eligibility can be protected through management actions. If the river segments are designated, a management plan will be developed within three years pursuant to the WSR Act. This will be done in order to determine management objectives and a strategy for long-term protection of the river's outstandingly remarkable values to the full extent of the WSR Act.

All river segments are within GSENM. Almost half of the river mileage is in Outstanding Natural Areas (ONA) which became ISAs in the wilderness study process. Such administrative designations will complement WSR designation and provide specific authority and guidance for the BLM to protect and manage the rivers.

Historical or Existing Rights That Could be Adversely Affected by Designation

No impact on existing or historical rights would occur as a result of designation. Section 13 (b) of the Act states that jurisdiction over waters is determined by established principles of law. Existing, valid water rights are not affected by designation.

Alterations to existing irrigation or water withdrawal facilities may be approved under Section 7 of the Act as long as there is no direct adverse effect to the values for which the river was designated. The valid and existing rights of present land owners to use water and shorelines are not affected.

Estimated Cost

No additional easements or land acquisitions are anticipated as a result of NWSRS designation. Section 6(b) of the National WSR Act specifically prohibits the use of condemnation for fee title purchase of lands if 50 percent or more of the acreage within the river area boundary is in public ownership (Federal, state or local government). This is the case with both the Escalante and Paria River Systems. It is estimated that an additional $70,000 or 1 FTE would be needed to develop, implement, and maintain actions identified in the river plans for the Escalante and Paria River systems.

Paria River System

The Paria River System begins on the Paunsaugunt Plateau near Bryce Canyon. The river system flows through the White Cliffs and the Vermilion Cliffs, and carves its way through the Paria Canyon/Vermilion Cliffs Wilderness Area to the Colorado River. The Paria River and tributaries are in the Colorado Plateau Physiographic Province and in the Canyonlands and High Plateaus sub-provinces. Dominant vegetation zones change with elevation and precipitation levels. These zones start in lower elevations with shadscale, then blend with sagebrush, and eventually piñon and juniper. Headwaters of some tributaries are in the Montane Zone. The Paria is a significant tributary in the Colorado River Basin and joins the Colorado at Lees Ferry in Arizona. It flows through the Plateau Uplands water province.

The headwaters of the Paria River are composed of several tributaries in Dixie National Forest and Bryce Canyon National Park. From there, the Paria flows through GSENM and then leaves the study area at the Arizona State line. This suitability assessment covers the river and major tributaries within the boundaries of the Monument, as well as designated BLM wilderness outside the Monument boundaries.

As prescribed in the WSR Act and by BLM policy, the area included in this evaluation is the river area and its adjoining tributaries within the river corridor. Generally, the corridor width cannot exceed an average of 320 acres per mile, which is usually measured approximately 1/4 mile from the mean high-water mark on both sides of the channel. Corridor boundaries for Federally designated and administered WSRs may vary based on a number of conditions, but are usually delineated by legally identifiable lines (survey or property lines). They can also be delineated by some form of on-the-ground physical features (i.e., topography, natural or man-made features such as canyon rims, roads, etc.), which provide the basis for protecting the river's identified values and practicality in managing those values.

Suitability Recommendations

Approximately 112 miles of the Paria River System are recommended suitable for inclusion in the National Wild and Scenic Rivers System (NWSRS). The suitable river segments include: Upper Paria River 1, 2; Lower Paria River 1, 2; Deer Creek Canyon; Snake Creek; Hogeye Creek; Kitchen Canyon; Starlight Canyon; Lower Sheep Creek; Hackberry Creek; Lower Cottonwood Creek; and Buckskin Gulch (refer to Table A4.2).

The Paria River and selected tributaries contain outstandingly remarkable river values that are worthy of addition to the National Wild and Scenic Rivers System. These values are scenic, recreational, wildlife, geological, historic, and riparian. Unique natural and human resources would benefit from the protection and enhancement afforded by NWSRS designation.

Bull Valley Gorge is considered non-suitable and is released from further consideration for inclusion in the NWSRS. The rationale for dropping this 5.9 mile segment is that, while this segment has outstandingly remarkable values, the outstandingly remarkable values are derived from its geology rather than from being a riverine system. The recreation interest lies in the tributary as a slot canyon. The BLM felt that the quality of river characteristics in this segment will not significantly enhance nor contribute to the NWSRS.

Characteristics Which do or do not Make the Area a Worthy Addition to the NWSRS

The segments identified in this report are in the Colorado Plateau Physiographic Province, Canyonlands and High Plateaus sub-provinces. Currently, there are no designated components of the NWSRS within this province. The Nationwide Rivers Inventory identified the Paria River from the Colorado River to its source as possessing values of national significance as identified by the National Park Service (NPS) (NPS, 1982, 1986, 1988). The Paria was listed as an object of historic or scientific interest when the Monument was designated.

The adjacent Arizona Strip District identified the segment of the Paria River within designated wilderness (in Utah) as suitable. This determination (although in the administrative record) was not included in the Arizona statewide WSR review in 1994 - 1996.

The Paria River, Hackberry Creek, and Bull Valley Gorge were nominated as eligible rivers in *A Citizen's Proposal to Protect the Wild Rivers of Utah.*

Those segments of the Paria River system listed as suitable above will be worthy additions to the NWSRS based on the following outstandingly remarkable values:

- **Scenic:** Throughout the spectacular Paria River Gorge, rugged canyons, colorful outcroppings and imposing cliff faces provide unique opportunities for sightseeing and photography.
- **Recreational:** The Paria River and major tributaries provide outstanding opportunities for hiking, backpacking, photography, and nature viewing. The canyons and colorful sandstone outcroppings, known as slickrock, attract visitors from throughout the United States and other countries.
- **Geologic:** The Paria River cuts through strata of successively older rocks ranging in age from Cretaceous through Permian, a time span of more than 150 million years, as it descends toward the Colorado River.

- **Riparian:** The river provides a unique riparian corridor through an otherwise arid region. This corridor provides habitat for 7 amphibian species, 242 bird species, 59 mammal species, and 21 reptile species. Among these are the threatened and endangered southwestern willow flycatcher, peregrine falcon, Mexican spotted owl, and wintering bald eagles. There are documented nests in the riparian vegetation along the banks of the Paria. This is also important historic habitat for the population of reintroduced bighorn sheep.

- **Historic:** The Paria River system has provided water for humans in a relatively arid environment for at least 10,000 years. Prehistoric Native American Indian sites are prolific throughout the system. The river system continues to provide water for humans today.

Current Uses and Land Ownership Concerns

- **Energy and Minerals:** An existing oil and gas lease is within the river area on the north end of Hackberry Creek. There are no oil or gas wells within the river area. There are no mining claims. All Federal lands in the Monument are withdrawn from new mineral entry.

- **Water Resource Developments, Water Rights, and Instream Flow:** Existing water developments and rights within the river area are associated with livestock, agricultural, and domestic use. Sixty four surface, 6 underground, and 7 spring water rights within the river corridor are on record with the State of Utah. Of these, the BLM holds the rights to 31 surface, 2 underground, and 7 springs. Utah Division of Water Resources reports a total of 3.14 cfs surface diversions in Buckskin Gulch, Hackberry Creek, Hogeye Creek, Lower Paria River, and the Upper Paria River. Three of these cfs are held by private landowners. Existing, valid water rights would not be affected by designation. Future water developments on or above public land segments will be subject to environmental analysis where Federal permits, approval, or funding would be involved.

  There is some concern from Kane County Water Conservancy Districts and potential users over the possible effects designation could have on proposed or potential projects. This concern should be addressed by Congress upon WSR designation. No action taken in this Plan or WSR recommendation can establish an appropriation or Federal reserved water right. Only Congress, passing legislation designating a WSR, may establish a federal reserved water right. If Congress creates a reserved right, the BLM or the State of Utah may establish instream flows necessary to meet the purposes of the designation. Such a reserved right would, by law, be established with the priority date of the designation and would be junior to all preexisting water rights in accordance with the existing State priority system.

- **Forestry, Agriculture, and Livestock Grazing:** There are no forested lands within the study area. Agriculture, in the form of irrigated farmlands, occurs near the communities of Tropic, Cannonville, and Adairville. These areas of agricultural use are not within the study area. However, farming has an impact on the river study area. On private land, water is diverted out of the channels to irrigate the farmland and the runoff returns to the river bed. When this water returns, it can carry remnants of chemicals used to spray the fields.

  Livestock grazing is permitted on public lands throughout the river area. The Paria and its tributaries flow through seven allotments and serve as boundaries for others. The Paria flows through Bunting Well, Cottonwood, and Headwaters Allotments. Grazing along the river and on the uplands is primarily a fall/winter/spring operation. The river is the major source of water in this area for livestock. Grazing will continue to be governed by applicable laws and regulations.

  Six fences cross the Paria within the corridor. These include allotment boundary fences, pasture fences, and State section line fences. If not removed after use, these wire fences typically wash out or are taken up during high flows, but are rebuilt each year as flows recede or grazing operations start up. Although some landowners expressed concerns that they would not be able to maintain these fences with designation, neither WSR designations made in this Plan, nor designation by Congress would affect the ability of landowners or ranchers to maintain fences.

- **Recreational Use and Facilities:** Cortidors of the Paria River and its tributaries provide outstanding opportunities for recreational activities. These include hiking (canyoneering), backpacking, bird-watching, photography, camping, and nature

study. Recreational use is estimated to be about 7,200 visits per year (based on 1997 RMIS data).

The BLM has developed trailheads at Whitehouse, Buckskin Gulch, and Wire Pass. These sites receive most of the Paria visitors (6,986 in FY 1997). Access for hiking and river-based activities is available at these trailheads. A visitor contact station and developed campground are located near the Whitehouse trailhead. The old Pahreah townsite and Paria Movie Set are located near the river corridor north of Highway 89.

- **Transportation/Utility Facilities:** U.S. Highway 89 travels over the river at the lower end of the Upper Paria. Outside of the Wilderness area south of the Monument, dirt roads approach the water's edge, and in some places, ford the river. An historic travel route goes along the Upper Paria river channel, in and out of the river. Power transmission lines cross over the river at three places between the Pahreah townsite and Highway 89, and two others cross the Paria at the Wilderness boundary. WSR designation would not affect the ability to maintain these lines.

- **Private and Commercial Development:** All major visitor facilities and developments will be outside the Monument boundaries. There are 1,152 acres (5 miles) of private land within the river area. Development on these parcels is not a concern for river management.

- **Rights-of-Way or Leases:** Three rights-of-way (ROW) fall within the Paria River study area. They are for utility lines at T41S, R1W, S29 and 32; T42S, R1W, S16; and T43S, R1W, S 23.

Resources and Uses that Would be Enhanced or Curtailed by Designation

This section describes resources and uses that could be affected by designation of a Wild and Scenic River. As mentioned above WSR designations can be made only by Congress, or the Secretary of the Interior upon application of a State Governor.

- **Scenic:** Deep, narrow canyons and colorful rock walls provide exceptional opportunities for sightseeing and photography. During a BLM visual resources inventory, the river corridors were determined to have scenic quality A. This indicates that scenic qualities of the landforms, vegetation, and water form are extremely high, with great variety and distinction.

- **Recreation:** The Paria River and major tributaries provide outstanding opportunities for hiking, backpacking, photography, and nature viewing. The canyons and colorful sandstone outcrops, known as slickrock, attract visitors from throughout the United States and other countries. Thousands of hikers and backpackers a year visit the river as it flows through the Paria Canyon/Vermilion Cliffs Wilderness Area. Outside the Wilderness area, visitor use is quite low and dispersed.

  The Paria River Corridor is also accessed by motorized users. This use will be curtailed for the entire river corridor by the Monument Plan zone prescriptions.

- **Geological:** The Colorado Plateau is a region of generally horizontal geologic strata where plateaus and mesas are separated by deep canyons. The Paria River cuts through strata of successively older rocks ranging in age from Cretaceous through Permian, a time span of more than 150 million years, as it descends toward the Colorado River near Lees Ferry. The upper tributaries of the Paria include slot canyons, so defined because they are very deep with extremely narrow walls, are incised mostly into the Jurassic Navajo Sandstone. Southern portions of the Paria River and tributaries such as Buckskin Gulch, also form slot canyons. Kaibab Gulch, the upper reaches of Buckskin Gulch, is the stratigraphic type section for the Permian Kaibab Formation.

- **Riparian and Wildlife Habitat:** The river and tributaries provide riparian corridors through an otherwise semi arid region that support a wide variety of wildlife. As typical of wetland areas, the diversity of plants and animal around the washes and streams is greater than in the surrounding uplands. Various animal species rely upon the river area for consumptive use and other requirements. Special status animal species include bald eagles, southwestern willow flycatcher, Mexican spotted owl, and peregrine falcons. The riparian area is potential habitat for the recently reintroduced California condor. Other wildlife include bighorn sheep, mule deer,

raccoons, bats, reptiles, amphibians, waterfowl, raptors and other birds.

- **Vegetative Composition Varies Depending on the Zone:** Riparian and upland riparian communities associated with the river consist of native willows, cottonwoods, bulrushes, cattails, and non-native tamarisk. Stretches that receive disruptive, scouring floods on a regular basis remain in a disclimax successional stage. Other vegetation includes rushes, sedges, and a variety of grasses and forbs. Algal mats are found in some quiet pools. Upland vegetation is described as a mixture of desert shrub, sagebrush, piñon and juniper, grasslands, mountain shrub, and coniferous woodlands. The distribution of these associations is determined largely by elevation and precipitation.

- **Cultural (Prehistoric and Historic) Resources:** There is evidence to suggest that cultural properties and features representing the entire time span of human occupation of the region are present along or immediately adjacent to the Paria River. This should not be surprising since water is necessary to all human activity. The probable span of use of the riverine habitat began about 11,000 years ago. Numerous prehistoric sites can be attributed to several Native American cultures: Anasazi and Fremont, Hopi, Zuni, Paiute, and possibly Navajo. The river system continues to be important to modern societies. Cultural properties likely to be encountered along the river include rock art sites, agricultural features, storage cists, rock shelters, habitations, artifact scatters and pioneer-era homesteads, ranches, and travel routes. These cultural properties exhibit a challenge in balancing conservation and utilization, but also offer great opportunities for scientific study, public education and interpretation.

- **Wilderness and Wilderness Study Areas:** Seventy-five percent of the Paria River and tributaries run through WSA and a designated Wilderness area. The river and tributaries flow through the Paria-Hackberry WSA and The Cockscomb WSA. Lower Paria River-2 segment and the entire eligible segments of Buckskin Gulch and Wire Pass are within the Paria Canyon/Vermillion Cliffs Wilderness Area.

- **Streamflow and Water Quality:** The Paria River and tributaries are free-flowing streams, although intermittent. A mean flow of 9.08 cfs is recorded by United States Geological Survey south of the town of Tropic. High flows typically occur during the spring runoff period and as a result of summer thundershowers. Frequent scouring of the river as a result of high flows constantly affects channel morphology and the riparian ecosystems.

  Utah Division of Water Quality has classified the Paria River and tributaries from the State line to headwaters as 2B–protected for secondary contact recreation (boating, wading), 3A–protected for cold water fish and other cold-water aquatic life, and 4–protected for agricultural use.

  The Paria generally is turbid and saline. The water appears turbid for most of the year to the degree that the substrate is not visible. Dissolved salt and sediment loads are high, reducing the feasibility and success of impoundments on the river. There is heavy algal growth in pools during periods of low water.

Federal, Public, State, Tribal, Local, or Other Interests

Kane County Water Conservancy District does not support WSR designation for the Paria River System. They are specifically concerned about being able to maintain the powerlines on the lower portion of the Paria River and upgrading the crossing on Skutumpah road over Bull Valley Gorge. However, WSR designation may or may not affect the County's ability to improve the crossing over the canyon, dependent on an individual site specific assessment of impacts. This is not a concern for this analysis, as Bull Valley Gorge is not considered suitable. Powerlines would be able to be maintained although upgrades would be evaluated in light of impacts to river values.

Kane County Water Conservancy District also expressed concern for the private property owners near Highway 89. They feel that those private property owners would not be able to use their water rights if designation occurs. They are also concerned that ranchers would not be able to repair and build fences in the river corridor. Under the WSR Act, designation neither gives nor implies government control of private lands within the river corridor. Although Congress (or the Secretary of the Interior upon request of the Governor for 2(a)(ii) rivers) could include private lands within the boundaries of the designated river area, management restrictions would not apply.

There was also concern that motorized users would not be able to access the Paria River Corridor as they have in the past. Because cross-country vehicle travel is limited to designated routes in the

Management Plan, motorized and mechanized use in the Paria River corridor will be curtailed.

Native American Indian tribes are concerned about rock art in the canyons. WSR designation could contribute to the protection of the rock art and surrounding area.

Ability to Manage

The Paria River study area is considered to be manageable based on the current level and type of activities taking place, and assuming that adequate staff and funding is available to carry out management of a designated WSR. Designation of the Paria River System would slightly raise the level of management needed above that identified in the Monument Plan. The free-flowing character and outstandingly remarkable values identified in the eligibility study can be protected through management actions. If the rivers are designated, a management plan will develop management objectives and a strategy for long-term protection of the river's outstandingly remarkable values to the full extent of the WSR Act.

River protection is considered in environmental assessments of proposed projects and in all land use and activity plans. The majority of the river system on public land is in either designated Wilderness or WSAs. Dams could be constructed in wilderness but not on WSR. Overlapping designations complement WSR designation and provide additional authority, protection, and guidance for the BLM to manage the river if designated.

Historical or Existing Rights that Could be Adversely Affected by Designation

No impact on existing or historical rights would occur as a result of designation.

Estimated Cost

No additional easements or land acquisitions are anticipated as a result of NWSRS designation. Section 6(b) of the National WSR Act specifically prohibits the use of condemnation for fee title purchase of lands if 50 percent or more of the acreage within the river area boundary is in public ownership (Federal, State or local government). This is the case with both the Escalante and Paria River Systems. It is estimated that an additional $70,000 or 1 FTE would be needed to develop, implement, and maintain actions identified in the river plans for the Escalante and Paria River systems.

Table A4.1. Escalante River System Suitable Segments

Segment	Segment Description	Length (Nearest 0.1 mile)	Tentative Classification	Characteristics which make the area a worthy addition to NWSRS	Current uses and land ownership concerns	Resources and uses that would be enhanced or curtailed by designation	Federal, public, state, tribal, local, or other interests
Escalante River-1	Confluence with Pine Creek (T35S, R3E, S9) to Highway 12 (T35S, R4E, S12)	13.8	Wild	high scenic quality, high recreational use, numerous geologic features, important fish and wildlife habitat, prehistoric sites, historic homestead and routes, riparian area, fossil tracks, petrified wood	2 powerlines, 1 pipeline, and 1 telephone line cross the Escalante River and Calf Creek near their confluence, T35S, R4E, S12. There is also a ROW for State Route 12 near Escalante River and Calf Creek confluence.		Garfield County is concerned about their ability to replace Wide Hollow Reservoir upstream of this segment. Escalante River-2
Escalante River-2	Highway 12 to east side of private land (T35S, R4E, S13)	1.1	Recreational				
Escalante River-3	Private land to boundary (T36S, R6E, S4)	19.2	Wild				

Table A4.1. Escalante River System Suitable Segments (continued)

Segment	Segment Description	Length (Nearest 0.1 mile)	Tentative Classification	Characteristics which make the area a worthy addition to NWSRS	Current uses and land ownership concerns	Resources and uses that would be enhanced or curtailed by designation	Federal, public, state, tribal, local, or other interests
Harris Wash	T36S, R5E, S35 to Monument boundary (T36S, R5E, S36)	1.1	Wild	high quality scenery, recreational attraction, southwestern willow flycatcher habitat, historic route, prehistoric sites, scientific study opportunities			1 mile Federal public water reserve. Garfield County concerned that WSR designation would curtail improving Hole-in-the-Rock Road.
Lower Boulder Creek	Downstream side of T34S, R4E, S11 to Escalante River (T35S, R5E, S22)	13.5	Wild	high quality scenery, high recreational use, part of the Escalante Canyons ONA and prehistoric sites	a pipeline ROW exists along the north end T34S, R4E, S11 &12	fisheries could be enhanced with designation	
Slickrock Canyon	Monument boundary (T33S, R5E, S22) to Deer Creek (T33S, R5E, S33)	2.8	Wild	high quality scenery, recreational values, prehistoric sites, and riparian areas			
Lower Deer Creek-1	Slickrock Canyon (T33S, R5E, S 33) to Burr Trail Road (T34S, R5E, S16)	3.8	Recreational	high quality scenery, Deer Creek Recreation Area, Escalante Canyons ONA, southwestern willow flycatchers, prehistoric sites, threatened plant, and riparian area	1.7 miles of the section of Deer Creek between Slickrock and the Burr Trail is on private land. Irrigation pipeline and ROW for maintenance of water system on part of pubic land, water right to approx 1.5 cfs for irrigation and non-consumptive use through this section. This is not a significant diversion for this stream.	fisheries could be enhanced with designation. A Federally threatened species, the Ute-ladies' tresses orchid, is found in the Deer Creek drainage and could be further protected by WSR designation	part of this segment is in the Escalante Canyons ONA
Lower Deer Creek-2	Burr Trail Road to Lower Boulder Creek (T35S, R5E, S9)	7.0	Wild				

Table A4.1. Escalante River System Suitable Segments (continued)

Segment	Segment Description	Length (Nearest 0.1 mile)	Tentative Classification	Characteristics which make the area a worthy addition to NWSRS	Current uses and land ownership concerns	Resources and uses that would be enhanced or curtailed by designation	Federal, public, state, tribal, local, or other interests
The Gulch-1	Monument boundary (T32S, R6E, S32)to Burr Trail Road (T34S, R5E, S13)	11.0	Wild	high quality scenery, outstanding recreation, natural arch, peregrine falcon habitat, riparian area and petrified wood			ONA
The Gulch-2	Along Burr Trail Road to T34S, R5E, S13	0.6	Recreational				
The Gulch-3	Below Burr Trail Road to Escalante River (T35S, R5E, S36)	13.0	Wild				
Steep Creek	Monument boundary (T33S, R5E, S24) to The Gulch (T34S, R5E, S12)	6.4	Wild	high quality scenery, recreational values, and riparian areas			
Lower Sand Creek and tributary Willow Patch Creek	Sweetwater Creek (T34S, R4E, S8) to Escalante River (T35S, R4E, S10)	13.2	Wild	high scenic quality, part of an ONA, fish habitat, southwestern willow flycatcher habitat, historic trail, and riparian area	a utility line crosses the north end of Lower Sand Creek, T34S, R4W, S8		
Mamie Creek and west tributary	Monument Boundary (T34S, R3E, S16) to Escalante River (T35S, R4E, S7)	9.2	Wild	high scenic quality, part of an ONA, high recreational use, natural bridge, fish and wildlife habitat, prehistoric and historic sites including an historic mail trail, and riparian area			part of Phipps Death Hollow ONA
Death Hollow Creek	Monument boundary (T34S, R3E, S3) to Mamie Creek (T34S, R3E, S36)	9.9	Wild	high scenic quality, part of an ONA, southwestern willow flycatcher habitat, prehistoric sites, dinosaur tracks, and riparian area			segment is in the North Escalante Canyons ONA

Table A4.1. Escalante River System Suitable Segments (concluded)

Segment	Segment Description	Length (Nearest 0.1 mile)	Tentative Classification	Characteristics which make the area a worthy addition to NWSRS	Current uses and land ownership concerns	Resources and uses that would be enhanced or curtailed by designation	Federal, public, state, tribal, local, or other interests
Calf Creek-1	Headwaters (T34S, R4E, S10) to Lower Calf Creek Falls (T34S, R4E, S24)	3.5	Wild	high scenic quality, Calf Creek Recreation Area, bird habitat, prehistoric site, and riparian area	public campground, diversion on lower end. 2 powerlines, 1 pipeline, and 1 telephone line cross the Escalante River and Calf Creek near their confluence, T35S, R4E, S12. There is also a ROW for State Route 12 near Escalante River and Calf Creek confluence	recreation could be enhanced	segment is in an ONA and Recreation Area
Calf Creek-2	Lower Falls to Calf Creek Recreation Site (T35S, R4E, S1)	3	Scenic				
Calf Creek-3	Recreation Site to Escalante River (T35S, R4E, S12)	1.5	Recreational				
Twenty-five Mile Wash	T37S, R6E, S2 to Monument boundary (T37S, R6E, S25), does not include unnamed tributary on north side	6.8	Wild	high scenic quality, high recreation use, bird habitat, rock art, prehistoric structures, and riparian			ONA
Escalante River System Total		140.5					

Note: Short segments of Scorpion Gulch, Fools Canyon, Coyote Gulch and Willow Gulch may be on Monument lands. These segments will be managed and suitability recommendations made with the remainder of the named segments by Glen Canyon National Recreation Area.

Table A4.2. Paria River System Suitable Segments

Segment	Segment Description	Length (Nearest 0.1 mile)	Tentative Classification	Characteristics which make the area a worthy addition to NWSRS	Current uses and land ownership concerns	Resources and uses that would be enhanced or curtailed by designation	Federal, public, state, tribal, local, or other interests
Upper Paria River - 1	Little Dry Valley (T38S, R2W, S21 to T41S, R1W, S7)	21.7	Wild	high quality scenery, recreational attraction, exposed geologic strata and arches, and historic sites	• Paria River runs through 3.1 miles of private lands in the Recreation segment • landowner in the lower segment periodically constructs a diversion utilizing their water rights. While this blocks the flow temporarily, the diversion is frequently washed out by high flows retaining the free-flowing character • there has been motorized use and commercial horseback rides in the river corridor - it is used as a livestock driveway and historic throughway	• motorized use will be curtailed, by the provisions of the Plan • enhance southwestern willow flycatcher habitat • enhance deer population and all other wildlife • regardless of designation, decisions in the Plan close these areas to cross-country vehicle use	• Kane County Water Conservancy District is concerned that private property owners would be constrained from using their water rights or building fences • also concerned that ranchers would not be able to drive their cattle down the Paria like they do now • also concerned that the existing powerlines could not be maintained if designated
Upper Paria River - 2	T41S, R1W, S7 to downstream side of private property south of Highway 89 (T42S, R1W, S28)	16.9	Recreational				
Lower Paria River - 1	Downstream side of private property (T43S, R1W, S10) to Wilderness boundary (T43S, R1W, S23)	3.3	Recreational	high quality scenery, Wilderness area, high recreation use, narrow canyon, peregrine falcon, and historic travelway		habitat for peregrine falcon and southwestern willow flycatcher would be enhanced	4.9 miles is in the designated Paria-Vermilion Cliffs Wilderness area outside GSENM boundary
Lower Paria River - 2	Segment in Wilderness (T43S, R1W, S23 to T44S, R1W, S12)	4.8	Wild				

Table A4.2. Paria River System Suitable Segments (continued)

Segment	Segment Description	Length (Nearest 0.1 mile)	Tentative Classification	Characteristics which make the area a worthy addition to NWSRS	Current uses and land ownership concerns	Resources and uses that would be enhanced or curtailed by designation	Federal, public, state, tribal, local, or other interests
Deer Creek Canyon	Headwaters (T40S, R3W, S1) to Paria River (T40S, R2W, S4)	5.2	Wild	high quality scenery and recreation values			
Snake Creek	Entire (T39S, R2W, S26 to T40S, R2W, S10)	4.7	Wild	high quality scenery and recreation values			
Hogeye Creek	Entire (T40S, R2W, S 1 to T40S, R2W, S26)	6.3	Wild	high quality scenery and recreation values			
Kitchen Canyon	T40S, R2W, S28 to Starlight Canyon (T40S, R2W, S34)	1.3	Wild	high quality scenery			
Starlight Canyon	Entire (T41S, R2W, S7 to T40S, R2W, S35)	4.9	Wild	high quality scenery			
Lower Sheep Creek	Bull Valley Gorge (T39S, R2W, S7) to Paria River (T39S, R2W, S17)	1.5	Wild	high quality scenery, recreational values, spotted owl sighting	• motorized use • livestock driveway • historic throughway	• motorized use will be curtailed if classified Wild • regardless of designation, decisions in the Plan close these areas to motorized vehicle use	
Hackberry Creek	Top (T38S, R1W, S29) to Cottonwood Creek	20.1	Wild	recreational and scenic values, spotted owls, and riparian area	limited OHV use at upper and lower ends	• motorized use will be curtailed if classified Wild • regardless of designation, decisions in the Plan close these areas to motorized vehicle use	
Lower Cottonwood Creek	Confluence with Hackberry Creek to Paria River	2.9	Recreational	recreational values and ecological continuity	1.3 miles run through private lands		

Table A4.2. Paria River System Suitable Segments (concluded)

Segment	Segment Description	Length (Nearest 0.1 mile)	Tentative Classification	Characteristics which make the area a worthy addition to NWSRS	Current uses and land ownership concerns	Resources and uses that would be enhanced or curtailed by designation	Federal, public, state, tribal, local, or other interests
Buckskin Gulch/Wire Pass	Wilderness boundary (T43S, R2W, S15) to Paria River (T44S, R1W, S12)	18.0	Wild	high quality scenery, high recreational use, slot canyons	• a lone watering hole in this segment used for livestock • motorized vehicles are used to maintain range improvements	spring and vegetation could be enhanced	segments are in the designated Paria-Vermilion Cliffs Wilderness area outside GSENM boundary
Paria River System Total		111.7					

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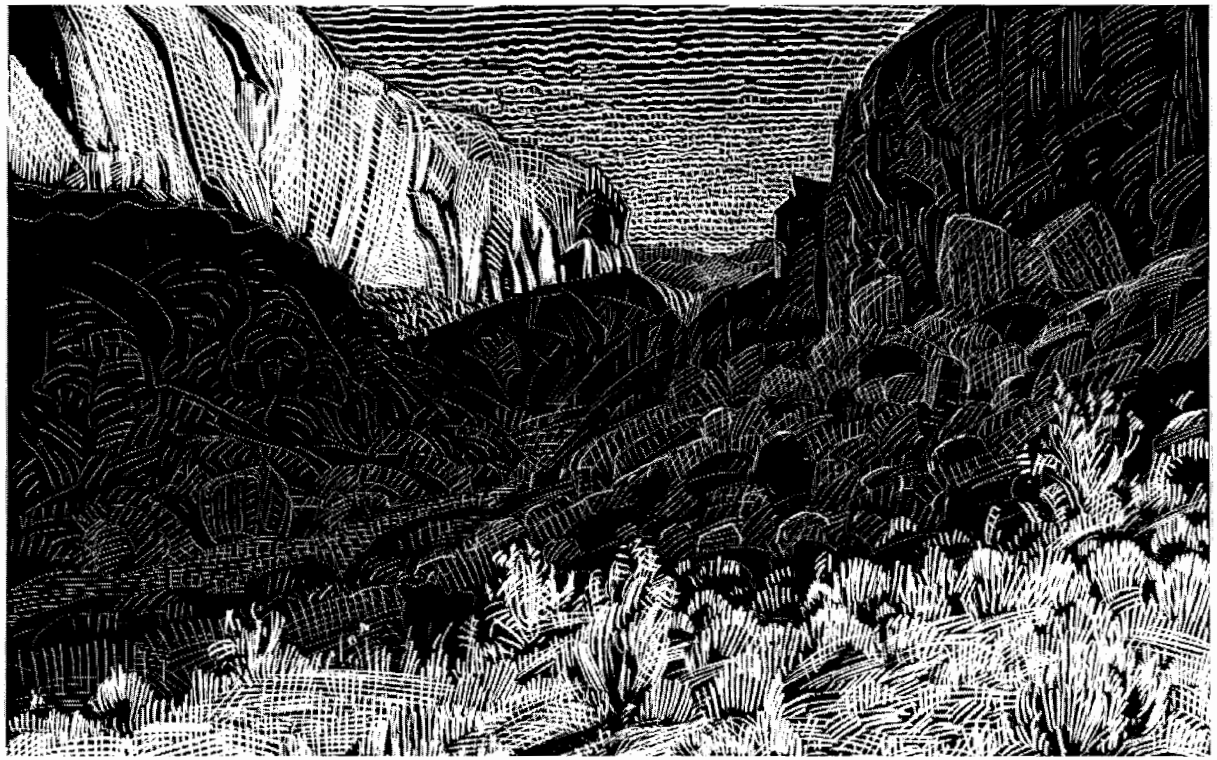

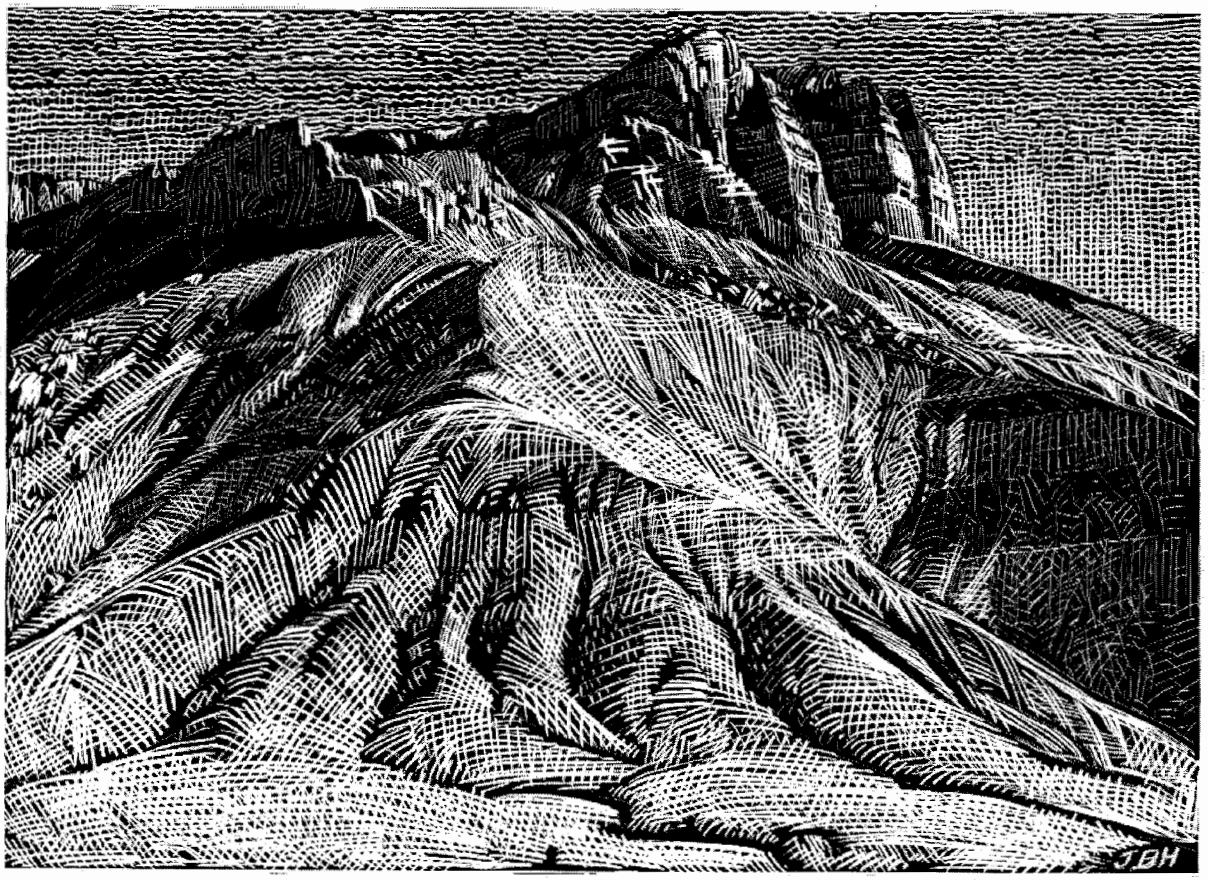
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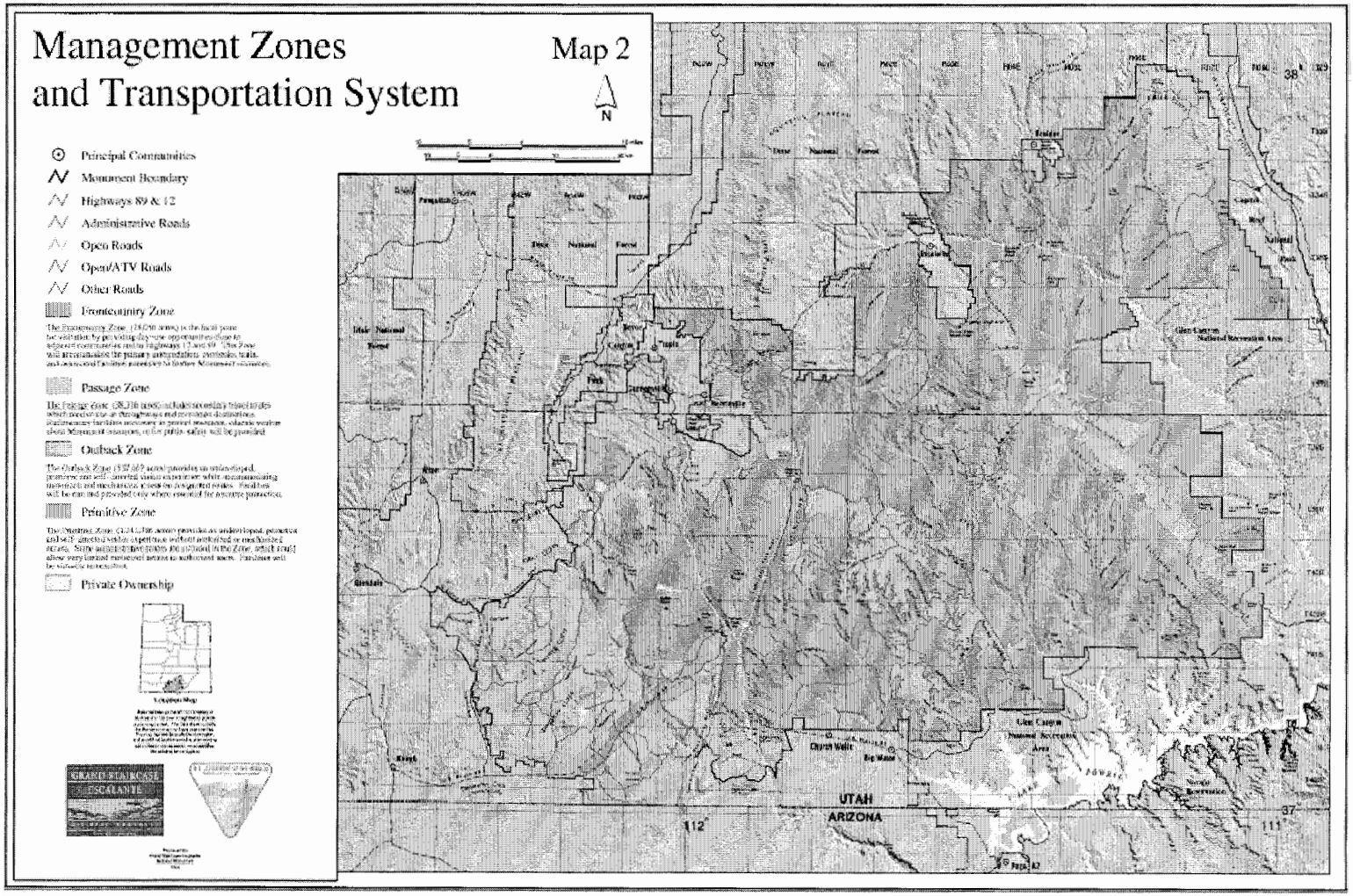
Management Zones
and Transportation System
Map 2
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Principal Communities
Monument Boundary
Highways 89 & 12
Administrative Roads
Open Roads
Open/ATV Roads
Other Roads
Frontcountry Zone
Passage Zone
Outback Zone
Primitive Zone
Private Ownership
Dixie National Forest
Glen Canyon National Recreation Area
Church Wells
Big Water
UTAH
ARIZONA
112°
111°
38°
37°

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