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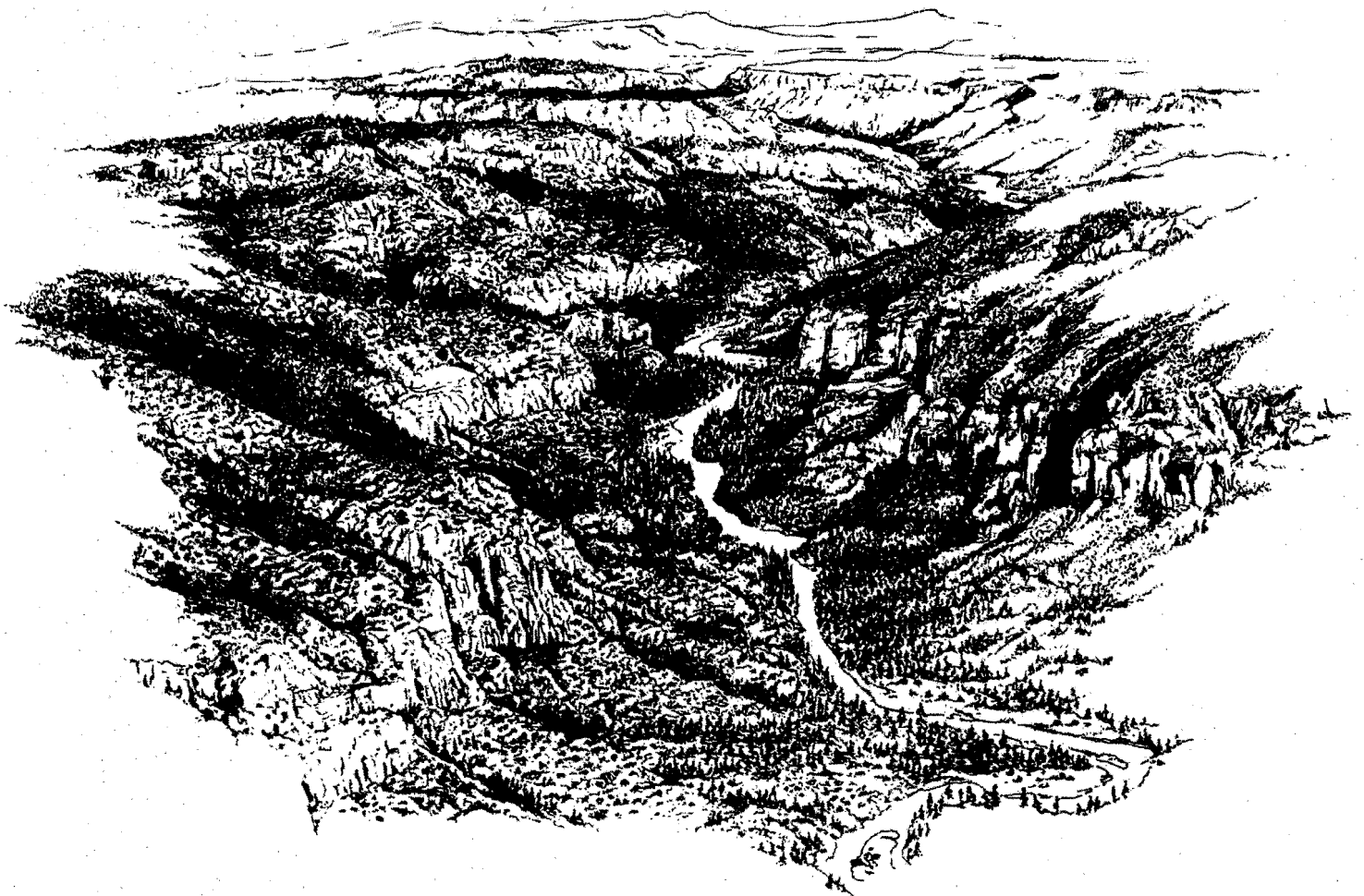


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Rio Chama Management Plan

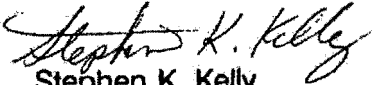


Published November 1990

RIO CHAMA MANAGEMENT PLAN

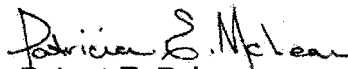
November 1990

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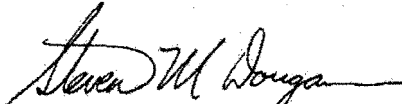
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Introduction

The Rio Chama management plan was selected from several alternatives that were discussed in the Environmental Assessment. It was evaluated equally against the river management objectives that were developed from public meetings, planning team discussions, and interagency reviews. Comments received from the public and the boating community, during the draft plan review process, were also evaluated. Several of those recommended changes have been made and appear in the Final Plan.

This management plan best meets the identified issues and concerns. It also establishes an orderly and realistic approach to implementing various management activities which may take several years to implement. In addition, costs of developments, land acquisition, and operation and maintenance are presented.

The Rio Chama planning team thanks all who contributed to the formulation of this plan, both members of the public and the various agencies who gave time, energy, and feeling to it. It is obvious that a great many people feel strongly about the Rio Chama as a special place. Of course there is not always agreement on how to maintain that "specialness". The Rio Chama team shares these feelings for the Chama and hopes that this plan strikes a balance and ensures that those qualities endure.

Purpose of project—what is this plan for?

The Rio Chama Management Plan will guide the overall protection, use, and development of the Rio Chama corridor for the next 8-10 years. The main objectives of the plan are to maintain and perpetuate the enduring resources of wilderness, preserve the Wild and Scenic character of the river, minimize impacts on the land, protect wildlife and plant habitats, provide opportunities for visitors to experience the river corridor, improve the safety and enjoyment of visitors, and preserve the natural and cultural environment.

This plan satisfies direction spelled out in the Wild and Scenic Rivers Act of 1968 to prepare a management plan for Wild and Scenic Rivers within three years of designation. The Rio Chama was so designated on November 7, 1988. While it satisfies that direction, the plan also contains guidelines for management of the river corridor downstream from the actual Wild and Scenic segments, and also for areas outside of the corridor which affect the river. At the end of 10 years, or sooner if conditions require, the plan will be revised.

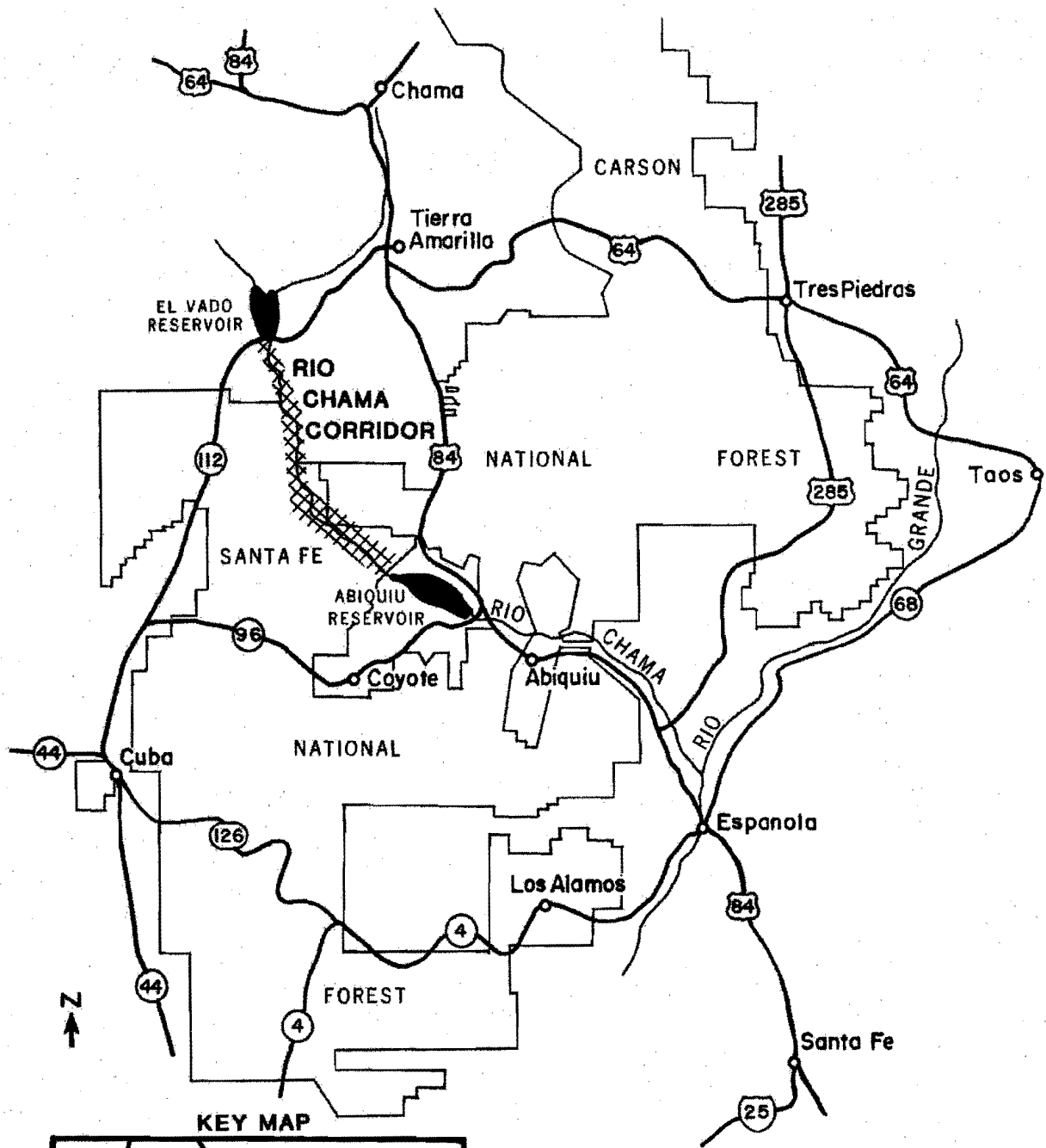
What is the "corridor"?

When rivers are studied for possible inclusion in the National Wild and Scenic Rivers System, a corridor of land averaging 1/4 mile from each bank is analyzed including the river. Once a river is designated, an actual corridor must be delineated which is more responsive to the geography of the river, encompassing approximately the same amount of land. Management guidelines included in the Wild and Scenic Rivers Act apply to all the lands within the corridor. (Refer to Appendix C). Specifics about the corridor are discussed in the following Corridor Description and Management Segments section of this plan, and are shown on Map 3.

Where is the corridor located?

The Rio Chama Management Plan encompasses the 30.4 mile section of the river from El Vado Dam southeasterly to Abiquiu Reservoir. The northern end of the river, near El Vado Dam, is reached via NM Highway 112, from the Tierra Amarilla area. The lower section, is accessed along Forest Road 151, from US Highway 84, near the Ghost Ranch. See Map 1, the Vicinity Map, for the river's location in northern New Mexico.

The planning area includes lands or facilities administered by the Taos Resource Area, Bureau of Land Management; the Coyote Ranger District, Santa Fe National Forest; and, the Can-



MAP 1
RIO CHAMA CORRIDOR
VICINITY MAP

jilón Ranger District, Carson National Forest. It also includes lands within the flood easement of Abiquiú Reservoir, managed by the Corps of Engineers. Personnel from these agencies were the primary writers of this plan. Other agencies with responsibility for the management of the water in the Rio Chama, as well as the owners of that water, were also involved in the preparation of the plan.

Corridor description and management segments

Description

The Rio Chama corridor encompasses the 30.4 miles of river as described in Public Law 100-633, designating a portion as a component of the National Wild and Scenic Rivers system. According to the Wild and Scenic Rivers Act of 1968, a corridor "shall include an average of not more than three hundred and twenty (320) acres per mile on both sides of the river". The corridor begins at the El Vado Ranch launch site, about one mile south of El Vado Dam, and extends downstream to the an elevation of 6235', just below the Big Eddy. A legal description of the corridor boundaries is being developed; once completed, it will define the final boundaries and the total acreage within the corridor. This document will be on file in the Santa Fe National Forest Supervisor's Office and in the BLM's area office in Taos, New Mexico.

Public Law 100-633 designated three distinct segments of the river, as follows:

Segment 1, from the El Vado launch site downstream approximately 24.6 miles to elevation 6353, feet as a component of the National Wild and Scenic Rivers System. The segment between the launch site and the beginning of Forest Service Road 151, at the northern property boundary of the Christ in the Desert Monastery, is classified as a Wild river. The segment from that point downstream to elevation 6353 feet is classified

as a Scenic river. Section 1 will be referred to as the "Wild & Scenic section";

Segment 2, from elevation 6353' downstream approximately 4.0 miles to elevation 6283.5', provides the same protections afforded study rivers listed in section 5(a) of the Wild and Scenic Rivers Act, until Congress decides otherwise. This section will be referred to as the "study section";

Segment 3, from 6283.5 downstream approximately 1.8 miles to elevation 6235' will be referred to as the "joint management section".

These segments are shown on Map 3.

Jurisdictions

In addition to specifying the location of the segments indicated above, PL 100-633 also indicated the agency jurisdictions for each segment, as follows:

Segment 1 will be administered by the Secretaries of the Interior and Agriculture through the Albuquerque District of the Bureau of Land Management and the Santa Fe National Forest;

Segment 2 will be administered by the Santa Fe National Forest. However, nothing in the Rio Chama Wild and Scenic River Act nor in the original Wild and Scenic Rivers Act specifically authorizes any interference with the Secretary of the Army's authorized operation and management of Abiquiú Dam and reservoir.

Segment 3 will be jointly administered by the Secretaries of Agriculture, Army, and Interior through the Santa Fe National Forest, the Albuquerque District of the Corps of Engineers, and the Albuquerque District of the Bureau of Land Management. Management will be consistent with the Santa Fe National Forest Plan, the interim management plan as

amended by this plan, and the previously authorized operation of Abiquiu Dam.

Why do we need this plan?

The Rio Chama is a unique water-based recreation and wildlife resource for the State of New Mexico. The Rio Chama is a secret whose beauty is being discovered. Recreational use of the Rio Chama has grown substantially over the past few years due to the increasing popularity of float boating, and the scheduled summer releases of stored water in El Vado Reservoir. Because the Rio Chama was recently designated a Wild and Scenic River, use and the potential impacts associated with it are expected to escalate.

The high level of recreation demand along the river and the ability to regulate flows have resulted in several issues, concerns, and opportunities (ICO's), that are addressed by this plan. These ICO's were grouped together and written as objective statements, which will follow.

As stated above, different sections of the river are described in detail later in this plan. The upper section flows through a Congressionally declared Wilderness Area, a Wilderness Study Area, and the Wild River section. Each of these imply a largely natural environment, unaffected by humans, with opportunities for solitude. In recent years, especially with the scheduled weekend releases, use has grown to the point that these qualities are threatened. A feeling of solitude has not been possible on high use weekends on the river, and even at times in campsites. Some campsites are showing signs of overuse, such as loss of vegetation, exposed and compacted soils, and erosion. High levels of use can also frighten wildlife, disrupting their normal patterns. This is especially a concern when such use coincides with a reproductive period for a threatened and endangered species.

The Rio Chama has been used for many years both by private boaters, who have their own boats and equipment, and commercial river outfitters who provide the river experience for

those who don't have the equipment or expertise to run the river. The Interim Rio Chama Boating Management Plan, written in 1986, placed a limit on the number of outfitters permitted to use the river, and the number of launches they would receive. Projections were made for the amount of private use which would occur, but no limits were set. As stated above, use has risen dramatically and the allocations of launches and total use are in need of reexamination.

Since 1986, water has been released from El Vado Dam during summer weekends for white-water boating, under an agreement between the State of New Mexico and the City of Albuquerque, which owns some of the water in El Vado Reservoir. Also, since 1985, some releases have been made during the winter to improve the river for fish, which have minimum needs for spawning. The agreements for these releases have been quite successful, but at times somewhat informal. A need exists to clarify the objectives for the releases and perhaps improve their predictability.

A number of tracts of private land exist within the river corridor, in the upper, or Wild, section. Most are undeveloped at this time. Some are currently used by recreationists for camping, picnicking, or fishing. The designation as a Wild and Scenic River could make private development of these tracts more attractive, which, in some cases could threaten the very qualities for which the river was designated.

In the lower section of the river, uncontrolled vehicular use has resulted in loss of vegetative cover and topsoil. "Two-track" roads leading down to the river's edge are not surfaced or graded, are poorly aligned, and are contributing significantly to erosion and soil going into the river. These roads have occurred through indiscriminant public use and were not planned or constructed. Several boating access points are similarly unsafe and contributing to erosion problems. In addition to the soil and water quality problems, these roads are unsightly and adversely effect the overall riparian ecosystem.

A variety of activities take place along the lower river, including putting in and taking watercraft

out of the river, parking for one or two day excursions, vehicle camping, hiking into the wilderness, fishing and hunting, and observing wildlife and cultural resources. At the present time there are no developments which serve these diverse recreation opportunities in a safe, satisfactory, "customer-oriented" manner. The area is virtually inaccessible for handicapped or elderly people. There are few trails by which to experience the canyon away from the river. The random use also contributes to many of the environmental problems described above. Of large concern is the lack of sanitary facilities in areas of concentrated use, which is leading to unhealthy, unpleasant, and environmentally unacceptable conditions.

These opportunities and concerns must be addressed in a comprehensive manner. They are all related, and tied together by the Rio Chama and the land which surrounds it. With the continuing rise in use and added pressure on this delicate environment, the Rio Chama Management Plan is needed. An appendix which addresses the complex and highly technical issue of water storage, flows, and requirements by water managers and owners, has been prepared as a companion to this document and is available on request.

What kind of public involvement has gone into this plan?

Many of the concerns and opportunities described above were identified through meetings and correspondence with the public. Four public meetings were held during November and December, 1988 in Albuquerque, Santa Fe, at the Ghost Ranch Living Museum, and in Durango, Colorado. Additional informal meetings occurred with commercial outfitters, as well as private boaters who float the Rio Chama. The Forest Service has met with Chama Allotment (Coyote Ranger District, USFS) grazing permittees and recreationists on an individual basis to gather additional information and possible concerns.

On May 23, 1989 the Interdisciplinary Team (IDT) mailed a Scoping Summary Package to

interested citizens providing an update on the planning process and requesting additional comments. In July, 1989, a working meeting was held with various water managers and owners to identify their issues, concerns, and additional opportunities to improve wildlife and recreation benefits through flow management.

Identifying issues, concerns, and opportunities for management of this area has been an ongoing process, continuing with the publication of the Draft Management Plan and the Environmental Assessment. This document was mailed to the various users groups, concerned citizens, and agency representatives in June, 1990. At that time comments about the draft were requested; approximately 35 letters or public comment forms were received which helped in the preparation of this Final Rio Chama Management Plan. In addition, a public meeting was held on July 2, 1990 in Santa Fe, NM that was attended by 22 concerned and interested citizens. Subsequent meetings and consultations were held with representatives of both the private and commercial boating communities. The planning team is grateful to the numerous individuals, groups, organizations, and agencies that provided their time and support for the development of this plan.

What are the issues, concerns, and opportunities regarding the Rio Chama?

From the public meetings, planning team discussions, and interagency reviews, the ICO's related to the management of the Rio Chama were developed. These ICO's were grouped together and refined into objective statements which guided the content of the plan. They are listed below:

1. Maintain or enhance the natural qualities of the Rio Chama by minimizing impacts and rehabilitating disturbed areas.
2. Maintain or enhance high quality recreation and wilderness experience with minimal restrictions.

What is the relationship of this plan to other management plans and legislative requirements?

There are many laws, compacts, and agreements, too numerous to list here, which affect the management of the Rio Chama. Those related to the management of the water in the river and associated reservoirs are particularly complex. A brief description of the laws which directly affected the preparation of this plan is given below. In addition, those related to water management are discussed in the companion document, "Rio Chama Water Management Addendum", prepared jointly by the U.S. Army Corps of Engineers and the Bureau of Reclamation.

- PL 100-633, signed on November 7, 1988, amended the 1968 Wild and Scenic Rivers Act to designate the Rio Chama as a component of the Nationwide Wild and Scenic River system.
- PL 100-522, signed in November, 1988, as a companion bill to PL 100-633, modified the authorization to store native water in Abiquiu Reservoir, in lieu of San Juan/Chama water.
- PL 97-140, dated December 29, 1981, authorized the storage of San Juan-Chama water in Abiquiu Reservoir.
- PL 95-237, signed on February 24, 1978, designated the Chama River Canyon Wilderness Area, 47,400 acres within the Santa Fe National Forest and 2,900 acres within the Carson National Forest as wilderness, with the river under the jurisdiction of the Santa Fe National Forest.

There are also a number of other plans and agreements which have provided direction, to one degree or another, for the management of the Rio Chama. These are described below, along with their relationship to this plan.

● the Interim Rio Chama Boating Management Plan, approved in May, 1986, was a cooperative effort between the Albuquerque District, BLM, and the Santa Fe National Forest. It was developed to protect and preserve the Rio Chama Canyon Wilderness, to provide continued enjoyment of visitors seeking a wilderness experience through whitewater boating, and allow for an equitable distribution of use on the river. The Rio Chama Management Plan will, upon approval, supersede the interim plan. It is anticipated that boating use policies will be in effect for the 1991 boating season.

● the Santa Fe National Forest Plan, approved in September, 1987, included the Wild and Scenic River eligibility and classification study for the entire river, and recommended the Rio Chama for inclusion in the Wild and Scenic River system. It also provides resource management direction for the lands within the National Forest through which the river flows, including the Chama River Canyon Wilderness. Any management direction in the Rio Chama Corridor Management Plan must be consistent with that defined in the Forest Plan for National Forest lands.

● the Taos Resource Management Plan (BLM), approved in October, 1988, established the Rio Chama Special Management Area (SMA). This Plan recommended Wild and Scenic River designation for all BLM portions of the river. Any management direction given in this plan for BLM lands must be consistent with that of the Resource Management Plan.

● a Memorandum of Understanding between the Forest Service, Bureau of Land Management, and the Army Corps of Engineers, dated August 25, 1989, details management responsibilities within the river corridor for each agency, as well as for this planning effort.

Organization of the plan

Following this introductory section, a discussion of the corridor and the management segments will be presented. This will include:

- management guidelines of natural resources;
- a boating management plan which includes launches, party sizes, private/commercial allocations, permits, and, a discussion about boating and camping equipment and campsite management;
- a visitor facility development plan with schematic drawings;
- an interpretive services plan;
- management guidelines on the inventory, interpretation, and protection of cultural resources;
- recommendations on water flow management and releases;
- a land acquisition policy;
- an implementation schedule with cost estimates; and,
- appendices which include: list of preparers, bird species list, stipulations for Wild and Scenic Rivers and Wilderness Areas, and a legal description of the river corridor.



Natural Resource Management

Wildlife

Management objectives for wildlife species would provide for a healthy habitat for the majority of animals using the corridor. These include providing adequate habitat privacy during important reproductive seasons for all avian and terrestrial species, and for over-wintering populations. This will be accomplished through the river use permit system, access management, and through flow management recommendations. Maintaining habitat diversity and wildlife viewing opportunities are also a high priority. The early and release season prescriptions were designed to place an emphasis on protecting natural security during the reproductive period within the early season. Additional wildlife inventories will be conducted to determine their location, abundance, and seasonal variations.

Riparian Habitat

Riparian habitat objectives include leaving an adequate percentage of the riparian zone undisturbed from camping impacts and revegetation of disturbed areas. Based on Limits of Acceptable Change (LAC), campsites may be temporarily closed to protect ground cover vegetation or riparian condition. Photo point monitoring will be increased to include photo points of all potential campsites once every three years, and the most commonly used campsites will be photographed every year. In areas where heavy trail wear is occurring, trails will be rerouted or in some cases stabilized with native materials to reduce soil loss.

Several diverse riparian habitat areas have been identified and closed to overnight camping to preserve their natural character. These areas will remain closed and also serve as controls, or comparison areas for monitoring wildlife use in the canyon and other campsite impacts.

To improve the riparian habitat that has been degraded or otherwise impacted, up to 100

acres will be reseeded with native species. Pole planting of native cottonwoods and willows will also be used in these areas. In addition, eliminating unauthorized livestock grazing will be a priority. If necessary, additional fencing will be used to help control unauthorized use. The majority of this work is planned in the scenic section, and will be consistent with the Wild and Scenic River designation. The activity planning and design work will be completed by the end of 1990.

Threatened and Endangered Species (T&E)

The Endangered Species Act of 1973 as amended, requires the "protection and enhancement" of T&E species habitats. The Bureau of Land Management and the Forest Service are actively involved in compliance with this mandate. Coordinating agencies include the New Mexico Department of Game and Fish and the U.S. Fish and Wildlife Service.

A biological evaluation (BE) has been completed and has determined that this Management Plan will have "no effect". Actions in this plan include measures for the protection of these species. Additional inventories and studies are planned to ensure protection and identify enhancement opportunities. Existing management, and protection measures may be modified to conduct or respond to studies designed to improve T&E species management.

A threatened, endangered, and sensitive plant inventory was conducted as part of the biological evaluation process. This supplements an earlier inventory conducted in the canyon by BLM and the New Mexico Department of Natural Resources. *Abronia bigelovii*, (Verbena variety), a federal candidate species, was found to occur in the canyon, and is the northern most occurrence of this species. It is unlikely, due to the location, that any river recreational activities will impact the plant populations. These plants will be monitored, and protection measures taken at any sign of impacts, in accordance with the Biological Evaluation.

Fisheries

The Rio Chama will be managed to provide a quality fishing experience. The target management species is brown trout. Flow management recommendations will support natural reproduction of this species; (see Flow Management section). The put and take rainbow trout fishery in the upper three miles of the Chama where fishing pressure is greatest, will continue. Development of special fishing regulations, in the upper section of the river to enhance a quality fishing experience, will also be supported. This will be coordinated with the New Mexico Game and Fish Department, and with private groups that have expressed interest. Additional longterm studies of the extent of the brown trout fisheries are planned. This is needed to determine the impact of other management actions, such as stream flows and water quality.



Watershed

Improvements of watersheds are recommended to improve water quality in the Rio Chama. Rehabilitation of existing erosion control structures within the immediate watersheds are the highest priority, and should be completed within four years of the approval of this plan. It is recommended that watershed improvement plans be completed for the Rio Nutrias, Rio Cebolla, Gallina, Ojitos, and localized portions of

the Chama watersheds within five years of approval of this plan. All roads, trails, and tributaries into the Rio Chama will be monitored for impacts to water quality. A water quality, sedimentation, and turbidity analysis study will be conducted to determine impacts to the Rio Chama.

Visual Resources

Any management activities within the upper section of the corridor will be designed and implemented so that they will not be evident to visitors. They will borrow from patterns, colors, textures, and materials commonly found in the surrounding landscape, and thus blend with the environment. [This is the Visual Quality Objective of Retention (USFS) and Class II (BLM)]. Recreation developments and signs will be evident, but subordinate to the surrounding landscape. These facilities will be designed at a scale and form which fits within the landscape and constructed of natural appearing materials, colors, and textures. [This is the Visual Quality Objective of Partial Retention (USFS) and Class III (BLM)].

Range Management

Range management objectives within the corridor are to minimize conflicts with other values and to reduce impacts to riparian habitat. Existing grazing management plans are consistent with these objectives. The entire Forest Service portion of the canyon is within the Chama Canyon Allotment. The authorized use for the portion of this allotment above the Monastery is October 1 to October 30, every other year. Some unauthorized grazing is occurring in this area; steps will be taken to control it. Authorized grazing along the Rio Chama will be monitored for adverse impacts to riparian condition. Parcels acquired through land acquisitions will not be reallocated to grazing use.

Current conflicts and complaints concerning livestock use on federally managed lands in the canyon, especially the wilderness portion, have resulted almost entirely from unauthorized use. Strong emphasis will be placed on the elimina-

tion of this problem through the implementation of sound grazing management practices. Agencies will work with grazing permittees to identify fencing needs, water improvement locations, the use of range riders to move cattle, or other control measures to meet this goal.



Wilderness

All interim management guidelines for BLM Wilderness Study Areas (WSA) and Forest Service Manual direction for wilderness management will be complied with. (Refer to Appendix C). No developments are called for in this plan that would effect these areas.

The Bureau of Land Management's Rio Chama Wilderness Study Area (WSA) will be managed under Interim Management Policy and Guidelines for Land Under Wilderness Review (USDI, BLM 1987) until the area is added to the National Wilderness Preservation System or removed from further wilderness consideration. If designated as wilderness, the area will be managed under the Wilderness Management Policy (USDI, BLM 1985). If removed from further wilderness consideration the area will be managed under the principles prescribed in the Taos Resource Management Plan and this corridor plan. The BLM, through its New Mexico Statewide Wilderness Study: Final Environmental Impact Statement, published in 1988, recom-

mends 5,232 acres of the entire 11,985 acres of public land as suitable for wilderness designation.

Firewood

The entire corridor will be closed to gathering and removal of fuelwood for home use. Gathering of fuelwood for campfires will be allowed unless otherwise posted, but will be limited to dead and down only.

Fire Management

Fire hazards are reduced, to some extent, by campers consuming dead and down fuels. Fuel loading in non-camping areas presents higher risk of fire in the corridor. These areas will be monitored over the next several summers to determine the amount, kind, and potential for a major wildfire. Once the inventory has been completed, a set of management prescriptions will be developed that will address the fuel hazards. These prescriptions will also take into account the management jurisdiction and river corridor land designation (wild, scenic, or study).

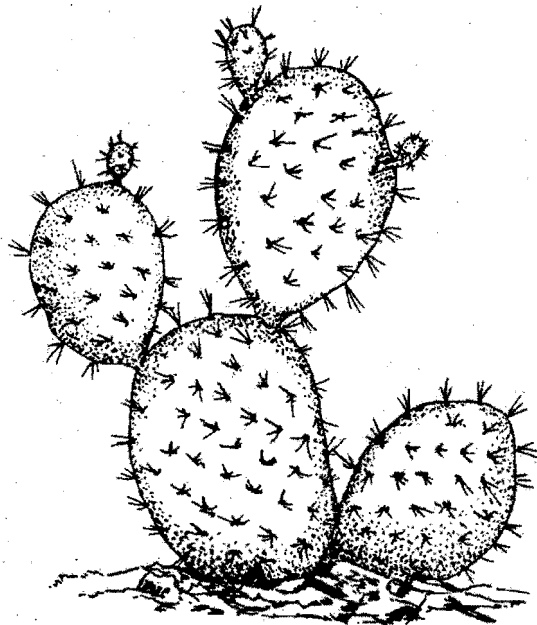
Fires will be suppressed within the corridor but will require use of natural features and hand tools. Suppression objectives are to control 90% of the high intensity wildfires at 3 acres or less, and contain low intensity wildfires at 10 acres or less. Fire suppression objectives will also include protection of Bald Eagle roost trees and snags. Due to the values and limits of the vegetation resources, all fires (man caused or natural) will be suppressed. These objectives and corridor boundary maps will be provided to the State Forestry and Forest Districts with initial attack responsibilities. During extreme fire hazard conditions, campfires and smoking will be restricted.

Minerals Management

As of January, 1990, there are no known valid mining claims within or near the Rio Chama Management corridor. The Bureau of Land Management's Wilderness Study Area (WSA)

and the Congressionally designated Rio Chama Wilderness, administered by the Santa Fe National Forest, have been withdrawn from all mineral entry. Therefore, no claims, permits, or leases will be authorized.

Within the Wild section of the Wild and Scenic River corridor, as defined by this plan, mining claims and mineral leases are prohibited; refer to Map 7. Within the Scenic river section new mining claims and mineral leases could be allowed; subject to regulations of 36 CFR 228. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment. This only applies to those portions of the Scenic section of the river that are outside of the WSA or designated Wilderness. Activities in the remaining sections will be subject to the guidelines in the Santa Fe National Forest Land Management Plan.



Mitigation Measures and Management Requirements

The following mitigation measures, management requirements, and monitoring requirements were developed for each resource to: reduce the impacts of management actions on other resources; to ensure quality in the implementation of an action; and, to see if anticipated effects were accurate. The mitigation measures are based on experience with previous projects of a similar nature, Forest Service and BLM regulations and policies, and New Mexico state laws; they have been demonstrated to be effective. The monitoring requirements and studies are intended to keep management actions in line with intended plan direction, assure that anticipated effects were accurate, and initiate change if these are otherwise occurring. Any items listed in the Biological Evaluation for the protection, enhancement, or monitoring of threatened, endangered, and sensitive species habitat are incorporated into this plan.

Mitigation Measures

1. The entire corridor, outside of designated dispersed camping areas, will be closed to off-road travel through vehicle barriers, fencing, and regulation.
2. Camping along the lower river will be prohibited except at developed facilities and designated dispersed areas. Campsites will be signed, and other areas will be closed through regulation, vehicle barriers, and enforcement.
3. Recreation facilities in the lower corridor will be designed for minimum impact on area resources and to harmonize with the surrounding landscape. Facilities will be screened from the river and natural materials and colors used.
4. Obliterated roads and areas disturbed by recreation facility construction, will be revegetated with native and/or drought tolerant plant materials to prevent erosion and restore the natural and visual integrity of the landscape. Areas which will be rehabilitated, such as sites disturbed by indiscriminate vehicular use, will have surface rock removed, sites will be tilled to a depth of 8 inches and fertilized, and seed will be disked and tilled. Seeding application rates of approximately 30 pounds to the acre is recommended; within the riparian zone these species will be used: a) Indian ricegrass, b) Giant Dropseed, c) Alkali Sacaton, d) Side Oats Gramma, and e) Sheep Fescue. Within the pinyon/juniper zone these species will be used: a) Blue Gramma, b) Side Oats Gramma, c) Little Bluestem, d) Alkali Sacaton, e) Indian Ricegrass, and Galleta. Appropriate flower species will also be incorporated to enhance the aesthetics of the various mixtures.
5. At least 20% of the camp units at the Rio Chama Campground and the Big Bend Nature Trail will be designed for barrier-free access, which would be accessible to handicapped and elderly people.
6. Skull Bridge will have a gate at the east end to permit vehicular closure of the area on the west side of the river to protect wildlife, wilderness, soils, and riparian values. The private land owner on the west side of the river will have access through this gate.
7. Sanitation facilities will be located a minimum of 50 feet from the river and 200 feet from potable water sources, in accordance with State of New Mexico standards.
8. All camp units will be sited at least 50 feet from the river edge in order to protect the stream banks, the riparian community, and ensure public access.
9. In order to minimize soil loss topsoil in construction areas will be removed and stockpiled prior to construction, and placed on disturbed areas before seeding. Campground living areas will be sur-

faced with gravel to protect soils. Manufactured firerings will be placed within these surfaced areas and fires will be permitted only within them.

10. Where recreation facilities are planned directly on top of or very near cultural resource sites: 1) the facility will be relocated so as to not affect the cultural site; or, 2) recovery of the scientific data contained in the sites through excavation and recording will occur. Excavation is the best means we have of increasing our knowledge and understanding of the history and prehistory of an area. If a site to be directly effected is determined eligible for the National Register through consultation with the State Historic Preservation Officer (SHPO), the Forest Service will further seek a "no adverse effect" determination through additional consultation with the SHPO under a formal data recovery proposal.
11. Protection of cultural resource sites will be considered as a purpose for the location of off-road vehicle control measures and revegetation projects. Identified cultural resource sites will be avoided by the heavy equipment used to carry out these activities.
12. Sanitation facilities will be planned, located, designed, and constructed in accordance with New Mexico Environmental Improvement Division standards to minimize the possibility of water contamination.
13. The quality of potable drinking water will be tested for compliance with State standards.
14. Developed campsites within the lower canyon will be located away from gully sideslopes and alluvial fans from adjacent side drainages.
15. Indigenous riparian species, such as cottonwood and willow, will be established from cuttings along designated seg-

ments of the Rio Chama to help stabilize banks, provide for fish habitat, and to regulate stream temperatures. This has proven successful in many locations, such as along the Pecos River, downstream from El Cerrito, New Mexico.

16. Heavy equipment will not be used to construct or maintain the facilities at Chavez Canyon River Access Point between March 1 and May 15 of each year, unless otherwise approved by agency wildlife biologists. This will be specified in construction contract clauses.

Monitoring Requirements and Other Studies

1. Boating use, during release season low water periods, will be monitored to determine effects on crowding and campsite condition in the upper canyon. If such effects develop, additional use restrictions will be considered. If weekday launches exceed more than an average of 3 per day or a total of 5 per day on more than two consecutive days, launch capacities and allocations may be developed for the following boating season.
2. Total boating use on the lower river will be monitored to identify potential adverse effects on the social and environmental settings and to public safety. If such conditions arise, use restrictions may be developed.
3. The percentage of total boating use by private and commercial users will be monitored annually. To encourage the prescribed allocations, adjustments will be made in maximum party size, number of launches, and launch assignments.
4. Demand for boating by private and commercial boaters will be reevaluated within five years of the implementation of this plan. This will be based on a percentage of non-use by each group, ratio of permit applicant success, comparison of demand on unallocated but similar rivers, and other factors. Adjustments to the

prescribed allocation may be made based on this study, but would be limited to a maximum of 10% of the total capacity, and neither group will ever fall below 10% of use within the life of this plan.

5. Limits of Acceptable Change (LAC) will be identified for campsites within the upper canyon, and include surface vegetation cover, amount of dead and down wood, evidence of trails, soil erosion, soil compaction, evidence of human waste, aesthetics, and other factors. All commonly used campsites and control sites will have photopoints established and be photographed a minimum of once every three years, with heavily used campsites being photographed annually.
6. Crowding on the river and at campsites will be monitored during the release season to insure that an acceptable level of solitude is occurring in the wilderness sections of the river. If it is not, two methods of regulated dispersal may be implemented: scheduling of launches in half-day periods, and assignment of camping by zones.
7. An instream flow study was initiated in 1990 and will continue for two years. The primary objective of the study will be to evaluate and quantify flows necessary to support fisheries, recreation boating, fishing, riparian vegetation, aesthetic qualities, and threatened and endangered species prey. This study will be used to refine the flow recommendations made in this plan.
8. Additional inventories and studies are planned to ensure protection and identify enhancement opportunities for threatened and endangered flora and fauna in the area. Existing management and protection strategies may be modified accordingly.
9. Watershed analyses will be completed for the Rio Nutrias, Rio Cebolla, Gallina, Ojitos, and localized portions of the Chama watersheds within five years of the completion of this plan. Water quality, sedimentation, and turbidity will be studied and roads and trails will be monitored for effects on water quality of the Rio Chama. Corrective strategies and plans will result, as appropriate.
10. Impacts of recreational releases on fishing and water quality will be monitored. Releases on holiday weekends and on more than two consecutive weekends will be avoided.
11. Additional wildlife inventories will be conducted to determine their location, abundance, and seasonal variations.
12. Additional long term studies of the extent of the brown trout fisheries are planned. This is needed to determine the impact of other management actions, such as stream flows and water quality.

Boating Management Policies

These policies were developed through an integration of environmental attributes and user preferences and will be implemented starting with the 1991 boating season. Management prescriptions include the following elements:

- River segments that correspond to designations and access;
- Seasons of use that reflect water flow conditions and environmental sensitivity;
- Use limits that provide a range of social experience while protecting environmental qualities; and,
- Use allocations that reflect historical use allowing for any shifts in demand.

For an overview of these management prescriptions refer to Table 1 on the following page. The early season is often referred to as the runoff period while the release season is often referred to as the irrigation period, by water managers and water users.

River Segments

For the purpose of boating management, the river has been divided into two sections. The upper section runs from El Vado ranch to the monastery. The lower section continues from the monastery downstream to the Big Eddy River Access Site. The upper section will be the primary focus of boating management prescriptions in order to protect environmental quality and provide a "wilderness" experience.

Seasons of Use

The historical boating use season (April 15-Sept. 15) has been divided into two periods in order to reflect the nature of discharges from El Vado dam and the sensitivity of wildlife. The early season is defined as the period from April

15 to July 15. The release period begins July 16 and runs through the third weekend of September. The remainder of the year has not experienced significant boating use and is not considered as part of the use season for the purpose of regulation. Separate use restrictions have been developed for the two seasons on the upper section. Use restrictions on the lower section do not vary between the two periods.

Number of Launches

The launch capacity of the upper section is set at 18 per week in the early season and 16 during the release season. During the early season there will be a maximum of 10 launches on the weekday period (Sunday through Thursday) with a maximum of 3 launches on any one day. There will be an additional 8 launches allowed on the weekend (Friday - Saturday). These may all occur in one day or be spread over the two days. During the release season, the entire 16 launches will occur on the weekend, with no limit on any one day. Weekdays during the release season will not have any initial launch restriction since flows adequate for recreational boating may be limited and unpredictable. If weekday launches exceed more than an average of 3 per day or a total of 5 on one day in any week, launch capacities and allocations may be developed for the following boating season.

Should boating use associated with fishing access develop during low water periods, it will be monitored and evaluated for possible future use restrictions. Until completion of a study to evaluate such use, there will be no distinction between floatboat access for whitewater and fishing purposes.

There is no limit on the number of launches specified for the lower section. However, use will be monitored to determine if such a restriction is required in order to protect the environmental and scenic qualities or social experience of this section.

TABLE 1: BOATING CAPACITY ALLOCATION (UPPER SECTION)

Table 1 presents an overview of boating allocations for the upper section of the Rio Chama. This table includes the allotted number of launches, party size, and number of visitors for

both commercial and private users, which will be initiated in 1991. It also includes the average group size that has occurred over the past four years and the resultant numbers and percentages if the current group sizes remain the same.

	EARLY SEASON (4/15-7/15)				RELEASE SEASON (7/16-9/15)	
	(Fri-Sat) # %Alloc		(Sun-Thurs)(1) # %Alloc		(Fri-Sat)(2) # %Alloc	
# OF LAUNCHES						
Commercial	2		3		5	
Private	6		7		11	
Total	8		10		16	
PARTY SIZE (Maximum allowable)						
Commercial(3)	16		16		16	
Private	16		16		16	
MAXIMUM # OF VISITORS						
Commercial(3)	32	25%	48	30%	80	31%
Private	<u>96</u>	<u>75%</u>	<u>112</u>	<u>70%</u>	<u>176</u>	<u>69%</u>
Total	128	100%	160	100%	256	100%
PARTY SIZE (HISTORICAL)						
Commercial(3)	10		10		10	
Private	6		6		6	
PROJECTED # OF VISITORS(4)						
Commercial(3)	20	36%	30	42%	50	43%
Private	<u>36</u>	<u>64%</u>	<u>42</u>	<u>58%</u>	<u>66</u>	<u>57%</u>
Totals	56	100%	72	100%	116	100%

- (1) Maximum launches/day is 3; one commercial and two private.
- (2) Launches may be restricted to Saturday due to release schedule; weekday launches will not be restricted at this time. The target is 5/day.
- (3) Commercial visitors includes only passengers, not outfitters/guides.
- (4) These projected numbers and percentages are based on the the average group size of 10 paying guests for commercial outfitters and 6 for private, multiplied times the number of launches.

Party size

During both the early and releases seasons, upper section launches are restricted to 16 people for private trips and 20 for commercial. The commercial party size includes a crew which normally accounts for one employee per four guests. After accounting for the normal crew to guest ratio, there is an equal number of private and commercial visitors in early and release period launches. When the allocation between private and commercial is taken into consideration, these launch size limits would allow for a maximum of 284 visitors per week in the early season and 256 per weekend in the release season.

The average historical party size for both private and commercial groups has been determined using data from the past four seasons (1987 - 1990). These party sizes are 6 for private and 12 for commercial. The average number of commercial passengers is 10 for the purpose of determining projected number of visitors. The variations between the early and release seasons were not significant and therefore not considered in the development of Table 1. These party sizes when multiplied by the allocated launches would indicate a projected number of 128 visitors per week in the early season and 116 per weekend in the release season.

Launches in the lower section will be allowed to have up to 35 persons for both private and commercial trips. This party size limit should prevent excessive crowding at access points and while floating the river.

User Group Allocation

The initial Commercial/Private allocation will be approximately 30%/70% for both the early and release seasons. This closely tracks the historical ratio and recent trends. (Refer to the Recreation portion of section IV, Affected Environment and Environmental Consequences, of the Environmental Assessment, which accompanied the draft Plan. A breakdown of both com-

mercial and private boating use over the past ten years appears in Tables 4 and 5 of that document; copies of the Draft Management Plan are on file in the Santa Fe National Forest Supervisor's office and in the office of the Taos Resource Area).

The available launches have been assigned to each user group based on these allocations. For the early season there will be 3 commercial and 7 private launches for the weekday period and 2 commercial and 6 private for the weekend period for a total of 5 commercial and 13 private launches. The 16 launches for the release season will be divided into 5 commercial and 11 private.

The historical party size of each user group was used to project the number of visitors anticipated if party sizes remain the same and all allocated launches are utilized. The percentages of total use derived under this projection shows a higher commercial level than is derived by using the maximum party size. These percentages of use may be more representative of the actual use to be expected during the first season of implementation. A gradual shift in use to the maximum party size is anticipated as user groups develop networks to better use their respective allocations. Modifications in maximum party size, number of launches, and launch assignments may be necessary to allow for the desired Commercial/Private allocation, and could occur within the re-evaluation period described below. Any such modifications must be considered in the context of meeting the environmental and visitor experience criteria set forth in this plan.

Re-evaluation

The user group allocation on the upper section is based on the total number of visitors from each group during the respective seasons over the past 5 years. This allocation will be re-evaluated based on demand every 5 years. This

will be accomplished through a study, possibly under a contract with a university, that will provide an estimate of demand for private and commercial users. Because available launches will be restricted for both user groups, observed use may not reflect actual demand. This study will estimate the demand based on other information such as percent of nonuse by group, ratio of applicant success, and comparison of demand on unallocated but similar rivers in the region. Adjustments to the prescribed allocation would be limited to a maximum of 10% of the total capacity and a minimum allocation of 10% to one sector.

Permit System

The permit assignment system for the private and commercial groups differ in order to accommodate the manner in which each prefers to gain access to the resource.

Private Permits

The private permits will be assigned through a lottery system. Individuals (acting as trip leaders) may be assigned one launch in each of the two permit periods, the early and release periods. Individual's participation in the private sector allocation is unrestricted except for the number of permits assigned to them as trip leader. Successful applicants must participate in their trip or designate a substitute trip leader who was not assigned a launch for the same permit period. The details of the private permit system will be developed through a cooperative effort with representatives of the private user sector, before the 1991 boating season.

Commercial Permits

There are currently 14 commercial outfitters who provide access to the non-outfitted public. On the upper section the number of outfitters will be allowed to decrease to below 10 before any new permits may be issued. The goal is to maintain a maximum of ten outfitters and

guides. The lower section will remain open to new outfitters for an indefinite period or until monitoring indicates a need for use restrictions.

Upper section commercial outfitters who have not established a minimum level of use over the past two seasons will not have their permit renewed for the 1991 season. The minimum level shall be defined as:

- at least one trip which meets the historical use criteria as defined in the Rio Chama commercial permit stipulations.

Outfitters who have established an average of less than two launches for the three highest of the past five seasons, will receive temporary, one year permits that are renewable but nontransferrable.

In addition, outfitters who have established historical use in excess of the above criteria will be granted multi-year permits that are transferable, subject to restrictions contained in the permit stipulations. Outfitters with a higher level of historical use will be assigned a proportionately larger number of launches.

Commercial launches will be assigned to outfitters according to historical use developed over the past five years, as follows:

- Early and release period launches will be assigned separately according to the record of each permittee within the period. The details of this assignment process will be developed in cooperation with the upper section permittees;
- All or a portion of the commercial allocation not assigned according to this process will be placed in a commercial pool and made available, based on preseason launch requests; the details of this pool will be developed in cooperation with the upper section outfitters.

- As pool launches are used in a manner which qualifies as historical use, they may be assigned to the outfitters base allocation for the term of their permit;

- The base allocation will be subject to the permit stipulations which govern their use and retention; and,

- Any launches made available through a reduction in an outfitters base allocation will be placed in the commercial pool unless reassignment to the private sector is indicated by a shift in the overall use demand.

Joint Pool System

A joint private and commercial pool system may be developed to allow each group to use unassigned or cancelled launches. Assignments from this pool will be temporary and will not affect following season allocations. Launches may be placed in this pool in a manner which restricts their use to trips planned on a short notice basis.

Safety Requirements

Procedures and equipment required for safe river operations are detailed in the respective private and commercial permit stipulations. Elements common to both stipulations include:

- First aid and repair kits;
- Extra oars and/or paddles;
- Throw lines;
- Bailing buckets;
- Life jackets; and,
- Accident reporting procedures.

Additional requirements for commercial parties include:

- Guide certification;
- Recommended criteria for boat loading;
- Use of substances which impairs safe operation of the watercraft; and,

- Designation of a head guide with certain experience requirements.

Environmental and Resource Protection

Both the private and commercial user are required to employ certain measures which limit impacts to the river environment. These include:

- The use of fire pans, for open fires;
- Only dead and down wood allowed to be collected within the river corridor;
- Carry out of all trash including charcoal remaining in the fire pan;
- Straining and disposal of liquid wastes generated from cooking; and,
- Proper disposal of human waste, including mandatory carry out of feces.

In addition to these low impact camping stipulations, significant protection is provided to wildlife and other resource values under the launch restrictions, which limit the number and size of boating parties.

Motorized Watercraft

The entire river from the El Vado access to the Big Eddy access is closed to motorized watercraft. This restriction is designed to address both environmental quality and safety concerns. Motorized use of any kind within the upper section would conflict with both the wilderness and wild river designations. Motorized watercraft in any portion of the prescribed river corridor would present a safety hazard to such watercraft due to channel obstruction such as rocks and debris. These craft could also pose a hazard to floatboat activity. A buoy will be placed downstream from the Big Eddy by the Corps of Engineers when the Abiquiu reservoir rises to that point. This is to notify motorized craft of the upstream limit of travel.

Designation and Monitoring of campsites

Commonly used campsites are located on maps available to boating parties at the launch

sites. Upper section campsites will not be signed. However, areas closed to camping will be signed on the ground as well as noted on maps. Lower section boating campsites may be signed so as to be identifiable from the river. The Limits of Acceptable Change (LAC) concept will be implemented, which means that all heavily used campsites will be monitored for impacts as described in the Riparian Section of this plan. Monitoring will be accomplished by photo points taken annually and by large scale color infrared aerial photography which will be repeated every five years.

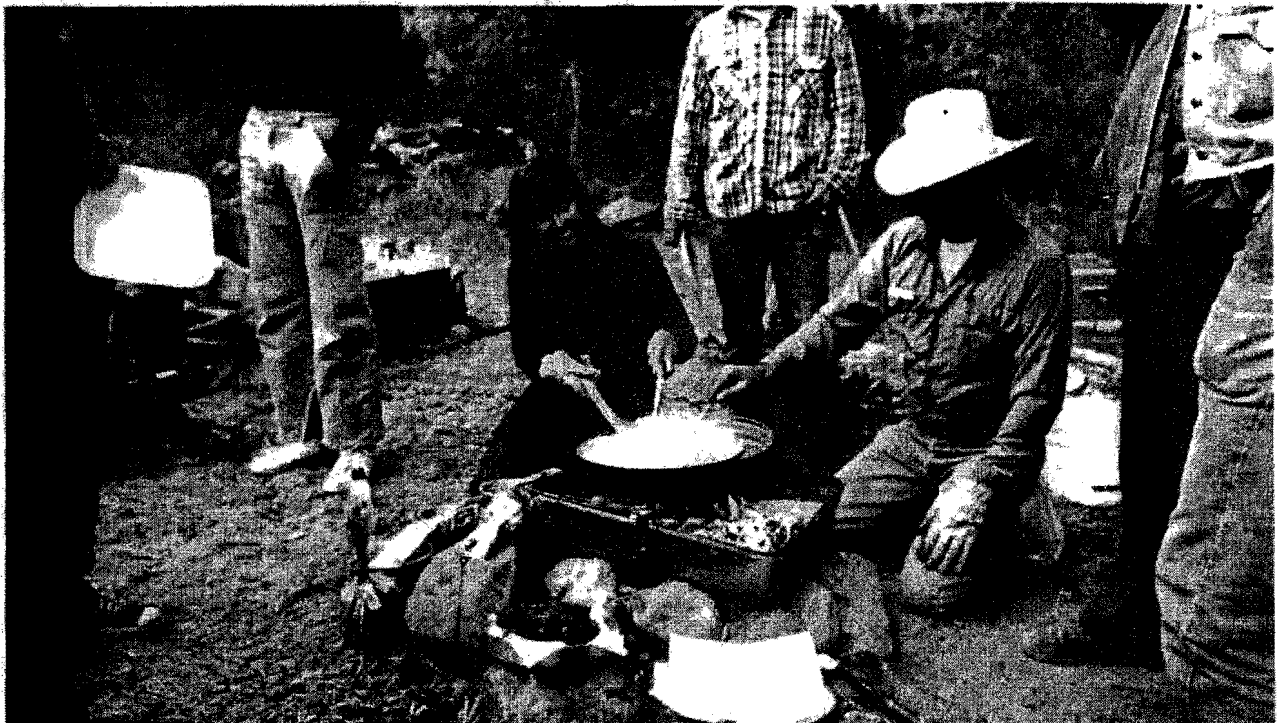
Use Restrictions

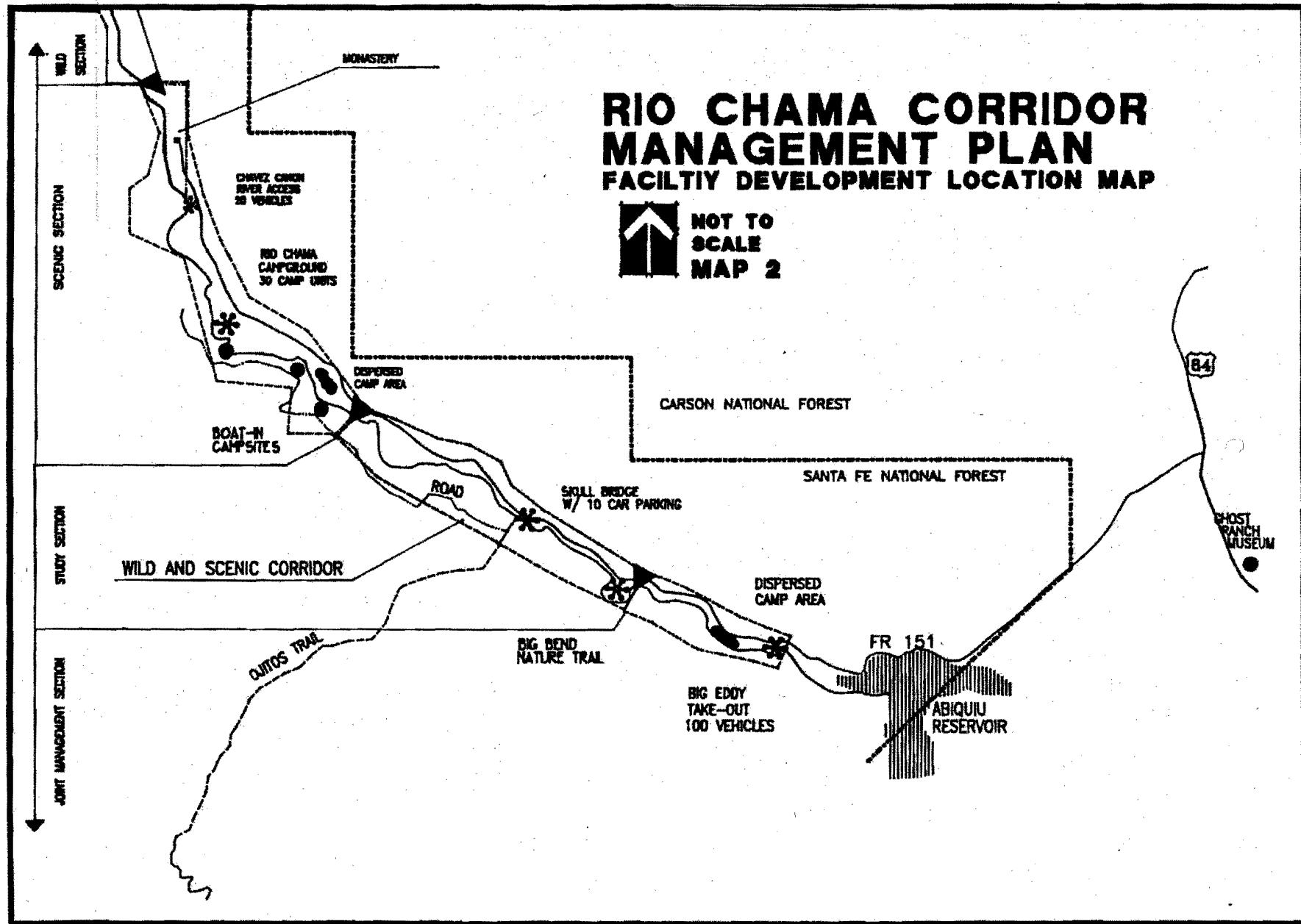
Only one launch party may occupy a campsite, as defined by permit stipulations. This restriction is required in order to limit the radius and intensity of impact to camping areas. Several campsites have been located adjacent to each other in order to accommodate boating parties which desire to associate with each other. Those parties desiring solitude in the upper section of the river will only camp adjacent to one another if they choose. The selection of campsites should not be a problem. During the

early period, when the maximum number of launches within the upper section is limited to 8, there will be no need for regulated dispersal of campsites. The release season launch number of 16 may require some form of regulated dispersal in order to avoid crowding of camps. Two methods will be studied for possible implementation:

- Scheduling of launch times in half-day periods; and,
- Assignment of camping zones.

The assignment of specific campsites was considered but ruled out as inappropriate. Each of the potential campsites would need to be clearly signed due to the close proximity of sites and the similarity in site characteristics. The impact of the signing necessary to implement such an assignment system would detract from the wilderness qualities. The loss of the freedom to choose a campsite while floating would also detract from the wilderness experience. After the monitoring period, a decision will be made whether there is a need to implement either of the management options.





Visitor Facility Development and Management

Recreation use of the Rio Chama has increased greatly over the last decade, with boating use increasing 300% from 1980-1989 (see Environmental Assessment). The increase in recreation not associated with boating, in the lower corridor below the monastery, has not been as high, but has still been substantial. This explosion in use has occurred in a mainly uncontrolled fashion, with few management attempts to direct it. The result, in the lower corridor, has been a proliferation of vehicle tracks and beat-out areas near the river (17 user-created roads in the 6 mile stretch between the Big Eddy and Chavez Canyon sites), loss of soil, vegetation, damage to the riverbanks in some areas, and a low quality recreation experience at the take-out. This increased level of random use also affects wildlife and a sensitive plant species located in the lower corridor.

There are also opportunities for recreation and environmental education in this area, which have not been realized to date. The designation of the Rio Chama as a Wild and Scenic River emphasized its place as a national resource, and different demands are occurring for its use than have occurred in the past. Many people have questions about its geological, natural, and cultural history and current characteristics. The current road condition and lack of facilities present safety hazards and barriers to use by much of the American public.

For these reasons, the improvement of river access points, trails, campgrounds and parking at the Ghost Ranch Living Museum, as well as reconstruction of Forest Road 151, have been proposed. These are described in detail in this section. For the locations of each facility, see Map 2.

These facilities will be designed for minimum impact on area resources and to harmonize with the surrounding environment. They will control use to protect the environment while

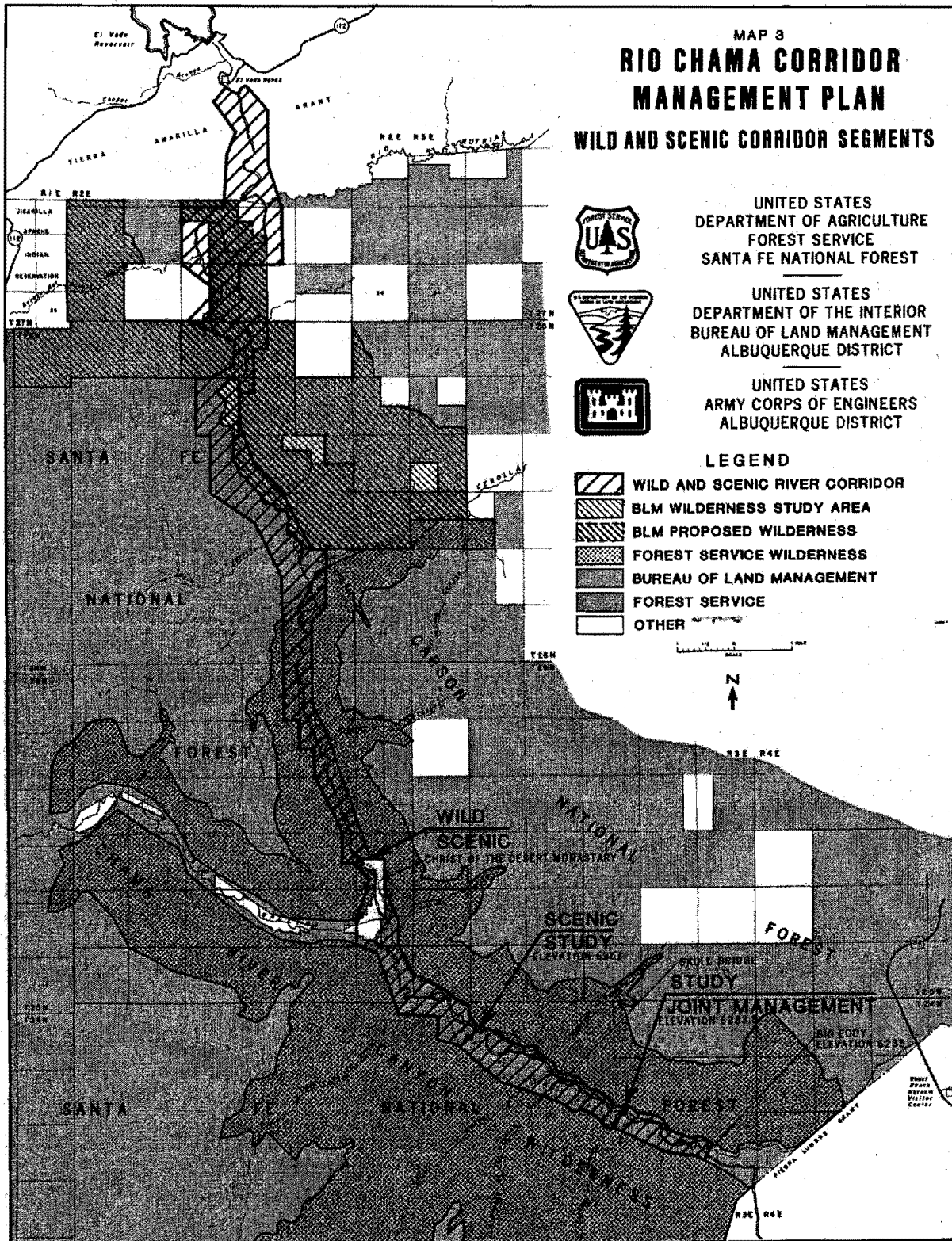
providing quality recreation and educational experiences. Natural materials and colors will be used whenever possible. For example, parking areas and roads will be surfaced with gravels and native soils, not asphalt and concrete. Signs will be the minimum amount necessary to guide and inform the visitor. Disturbed areas will be revegetated with native and drought tolerant plant materials to restore the natural and visual integrity of the landscape.

Following are site specific development plans and descriptions.

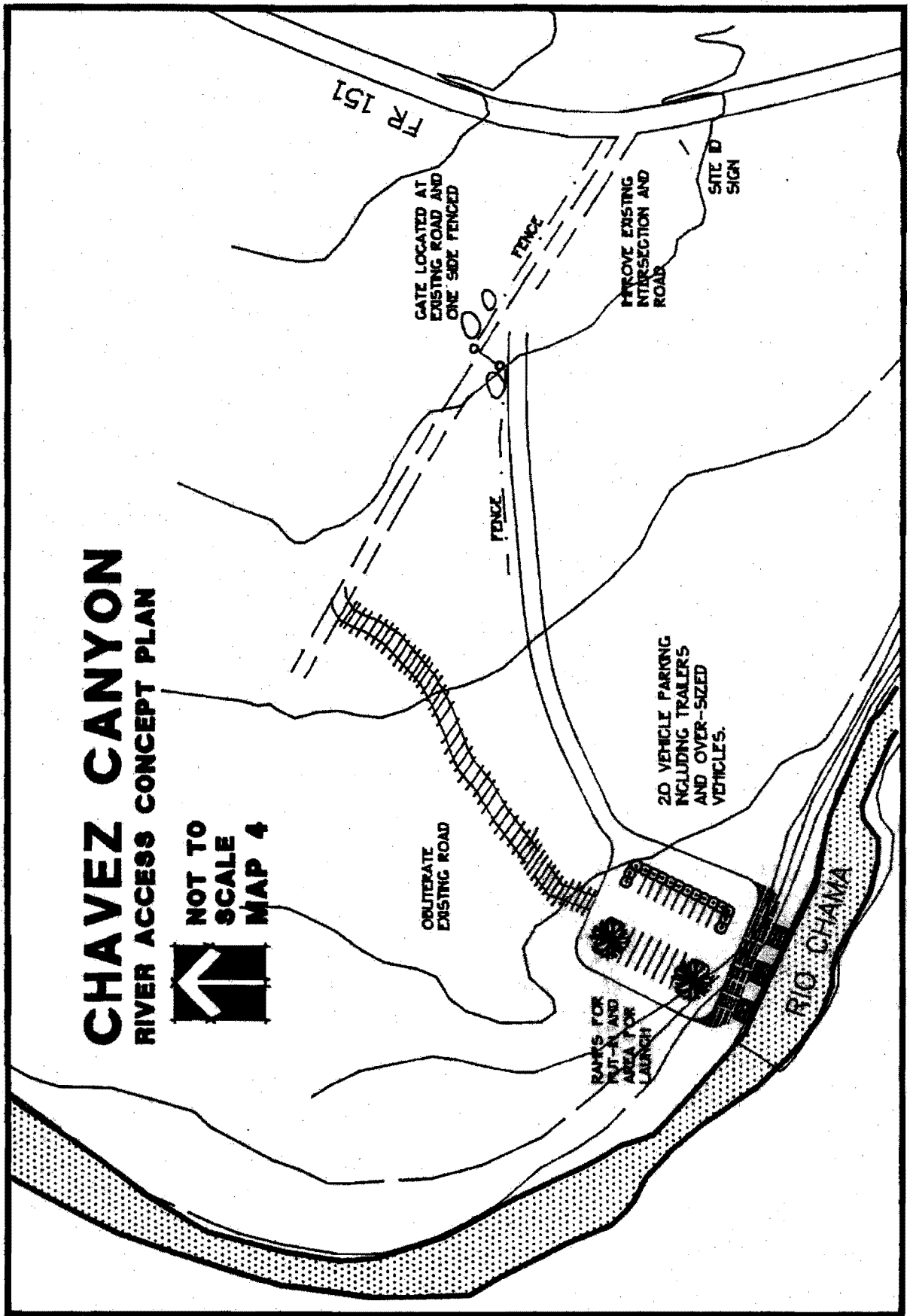
El Vado Ranch River Access

The access point for the upper river is on the privately owned El Vado Ranch, located approximately 1 mile below El Vado Dam. All proposed facilities and improvements will be coordinated with, and subject to approval of, the landowner. The intent will be to provide visitor services, permit administration, and information through river ranger contact and signing. The cabin nearest the river will be rented through the boating season and provide the primary contact point. Additional public restrooms may be constructed within easy access of the launch area. Signing will explain the Wild & Scenic River designation, low impact camping techniques, and use procedures.

A cooperative agreement with the owners of El Vado Ranch will be pursued. Key objectives of this cooperative agreement include control of boating access, administration of user fees, distribution of user fees, installation of the restroom and signs, and rental of the above referenced cabin. An easement to access the river will be pursued, including a small put-in point. If this easement cannot be acquired, development of alternative river access may occur on State of New Mexico Natural Resource Department land immediately south of El Vado Ranch. This development would occur cooperatively with that state agency.



CHAVEZ CANYON RIVER ACCESS CONCEPT PLAN



Chavez Canyon River Access

A parking area and walk-in boat ramp will be developed at Chavez Canyon as the uppermost access point for the lower section of the river. This point is also sometimes used as a take-out for boaters putting in at El Vado Ranch. The parking area will have space for 20 vehicles, up to half of which will be for large vehicles and trailers. An unloading/staging area will also be provided. Restroom and trash collection facilities will be provided, along with location and use information signing. Picnic tables, grills, and firerings will not be provided, and overnight camping will not be permitted.

The boat ramps will be for pedestrian, not vehicular uses. They will be designed to fit with the natural surroundings, to provide safe access from the staging area to the river, and to withstand forces of fluctuating rivers flows. See Map 4 for a conceptual idea of the layout of this site.

Rio Chama Campground

A campground with approximately 30 family units will be developed in an area where dispersed camping currently occurs. This campground may be constructed in phases to respond to demonstrated demand. The units will be well spaced, with areas of vegetation retained between them, to allow for maximum privacy and experience of nature. Each camp unit will have a picnic table, firering/grill, and levelled tent pad area. At least 20% of these units will be designed to be completely accessible to the handicapped, elderly, etc. Parking spurs for each unit will be sized and levelled to accommodate recreational vehicles and trailers. Potable water, restrooms, and trash collection facilities will be provided. There will be displays interpreting the natural environment and cultural history of the canyon, along with information on recreation opportunities and use. See Map 5.

This campground is intended primarily for drive-in use. Boat access is permitted, but not encouraged. Consequently, there will be no developed boat ramp or beach area provided.

Skull Bridge

Skull Bridge was raised in 1989 to permit safe clearance by boaters under most conditions. A five vehicle parking area was also constructed at the same time just downstream from the bridge for river access. This parking area will be enlarged to 10 vehicles as part of the FR 151 reconstruction project to serve trail use, dispersed camping, wildlife viewing, and boating in the area.

Big Bend Interpretive Trail

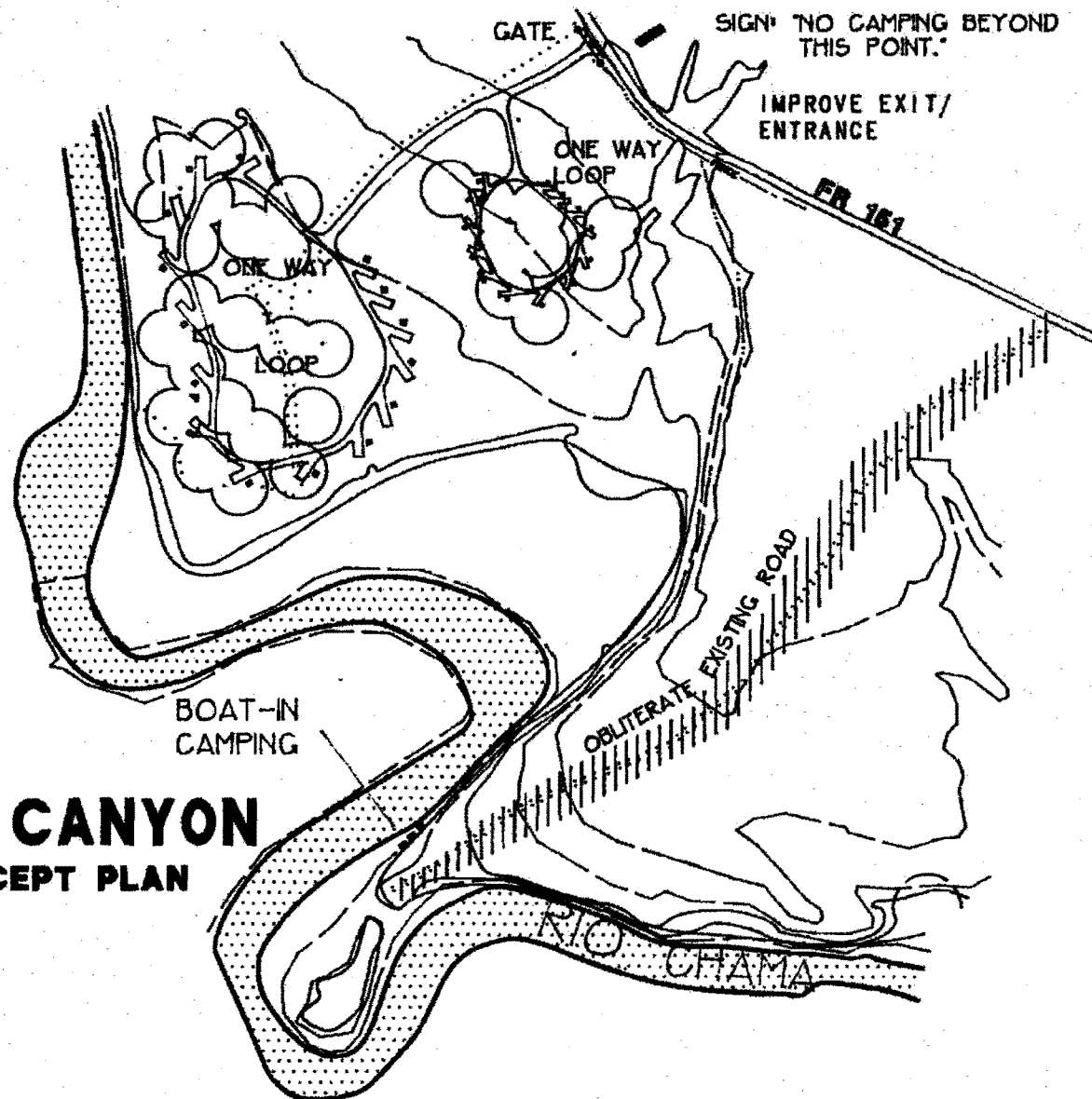
The Big Bend river meander provides an outstanding opportunity to interpret the riparian ecosystem of the Rio Chama. An interpretive trail, 3/4 - 1 mile in length will be constructed to serve both drive-in and boating use. A 10 vehicle parking area will be constructed to provide safe parking off of Forest Road 151. A beaching area for boats will be identified and will provide access to the trail from the river. The trail will be accessible to the handicapped, with benches and rest stops. The interpretive theme will include:

- The riparian community (plants and wildlife);
- Stream hydraulics (scour and deposition, meanders, rapids, etc);
- Effects of humans on the natural systems.

See Map 6 for a conceptual idea of the layout of the trail.

Big Eddy River Access

The major take-out point for boating will be at the Big Eddy, also known as the Whirlpool. Parking will be provided for up to 100 vehicles, at least twenty of which will be for large vehicles and trailers. A staging area/loading apron will be located separate from the parking areas and connected to the river with improved, walk-in boat ramps. Again, these ramps will be designed to fit with the natural surroundings as well as provide safe access from the staging



RIO CHAMA CANYON

CAMPGROUND CONCEPT PLAN



NOT TO
SCALE
MAP 5

area to the river. All access roads, parking areas, the staging area, and boat ramps will be designed to withstand fluctuating flows and possible inundation by Abiquiu Reservoir water. The parking areas will be divided into distinct modules which will step up from the river, allowing at least some use of the site with rising water levels -- see Map 7.

A waste disposal container will also be provided for the carryout of human wastes from boating parties. This will be hauled away and disposed of properly on a periodic basis. Restroom facilities will be located at the upper elevations of the site to minimize potential for inundation. Revegetation and erosion control will take place, again utilizing materials and techniques which are tolerant of inundation. Signing will primarily be for identification of the site and to direct users through it. Overnight camping will not be permitted at this site.

Forest Road 151 (Lower Canyon)

Forest Road 151 will be maintained from the junction with US Highway 84 to the Chavez Canyon River Access site, 13.5 miles in length. The width and alignment of the road will remain much as it is now, with the exception of the addition of periodic safety pullouts. Drainage improvements will be made and the road will be reconditioned, using gravels and soils from the immediate area (thus blending with the surrounding environment) to provide all-weather access.

Signs will be placed on US Highway 84 identifying the road to the Rio Chama Wild & Scenic River. A short distance in from the highway, on 151, an information stop will be provided to orient visitors to available recreation opportunities, distances, and recommended seasons of use.

Non-Boating Access to the Upper Canyon

Vehicular access to the rims of the upper canyon, and in some places to the river itself, occurs in several places. Most of these will be

closed off outside of the Wild and Scenic River Corridor, in accordance with Wild River management stipulations (see Appendix C). In some cases, the timing of closure will be dependent on private land acquisition -- existing access to private lands will not be denied. On the west side of the river, the Mine Canyon Road will be placed under a special use permit to the Jolly-Chama subdivision association and gated. A small trailhead will be constructed at the gate and all other users will use the road as trail access to the river.

Vehicular access to the east rim of the Rio Chama will be retained to serve recreationists in two areas: access to the existing Hart Canyon trail (#293) and future Hart Canyon and Navajo Peak loops (see below), through lands administered by the Carson National Forest; and, access to the Rio Chama WSA and future Navajo Peak trail through lands administered by the Bureau of Land Management.

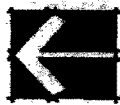
These access points and trails will serve hikers, backpackers, horseback riders, hunters, anglers, and others wishing to experience the beauty and solitude of the upper canyon without taking a boat. Conflicts with adjacent landowners and/or users will be resolved through installation of cattle guards and signs at property boundaries and gates. Unnecessary roads will be closed and obliterated. There are adequate campsites available for these people -- campsites accessed by these roads and trails will not be noted on boating maps for the area, but competition for sites will be monitored. More direct restrictions on use may be applied if competition is excessive.

Ghost Ranch Living Museum Parking Area

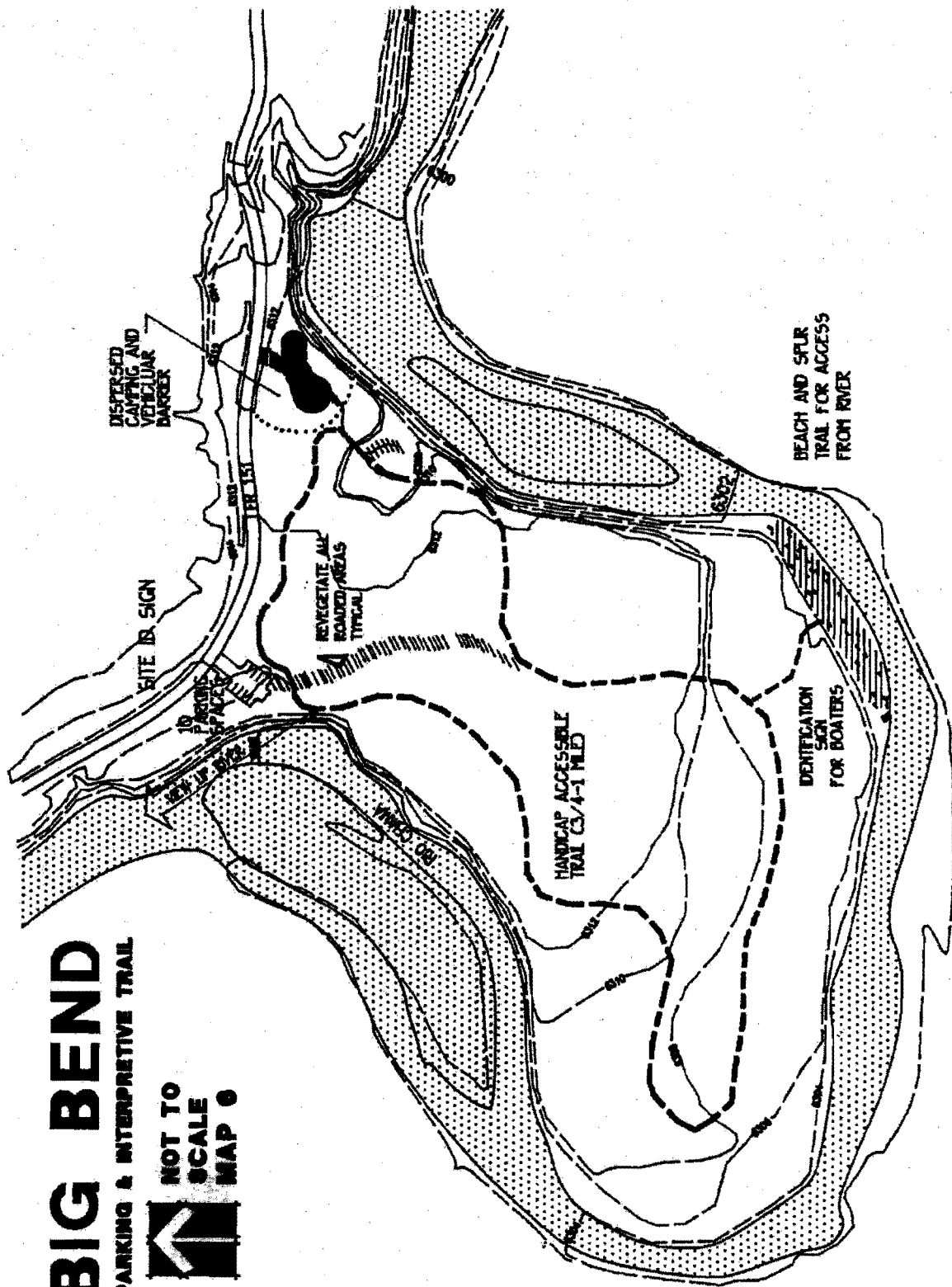
A 40 vehicle parking area has been constructed at the Ghost Ranch Living Museum, and is available for Rio Chama users. This parking area is separated from the existing museum parking lot and is available for use 24 hours a day. It is therefore, useable as a base for carpooling and shuttling vehicles into the lower river area. There is space for large vehicles and trailers as

BIG BEND

PARKING & INTERPRETIVE TRAIL



NOT TO
SCALE
MAP 6



well as passenger vehicles. An information display orienting users to the river and its opportunities will be provided. Additional displays about the Rio Chama will be located inside the museum, as described in the Interpretive Services section.

Trail Network

Existing trails within the Rio Chama canyon include the Hart Canyon Trail and the Ojitos Trail on the Santa Fe National Forest. The Ojitos serves as a portion of the Continental Divide National Scenic Trail (CDNST) which will eventually tie in with trails to the north (Carson National Forest), and to the south across BLM and other lands toward the Cibola National Forest; official designation as a portion of the CDNST system is expected to occur within the next year. Additional trails, totalling approximately 14 miles, will be constructed to provide loop trips into side canyons, views of the river from the canyon walls, and limited access to the river from the canyon rims. These trails include a Navajo Peak trail (BLM), a Cebolla Canyon trail, and the Hart Canyon Loop trail, and will utilize existing paths and roads, as much as possible. Other existing roads targeted for closure, and paths in the area will be inventoried and may be

added to the Forest and BLM systems, as appropriate.

Dispersed Camping Areas and Off-Road Vehicle Use

In addition to the developed recreation sites described above, two areas will be designated for drive-in primitive camping, picnicking, and so forth. Also, two to three other parking areas will be designated along the road where use currently exists; walk-in use may occur there. These areas (see Map 2) will not have developed facilities, although portable toilets may be placed here during the high use season. Vehicular use will be allowed. The areas are generally constrained by natural barriers. However, additional barriers of natural appearing materials may be added, as needed to control vehicular use.

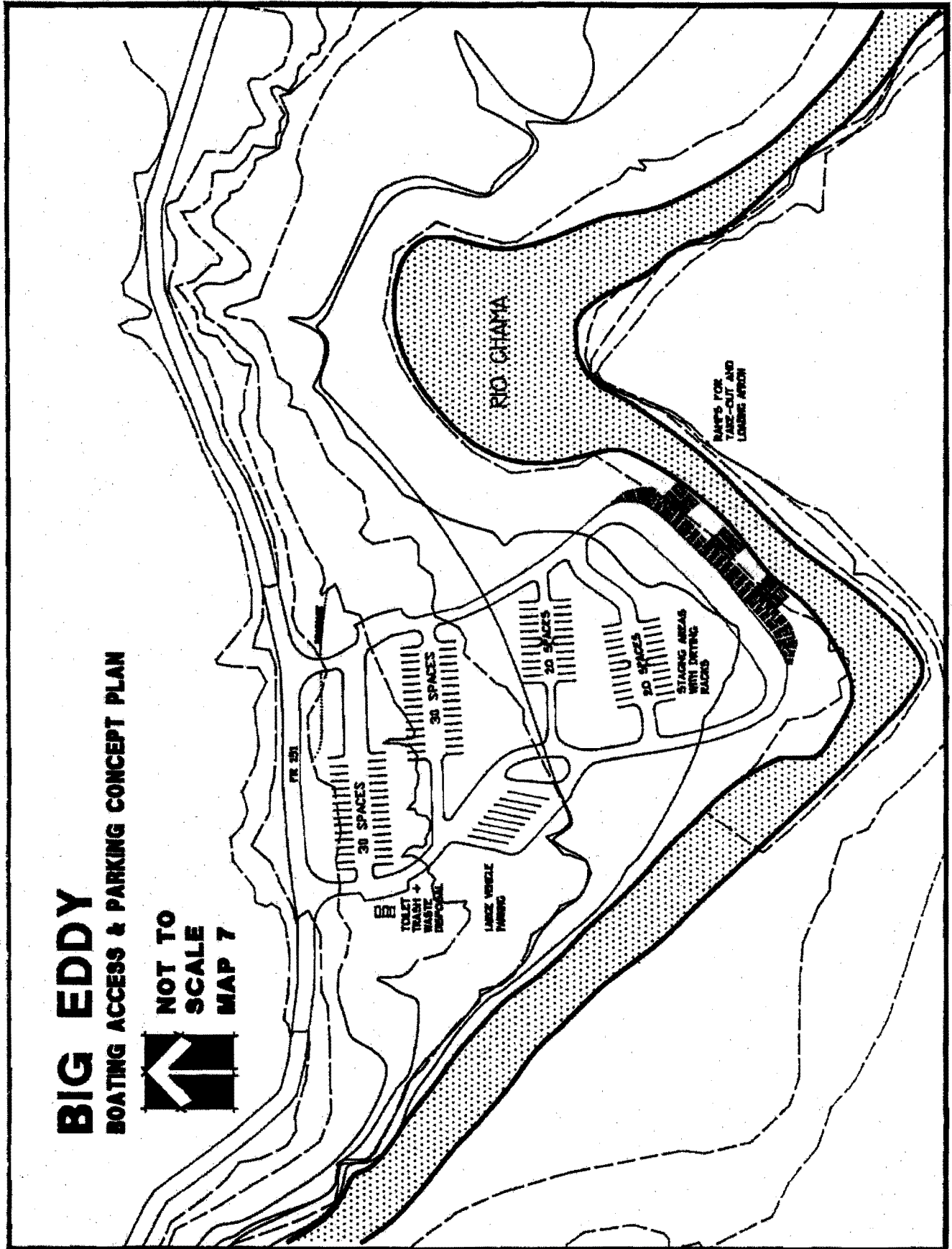
Demand for this type of recreation experience will be monitored. In all other areas within the corridor, vehicular use will not be allowed off of designated roads and parking areas. Existing roads and vehicle tracks will be closed with physical barriers, and an Off-Road Vehicle (ORV) closure order will be written for the entire corridor, prohibiting vehicular use outside of designated areas and roads.

BIG EDDY

BOATING ACCESS & PARKING CONCEPT PLAN



NOT TO
SCALE
MAP 7



Interpretive Services

The Ghost Ranch Living Museum will serve as the Rio Chama Information Center. The centerpiece will be the "Billian" sculpture, an interpretive look at the Rio Chama Canyon. The Living Museum will produce a periodic Rio Chama newsletter in addition to maps and guide brochures.



The following types of publications will be available to the public:

- Ghost Ranch, Rio Chama Newsletter;
- Rio Chama Map and General Information;
- Rio Chama Guidebook - written and produced by Southwest Natural & Cultural Heritage Association, (SNCHA), through a cooperative partnership with the Santa Fe National Forest, and;
- A guide book on "Wildlife and Riparian Habitats on the Rio Chama" will also be developed. This guide will provide information and a check list of common plants and animals found in the riparian and canyon habitats.

All of the guidebooks will be available at Forest Service and BLM offices, at the Ghost Ranch Living Museum, and at Cooper's Ranch. A new archeology/geology guide, "Float Trip Through Time", is also being developed.

A new "Gateway to the Past" Center is being built at the Ghost Ranch Living Museum, using Forest Service, Bureau of Land Management and cost share dollars. A bill has been introduced into Congress entitled "Chama River Gateway to the Past Interpretation and Visitor Education Act of 1990" to authorize implementation of a cultural resources interpretation program throughout the Chama Valley. The gateway center will be a focal point providing interpretive displays and information that will allow the visitor to go on his own and "discover" various interpreted cultural resource sites. One of the interpretive loops to be developed under the Gateway concept is the Upper Chama Loop, accessible only to those who float the river. The new "Float Trip Through Time" brochure noted above will be available at the Gateway facility and will provide information on interpreted sites along the river. The Ward Ranch, mentioned previously, is one of many resources along the Rio Chama which will be interpreted; rafters will have a chance to learn and understand the past history of the area through brochures and hands-on experiences. Additional plans for the Ward Ranch include:

- site recordation;
- development of a stabilization plan for the house structure;
- stabilization of the structure;
- development of signs and brochures to interpret the ranch's place in history;
- construction of an interpretive trail through the site;

- development of a cooperative agreement with volunteers and user groups to help manage and interpret the site; and,

- patrol, monitoring, and maintenance of the site.

As noted in the Cultural Resource section, the initial need is for cultural resource inventory survey to learn more about the kinds and quantities of cultural resource sites along the river that have interpretive potential. When this baseline data has been gathered, management decisions can then be made as to which sites are appropriate for interpretation.



Environmental education events will include an Annual Family Fun Day at the Living Museum

with an exhibit related to Rio Chama. Other events associated with the Rio Chama, such as an "Eagle Day", may be developed. Any such activity will be limited and controlled, but would be conducted during the winter from the Museum to observe/interpret the winter roosting of Bald Eagles in the Chama Canyon. These events will not be held if there is a threat or potential impact on the bald eagles or other important wildlife species.

Through a guide seminar trip each spring, outfitter/guides will be sought as partners for environmental education purposes. Outfitters will be offered an "educational" seminar through the canyon at the start of each season. The trip will be staffed by wildlife biologists, an archaeologist, a geologist, and other natural resource professionals. This will allow the outfitters to better serve their customers by providing them some environmental education and appreciation as part of their river experience, and should help to protect the environment of this special place.

All signs and displays within the wilderness section will be made using the non-reflective wilderness standards. Bulletin boards with brochure boxes will be built at the put-in, take-outs and campsites. The signs for the new Big Bend Nature Trail will be written to interpret the riparian ecosystem in an entertaining way. The signs will explain stream hydraulics, riparian vegetation, and riparian wildlife.

Cultural Resources



Inventory

There has been only one intensive systematic cultural resource survey along the Rio Chama. This was conducted in 1974 (and thus may have little utility given changed survey standards for intensive survey since that time) around Abiquiu Lake and upstream from the lake within an anticipated increased flood pool area. In 1987 a brief reconnaissance survey was conducted along the river from El Vado Lake south to the vicinity of the monastery. There is a need for additional inventory for two reasons.

First, some of the management activities planned in the Rio Chama corridor, particularly the lower section, such as campgrounds, river access points and parking areas, have a potential to directly impact cultural resource sites. Areas where such activities are planned will be surveyed within the direct impact zones. With facilities such as campgrounds, it will be necessary to survey wider areas to determine if there are cultural resource sites that may be subjected to secondary impacts due to concentration of visitor use. If sites are found in either situation, it will be necessary to avoid them or develop a management strategy through consultation with the New Mexico State Historic Preservation Officer and the Advisory Council

on Historic Preservation that will result in a determination of no adverse effect.

The second component of cultural resource management along the Rio Chama is the planned interpretive program as outlined in the "Living With the Land: Peoples and Cultures of the Chama" interpretive prospectus. Interpretation of cultural resource sites is viewed as a positive step in the direction of site protection. It is believed that cultural resource interpretation will increase public awareness of the fragile and irreplaceable nature of such sites, leading to an increased sense of public stewardship and a consequent reduction in incidents of looting and vandalism. However, decisions as to which sites are appropriate for interpretive development must be made based upon an acceptable level of inventory information. It will be necessary initially to gather information on the kinds and quantities of sites along the Rio Chama with interpretive potential. Thus intensive cultural resource inventory survey is needed adjacent to the river regardless of whether a construction project poses a threat.

Interpretation

Once sufficient inventory information has been gathered, a decision can be made as to which sites and how many may be appropriately interpreted. In keeping with the Forest Service Southwestern Region's "discovery" concept of cultural resource site interpretation, which BLM will adopt, all interpretive elements (signs, trails, etc.) will be low key and unobtrusive. Interpretive information on cultural resource sites in the upper section of the river, but within the wilderness or the Wilderness Study Area, will be available only in hand-outs and brochures with no on-site interpretation. New Mexico State Office Policy (BLM), contained in a manual supplement for management of cultural resources in Wilderness areas, will be followed. Sites in the upper section but outside the wilderness and the Wilderness Study Area, as well as those in

the lower section, may be interpreted with minimal signing and perhaps visitor trails. Very general information about the prehistory and history of the Rio Chama Valley will be provided through interpretive displays at the Gateway to the Past Building at the Ghost Ranch Living Museum. Here, as well as at El Vado Ranch, information on specific interpreted sites along the Rio Chama will be available in the "Float Trip Through Time" brochure.

Protection

By providing access, boating use of the Rio Chama has a potential to result in vandalism, looting and artifact collection at cultural resource sites. As a part of management of the river, it will be necessary to monitor and inspect sites periodically to determine if vandalism, looting and collecting are occurring and to what degree. It is, of course, necessary to know the locations of sites in order to monitor them; this is another reason that gathering of inventory is an initial necessity. Baseline data of the condition of sites at the time of inventory will be gathered. Once the inventory and baseline data has been gathered, a monitoring plan will be developed and changes in site condition will be documented.

As noted above, it is believed that through interpretation of a few carefully selected sites, we can increase public awareness of the unique management requirements of cultural resource sites and engender a greater sense of public stewardship. In the long term this should work toward more effective protection for all cultural resource sites. Because interpreted sites will be the scene of frequent visitation, they will be monitored more frequently than non-interpreted sites. Prior to interpretation, it may be necessary to mitigate potential adverse effects to particularly significant and/or fragile sites. Such management decisions will be made on a site by site basis.

Flow and Release Recommendations

The highest priority value for flow management is, first, meeting the delivery requirements of the Rio Chama water rights holders and the San Juan-Chama contractors (water users); and second, assuring the aquatic ecosystem maintenance. However, in recent years, beginning in 1984, coordinated efforts have resulted in both priorities having been met. Through modification of these releases from El Vado Dam, the aquatic habitat will receive special attention, especially during the dry cycles. Any recommendations for minimum flow requirements, number of releases per season for boating, and releases per year will be balanced between the recreational, aquatic, and environmental uses and the downstream irrigation and municipal demands. All of these concerns being met are predicated on the amount of water (either Rio Chama natural flow or San Juan-Chama imported flow) available for reregulation and the flexibility to operate in a manner that does not adversely impact the position of the water users.

Aquatic Habitat

As stated above, any flow management recommendations must be considered within the limits of water availability, transfer, and demand by water owners. Preliminary flow management recommendations are to support a naturally reproducing brown trout population, and overall aquatic organism stability. Stable flows of 150 CFS from mid September to mid March are recommended, along with a minimum flow of 100 CFS at any time during the year. Study and monitoring efforts will be increased to refine the flow requirements for fisheries, general aquatic health, relationships to Threatened and Endangered species habitats, and recreational flow requirements. During extended dry cycles, priorities will be placed on maintenance of minimum flows over reproductive flows.

Instream Flow Study

All flows identified in this flow management section are estimates and will be refined by a two year instream flow study which was initiated in 1990. The primary objective of this study will be to evaluate and quantify flows necessary to support the following:

- Fisheries; minimum flow maintenance requirements by season, reproduction, gravel bed maintenance, and sediment transport flows;
- Recreation Boating; minimum flows for 16' rafts, 12' rafts, canoes, and kayaks;
- Fishing; access, minimum flow for boats to first take out, and effects of variable flows on fishing;
- Riparian; frequency, discharge, and duration of flood stage flows necessary for maintenance of riparian regeneration;
- Scenic/Aesthetic; minimum to maintain scenic and aesthetic qualities of each section. Focus may be on lower section for this value; and,
- Threatened and Endangered; flows necessary for maintenance of open water during winter months for bald eagles.

Recreational Boating

After the minimum needs of aquatic habitat are met, the next priority for use of available water would be for up to 10 weekend releases, including augmentation of early season flows through El Vado Reservoir. Augmentation would occur for up to two weekends when flows of 500 CFS or greater would be increased to a minimum boatable level for 16 foot rafts which is estimated to be 750 to 1,000 CFS. Flows for recreational releases would be determined based on fore-

casts of available water and minimum needs for various types of craft.

Releases of less than the minimum for large rafts could be planned in order to provide access for smaller craft such as canoes and kayaks and thus take advantage of the opportunity to provide some access under situations where only a limited amount of water is available. Releases for the purpose of providing boating access for fishing could also be planned if such a level is determined by the proposed fishing study. Such releases would most likely be scheduled for mid week periods during the release season.

Impacts of recreational releases on fishing and water quality will be monitored. Releases on holiday weekends and on more than two consecutive weekends will be avoided.

The recommended priorities for recreational boating releases are as follows:

1. Augmentation for up to two weekends during the early season, beginning with the Memorial Day weekend, from 2:00 PM Friday to 11:00 AM Monday.
2. One weekend release per month beginning July 15 of flows sufficient for large rafts, from 8:00 AM Saturday to 11:00 AM Sunday.
3. An additional release per month, of flows sufficient for small rafts, kayaks, and canoes.
4. An increase of the flows in #3 to accommodate large rafts.
5. An increase in the duration of the release in #2 to begin at 2:00 PM Friday, instead of 8:00 AM Saturday.
6. An increase in the duration of the release discussed in #3 and #4 to begin at

2:00 PM Friday, instead of 8:00 AM Saturday.

Pre-release Strategies

The objectives for the "joint management section" of the Chama River is to reduce the frequency of inundation of this section to less than once every twenty years. This will be attempted through interagency cooperation between the Corps of Engineers, Bureau of Reclamation, Bureau of Land Management, and the US Forest Service, and by monitoring snow pack and anticipated spring runoff. This will also be done in full cooperation with the city of Albuquerque, Middle Rio Grande Conservancy District, and the States which comprise the Rio Grande Compact Commission. The estimated 1:20 probability includes factoring in years where conditions would not allow for any significant pre-release. Surface elevations of Abiquiu Reservoir will be managed by the COE through pre-release evacuation measures when necessary.

Fishing Study

As the fishery on the Rio Chama improves, so do the opportunities for guided fishing trips. A study to determine an optimum range of flows for fishing is planned for 1991. Flow recommendations for fishing opportunities will then be made in a manner similar to those for boating.



Land Acquisition Policy

The Rio Chama flows through lands which are owned by private individuals, and lands managed by State and Federal governments. The private and State owned tracts vary in size from one acre to several hundred acres all within the Wild and Scenic corridor section. In order to maintain the integrity of the Wild and Scenic setting, acquisition of non-federal lands or easements on those lands may be desirable. The recent acquisition of the Ward Ranch by the Bureau of Land Management is a good example of the kinds of lands that should be acquired to enhance the wild and scenic qualities of the entire river corridor.

The appropriate managing agencies will seek acquisition of title, scenic or conservation easements on "high priority" tracts of lands within the corridor. "High priority" is based on: the potential for future development, the potential for use by the public, the sensitivity of the land, and the opportunity for acquisition. Acquisition of lands in fee title will only be pursued with willing sellers. All lands acquired in fee title will not be allocated for livestock use except as provided for in pre-existing agreements. Acquired lands within the designated Wild segment will be withdrawn from mineral entry and will be managed in accordance with the stipulations in Appendix C.

Donation, purchase, and exchange are ways which could be used in acquiring these lands. The Wild and Scenic Act specifically prohibits condemnation of any lands to acquire fee title if 50% or more of the entire acreage is owned by the United States, or by the State of New Mexico. Therefore, condemnation of lands within the Rio Chama corridor will not be used.

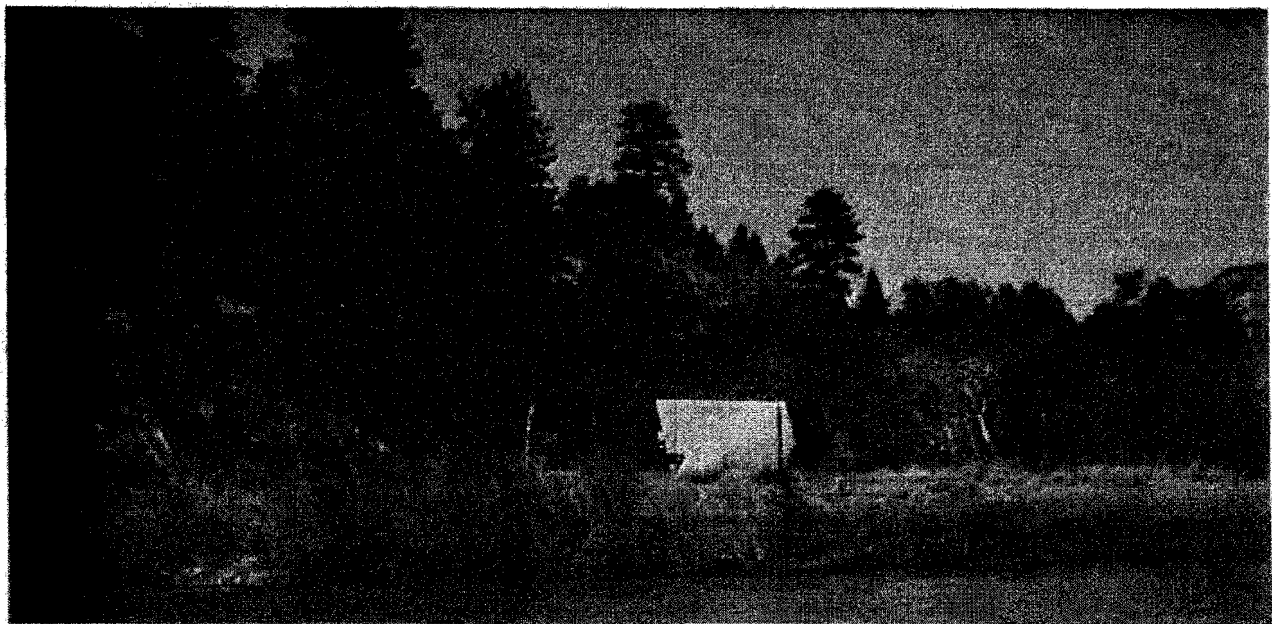
In addition, a land owner could agree to a life estate-agreement whereby the owner would sell the land and improvements to the government but be allowed to remain on the property until his or her death. Such lands and improvements could not be passed on to the heirs.

If land acquisition or a life estate agreement are not possible, then the managing agency will try to obtain a scenic, conservation, or environmental easement. These legal, binding easements enable a land owner, in cooperation with a land trust organization, State or Federal agency, or an other body that agrees to administer it, to restrict and manage certain development activities which may be inconsistent with the characteristics which made the river "Wild and Scenic". Such managerial capabilities could be implemented on the Rio Chama to retain the wild and scenic qualities that exist today.

TABLE 2: PRIVATE LAND ACQUISITION PLAN

Ownership	Location	Acres	Agency
1. Private	T.27N.,R.2E., S1/2,NW1/4 SW1/4, Sec 28	240.00	BLM (Land Acq.)
2. Private	T.26N.,R.2E., Lots 1-4, Sec. 9.	141.34	BLM (Land Acq.)

3. Private	T.27N.,R2E., Lots 3,4 and E1/4NW1/4, N1/2NW1/4, Sec. 27.	147.42	BLM (Land Acq.)
4. New Mexico Game and Fish Department	T.27N.,R2E., W1/2 Sec. 33.	320.00	BLM (Land Acq.)
5. Private	T.27N.,R2E., W1/2,E1/2, Sec. 28.	160.00	BLM (Land Acq.)
6. Private (Adjacent to NMG&F land)	Unsurveyed	480.00	BLM (Scenic Easement)
7. Private	T.26N.,R2E., Within Secs. 22,23,26,27	17.00	USFS (Land Acq.)
8. Private	T.25N.,R2E., Within Secs. 25 and 26.	154.80	USFS (Land Acq.)
9. Private	T.25N.,R2E., Within Secs. 24 and 25.	125.50	USFS (Scenic Easement)



Implementation and Operation

Annual Operating Plan

Implementation and operation of the plan will be carried out under an Annual Operating Plan, (AOP), which will be developed by April 15 of each season. The AOP will cover: anticipated personnel to be provided by each agency; projects to be planned, initiated and/or completed during the period covered by the AOP; and, the lead agency for all actions covered under the AOP.

The appropriate agencies will meet or consult periodically to develop and implement this plan. This will include:

- A fall meeting of the Forest Service and BLM to evaluate the previous seasons accomplishments and prepare a draft of the coming seasons AOP;
- A fall consultation with the Bureau of Reclamation and water users, initiated by BLM, to determine the dates for potential recreational releases for the next season;
- A spring (mid March) consultation/meeting with appropriate water management interests to evaluate the need for a

pre-release operation, and to estimate the probable level, number and duration of recreational releases; and,

- A pre-season meeting (late March) with the Forest Service and BLM to complete the AOP.

Agency Authority and Personnel

Each agency will be responsible for providing the necessary support (personnel, equipment, and materials) to meet its obligations under the AOP. Personnel responsible for patrol and monitoring will have dual responsibility/authority on Forest Service and BLM lands. This is required in order to effectively administer the Rio Chama corridor where the various users and resources are so interrelated.

Law enforcement will be provided by each agency depending on the jurisdiction involved. The development of an interagency agreement to provide dual law enforcement authority for each agency regardless of land base involved will be explored. Until such an agreement is completed, the Forest will take the lead and request BLM assistance where violations involve both Forest and BLM lands. At this time it is not anticipated that River Rangers will require law enforcement authority.

TABLE 3: IMPLEMENTATION SCHEDULE & COSTS

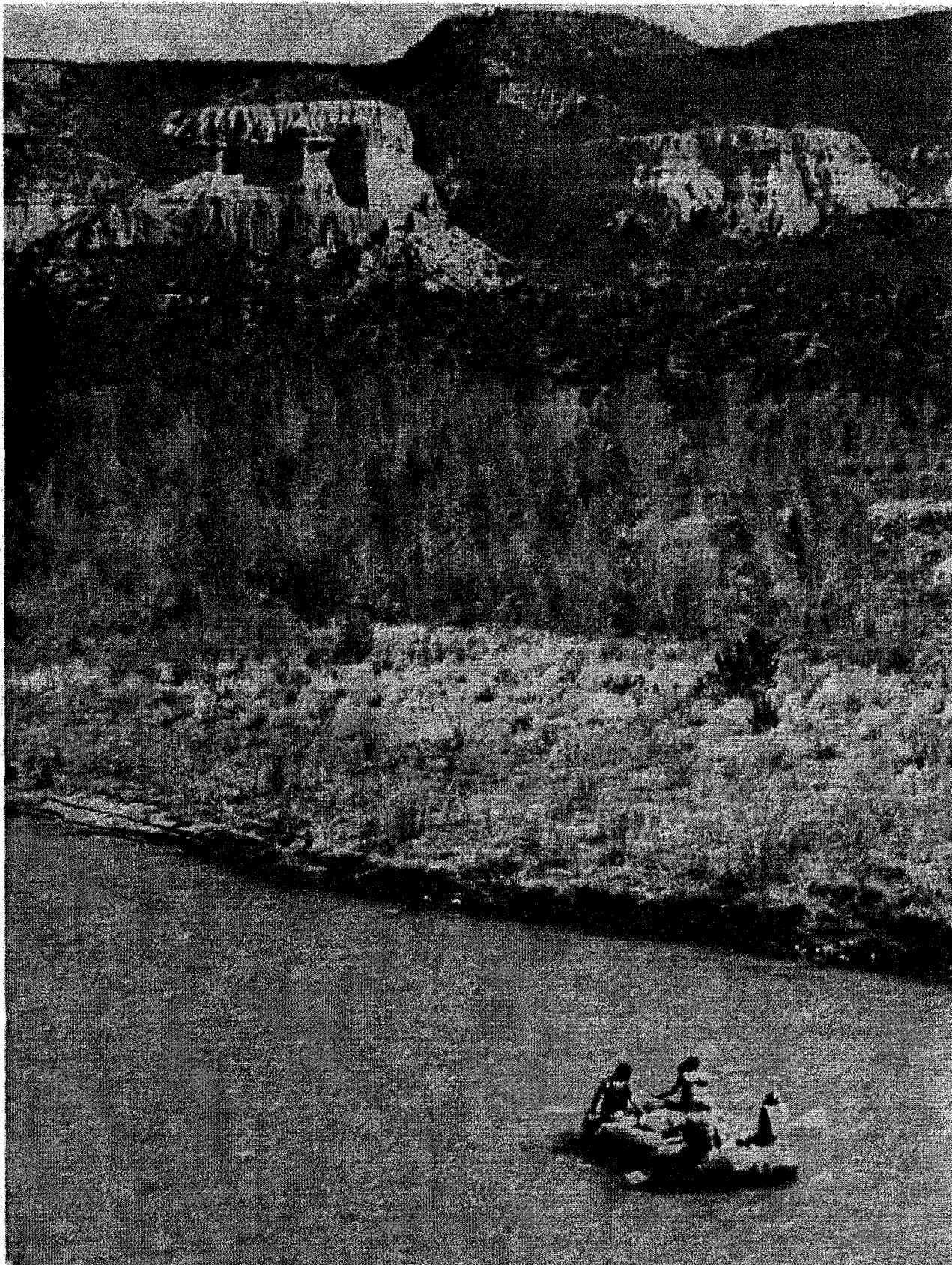
Costs Shown Are in Thousands of Dollars (1990 Dollars)

DESCRIPTION\YEAR	1991	1992	1993	1994	1995	2000	2010	COMMENTS
RECREATION FACILITY DEVELOPMENT •Rio Chama Campground •Big Eddy River Access •Chavez Canyon River Access •Big Bend Nature Trail •ORV Controls •Trail Construction (BLM) •Trail Construction (USFS) •Dispersed Camp Access Roads Parking	198.0 219.0 15.0 15.0	43.0 106.0 83.0 45.0	100.0					All include road costs Completed in 1990
FOREST ROAD #151 •Reconstruction Phase I 9.5 miles U.S. #285 to Skull Bridge •Reconstruction Phase II 4.5 miles Skull Bridge to Chavez Canyon River Access •Surface Replacement (Includes EEC Facilities) •Annual Maintenance •Dust Abatement	315.0	158.0	6.0	6.0	* 6.0 34.0**	80.0* 6.0 34.0**	80.0* 6.0 34.0**	*Approximately 1998 and 2008 **Approximately every 4 years
RECREATION OPERATION & MAINTENANCE •Upper River (BLM) •Lower River (USFS) •Recreation Facilities (USFS)	36.0 20.0	30.0 20.0 24.0	30.0 20.0 24.0	30.0 20.0 24.0	30.0 20.0 24.0	36.0 22.0 24.0	36.0 22.0 24.0	Equipment replacement every 10 years Equipment replacement every 10 years Operations plus replacement costs based on 20 year life
LAND AND SCENIC EASEMENT ACQUISITIONS •Bureau of Land Management •Forest Service	170.0 40.0	150.0 200.8	120.0 77.4					Willing buyer/seller agreement Willing buyer/seller agreement
WATERSHED MAINTENANCE •Cebolla/Nutrias (BLM)		50.0						

IMPLEMENTATION SCHEDULE & COSTS (continued)

Costs Shown Are In Thousands of Dollars (1990 Dollars)

DESCRIPTION\YEAR	1991	1992	1993	1994	1995	2000	2010	COMMENTS
ADDITIONAL PLANS & STUDIES								
•User Demand (BLM)					5.0	5.0	5.5	Study funded every 5 years
•Fishability (BLM)	2.0							
•Aquatic: In Stream Flow (Support)								
BLM/USFS	14.0	4.0	4.0					8.0 BLM and 6.0 USFS in '91;
•Turbidity/Sedimentation								
BLM/USFS	4.0	4.0	4.0					Equal funding levels; \$2,000 each
Fisheries (BLM/USFS)	2.0	2.0	2.0		2.0	2.0	2.0	Equal share for each FY
•T&E Species: (USFS)								
Bald Eagle	45.0	45.0	45.0					
Other Inventories	7.5	7.5						
•CR Site Mitig. (USFS)		40.0						Rock shelter data recovery
•CR Interp. (USFS)			20.0					Pit house site
•CR Interp/Stab (BLM)	20.0	10.0	6.0	2.0	1.5			Ward Ranch
•CR Inv. (BLM/USFS)	20.0	20.0	20.0					Equal share for each FY
RIPARIAN								
Project Planning/Design	12.5							
Implementation (USFS)		100.0						
•Ripans on Protection & Develop.								
USFS	100.0							
BLM	3.0		5.0 ¹					¹ Depends on land acquisition
WATERSHED								
•Gallina W/S Improvements (USFS)	45.0	45.0						
•Chama W/S Plan (USFS)			7.0					
•Nutrias/Cebolla (BLM)			25.0					
Maint. & Road Obliteration		50.0						Cost estimate to be revised in FY 92
W/S Plan/S&D			25.0	50.0 ²				² Cost estimate to be revised via FY 93 Plan and S/D
MONITORING								
•Campsite/Riparian & T&E Plants	2.0	2.5	2.5	3.0	3.0	3.5	3.5	
(photo points etc.) (USFS)								
•Repeat of Color I.R. (BLM/USFS)					9.0	10.0	11.0	BLM is purchasing 1990 coverage, 1995 by USFS, 2000 BLM etc.
•Archeology (BLM/USFS)	2.0	2.0	2.0	2.5	2.5	3.0	3.5	Equal share for each FY



APPENDICES

A. LIST OF PREPARERS

B. BIRD SPECIES ALONG THE RIO CHAMA

**C. STIPULATIONS FOR WILD AND SCENIC RIVERS AND
WILDERNESS AREAS**

APPENDIX A

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In addition, the IDT wishes to thank the writers of the Rio Chama Water Management Addendum, a companion document to this plan. The individuals that presented this highly technical subject in an understandable manner include:

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APPENDIX B

BIRD SPECIES ALONG THE RIO CHAMA

ABUNDANT

Cliff swallow
Brewer blackbird
Chipping sparrow
American robin
Yellow warbler
Violet-green swallow
Rufous-sided towhee
Spotted sandpiper
Common raven
Common merganser
Virginia's warbler
Black-headed grosbeak
Solitary vireo
Western tanager
Broad-tailed hummingbird
American dipper
Yellow-rumped warbler
Western wood peewee
Mountain chickadee
Grey-headed junco
White-breasted nuthatch

COMMON

N. Rough-winged swallow
Barn swallow
White-throated swift
Canyon wren
Brown-headed cowbird
Mallard
House finch
Pinyon jay
Scrub jay
Rock wren
Say's phoebe
Western meadowlark
Western flycatcher
Cassin's kingbird
Stellar's jay

Clark's nutcracker
Common bushtit
Common nighthawk
Common flicker
Turkey vulture
House wren
Wild turkey
Belted kingfisher
Townsend's solitar
Red-winged blackbird
Pine siskin
English sparrow
Starling
Mourning dove
Tree swallow
Warbling vireo

UNCOMMON

Ash-throated flycatcher
Band-tailed pigeon
Golden eagle
Painted redstart
Red-tailed hawk
American kestrel
Killdeer
Cedar waxwing
Vesper sparrow
Green-tailed towhee
Black-billed magpie
Bank sparrow
Lesser goldfinch
Ruby-crowned kinglet
Black-throated grey warbler
Hepatic tanager
Hermit thrush
Blue-gray gnatcatcher
Flamulated owl
Grace's warbler
Mocking bird
Beswick's wren
Dusky flycatcher

Olive-sided flycatcher
Hairy woodpecker
Great-horned owl
Northern oriole
Cooper's hawk
Lazuli bunting
Lewis' woodpecker
Yellow-breasted chat
White-crowned sparrow

APPENDIX C

STIPULATIONS FOR WILD AND SCENIC RIVERS AND WILDERNESS AREAS

This section includes brief overviews of management policies for Forest Service wilderness areas (in this case the Chama River Canyon Wilderness) and for Wild and Scenic Rivers.

WILDERNESS

Objectives:

1. Maintain and perpetuate the enduring resources of wilderness as one of the multiple uses of National Forest System land.
2. Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.
3. Minimize the impact of those kinds of uses and activities generally prohibited by the Wilderness Act, but specifically excepted by the Act or subsequent legislation.
4. Protect and perpetuate wilderness character and public values including, but not limited to, opportunities for scientific study, education, solitude, physical and mental challenge and stimulation, inspiration, and primitive recreation experience.
5. Gather information and carry out research in a manner compatible with preserving the wilderness environment to increase understanding of wilderness ecology, wilderness uses, management opportunities, and visitor behavior.

Policy:

1. Where there are alternatives among management decisions, wilderness values shall dominate over all other considerations except where

limited by the Wilderness Act, subsequent legislation, or regulations.

2. Manage the use of other resources in wilderness in a manner compatible with wilderness resource management objectives.
3. In wilderness where the establishing legislation permits resource uses and activities that are nonconforming exceptions to the definition of wilderness as described in the Wilderness Act, manage these nonconforming uses and activities in such a manner as to minimize their effect on the wilderness resource.
4. Use interdisciplinary skills in planning for wilderness use and administration.
5. Gather necessary information and carry out research programs in a manner that is compatible with the preservation of the wilderness environment.
6. Whenever and wherever possible, acquire non-Federal lands located within wildernesses, as well as non-Federal lands within those areas recommended for inclusion in the system.
7. Inform wilderness visitors that they face inherent risks of adverse weather conditions, isolation, physical hazards, and lack of rapid communications, and that search and rescue may not be as rapid as expected in an urban setting in all publications and personal contacts.

Wilderness Resource Management:

In absolute wilderness there is no human influence preventing the area from retaining its purest natural form. It is unlikely, however, that this condition exists anywhere on earth. There are few places, if any, remaining where humans

have neither set foot nor where human influences, through pollution, have not been felt. The Wilderness Act defines wilderness at some point below absolute wilderness.

Where a choice must be made between wilderness values and visitor or any other activity, preserving the wilderness resource is the overriding value. Economy, convenience, commercial value, and comfort are not standards of management or use of wilderness. Because uses and values on each area vary, management and administration must be tailored to each area. Even so, all wilderness areas are part of one National Wilderness Preservation System and their management must be consistent with the Wilderness Act and their establishing legislation.

WILD AND SCENIC RIVERS

The Wild and Scenic Rivers Act of 1968:

Congress passed the Wild and Scenic Rivers Act in 1968 to recognize and protect rivers that exhibit "outstandingly remarkable" values and to maintain the free-flowing character of those rivers for the benefit of present and future generations. The Act set forth general criteria for classification of rivers in three categories: wild, scenic, and recreational. These criteria were further defined first in a U.S. Departments of Agriculture and Interior study in 1970 and finalized in the Federal Register, Volume 47, No. 173, dated September 7, 1982.

Definitions:

Wild River: those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Approximately 21.6 miles of the Rio Chama is classified as wild.

Scenic River: those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shore-

lines largely undeveloped, but accessible in places by roads. Approximately 3.0 miles of the Rio Chama is classified as scenic.

Recreational River: those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

PL 100-633, which designated segments of the Rio Chama as a component of the National Wild and Scenic Rivers System, did not designate any portion as Recreational. However, the "study segment" was classified in the Santa Fe National Forest Plan eligibility study as Recreational. Therefore, management guidelines for that classification will be applied to the study segment.

The following guidelines set specific standards for managing various activities within Wild and Scenic River corridors, and are in accordance with Forest Service Handbook and Santa Fe National Forest Plan direction. As noted in FSH 1909.12, section 8.12, these guidelines also govern interim management of study rivers.

1. Standards for Wild Rivers

a. **Timber Production:** Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire). Timber outside the boundary but within the visual corridors, will be managed and harvested in a manner to provide special emphasis to visual quality.

b. **Water Supply:** All water supply dams and major diversions are prohibited.

c. **Hydroelectric Power:** No development of hydroelectric power facilities would be permitted.

d. Flood Control: No flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river area must be maintained.

e. Mining: New mining claims and mineral leases are prohibited within the corridor. Valid claims would not be abrogated. Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect the rivers included in the National System, other existing mining activity would be allowed to continue. Existing mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, and visual impairment. Reasonable access will be permitted.

f. Road Construction: No roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley or, if the river valley is broad, within the specified corridor. A few inconspicuous roads leading to the boundary of the river area at the time of study will not disqualify wild river classification. Also, unobtrusive trail bridges could be allowed.

g. Agriculture: Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently practiced. Row crops are prohibited.

h. Recreation Development: Major public-use areas, such as large campgrounds, interpretive centers, or administrative headquarters are located outside the wild river area. Simple comfort and convenience facilities, such as

fireplaces or shelters may be provided as necessary within the river area. These should harmonize with the surroundings.

i. Structure: A few minor existing structures could be allowed assuming such structures are not incompatible with the essentially primitive and natural values of the viewshed. New structures would not be allowed except in rare instances to achieve management objectives (i.e. structures and activities associated with fisheries enhancement programs could be allowed).

j. Utilities: New transmission lines, gas lines, water lines, etc. are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of way. Where new rights-of-way are indicated, the scenic, recreational, and fish and wildlife values must be evaluated in the selection of the site.

k. Motorized travel: Motorized travel on land or water could be permitted, but generally is not compatible with this classification.

2. *Standards for Scenic Rivers*

a. Timber Production: A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near natural environment. Timber outside the boundary but within the visual scene area should be managed and harvested in a manner which provides special emphasis on visual quality.

b. Water Supply: All water supply dams and major diversions are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities would be allowed.

d. Flood Control: Flood control dams and levees would be prohibited.

e. Mining: Subject to regulations at 36 CFR 228 that the Secretaries of Agriculture and the Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed and existing operations allowed to continue. However, mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

f. Road Construction: Roads may occasionally bridge the river area and short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Consideration will be given to the type of use for which roads are constructed and the type of use that will occur in the river area.

g. Agriculture: A wider range of agricultural uses is permitted to the extent currently practices. Row crops are not considered as an intrusion of the "largely primitive" nature of scenic corridors as long as there is not a substantial adverse effect on the natural-like appearance of the river area.

h. Recreation Development: Larger scale public use facilities, such as moderate size campgrounds,

public information centers, and administrative headquarters are allowed if such structures are screened from the river. Modest and unobtrusive marinas also can be allowed.

i. Structures: Any concentrations of habitations are limited to relatively short reaches of the river corridor. New structures that would have a direct and adverse effect on river values would not be allowed.

j. Utilities: This is the same as for wild river classifications.

k. Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted to protect the river values.

3. *Standards for Recreational Rivers*

a. Timber Production: Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.

b. Water Supply: Existing low dams, diversion works, rip rap and other minor structures are allowed provided the waterway remains generally natural in appearance. New structures are prohibited.

c. Hydroelectric Power: No development of hydroelectric power facilities is allowed.

d. Flood Control: Existing flood control works may be maintained. New structures are prohibited.

e. Mining: Subject to regulations (36 CFR 228) that the Secretaries of Agriculture and Interior may prescribe to protect values of

rivers included in the National System, new mining claims and mineral leases are allowed and existing operations are allowed to continue. Mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation and pollution, and visual impairment.

f. Road Construction: Paralleling roads or railroads could be constructed on one or both river banks. There can be several bridge crossings and numerous river access points.

g. Agriculture: Lands may be managed for a full range of agricultural uses, to the extent currently practiced.

h. Recreation Development: Campgrounds and picnic areas

may be established in close proximity to the river. However, recreational classification does not require extensive recreation development.

i. Structures: Small Communities as well as dispersed or cluster residential developments are allowed. New structures are allowed for both habitation and for intensive recreation use.

j. Utilities: This is the same as for wild and scenic river classifications.

k. Motorized Travel: Motorized travel on land or water may be permitted, prohibited or restricted. Controls will usually be similar to surrounding lands and waters.

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