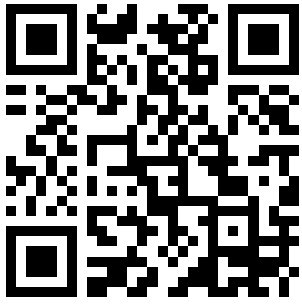


Wild and Scenic River Study Report and Final Environmental Impact Statement

North Fork of the South Platte and the South Platte Rivers

Volume 2. Appendices

Pike and San Isabel National Forests
Comanche and Cimarron National Grasslands

Front Cover Photograph: South Platte River below Corral Creek

Table of Contents

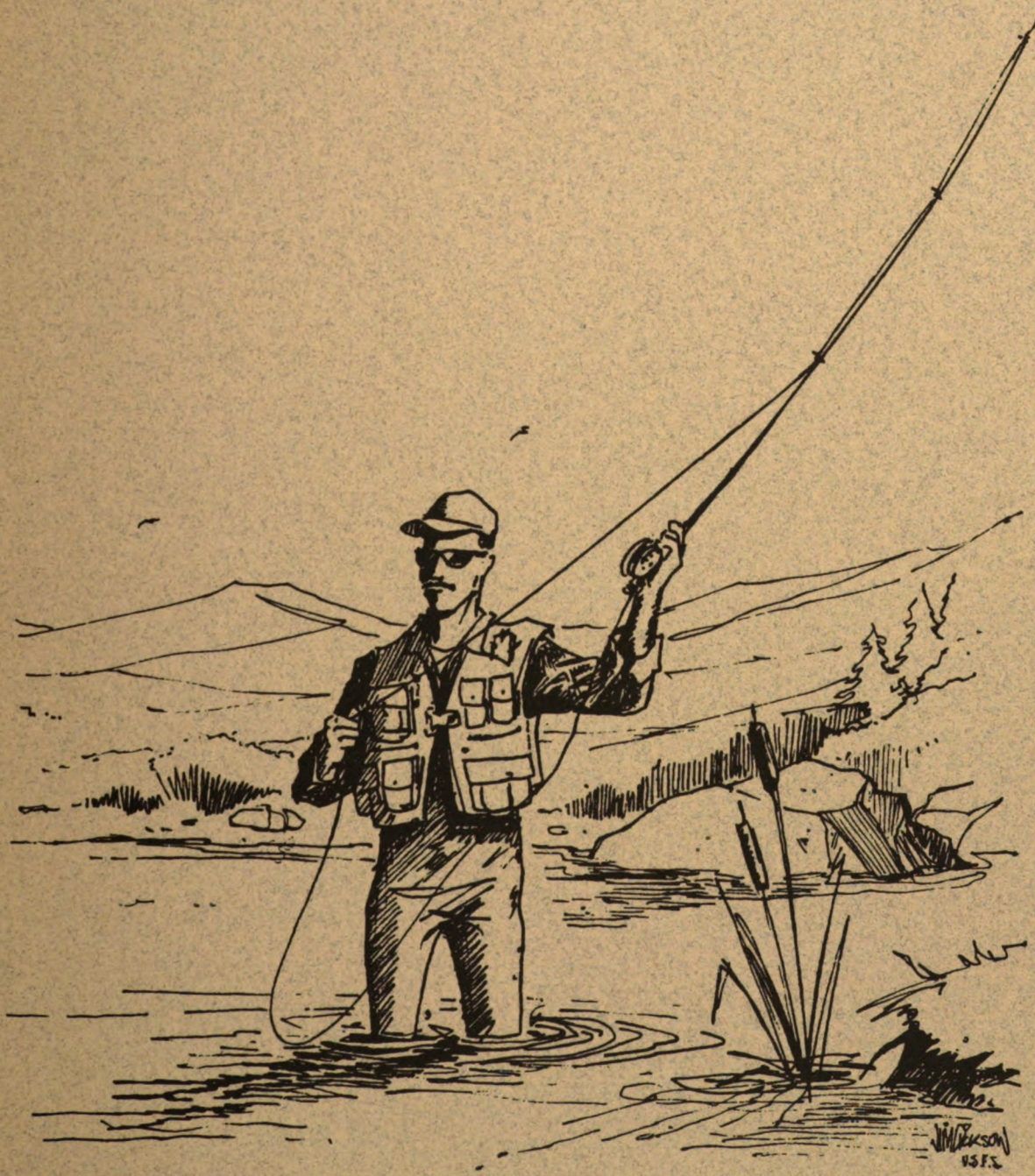
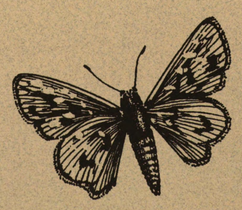


Table of Contents

APPENDIX F – CONTINUED

South Platte Protection Plan



Appendix A – Proposal for South Platte Protection Plan Table of Contents

June 12, 2003

Mr. Bob Leaverton, Forest Supervisor
Pike and San Isabel National Forests
1920 Valley Drive
Pueblo, CO 81008

Dear Forest Supervisor Leaverton:

We are pleased to re-submit the South Platte Protection Plan (SPPP) for your consideration in the Final EIS for the Wild and Scenic Rivers Study of the South Platte River. As requested, we are re-submitting the entire SPPP. After last summer's combination of drought and fire, the Forest Service met with many of the participants who helped develop the original SPPP and all agreed that it was important to re-examine the plan in light of the Hayman Fire and the record drought year. The SPPP was revised in that process. The changes are relatively few, but they reflect important lessons learned over the past year.

Specifically, revisions were made to the Streamflow Management Plan and its accompanying Enforcement Plan (Attachment B), the Recreation Management Plan (Attachment C), and the Water Development Principles (Attachment F). We have also attached a revised copy of the proposed amendments to the Pike-San Isabel Forest Plan that accompanied the SPPP.

We would also like to reiterate our recommendation, first expressed in a February 27, 2001 letter to Gail Kimbell, that the Forest Service postpone a formal conclusion to its Wild and Scenic Study indefinitely rather than making a decision on whether the river is "suitable" or "not suitable" for designation. We believe that the collaborative efforts underlying the SPPP will be served best if the Forest Service does not make a suitability determination as that would alienate key stakeholders in the SPPP process, regardless of which way that decision went.

Finally, we would like to express our appreciation to the Forest Service for your long-standing support of our efforts. Your staff – and especially Lance Tyler, Sue Spear, Connie Young-Dubovsky, and John Hill – have been a very valuable resource. Without the information and encouragement they have provided throughout the SPPP process, we could not have completed our efforts. Thank you!

Sincerely,

Ed Pokorney

Ed Pokorney, Coalition Co-Chair
Denver Water
1600 West 12th Avenue
Denver, CO 80204

David Nickum

David Nickum, Coalition Co-Chair
Colorado Trout Unlimited
1320 Pearl Street, Suite 320
Boulder, CO 80302

cc: Rick Cables, Rocky Mountain Region Forester
P.O. Box 25127
Lakewood, CO 80225

SPPP Participants

PROPOSAL FOR

SOUTH PLATTE PROTECTION PLAN

The undersigned submit this Proposal to the US Forest Service on behalf of those who have attached endorsements or who will submit endorsements. This Proposal represents a response to the invitation from the Forest Service to submit more details to explain what would be included in Alternative A2 as described in the Forest Service Draft Legislative EIS ("LEIS") dated March 1997. We are asking the Forest Service to consider the South Platte Protection Plan as an expanded description of Alternative A2, and urge a supplemental environmental analysis of this alternative to wild and scenic designation.

The Proposal reflects the contributions and views of a wide range of "stakeholders," including recreation users, local governments, environmental interests, state agencies, water suppliers, and basin residents. Although these interests (listed at the end of this proposal) have participated openly and contributed to this document, none should be assumed to have recommended or preferred this alternative to designation unless they have submitted a specific endorsement of the South Platte Protection Plan. The process has striven to incorporate the interests and ideas of all of these groups as they relate to protection and enhancement of the values identified on certain parts of the South Platte River and its North Fork.

Throughout the process, it has been clearly understood between the participating parties that the South Platte Protection Plan was being drafted to provide further definition to Alternative A2, an alternative in lieu of designation under the Wild and Scenic Rivers Act. It has also been understood, and is reiterated here, that the commitments to proceed with this Proposal by local government endorsers is contingent upon the selection by USFS of Alternative A2 and rejection by the USFS of designation pursuant to the Wild and Scenic Rivers Act.

CONTENTS

The South Platte Protection Plan proposal consists of this primary document with the following attachments:

- Attachment A — ORV Protection Summary
- Attachment B — Streamflow Management Plan
- Attachment C — Recreation, Wildlife & Scenery Report
- Attachment D — Endowment Plan
- Attachment E — Watershed Management
- Attachment F — Denver's South Platte Right-of-Way

All of the above, taken in their entirety, constitute the South Platte Protection Plan.

PURPOSE

The purpose of the South Platte Protection Plan is to protect those river-related values [outstandingly remarkable values ("ORVs")] identified by the USFS. These values are historic cultural resources, fisheries, geologic, recreational, scenic, and wildlife. The Proposal also recognizes that the Colorado Front Range communities rely heavily upon the South Platte for drinking water supply and other municipal and industrial uses that agriculture throughout northeastern Colorado depends heavily on South Platte flows, and river values must be protected in the context of preserving these functions as well. We believe that the interests of all these communities can be maintained through common dialogue toward an approach in which the many values on the river -- habitat, ecosystem, and human-based -- can all be addressed in coordination and balance with one another. It is this mutual respect for the many important uses that is central to the South Platte Protection Plan.

OUTLINE

The South Platte Protection Plan consists of the eight actions set forth below. (These are also summarized in the maps on pages 3 and 4.

1. **Protect canyons**. A commitment not to build any water works facilities in Cheesman Canyon and Elevenmile Canyon.

2. **Flow Management Plan**. More fully described in Attachment B consisting of:

    - Temperature goals through management of top and bottom releases from reservoirs.
    - Minimum streamflows.
    - Ramping (changing gradually) outflow changes from storage.
    - New valves, monitors, gages.
    - Coordination with DOW re channel work on North Fork.
    - Public input to annual operating plans.
    - Consideration of whitewater and fisheries in Roberts Tunnel discharges, within the limitations described in the Flow Plan.

3. **Recreation, Wildlife, Scenery and Other Values**. (More fully described in Attachment C). A management partnership between Colorado State Parks and the U.S. Forest Service is proposed, all the way from Elevenmile Reservoir to Chatfield Reservoir. Until the partnership is in place, portions of the area would be cooperatively managed by the Forest Service, Denver Water, Jefferson County and

Douglas County. The proposal also includes proposed recreation management by Jefferson County Open Space along portions of the North Fork, and a special recreation area at Bailey Canyon to be managed by the US Forest Service.

4. **Cooperative water quality initiatives** through an Upper South Platte Watershed Steering Committee, composed of interested local governments, agencies and parties in the basin, which was triggered by this proposal but is expected to continue independently of the South Platte Protection Plan. (Watershed management is more fully described in Attachment E).

5. **Endowment**. Front Range local governments and water suppliers will contribute at least one million dollars to be spent on the values identified by the Forest Service. (More fully described in Attachment D). A board will be convened within 90 days following a decision by the U.S. Forest Service to adopt the South Platte Protection Plan in lieu of designation.

6. **The South Platte Enhancement Board.** A coordinating forum, the South Platte Enhancement Board, will provide comments and responses on activities such as land use or land management planning decisions, as well as deciding expenditures from the endowment. (More fully described in Attachment D).

7. **Withdrawal of 1986 applications for conditional storage rights.** Both Denver Water and the Metropolitan Denver Water Authority would withdraw Water Court applications for 780,000 acre feet of additional storage at the Two Forks reservoir site.

8. **Alternatives to development of Denver's right-of-way.** Denver Water and environmental groups have proposed a working relationship that could lead to alternative projects and allow Denver later to relinquish its 1931 right-of-way on the South Platte at Two Forks. (More fully described in Attachment F).

It is proposed that enforcement of the South Platte Protection Plan be provided by a written agreement between the U.S. Forest Service and those entities making commitments within the Plan. We understand and expect that such an agreement shall be written in a manner to provide for enforcement through the Administrative Procedures Act by citizen or group with standing in a manner similar to remedies available if a river were designated under the Wild and Scenic Rivers Act. It is further recommended that such an agreement provide for public participation in the event of significant changes to the written agreement, leases to State Parks or other major concessionaires, or in the event of adoption of a Recreation Management Plan or amendments thereto so that the public can ascertain and comment on consistency with the South Platte Protection Plan.

RECREATION MANAGEMENT

The proponents of the South Platte Protection Plan recommend a unified recreation management approach, including U.S. Forest lands and lands owned by Denver Water, in a U.S. Forest Service/Colorado Division of Parks and Outdoor Recreation ("State Parks") management partnership. Provided that a Management Agreement can be developed between the U.S. Forest Service and State Parks, Denver Water commits to make its properties, from Elevenmile Reservoir to Chatfield Reservoir, including Cheesman Reservoir and Waterton Canyon, available for lease to the recreation manager. The exact lands and boundaries to be included in a lease must be worked out with the recreation managers considering the needs of effective management, concerns of neighboring land owners and recreation users, and other relevant recreation-related issues. These steps should begin with a joint recreation management study. Denver Water commits to participate in such a study and to include its lands for consideration as part of the recreation area. (Lands owned by Denver Water to be considered in the Recreation Management Study are shown on the map on page 6.)

Development of a Recreation Management Plan should have the latitude to meet the needs of recreationists in current times as well as those needs that may evolve in the future. However, it was the consensus of those interests working on the South Platte Protection Plan that Recreation Management should adhere to the following principles:

1. **Intensity of Development.** The river corridor between Elevenmile and Chatfield reservoirs constitute today a locale for dispersed recreation. It is very desirable to maintain the area as dispersed recreation. Those areas with heavy use and road access (e.g., Elevenmile Canyon, the downstream portion of Waterton Canyon, and the Deckers Valley) will require more management and facilities than areas that are more pristine and less accessible (e.g., Cheesman Canyon, Wildcat Canyon). It is noted that the guidelines enumerated herein for levels of development are consistent with the federal designations previously proposed by the U.S. Forest Service.

2. **Recreation at Cheesman Reservoir.** The Recreation Task Force encountered viewpoints ranging from maintenance of Cheesman Reservoir in a near wilderness condition to advocates for motorized boating and increased recreational opportunities on that property. It is expected that the level of recreational use of the Cheesman Reservoir property will be a controversial issue that should be planned through an open process with extensive public participation.

3. **Wildlife Protection.** Attachment C should be read in the context that Recreation Management throughout the river corridor is expected to include management to meet the needs of wildlife in the area. Management goals in Attachment C include providing resource and ecological protection or restoration for wildlife and plant species. Furthermore, an area considered most sensitive for wildlife is Segment C, which runs from Beaver Creek downstream to the high water line of Cheesman Reservoir. This includes Wildcat Canyon. Attachment C discusses the current uses

and values which include a wide range of vegetation types and foraging and habitat for many wildlife species. It also notes that it provides connecting landscape linkages for potential wildlife movement corridors to Lost Creek Wilderness and nearby low road density areas of Cheesman watershed, Sheep Rock, Thunder Butte, Green Mountain and Gun Barrel roadless areas.

4. **Concerns of Area Residents.** A number of concerns were received from area residents along the South Platte. These concerns focused primarily on protection of private property from unauthorized trespass, wildfire hazards related to both authorized and unauthorized campfires, the limited capabilities of local volunteer organizations in responding to emergencies, and the crowding of roads that are used by residents. It is strongly recommended that a special effort be made to include area residents in the public participation process for development of a Recreation Management Plan.

5. **Other Values.** The South Platte Protection Plan has focused primarily on those "outstandingly remarkable values" identified by the U.S. Forest Service because that is the standard that the Forest Service must use in judging the Plan. The exclusion of other important values including wide varieties of wildlife, the high quality rock climbing along the North Fork and the all-terrain vehicle trails above Nighthawk, as well as many more, were not intended to exclude those values from consideration in the Recreation Management Plan. It is further recommended that mining and timbering policies in the area be planned and managed in a manner consistent with recreation, wildlife, and scenic values.

6. **North Fork Management.** Jefferson County Open Space, through its land acquisitions process, will consider the management of additional lands along the North Fork within Jefferson County. A precise boundary division between the State Parks/USFS partnership and Jefferson County Open Space should be determined as part of a Recreation Management planning process. In the area through Bailey Canyon on the North Fork, it is recommended that the U.S. Forest Service manage for a special recreation area with emphasis on whitewater recreation, but inclusive of other appropriate dispersed recreation activities.

OTHER WATER SUPPLY OPERATIONS

Water suppliers and Front Range local governments have engaged in developing Alternative A2 because of the great significance this part of the South Platte represents in meeting the water supply needs of present and future customers. It is estimated that well over half of the people of the State of Colorado receive water supply through water systems that rely heavily on this part of the South Platte. As such, this river plays a key role in the socio-economic viability of our state. It is critical that this key role be protected and maintained, and that sufficient flexibility will be maintained to accommodate changes to these systems for future growth. Water suppliers are committed to working closely with those representing other interests on the river in order to protect and enhance all of the important values of the river.

The Forest Service Draft LEIS reflects the tremendous variability in flow that currently can occur on the River. The Draft LEIS states that flow currently varies between 10 cfs and 6,300 cfs. In addition, it should be expected new water will be brought through the mainstem over time. Much of this increased flow reflects conditional water rights already in place where there is substantial reliance on the ability to use the mainstem as a part of the conveyance process. Additionally, new water will come from projects that are under preliminary consideration or from projects that are yet to be anticipated. The South Platte Protection Plan is intended neither to prohibit nor allow development of those water supplies. Numerous laws and regulations provide substantial protection for the values on the stream. Each project will be considered on a case by case basis and evaluated on its own merits at the time of application. Endorsement of this plan does not indicate support for any project.

Projects are or may be proposed by a variety of water providers including, but not limited to, the cities of Aurora, Denver and Thornton and the counties of Arapahoe, Jefferson and Douglas. Other water could be introduced into the South Platte from or through the Arkansas basin. Denver intends to divert more water from Dillon down the North Fork as demand increases, and may consider expansion of existing reservoirs on the South Platte. There is discussion between Denver, Aurora and others about possibly expanding Antero Reservoir.

AREA AFFECTED

The South Platte Protection Plan generally addresses the same area as recommended for designation by Alternative B. That includes the South Platte mainstem from below Elevenmile Reservoir to the Confluence of the mainstem with the North Fork of the South Platte River, and the North Fork from Insmont to the Confluence. However, this Proposal expands that area by its recommendation for a USFS/State Parks partnership along the mainstem from Elevenmile Reservoir all the way to Chatfield Reservoir (both are currently state parks), including Cheesman Reservoir. Portions of the North Fork would be managed by Jefferson County Open Space and the US Forest Service. The width of the area protected is generally considered to be 1/4 mile from each side of the river. However, it should be noted that the US Forest Service is not limited on federal lands to the 1/4 mile rule, and it is recommended that the river valley within federally managed lands be planned and managed in a manner compatible with adjacent uses and values. Similarly, the lands owned by Denver Water and Jefferson County Open Space often extend more than 1/4 mile from the river, and such outlying lands will also be considered for a role in protecting or enhancing the river values. Precise boundaries should be fixed by recreation management agencies following a comprehensive recreation management plan.

BENEFITS OF THE SOUTH PLATTE PROTECTION PLAN

Numerous immediate benefits to the values on the South Platte will be achieved through the South Platte Protection Plan. The Plan provides for local governments,

water providers, and state and federal governments to combine their capabilities while maintaining an important level of water management flexibility. This kind of synergy may be effective in protecting and balancing the many uses on the river.

Benefits of the South Platte Protection Plan include:

- Additional local dollars that would not otherwise be available will be provided through a one million dollar endowment for the exclusive benefit of the values which the South Platte Protection Plan is designed to protect. Along with the endowment, the potential exists to leverage funds through additional funding sources.

- Through the South Platte Enhancement Board, expanded opportunities will be available for intergovernmental coordination and user input on recreation and land use management.

- The South Platte Protection Plan includes a broad geographical area stretching beyond the boundaries of the LEIS Alternative J. The South Platte Protection Plan is taking a broad perspective, incorporating the North Fork, Waterton Canyon, and Cheesman Reservoir and looking at management of connected uses such as hiking trails and wildlife needs that go beyond the immediate river corridor.

- Water suppliers and local governments would voluntarily support the permanent protection of Cheesman and Elevenmile Canyons from development of any water facilities. Denver Water would withdraw its application for a conditional decree for 780,000 acre feet of storage at the Two Forks Reservoir site. The Metropolitan Denver Water Authority would withdraw a similar application at the same site.

- This Plan would bring greater focus to local governments bringing authority and resources with regard to open space, safety services (such as the county sheriff), road development and maintenance, view protection and other land use management capabilities. These particular powers and capabilities would bring a wealth of resources and attention to enhance protection of the values on this stream.

- Denver Water lands would be included for recreation management under the South Platte Protection Plan. Jefferson County Open Space will consider the management of additional lands along the North Fork through its acquisition process.

- The South Platte Protection Plan provides flow benefits by operating existing storage facilities to provide minimum flows, to moderate ramping rates, and to assist in achieving temperature goals.

THE COLLABORATIVE PROCESS

One of the benefits that has already accrued as a result of putting together this proposal is increased communication among a very broad cross-section of interests. We believe this is only the start of a healthy long-term process for making decisions about the South Platte far into the future.

From the very beginning, the water suppliers told interest groups that they were not dealing with a blank slate because the outline for what A2 would be was already contained in the Draft LEIS. The suppliers said their intention was to "flesh out the details" of that outline as well as what was spelled out in the December 20, 1996 letter from Front Range water providers to Forest Supervisor Rick Cables. (Letter is attached.) The water suppliers said
they would put together a plan that would be parallel to (or better than) Wild & Scenic designation in terms of protection, but that would also allow for the flexibility needed to provide water to metropolitan Denver. At the same time, they wanted to collaboratively build a plan, with the help of interest groups, that would address as many of everyone's concerns as possible.

That being said, the interest groups were very involved in every aspect of formulating the South Platte Protection Plan. Before the public group process began, the water suppliers contacted representatives from all of the various interests along the river. They hired a facilitator to interview them at length to:

1. determine their concerns for the river,

2. explain their reasons for or against designation and/or A2, and

3. tell us under what conditions they would be willing to attend meetings to help create an alternative plan.

Many of the groups made it clear that they would help us create an alternative only with the understanding that their involvement did not necessarily mean they would endorse the final product. The water suppliers agreed to this baseline, and made it clear they were looking for ideas from interest groups so that their concerns could be addressed regardless of whether they ended up endorsing the final South Platte Protection Plan.

With this understanding, four work groups were put together to address the four major components of the plan: flows; water quality; recreation, scenery and wildlife; and the endowment fund. Invitees to the work groups included a balance of environmentalists, counties, water providers, recreationists and landowners. (See appendix for lists of attendees and meetings.) Participants attended over 46 meetings — some of which lasted 4-5 hours — to put together this plan representing their expressed interests and concerns. Despite their reservations, the interest groups put a great deal of time and effort into this lengthy process.

Later in the process a meeting was held to discuss plans for meeting the water supply needs within metropolitan Denver. This group, composed of water suppliers, counties, and environmental interests discussed what alternatives exist for supplying water in addition to or as an alternative to storage at the Two Forks site. This discussion was also pursued further in other groups. This work was deemed pivotal to coming to some understanding about the reserved ROW.

In addition, three large public meetings were held at the beginning, middle and end of the process to get comments from the general public and to allow participants in individual work groups to hear what other groups were doing. These were generally well attended and provided useful feedback.

Near the end of the process, yet another group was formed to tie the various components of the plan together. This group -- the Synthesis Committee -- determined what elements were missing or contradictory when looked at as a whole. It looked at some of the overarching issues of all four work groups. This group was composed of members of the various interest groups, water suppliers and counties, as well as some new people to give a fresh perspective to the product.

Throughout the process, people were requested to inform their constituents of the progress and to bring back comments and concerns. After all the work groups finished, the final proposal was sent out once again to all the parties for final comments. The South Platte Protection Plan before you reflects our efforts to balance the comments from the various interests with those of the water suppliers and counties.

It should be noted that, despite our efforts, not all entities involved felt as represented or involved as others. Inevitably, when pursuing an effort of this magnitude, meeting times and locations will not please everyone. This is particularly so when dealing with such a broad geographic reach. In addition, some of the groups had neither the staff, time nor resources necessary to maintain extensive involvement. Nonetheless, we did have participation from as far away as Colorado Springs, Longmont, and Fairplay to varying degrees. All meetings were open and posted with someone who could be called at anytime. In addition, work group drafts and other documents were always available on request.

While there was a fair amount of suspicion and pessimism expressed by most of the interest groups in the beginning of the process, six months of working together, attending numerous meetings and devising agreements, has greatly improved communication, reduced the amount of misinformation in some areas, and led to greater understanding among many of the key parties.

"The Players" in Wild & Scenic

Environmentalists

Trout Unlimited
Audubon Society
Colorado Hist. Soc.
Sierra Club
South Platte Eco Proj
Env. Defense Fund
CO Env. Coalition
CO Wildlife Fed
Nature Conservancy
Wilderness Society
High Country Cit. Alliance

Recreationists

American Whitewater
CO White Water Assn
Canoeists
CO Mt Club
Bighorn 4-WD Club
CO Assn of 4WD
Motorcyclists
United Sportsmen
Anglers' Covey
Wild Trout
CO Off-Hiway Veh. Assn
ACCESS Fund (rockclimbers)
Trail Conservation Services
(mountain biking)
CO Fishing Federation

Landowners

Deckers-Trumbull area
Buffalo-Pine area
Wigwam Club
Scraggy View area
Estabrook area
Denver Water
Jefferson County
USFS
Sportsmen's Paradise

Federal Gov't.

USFS
BLM
USF&WS
EPA
CORPS

State Gov't.

Dept of Natural Resources
Divn. of Wildlife
Divn. of Parks & Rec
Water Consv. Board
Water Quality Control Div.

Local Gov't.

Aurora
Park County
Douglas County
Jefferson County
Denver City & County
Adams County
Arapahoe County
El Paso County
Colorado Springs
Arvada
Castle Rock
Englewood
Glendale
Lakewood
Littleton
Thornton
Broomfield

Other Interests

Public Lands Multiple Use Coalition
Farm Bureau
Timber
Cattlemens' Assn
Mining

Water Suppliers

Denver Water
Alameda Water & Sanitation Dist
Bear Creek Water & Sanitation Dist
Centennial Water & Sanitation Dist
Cherry Creek Valley Water & San Dist
Consolidated Mutual Water Co
Douglas County Water Resource Authority
Arapahoe County Water & Wastewater
Castle Pines Metro Dist
Castle Pines North Metro Dist
East Cherry Creek Valley Water & San Dist
Meridian Metro Dist
North Douglas County Water & San Dist
Parker Water & San Dist
Pinery Water & Wastewater
Roxborough Park Metro Dist
Stonegate Village Metro Dist
Willows Water Dist
Inverness Water & San Dist
Ken-Caryl Ranch Water & San Dist
Lakehurst Water & San Dist
Parker Water & San Dist
Platte Canyon Water & San Dist
South East Englewood Water Dist
Southwest Group
Southwest Metro Water & San Dist

NOTE: **Some of these groups are in more than one category.**

FORWARDED ON BEHALF OF THE DENVER BOARD OF WATER COMMISSIONERS AND THE WILD AND SCENIC TASK FORCE:

H. J. Barry

H. J. Barry, III, Manager
Denver Water

Tom Griswold

Tom Griswold, Chairman
Wild and Scenic Task Force

Attachment A

ORV PROTECTION SUMMARY

I. Introduction

The Forest Service, in the Draft LEIS, identified the Outstandingly Remarkable Values (ORVs) for each segment of the river. Following is a summary of the ORVs for each segment, and the actions and goals proposed to protect and enhance each ORV in each segment. For purposes of this overview, values which the Forest Service did not consider outstandingly remarkable are not included, although protection of some other values are specifically recommended in other sections of this Proposal. Enforcement of any items included in the South Platte Protection Plan are expected to be addressed by the US Forest Service following a final federal decision.

II. Common Benefits

Several actions in the A2 Plan will benefit ORV's throughout all segments.

A. Endowment

Water suppliers and local governments in the Front Range agree to create an Endowment Fund overseen by the South Platte Enhancement Board (further described in Attachment D). Water suppliers, local governments and other members of the South Platte Protection Plan Enhancement Board (Enhancement Board) will contribute at least one million dollars, over a course of three years beginning six months after the Forest Service has taken a final agency action deciding to not recommend for designation the areas which it has identified as eligible along the South Platte and North Fork,.to protect and enhance the values throughout the South Platte Protection Plan area. The Enhancement Board, made up of seventeen representative stakeholders, will determine the allocation of funds and provide advice and comment on matters relevant to protecting outstanding values within the geographic reach on the mainstem of the South Platte and the North Fork. The Endowment Fund will be structured to allow for contributions from other interested parties.

B. Cooperation

Alternative A2 establishes processes for a high level of cooperation between governments and agencies having a stake in the management of the South Platte and North Fork rivers in the affected area. Because the plan was initially proposed by local governments throughout the Front Range, it brings those cities, counties and water and sanitation districts together to work with the state and federal agencies as well as a wide variety of user groups to specifically establish coordinated planning, management and implementation for the benefit of all of the resources and activities contained in the South Platte Protection Plan. Methods to implement this cooperation include: the South Platte Enhancement Board established as part of the endowment plan; the yearly

recreation committee for a partnership in the recreation management by the Forest Service, State Parks, Jefferson County, and others; and the Upper South Platte Watershed Steering Committee.

III. South Platte River Mainstem

A. Segment A (downstream of Elevenmile Dam to Lake George)

The Forest Service studied Segments A, B and C in 1984. The 1984 Forest Plan concludes that these segments possess the ORVs of Recreation, Scenery, Geology, Fisheries and Wildlife, but did not specify which values were found in which segments. In the 1997 Draft LEIS, the Forest Service further discussed the values by segment, as follows.

1. Recreational

a) General Description of ORV

The 1997 Draft LEIS states that Elevenmile Canyon is one of the most popular destinations in the Forest, attracting people from all over the region year-round for rock climbing, camping, picnicking, fishing, water play, floating, tubing, hiking and scenic viewing. Alternative A2 contains several components designed to protect and enhance this ORV.

b) Elevenmile Canyon Ecosystem Management Project

Between 1992 and 1995, the U.S. Forest Service developed this plan which locates recreation areas by type and, if implemented through a recreation manager, will protect the recreation values that were identified in the Draft LEIS as outstandingly remarkable. The plan addresses access in a manner to better protect the environment. It provides that the Forest Service will only allow overnight camping away from the river. This segment is almost entirely within the National Forest, and implementation is the responsibility of the U.S. Forest Service and its recreation manager through a concession agreement.

c) Flow Management

The Streamflow Management Plan (Attachment B) provides additional benefits to the ORVs of scenery and recreation through sedimentation and erosion control. By improving fish habitat, it enhances fishery opportunities. Responsibilities for streamflow management are set forth below under Fisheries.

d) Canyon Protection

The identified values will be further protected by the commitment contained in this proposal by water suppliers in the Front Range to not build any water facilities within Elevenmile Canyon, and to support an amendment to the Pike and San Isabel Forest Plan to reserve this unique canyon from availability for a Special Use Permit for any water facility.

e) Public Education

Denver Water, and other water providers endorsing Alternative A2, agree to distribute educational information about the ORVs, recreational opportunities, regulations and ongoing protection efforts on the South Platte as inserts into water bills, mailed directly to ratepayers. The purpose of the educational information is not to attract more users to the corridor but to raise public awareness and to provide guidance for protecting the natural values. This action will be the responsibility of the water suppliers, but the recreation manager must provide appropriate information and identify issues of concern.

Additional educational brochures or signs, (explaining such issues as the conflicts between vehicle crossings and fish habitat, the erosional effects of short-cutting switchbacks, the significance of geologic formations, etc.) would be eligible for funding through the endowment. Public education is the responsibility of the recreation manager, but the South Platte Enhancement Board and Coordinating Forum will also make recommendations as issues come to their attention. Recreation user groups will also be encouraged to educate their membership about responsible use of the resource.

2. Scenery

a) General Description of ORV

The Forest-wide visual resource inventory classifies the scenery in Segment A as "Class A -- Distinctive" due to the highly scenic features found in the area. Specifically, the area has a great deal of diversity in land form, water, color and vegetation, including granite rock formations, steep forested canyon with several small waterfalls, and the old railroad tunnels along the road.

b) Management

Protection of scenery involves control over development, road-building, timbering, and other acts of humankind. The scenery values in Segment A can be protected by the land management of the U.S. Forest Service and the recreation management of the recreation manager, as determined in the Elevenmile Canyon Ecosystem Management Project.

c) Canyon Protection

Water suppliers have committed upon acceptance of this proposal to refrain from building any water facilities within Elevenmile Canyon and to support an amendment to the Pike and San Isabel Forest Plan to reserve this unique canyon from availability for a special use permit for any water facility. That commitment will avoid possible inundation of some scenic values.

3. Geology

a) General Description of ORV

The 1997 Draft LEIS states that the area contains rare and exemplary geologic features, especially the exposed rock outcroppings in the canyon walls.

b) Management

Protection of geology involves avoidance in the vicinity of geologic features of development, road-building, timbering and other signs of humankind. The geologic values in Segment A can be protected by the land management of the U.S. Forest Service and the recreation management of the recreation manager, as determined the Elevenmile Canyon Ecosystem Management Project.

c) Canyon Protection

The geologic values will be further protected by the commitment contained in this proposal by water suppliers in the Front Range to not build any water facilities within Elevenmile Canyon, and to support an amendment to the Pike and San Isabel Forest Plan to reserve this unique canyon from availability for a Special Use Permit for any water facility.

4. Fisheries

a) General Description of the ORV

The Forest Service has identified this segment as containing nationally renowned brown and rainbow trout populations and habitat. Along with Segment B, this segment contains some of the most diverse habitat conditions of any of the study areas and is recognized by the Colorado Division of Wildlife as an important quality trout fishery in the state. Along with other study segments of the South Platte, this segment is a nationally important producer of brown and rainbow trout and draws people from all over the region. The upper 3 miles of the segment is a designated quality fisheries area with special fishing regulations in effect.

b) Streamflow Management Plan

The Streamflow Management Plan (Attachment B) capitalizes on the water delivery system currently available to benefit fishery resources, and creates a dynamic plan that can develop over time. As a means of reaching these goals, DOW identified specific ranges of flow and temperature designed to maintain and enhance instream trout habitat on the mainstem of the South Platte River from Spinney Mountain Reservoir downstream to the confluence with the North Fork.

Denver Water and Aurora are committed to taking the specific actions necessary to implement the Streamflow Management Plan. In accordance with the principles in that Plan, Denver Water and Aurora will install gauges to measure streamflow and snow levels, and manage their daily operations in a manner designed to carry out the commitments in the Streamflow Management Plan and to achieve the specified goals. In Segment A, these commitments include minimum flow releases at Spinney Mountain Reservoir and Elevenmile Reservoir, ramping (changing gradually) outflow changes from Elevenmile Reservoir, and revised spill operation procedures at Elevenmile Reservoir to target temperature ranges in the river below that are conducive to rainbow and brown trout.

c) Wetlands and Streambed Protection

The quality of the fishery and fish habitat is also affected by recreation management designed to protect streamside wetlands and damage to the streambed. That management is set forth in the Elevenmile Canyon Ecosystem Management Project.

d) Canyon Protection

The stream fishery values will be further protected by the commitment contained in this proposal by water suppliers in the Front Range to not build any water facilities within Elevenmile Canyon, and to support an amendment to the Pike and San Isabel Forest Plan to reserve this unique canyon from availability for a Special Use Permit for any water facility.

B. Segment B (from Lake George downstream to the mouth of Beaver Creek)

1. Fisheries – Brown and Rainbow Trout Populations and Habitat

See the General Description of the ORV in Segment A, above.

In Segment B, the commitments in the Streamflow Management Plan include minimum flow releases at Spinney Mountain Reservoir and Elevenmile Reservoir, ramping (changing gradually) outflow changes from Elevenmile Reservoir, and revised spill operation procedures at Elevenmile Reservoir to target temperature ranges in the river below that are conducive to rainbow and brown trout.

C. Segment C (downstream of Beaver Creek to the inlet of Cheesman Reservoir)

1. Scenery

a) General Description of ORV

The study corridor located between 8,500 and 6,850 feet possesses a great deal of diversity in landform, water, color, and vegetation, notable in the geographic region. This includes large granite rock formations and a steep forested canyon with several small waterfalls. In addition, there is the diversity of vegetation, including meadows, aspen, willows, Douglas-fir, and ponderosa pine forests. The area lies within an undeveloped canyon that is a vestige of primitive America and draws people from all over the region for its ruggedness, remoteness, and scenic beauty.

b) Management

Protection of scenery involves control over development, road-building, timbering and other acts of humankind. The scenery values in Segment C can be protected by the land management of the U.S. Forest Service and the recreation management of the recreation manager, as determined in a recreation management plan. Only the U.S. Forest Service has authority to adopt a plan for National Forest lands.

2. Geology

a) Description of ORV

The area is known for its variety of rare and exemplary geologic features. The segment lies in an area of relatively young topography, with north-south trending complex mountains cut by deep, rugged canyons. Like Segment A, the entire area has been formed by Precambrian granite formations. These rocky outcrops predominate throughout the segment. Massive rock outcrops are exposed in the canyon walls, except where the bedrock is marked by a covering of talus and soil. Unlike Segment A, the outcrops are more numerous, much more vertical and dominant, and there are massive granite cliffs that tower over river.

b) Management

Protection of geology involves avoidance in the vicinity of geologic features of development, road-building, timbering, and other signs of humankind. The geologic values in Segment C can be protected by the land management of the U.S. Forest Service and the recreation management of the recreation manager, as determined in a recreation management plan.

3. Fisheries – Brown and Rainbow Trout Populations and Habitat

This segment contains nationally renowned brown and rainbow trout populations and habitat. The fishery in this segment is solely supported by self-reproducing rainbow and brown trout, and as such, is designated as Colorado Wild Trout Water. This section of river contains the second highest amount of habitat in the study segments (next to Segment D). The area is recognized by DOW as an important quality trout fishery in the state. Along with other study segments of the South Platte, this segment is a nationally important producer of brown and rainbow trout and draws people from all over the region. Although the size of the trout is not as exceptional as in other segments, the catch rates are quite high due to the abundance of fish present.

a) Flow Management

The Streamflow Management Plan (Attachment B) capitalizes on the water delivery system currently available to benefit fishery resources, and creates a dynamic plan that can develop over time. As a means of reaching these goals, DOW identified specific ranges of flow and temperature designed to maintain and enhance instream trout habitat on the mainstem of the South Platte River from Spinney Mountain Reservoir downstream to the confluence with the North Fork.

Denver Water and Aurora are committed to taking the specific actions necessary to implement the Streamflow Management Plan. In accordance with the principles in that Plan, Denver Water and Aurora will install gauges to measure streamflow and snow levels, and manage their daily operations in a manner designed to carry out the commitments in the Streamflow Management Plan and to achieve the specified goals. In Segment C, these commitments include minimum flow releases at Spinney Mountain Reservoir and Elevenmile Reservoir, ramping (changing gradually) outflow changes

from Elevenmile Reservoir, and revised spill operation procedures at Elevenmile Reservoir to target temperature ranges in the river below that are conducive to rainbow and brown trout.

b) Wetlands and Streambed Protection

The quality of the fishery and fish habitat is also affected by recreation management designed to protect streamside wetlands and damage to the streambed. That management should be set forth in a recreation management plan, developed by a recreation management agency. In Section C, such a plan should be developed in concert with the U.S. Forest Service that manage the land.

4. Wildlife – Pawnee Montane Skipper Butterfly and Habitat

The only wildlife values identified by the Forest Service as an ORV is the Pawnee Montane Skipper butterfly, a threatened species, although there are other wildlife values that can be protected through recreation management. Within Segment C, the habitat of the Skipper is approximately 16.2 acres within the quarter-mile corridor on U.S. Forest land and approximately 39.4 acres within the corridor on Denver Water's land. The only known population of this Skipper occurs on the Pikes Peak granite formation in the South Platte River drainage system in Colorado.

Although, as previously noted, the Endangered Species Act carries a separate statutory mandate than the Wild and Scenic Rivers Act, in the context of which this report is being prepared, the two may have common goals and objectives. Denver Water has participated in the development of a Draft Recovery Plan as a member of the Pawnee Montane Skipper Recovery Working Group. Following approval, publication, and public comment on the Recovery Plan, it is anticipated that the FWS will develop a proposed Memorandum of Understanding (MOU) outlining actions to be taken in attempting to achieve the goal of delisting the species. It is anticipated that the South Platte Enhancement Board to be created as part of Alternative A2 may provide comments to the FWS on means by which the goals of the Recovery Plan and the goals of the Recreation Plan may be mutually achieved.

To the extent that Skipper habitat exists on lands owned by Denver Water in Segment C, any lease of those lands to a recreation manager will specify that areas of Skipper habitat will be managed in a manner to protect the species. This commitment is subject to future critical habitat mapping, delisting of the species, or changes to the Endangered Species Act.

D. Segment D (downstream of Cheesman Dam to the Wigwam Club)

1. Recreational – Fishing, Hiking and Scenic Viewing

a) General Description of ORV

Within Segment D, the Forest Service has specifically identified Cheesman Canyon as a destination which attracts people from all over the region for hiking, flyfishing and scenic viewing. The canyon is one of the most heavily fished sections in the state. The Gill Trail is heavily used by anglers, hikers, nature observers and photographers.

b) Public Education

Denver Water, and other water providers endorsing Alternative A2, agree to distribute educational information about the ORVs, recreational opportunities, regulations and ongoing protection efforts on the South Platte as inserts into water bills, mailed directly to ratepayers. This action will be the responsibility of the water suppliers, but the recreation manager must provide appropriate information and identify issues of concern.

Additional educational brochures or signs, (explaining such issues as the conflicts between vehicle crossings and fish habitat, the erosional effects of short-cutting switchbacks, the significance of geologic formations, etc.) would be eligible for funding through the endowment. Public education is the responsibility of the recreation manager, but the South Platte Enhancement Board and Coordinating Forum will also make recommendations as issues come to their attention. Recreation user groups will also be encouraged to educate their membership about responsible use of the resource.

c) Canyon Protection

Front Range water suppliers have committed upon acceptance of this proposal to refrain from building any water facilities within Cheesman Canyon and to support an amendment to the Pike and San Isabel Forest Plan to reserve this unique canyon from availability for a special use permit for any water facility. That commitment will protect the type of recreational activities identified as values in the Draft LEIS.

d) Storage Right Withdrawal

Denver Water and the Metro Denver Water Authority have agreed to withdraw the 1986 applications for 780,000 acre feet of additional storage at the Two Forks site if Alternative A2 is selected by the U.S. Forest Service. That action will follow through on the commitment to avoid water facilities in Cheesman Canyon and end plans that could have inundated the recreational values in portions of Segment D.

e) Recreation Management

Almost one mile of the land along the South Platte River below Cheesman Dam is owned by Denver Water. Denver Water agrees to make this land available for a recreation lease by an experienced and qualified recreation manager.

f) Flow Management

The Streamflow Management Plan (Attachment B) capitalizes on the water delivery system currently available to benefit fishery resources, and creates a dynamic plan that can develop over time. As a means of reaching these goals, DOW identified specific ranges of flow and temperature designed to maintain and enhance instream trout habitat on the mainstem of the South Platte River from Spinney Mountain Reservoir downstream to the confluence with the North Fork.

In Segment D, Denver Water commits to minimum flow releases at Cheesman Reservoir, ramping (changing gradually) outflow changes from Cheesman Reservoir,

and revised spill operation procedures at Cheesman Reservoir to target temperature ranges in the river below that are conducive to rainbow and brown trout.

2. Fisheries – Brown and Rainbow Trout Populations and Habitat

Segment D contains nationally renowned brown and rainbow trout populations and habitat. This segment contains exceptionally high fish habitat and is a nationally important producer of wild brown and rainbow trout. This stretch represents three miles of wild and Gold Medal trout streams in the state.

a) Flow Management

The Streamflow Management Plan (Attachment B) capitalizes on the water delivery system currently available to benefit fishery resources, and creates a dynamic plan that can develop over time. As a means of reaching these goals, DOW identified specific ranges of flow and temperature designed to maintain and enhance instream trout habitat on the mainstem of the South Platte River from Spinney Mountain Reservoir downstream to the confluence with the North Fork.

In Segment D, Denver Water commits to minimum flow releases at Cheesman Reservoir, ramping (changing gradually) outflow changes from Cheesman Reservoir, and revised spill operation procedures at Cheesman Reservoir to target temperature ranges in the river below that are conducive to rainbow and brown trout.

b) Storage Right Withdrawal

Denver Water and the Metro Denver Water Authority have agreed to withdraw the 1986 780,000 acre feet of additional storage at the Two Forks site if Alternative A2 is selected by the U.S. Forest Service. That action will follow through on the commitment to avoid water facilities in Cheesman Canyon and end plans that could have inundated fishery values in portions of Segment D.

c) Canyon Protection

Front Range water suppliers have committed by this proposal to refrain from building any water facilities within Cheesman Canyon and to support an amendment to the Pike and San Isabel Forest Plan to reserve this unique canyon from availability for a special use permit for any water facility. That commitment will further protect wild trout fisheries.

3. Wildlife – Pawnee Montane Skipper Butterfly and Habitat

The only wildlife values identified by the Forest Service as an ORV in Segment D is the Pawnee Montane Skipper Butterfly, a threatened species, although there are other wildlife values that can be protected by the recreation management proposed.

a) Pawnee Montane Skipper

The Pawnee Montane Skipper is a species of butterfly listed as threatened by the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act. Within Segment D, the habitat of the Skipper is approximately 92.2 acres within the quarter-mile corridor on U.S. Forest land and approximately 136.9 acres within the corridor on Denver Water's land. Any lease of those Denver Water lands to a recreation manager will specify the

areas of Skipper habitat will be managed in a manner to protect the species. This commitment is subject to future critical habitat mapping, delisting of the species, or changes to the Endangered Species Act. See additional information on this subject in Segment D above.

E. Segment E (upstream boundary of the Wigwam Club downstream to the confluence with the North Fork)

1. Recreational – Camping, picnicking, hiking, fishing, boating, scenic driving and other day use

a) General Description of the ORV

The quality and diversity of developed and dispersed recreation opportunities along this and the accessibility and proximity of the area to major metropolitan areas provides an excellent year-round recreation resource. This segment is considered the best recreational river within the region of analysis primarily because of the amount and diversity of opportunities presented to such a large population base. It contains a section of the Colorado Trail.

b) Recreation Management

Segment E contains a significant percentage of land outside of the National Forest. It includes lands owned by Denver Water. Provided that a management agreement can be developed between the U.S. Forest Service and State Parks (or with another experienced and qualified recreation manager), Denver Water commits to make its lands within Segment E available for lease to the recreation manager. The exact lands and boundaries to be included in a lease will be worked out with the recreation manager considering the needs of effective management, concerns of neighboring landowners and recreation users, and other relevant recreation-related issues.

c) Front Range Mountain Backdrop Project

Five Front Range counties have been cooperating to study, plan and preserve key parcels of the mountain backdrop along the Front Range. Douglas County and Jefferson County have been two of the Task Force member counties that have reviewed proposed lands in the Chatfield basin area. Jefferson County is coordinating discussions with potential partners for the goal of coordinating efforts and options available for the most beneficial outcome of the mountain backdrop. Involvement is voluntary, with the involved parties developing site specific solutions to address land preservation, sensitive siting, reclamation, preservation and enhancement of wildlife habitat and beneficial use of affected lands. The program will be extended to include areas in Segment E.

2. Fisheries – Brown and Rainbow Trout Populations and Habitat

This segment contains nationally renowned brown and rainbow trout populations and habitat. The DOW lists the South Platte from the Wigwam Club to the confluence with the North Fork as Gold Medal waters.

a) Streamflow Management Plan

The Streamflow Management Plan (Attachment B) capitalizes on the water delivery system currently available to benefit fishery resources, and creates a dynamic plan that can develop over time. As a means of reaching these goals, DOW identified specific ranges of flow and temperature designed to maintain and enhance instream trout habitat on the mainstem of the South Platte River from Spinney Mountain Reservoir downstream to the confluence with the North Fork.

In Segment E, Denver Water commits to minimum flow releases at Cheesman Reservoir, ramping (changing gradually) outflow changes from Cheesman Reservoir, and revised spill operation procedures at Cheesman Reservoir to target temperature ranges in the river below that are conducive to rainbow and brown trout

b) Wetlands and Streambed Protection

The quality of the fishery and fish habitat is also affected by recreation management designed to protect streamside wetlands and damage to the streambed. That management should be set forth in a recreation management plan, developed by a recreation management agency. In Section B, such a plan should be developed in concert with the U.S. Forest Service that manages some of the land.

c) Storage Right Withdrawal

Denver Water and the Metro Denver Water Authority have agreed to withdraw their respective applications filed in 1986 for 780,000 acre feet of additional storage at the Two Forks site if Alternative A2 is selected by the U.S. Forest Service. That commitment will provide additional protection to portions of the recreational values of Segment E.

3. Wildlife –

a) Pawnee Montane Skipper Butterfly and Habitat

See information on this subject in Segment C, above.

Skipper habitat is found within this segment outside of the boundaries of the National Forest. The lease of Denver Water lands to a recreation manager will specify that areas of habitat will be managed in a manner to protect the species.

b) Storage Right Withdrawal

Denver Water and the Metro Denver Water Authority have agreed to withdraw the 1986 780,000 acre feet of additional storage at the Two Forks site if Alternative A2 is selected by the U.S. Forest Service. That commitment will provide additional protection to the wildlife values of Segment E.

IV. North Fork of the South Platte River

A. Segment H (North Fork from Insmont to its confluence with the South Platte mainstem)

1. Recreational – Whitewater Kayaking, Picnicking, Fishing, Hiking, Riding, Rock Climbing, Scenic Driving

a) Fishing

The Streamflow Management Plan contains a goal to complete future channel work in a manner that maintains or enhances aquatic habitat. Denver Water will coordinate with the Colorado Division of Wildlife to review plans for any channel work in Segment H. Recreational managers will develop plans to manage fisheries and wildlife, coordinating with DOW.

b) Scenic Viewing/Scenery

Front Range Mountain Backdrop Project -- Five Front Range counties have been cooperating to study, plan and preserve key parcels of the mountain backdrop along the Front Range. Douglas County and Jefferson County have been two of the Task Force member counties that have reviewed proposed lands in the Chatfield basin area. Jefferson County is coordinating discussions with potential partners for the goal of coordinating efforts and options available for the most beneficial outcome of the mountain backdrop. Involvement is voluntary with the involved parties developing site specific solutions to address land preservation, sensitive siting, reclamation, preservation and enhancement of wildlife habitat and beneficial use of affected lands. The program will be extended to include areas in Segment H.

c) Recreation Management

The interest of State Parks serving in partnership as a recreation manager has been primarily focused on the mainstem of the South Platte River. However, it may be beneficial to tie in some properties on the North Fork near the confluence as part of the State Park/USFS system.

Segment H includes lands owned by Denver Water. Provided that a management agreement can be developed between the U.S. Forest Service and State Parks (or with another experienced and qualified recreation manager), Denver Water commits to make its lands within Segment H available for lease to the recreation manager. The exact lands and boundaries to be included in a lease will be worked out with the recreation manager considering the needs of effective management, concerns of neighboring landowners and recreation users, and other relevant recreation-related issues.

Jefferson County Open Space offers to manage lands in the North Fork within Jefferson County. Jeffco Open Space currently has other properties for recreational management along the North Fork and within the proximity of the North Fork. Denver Water is also willing to make its lands available for lease to Jeffco Open Space for the purpose of protecting the values identified by the U.S. Forest Service along the North

Fork. The boundary between Jeffco Open Space and the mainstem recreation manager, using lands held by Denver Water, will be determined based on recreation management needs and the views of affected neighbors and users.

d) Bailey Canyon

The U.S. Forest Service is urged to manage the North Fork and vicinity from Insmont to Pine Valley Ranch as a special recreation area with emphasis on whitewater recreation, but inclusive of other dispersed recreation activities, such as hiking, fishing and backpacking. This proposal recommends the following management guidelines:

- Facilitate discussions to improve whitewater access to Bailey Canyon.
- Provide a hiking trail along the river where possible.
- Withdrawal of the area within Bailey Canyon for new mining claims.
- Develop plans to protect private property against trespass.

Projects to accomplish these goals would be eligible for funding from the endowment.

e) Flow Management

Because of water supply objectives, a lack of control facilities and a variety of other considerations, no firm flow commitments are being proposed for the North Fork. However, Denver Water will commit to the same ramping (changing gradually) outflow changes from the Roberts Tunnel that were set for reservoirs on the mainstem. Also, whitewater flow goals will be taken into consideration in operation plans during the recreation season, so long as seasonal and annual volumes discharged from the Roberts Tunnel are not changed.

f) Storage Right Withdrawal

Denver Water and the Metro Denver Water Authority have agreed to withdraw their respective applications filed in 1986 for 780,000 acre feet of additional storage at the Two Forks site if Alternative A2 is selected by the U.S. Forest Service. That commitment will provide additional protection to portions of the recreational values of Segment H.

2. Wildlife

a) Pawnee Montane Skipper Butterfly and Habitat

See information on this subject in Segment C, above.

Skipper habitat is found within this segment outside of the boundaries of the National Forest. The lease of Denver Water lands to recreation managers will specify that areas of habitat will be managed in a manner to protect the species.

b) Peregrine Falcon

Jefferson County Open Space has assumed management responsibility for Cathedral Spires through an MOU with BLM, Fish & Wildlife Service, and Colorado DNR. Jeffco Open Space agreed to manage the parcel for the primary purpose of recovery of the Peregrine Falcon. Denver Water has agreed to fence off access to Cathedral Spires

across its property when required for species protection. The entire site is closed to recreationists during the nesting period. DOW is in the process of developing an memorandum of understanding to further delineate action items designed to lead to the recovery and delisting of the species. This commitment is subject to future critical habitat mapping, delisting of the species, or changes to the Endangered Species Act.

c) Storage Right Withdrawal

Denver Water and the Metro Denver Water Authority have agreed to withdraw the 1986 780,000 acre feet of additional storage at the Two Forks site if Alternative A2 is selected by the U.S. Forest Service. That commitment will provide additional protection to the recreation values of Segment H.

3. Cultural

a) Estabrook Historic District and North Fork Historic District including the Denver South Park and Pacific Railroad Grade

Pursuant to the National Historic Preservation Act of 1966, 16 U.S.C. §407, the State Historic Preservation Office (SHPO) has designated two historic districts along the North Fork of the South Platte: the Estabrook and the North Fork Historic Districts. Both districts are associated with the operation of the Denver, South Park and Pacific Railroad and the valley's history as a popular recreation and tourism area.

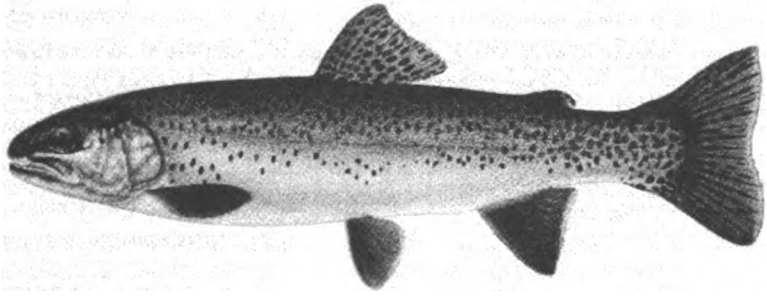
A 1986 Cultural Resource Inventory Report, prepared by Engineering Science, considers several methods of protecting historic features, from avoidance of impact through relocation of projects, to isolation through physical or visual barriers, and protection via warning and educational signs. Such techniques will be incorporated into the recreation lease in order to protect and enhance the historic/cultural ORV.

b) Storage Right Withdrawal

Denver Water and the Metro Denver Water Authority have agreed to withdraw the 1986 780,000 acre feet of additional storage at the Two Forks site if Alternative A2 is selected by the U.S. Forest Service. That commitment will provide additional protection to the cultural values of Segment H.

Attachment B

Streamflow Management Plan



for the

Upper South Platte River

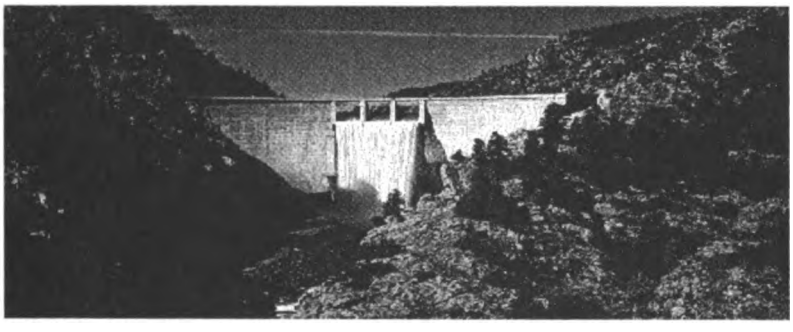


TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF TABLES

Table 1 - Summary of Plan Goals and Commitments

The following are obligations to be met by the responsible parties. The details of the commitments are contained in the page reference. All commitments are subject to the principles contained on page 4.

	Commitment	Responsible Party	Page No.
1.	No loss of existing or future water supply.	All water suppliers	B-4
2.	Minimum outflow from Spinney Mountain Reservoir – 32 cfs or inflow.	Aurora	B-8
3.	Minimum outflow from Eleven Mile Reservoir -- 32 cfs or inflow.	Denver Water	B-8
4.	Minimum outflow from Cheesman Reservoir -- 35 cfs (August-March) and 40 cfs (April-July) or inflow.	Denver Water	B-9
5.	Ramp outflow changes at Eleven Mile and Cheesman Reservoirs and Roberts Tunnel.	Denver Water	B-11, 16
6.	Channel work on the North Fork will maintain or enhance structural trout habitat –CDOW will be consulted.	Denver Water	B-16
7.	Operators will meet each spring with fishery, whitewater, and other interests to arrange upcoming operations.	Denver Water and Aurora	B-17
8.	Install new equipment: low flow valve at Eleven Mile, stream temperature monitors at Eleven Mile and Cheesman Reservoirs, SNOTEL gages in watershed.	Denver Water and Aurora	B-12, 13, 15
9.	Stream Channel Maintenance and Improvement – Identify degraded stream channel areas and sedimentation sources, and develop in-stream channel improvement projects.	Forest Service, CDOW, all interested water users	B-5

The following represent desirable outcomes. Some goals are more attainable than others. They are intended as guidance for water suppliers in their operating decisions. All goals are subject to the principles contained on page 4. The details of the goals are contained on the page referenced.

1.	Spinney Mountain Reservoir --When inflow is low make storage releases to maintain minimum outflow.	Unknown due to need for available downstream storage and other factors	Aurora and Denver Water	B-7
2.	Eleven Mile Reservoir – When inflow is low make storage releases to maintain minimum outflow.		Denver Water	B-8
3.	Cheesman Reservoir – When inflow is low make storage releases to maintain minimum outflow.		Denver Water	B-9
4.	Operate Spinney Mountain Reservoir for outflows in optimum range of 50 to 150 cfs.	Expect higher flow than optimum every year – natural flows exceed optimum high flows	Aurora	B-7
5.	Operate Eleven Mile Reservoir for outflows in optimum range of 50 to 100 cfs.		Denver Water	B-8
6.	Operate Cheesman Reservoir for outflows in optimum range of 50 to 150 cfs (August-March) and 100 to 225 cfs (April-July).		Denver Water	B-9
7.	Spinney Mountain Reservoir – Operate to minimize spilling.		Aurora	B-12
8.	Eleven Mile Reservoir – When reservoir is spilling, operate to discharge within optimum range of 50-60° F (June – September) with a maximum of 65° F and fluctuations no more than 10°F per day.	Need more operational experience. Good success at lower flows – expect less attainability at higher flows	Denver Water	B-12
9.	Cheesman Reservoir –When reservoir is spilling, operate to discharge within optimum range of 50-60° F (June – September) with a maximum of 65° F and fluctuations no more than 10°F per day.		Denver Water	B-13
10.	Discharges from the Roberts Tunnel into the North Fork will consider the needs of whitewater recreation and fish habitat. Desirable whitewater streamflow is 300 to 500 cfs.	Strictly contingent on water demands in Denver	Denver Water	B-17
11.	Annual operating plans to emphasize limiting fluctuations when they would harm life stages of brown and rainbow trout.	Experience has shown that there is limited ability to reduce higher flows and fluctuations from storm events	Denver Water and Aurora	B-9

STREAMFLOW MANAGEMENT PLAN
for the
UPPER SOUTH PLATTE RIVER

I. INTRODUCTION

A. Purpose

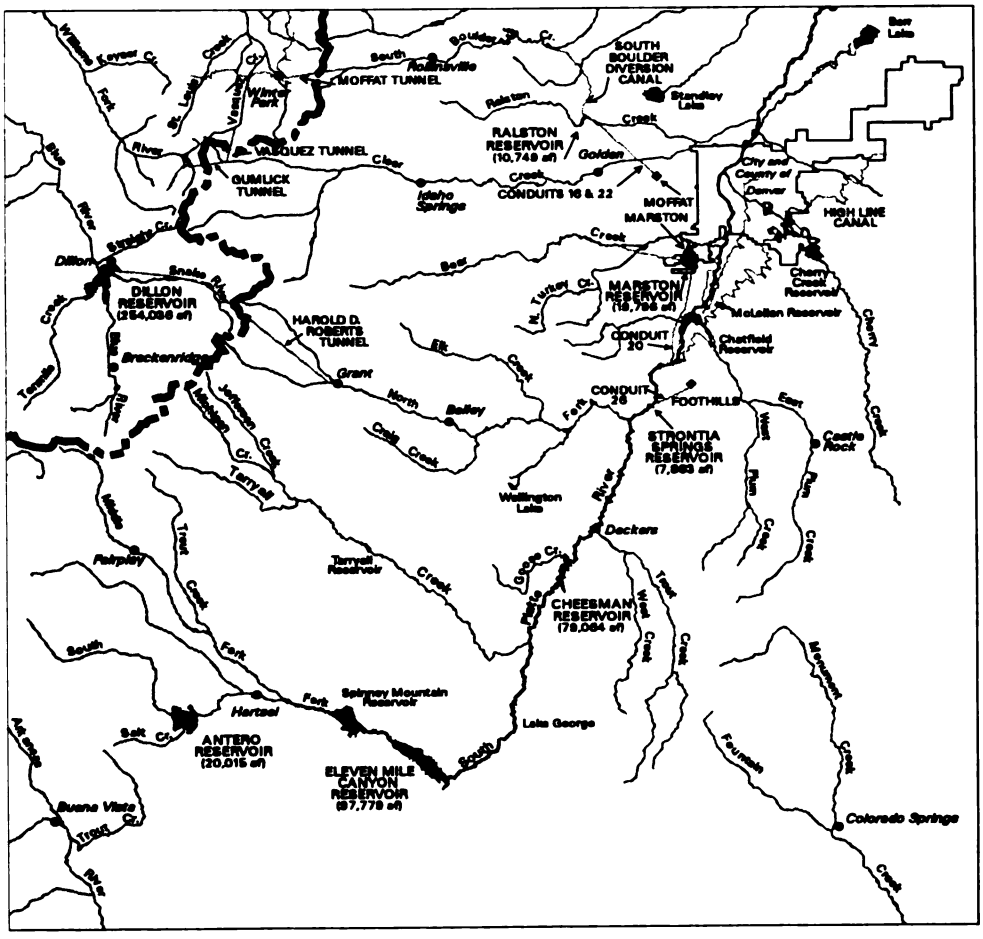
The Streamflow Management Plan is part of a locally generated alternative (the South Platte Protection Plan or SPPP) to a Forest Service recommendation for designation of the South Platte River under the Wild and Scenic Rivers Act. The Streamflow Management Plan was cooperatively developed to identify opportunities for operating water supply facilities in ways that protect and in some instances enhance the trout fisheries and whitewater recreation in the South Platte River while maintaining the current and future water supply functions of the river and facilities. Trout fisheries and whitewater recreation are two of the "Outstandingly Remarkable Values" (ORV's) listed in the Forest Service's 1997 Legislative Environmental Impact Statement. Operations under this Plan will not cause participating water users to lose existing or future water supply. The stream reaches covered by this Plan are the mainstem of the South Platte River from Spinney Mountain Reservoir downstream to the confluence with the North Fork and the North Fork of the South Platte River from the Roberts Tunnel to the confluence with the mainstem (Figure 1).

Through cooperative and voluntary development, this Plan provides benefits to the fisheries and whitewater recreation that are not likely to occur through Wild and Scenic designation of the river. These benefits for the fisheries include establishing minimum releases from Cheesman and Eleven Mile Reservoirs, moderating stream temperature when reservoirs spill, establishing guidelines for reservoir outflow fluctuations, managing streamflow during spawning periods, and allowing interested parties to participate in the establishment of annual operating plans for Spinney, Eleven Mile, and Cheesman reservoirs. There is also consideration given to whitewater recreation for the North Fork. Benefits are summarized in Table 1.

A major benefit of this Plan is providing minimum streamflows. The Forest Service can not control streamflow under the Wild and Scenic Act. The Forest Service might apply for instream water rights but those rights, if obtained, would be so junior (in an already over appropriated stream) that they would be ineffective for fishery purposes. Also, the Wild and Scenic Act does not allow the Forest Service to control how reservoirs are operated. Therefore, the benefits such as controlling water temperature and limiting streamflow fluctuations would not result from Wild and Scenic designation. Another

Figure 1

Upper South Platte River



benefit of this Plan is improvements to the North Fork. Wild and Scenic designation, under the Forest Service's preferred Alternative J of the Draft Environmental Impact Statement, would not cover the North Fork.

Facilities directly involved in the Streamflow Management Plan are Spinney Mountain, Eleven Mile and Cheesman reservoirs, and the Roberts Tunnel. Other facilities are indirectly involved as explained later.

B. Development

Beginning in about 1988, Denver Water and the Division of Wildlife began a process of working more closely together to educate each other and to manage water supply operations to benefit trout. While it was acknowledged that the fisheries were already outstanding—particularly immediately downstream of the reservoirs—the group met to discuss ways to enhance the fisheries even further. This Plan is a continuation of those fishery efforts. Whitewater recreation is an important management effort added to this Plan.

This Plan was developed in 1997 by representatives from the Colorado Division of Wildlife (CDOW), Denver Water, City of Aurora, Trout Unlimited, Wigwam Club, American Whitewater, and Park County Water Preservation Coalition The Forest Service observed the collaborative effort, provided information as needed, and helped maintain coordination between the agency and the working group. Although various agencies and interested parties participated in the Streamflow Management Plan discussions, participation does not necessarily imply an entity's support of the South Platte Protection Plan (SPPP).

In 1999, the Plan was revised at the request of the USFS and appeared in the Supplemental DLEIS issued by the USFS in 2000. The Plan was further modified as described in the Appendix on Enforcement Procedures for the commitments described in the Plan.

In the spring of 2003, some modifications were made to the Plan because of the drought and the Hayman and other fires in 2002. Very little rain has fallen so far on the areas burned in 2002. Estimates at this time are that with rainfall, very large volumes of sediment will enter the stream system and reservoirs. The amount and impact of erosion and sedimentation are not known at this time. It is expected to affect the fisheries, river system and reservoirs and alter the way in which they are managed. These changes cannot be anticipated in this Plan. It is recognized that management may need to be adapted to the changes experienced.

C. Layout

Section II describes the principles of the Plan. This is followed by an explanation of the operational goals and commitments established by this Plan. Section III includes background information on the resources covered by this Plan. To better understand the Plan, **first-time readers are asked to read Section III next**. The Appendix contains the Enforcement Procedures for the Plan.

II. THE PLAN

A. Principles

The South Platte River System serves as a water supply and delivery system that results in streamflows different from natural streamflow regimes. This Plan was developed to take advantage of those differences and will be implemented within the principles stated here.

- Operate water supply facilities in ways that will not cause participating water users to lose or adversely impact existing or future water supply. All operations under this Plan are first subject to this principle being met.
- Operate water supply facilities in ways that maintain and in some cases enhance the trout fishery and whitewater recreation. Recognize that the Forest Service designated the trout fishery an "outstandingly remarkable value" on the mainstem and whitewater recreation an "outstandingly remarkable value" on the North Fork.
- Provide a dynamic plan that is refined and continued through time.
- Plan does not promote or restrict development of water systems but provide goals and commitments for operating water systems.
- There will occasionally be conflicts between the operating objectives and operators will need to choose among tradeoffs in making their operating decisions.
- Due to water rights constraints, government regulations, facility maintenance, emergencies, dam safety concerns, or special requests to alter streamflow outside the normal operations, it might not be possible at times to meet all the guidelines within this Plan.
- The Roberts Tunnel will continue to be operated solely for water supply purposes. The seasonal and annual volumes discharged from the Roberts Tunnel will not be changed by operations under this Plan.

B. Future Water Projects

In coming decades, water system improvements and future importation to the Upper South Platte Basin will alter the hydrologic basis of this Plan. The anticipated growth in Metro Denver is likely to bring more water through the South Platte River reaches of concern. No one can predict with certainty what the future holds for proposed projects or water rights. It is not the intent of this Plan to promote or restrict the development of

water system improvements, enlargements or the introduction of new water from future projects, but it is intended to provide goals for the protection of the existing trout fishery and whitewater recreation values present in the South Platte River.

The concern is that prolonged high flow periods due to new project water may require a larger stream channel to adequately protect fisheries habitat and populations, channel stability, and maintenance of the ecosystem. Future water projects, especially those that will significantly extend bank full stream conditions, will require an analysis by the project proponent of channel capacity related to these values.

The new project proponent is responsible for any necessary analysis and channel reconstruction. Changes to channel capacity should be accomplished by physically reconstructing the channel where necessary. These alterations should be achieved by means other than flow manipulation in order to maintain the ORVs in the river corridor. Proposals for flow and channel modification for new projects will be reviewed by participants of the annual operations meeting.

C. Stream Channel Maintenance and Improvement

The mainstem of the South Platte, prior to the Hayman fire, contained some of the finest fishery habitat in the state. Maintaining habitat is one of the main goals of the Plan. This section of the Plan addresses stream habitat concerns regarding river sedimentation and areas needing channel habitat improvement projects. These channel improvement projects will consist of in-stream improvements, as opposed to flow management. Stream habitat concerns regarding flow management, reservoir operations and channel maintenance flows are addressed in Section II, D-F.

The Hayman fire of 2002 is expected to significantly increase sedimentation of the river. The impact of this sedimentation is not known at this time. It is expected to affect the fisheries, river system, and reservoirs and the way in which they are managed. In addition to the fire effects, there are several man-made disturbances (including roads) that contribute to sediment deposition in the river system. High amounts of sediment entering stream systems can change the chemical composition of a stream, and impact the ecology of the river. Sustained bankful or higher flows alter erosion and sediment transportation rates within the river corridor contribute to erosion.

To help minimize sedimentation and bank erosion, under the lead of the USFS, , CDOW, the water users, and any other interested participants will form a sediment group as needed to

- Develop, where appropriate, in-channel habitat improvement projects to improve stream channel habitat, including bank stabilization and erosion control
- Monitor the physical and biological response of the river to sedimentation and in-channel improvements

- Coordinate activities under this Plan with fire restoration efforts.

Funding for these activities may be provided by the governing Board of Trustees (see Attachment D Endowment Plan).

D. Trout Fisheries

1. Overview

Except for the uncertain future effects of the fires, this Plan offers an opportunity to maintain and in some cases enhance existing conditions for the high-quality trout populations in the river. Fishery management is a very complex science. Streamflow management is only one of many factors affecting trout population. Diseases, fishing pressure, stocking regulations, fire, etc., also have a dramatic effect on fish populations. CDOW fishery management goals of today will not necessarily be the same in the future, but the overall goal to maintain, protect and enhance the South Platte river system's aquatic resources will remain the same.

The Plan has four main reservoir operation goals for trout fishery management. which are listed by priority. The first goal is to maintain minimum streamflows below Spinney, Eleven Mile, and Cheesman Reservoirs. Streamflows below minimum levels deprive trout of habitat and may have serious impacts to trout populations. The second goal is to minimize streamflow fluctuation. Steady transitions from low streamflow to high streamflow, and vice versa, allow fish time to move into new habitats as water levels change. The third goal of the Plan is temperature moderation. Improving stream temperatures by mixing top and bottom reservoir releases will decrease physiological stress and susceptibility to disease in trout populations. The last goal is to manage peak streamflow. High streamflows, although naturally occurring, may negatively impact the recruitment of young fish into the population. However, high streamflows are also periodically necessary in order to maintain channel stability and capacity, and to transport fine sediment downstream. Due to limited storage space and water rights and other constraints, managing peak streamflows is the least attainable of the four fishery management goals. There are few opportunities to attenuate peak streamflows by reservoir operations. The extent to which Denver Water can pass peak flows is unknown at the present time. Denver Water and Aurora will strive to operate Spinney, Eleven Mile, and Cheesman reservoirs to attenuate peak streamflows recognizing the limited potential.

2. *Mainstem Plan*

Table 2: Desired Streamflow for Fishery Management

Location	Period	Minimum (cfs)	Optimum Range (cfs)
Spinney Release	Year round	20	50 to 150
Eleven Mile Release	Year-round	20	50 to 100
Cheesman Release	August-March	35	50 to 150
	April-July	40	100 to 225

These targets came from weighted area curves of fish habitat at different life stages (see Chadwick, Appendix B). They are not based on the native or historical streamflows and do not reflect the capability of the water facilities to manage streamflow.

a. Minimum Streamflows

Low streamflows result in low habitat levels available to trout. Natural streamflows in many Colorado streams can fall below levels necessary to maintain healthy trout streams. As experienced in 2002, natural streamflows are low during a drought. Also, since the majority of South Platte River streamflow comes from snowmelt, the streamflows are naturally very low in the wintertime. These natural streamflows can be lower than the habitat needs of trout. Importation of water into the basin and reservoirs provides opportunities to augment natural streamflows with streamflows more suitable for trout. The goal is to provide minimum levels of streamflow to maintain or enhance habitat for trout.

Spinney Mountain Reservoir

Background: Low streamflow (particularly less than 20 cfs) drastically reduces streamflow habitat for all trout life stages in the reach between Spinney and Eleven Mile. With the creation of the reservoir, streamflow in this river segment has improved, particularly the otherwise low winter flows. Spinney has a minimum release requirement of 32 cfs or native inflow whichever is less.

Target: The minimum desired release is 20 cfs with 50 to 150 cfs being optimum (Table 2). Future improvements (in-stream habitat structures and modifying or reducing width-to-depth ratios in areas that are currently wide and shallow) in stream geometry and habitat may allow for lower minimum streamflows needed to maintain or enhance trout population dynamics and structure.

Operations: Aurora has already committed to a minimum release of 32 cfs or the native inflow, whichever is less as designated in the 1980 agreement between Aurora and CDOW. Aurora will strive to keep the release above 50 cfs (optimum) recognizing this will not always be achieved.

Storage releases may be made to meet the desired 32 cfs minimum provided it can be recaptured without loss in Aurora's downstream reservoir and there are no impairments to water rights. When Aurora's downstream storage is full but there is space available in Cheesman Reservoir, reservoir operations will be coordinated between Aurora and Denver Water to allow water released from Spinney Mountain to be stored in Cheesman to meet the desired 32 cfs release.

Eleven Mile Reservoir

Background: Low streamflows (particularly less than 20 cfs) drastically reduce habitat for all trout life stages in the reach from Eleven Mile canyon downstream through Happy Meadow campground. Maintaining adequate winter streamflow for adults is a priority for fisheries. Eleven Mile is normally full and bypassing the inflow.

Target: The minimum requested by the CDOW for Eleven Mile Reservoir outflow is 20 cfs with an optimum range of 50 to 100 cfs (see Table 2).

Operations: Denver Water commits to release a minimum outflow of 32 cfs or the 7-day running average of computed inflow, whichever is less.[1] Using a 7-day running average will help to reduce fluctuations in streamflows.

If computed inflow is less than 32 cfs, then a bottom release may be made to meet the desired 32 cfs outflow. Bottom releases will be made provided they can be recaptured without loss in Denver Water's downstream facilities, the resulting lost storage in Eleven Mile can be recovered in the next runoff, and there is no impairment of water rights. Bottom releases will not be made if it would cause the reservoir to stop spilling. Starting no later than May 1, bottom releases will be discontinued to allow the surcharge pool to fill and complete the cycle. However, while the surcharge pool is being filled the minimum streamflow will be maintained as described in this Plan. The limited volume of water available for supplemental bottom releases will first go towards maintaining minimum streamflows and be used secondarily for temperature moderation.

Future improvements (in-stream habitat structures and modification or reducing width-to-depth ratios in areas that are currently wide and shallow) in stream geometry and habitat may allow for lower minimum streamflows to maintain or enhance trout population dynamics and structure.

---

[1] Computed inflow is reservoir inflow minus reservoir evaporation. Computed inflow = change in storage + outflow.

➢ Cheesman Reservoir

Background. Releases from Cheesman Reservoir have been managed in more recent years such that winter streamflows are not a limiting factor for trout populations. Winter streamflows (November through March) below Cheesman have averaged 98 cfs in the 1985 - 1996 period, but 9% of that time the streamflow was less than 40 cfs.

Target: The minimum release desired is 35 cfs August through March with the optimum range of 50 to 150 cfs. For the period April through July the minimum desired release is 40 cfs with the optimum range of 100 to 225 cfs.

Operations: Denver Water commits to release a minimum of 35 cfs August through March and 40 cfs April through July or the computed inflow, whichever is less.[2] Denver Water expects releases in April through July to stay above 50 cfs the majority of the time. Denver Water will strive to keep releases above 50 cfs (optimum) in August through March and above 100 cfs (optimum) in April through July, realizing this will not always be achieved.

Storage releases may be made to meet the desired 35 and 40 cfs minimums, provided the water can be recaptured without loss in Denver Water's downstream facilities, the resulting lost storage in Cheesman can be recovered in the next runoff, and there is no impairment of water rights. Future improvements (in-stream habitat structures and modification or reducing width-to-depth ratios in areas that are currently wide and shallow) in stream geometry and habitat may allow for lower minimum in-streamflows to maintain or enhance trout population dynamics and structure.

b. Limit Streamflow Fluctuations

Providing stable streamflows is an important tool for enhancing fisheries. Steady transitions from low streamflow to high streamflow, and vice versa, allow fish time to move into new habitats as water levels change. Ideally streamflows would be adjusted to match the life stages of trout as described in the next section. Yet streamflow stability must be placed in the context of many considerations for the South Platte River. Some of these considerations include:

- ideal streamflow for rainbow and brown trout can be very different from natural South Platte streamflow;
- native South Platte streamflows alternate between high snowmelt runoff and low winter baseflow; and
- metro Denver's water use fluctuates from day to day and hour to hour as temperature, cloud cover, precipitation, humidity, and other conditions affect the level of use; and

[2] Computed inflow is reservoir inflow minus reservoir evaporation. Computed inflow = change in storage + outflow.

- the unpredictability of streamflows is exacerbated by the ability of downstream senior water users to "call" water past the upstream facilities at times that may or may not coincide with Denver area water use or weather patterns in the upper reaches of the South Platte basin; and
- there is no substantial storage to act as a buffer between Denver Water's supply (Cheesman) and customer water use downstream. The operating range of Denver's terminal reservoir (Strontia) provides a space of only about 1,500 acre-feet and is expected to be further reduced because of sedimentation from the fires.

Target: See optimum flow ranges in Table 2.

Operations: Denver Water commits to the guidelines in Table 3 for staging of outflow changes (bottom releases) at Eleven Mile and Cheesman reservoirs. During emergencies, maintenance projects, efforts to manage fire impacts , certain water rights constraints, and other conditions described in the Appendix on Enforcement Procedures it may not be possible to meet the guidelines. Denver Water and Aurora will strive to limit streamflow fluctuations below Spinney, Eleven Mile, and Cheesman reservoirs within the operational limits described above. Particular emphasis will be placed on limiting fluctuations that could adversely affect the various life stages of brown and rainbow trout. Annual operating plans described in Section E will reflect this emphasis. Eleven Mile Reservoir when full and spill provides damping of streamflow fluctuations.

Table 3: Outflow Ramping Schedule
Maximum Change per Hour - % of Existing Flow

Flow Range (cfs)	Eleven Mile	Cheesman	Roberts Tunnel
0-50	17	25	17
51-100	11	17	15
101-200	14.5	20	19
201-400	9.5	14	12
401-600	7	11	10
601-800	6	9	9
>800	5	8	--

c. Temperature Moderation

The opportunity to moderate stream temperature below a reservoir occurs when:
- water temperature varies with depth inside the reservoir, and
- water can be selectively withdrawn at various depths to blend temperature.

In reservoirs with only one outlet level, blending can only be done when the reservoir is full and also discharging over the top of the dam (spilling).

CDOW recommends stream temperatures below dams be maintained between 50° and 60° F from June 1 through September 30. This temperature range enhances rainbow and

brown trout growth and physiology. Rainbow and brown trout growth are maximized at temperatures ranging from 65° F to 68° F, but the incidence of physiological stress and susceptibility to disease and parasitic infections increases at these higher temperatures. Warmer water, greater than 60° F, may also enhance western white sucker hatching success, growth and physiology while negatively impacting sportfish management objectives. Maintaining colder temperatures during the summer and early fall period will give a margin of error during low streamflow periods and will hopefully extend the cooling enhancement farther downstream.

The other temperature effect is the increase and decrease in stream temperature as the reservoir spills and stops spilling. Without time for acclimation, this can result in temporary stress to the trout population. Although trout appear able to survive short-term temperature fluctuations of a couple of degrees (F) per hour, this may cause stress and may interrupt behaviors, such as spawning. Therefore, temperature fluctuations downstream of dams should be kept below a rate of 10° F per day. Where possible, the bottom releases would be adjusted during spills to acclimate the fish to temperature change. It is easier for trout to acclimate to temperature increases than to temperature decreases.

Target: The target stream temperature for dam discharge while spilling is 50 to 60°F from June 1 through September 30 with a desired maximum of 65°F. The target for temperature fluctuations while spilling is less than 10° F per day. However, this will demand the development of new operational guidelines which will take some time to perfect.

Spinney Mountain Reservoir

The opportunities for temperature management at Spinney Mountain Reservoir are very limited. The dam does not have a multi-level outlet structure that would permit releases from a variety of elevations. The reservoir typically spills only in wet years, so blending releases from the spillway and outlet works is not feasible. For reasons of dam safety as well as water rights accounting, Aurora prefers to make releases through the outlet works rather than over the spillway when the reservoir is full.

Eleven Mile Reservoir

Background: Except for the drawdown during the drought of 2002, Eleven Mile Reservoir is typically kept full and spills water over the spillway. Relatively warm surface water spilling from Eleven Mile Reservoir during the summer can result in warmer discharge temperatures than are desirable for rainbow and brown trout. Ideal operation for trout habitat would be continuous bottom releases from the dam. Since Eleven Mile is a drought reserve, the reservoir is typically full and spilling which results in storage of over 5,000 acre-feet of additional supply in the surcharge pool. The surcharge pool is important reservoir storage.

In 1988 and 1989, water temperature was measured directly below Eleven Mile Reservoir dam (Station 1), at the mouth of Eleven Mile Canyon (Station 2), and at the Happy Meadows campground area (Station 3). The water temperature exceeded 60° F from June 24 through September 9 at Station 1; from June 6 through August 26 at Station 2; and from June 6 through August 26 at Station 3 in 1988.

Tasks: Within 5 years of acceptance of this Plan by the Forest Service, Denver Water will install new outlet valves using stream temperature and minimum fish flow release criteria in the design of the valves. The existing outlet valves do not allow for sustained releases below approximately 100 cfs and cannot be used for temperature modification. Denver Water will also install temperature gages in the spillway and outflow gage. If possible, CDOW or USFS will install a temperature monitoring device about halfway down Eleven Mile Canyon.

Operations: When Denver Water has filled the surcharge pool at Eleven Mile, which typically occurs in July, bottom releases will be made when possible to meet the temperature target below the dam through September. It is expected to take some experience in blending spill and bottom releases before the target is consistently met. Through experience, Denver Water will develop a system for blending releases so as to minimize operational changes while meeting temperature targets. When possible, Denver Water will provide a temperature gradient of less than 10°F per day when making the transition into and out of bottom releases. In the future, bottom releases for moderating wintertime stream temperatures will be considered.

Bottom releases will be made provided they can be recaptured without loss in Denver Water's downstream facilities, the resulting lost storage in Eleven Mile can be recovered in the next runoff, and there is no impairment of water rights. During years of high streamflow, reservoirs downstream of Eleven Mile may be full. Under these circumstances, Denver Water may not be able to make bottom releases for temperature moderation. Bottom releases will not be made if it would cause the reservoir to stop spilling. Starting no later than October 1, bottom releases would be discontinued to allow the surcharge pool to fill and complete the cycle. However, while the surcharge pool is being filled the minimum streamflow will be maintained as described in this Plan. Implementation of these operations will be reviewed at the Annual Operations Meeting.

The limited water available for supplemental bottom releases will first go toward maintaining minimum streamflow and secondarily for temperature moderation.

Cheesman Reservoir

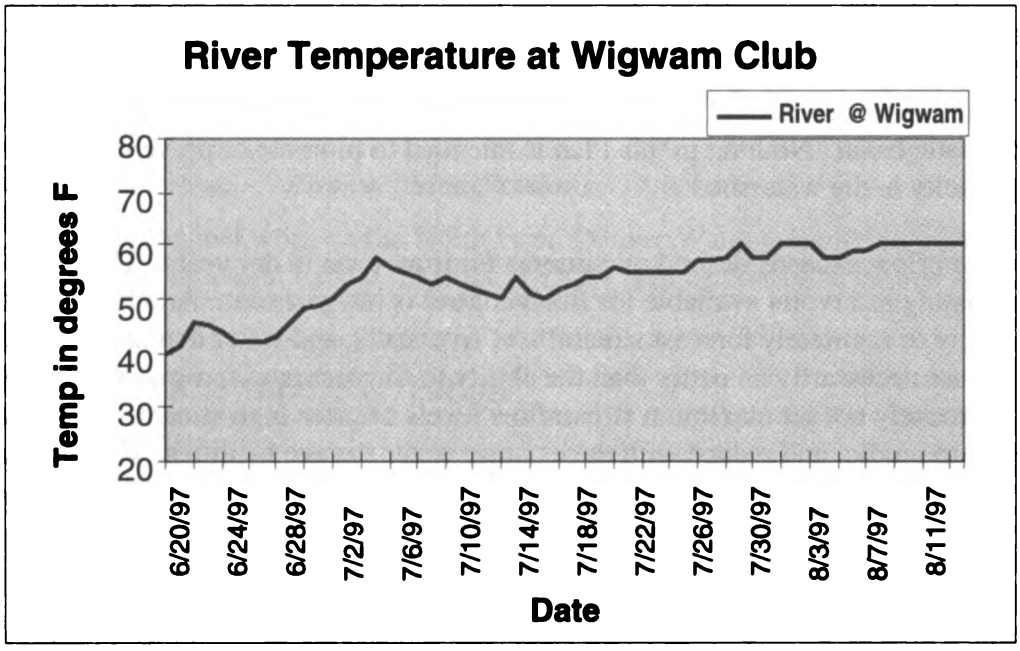
Cheesman Reservoir, as the workhorse of Denver Water's South Platte system, usually makes bottom releases except for a few months during wet years. During those spill events, downstream temperature could rise above 60° F.

An experiment was conducted in 1997 to test the reservoir operator's ability to manage temperature downstream of the reservoir during spill operations. Inflows were relatively low, which resulted in a relatively easy-to-manage situation. As a result, daily temperature changes were kept to within a few degrees. A year similar to 1995 presents a much greater challenge where the inflow during spring runoff essentially tripled within three days to a streamflow that nearly exceeded the capacity of the reservoir outlet works. Although managing temperature under such high streamflow is beyond the physical capabilities of the reservoir, temperature can be moderated at other times that the reservoir is spilling.

Tasks: Denver Water will install temperature gages in the spillway, the valve manifold, and the streamflow gage downstream of the dam.

Operations: When possible, Denver Water will adjust the proportion of spillway discharge and bottom releases to 1) keep the downstream temperature while spilling below 60° and 2) provide a temperature gradient of less than 10° F per day while making the transition into and out of spilling. When the outflow is 40 cfs or less, the goal is to keep the downstream temperature while spilling below 55° F.

Figure 2: River Temperature at Wigwam Club



d. Managing Peak Streamflows

Rainbow and brown trout are not native to the South Platte River and can have difficulty reproducing in the naturally low wintertime streamflows and high spring runoff. High streamflows, although naturally occurring, may negatively impact the recruitment of young fish into the population. High streamflows can also negatively impact rainbow

trout spawning and redd success rates if streamflows remain high during spawning activities (redd selection process) then decrease during post-spawning and leave redds dry. However, high streamflows are also periodically necessary in order to maintain channel stability and capacity, and to transport fine sediment downstream. Therefore, flows will be managed, when possible, to attenuate peak flows during some years to benefit fish recruitment, while some peak flows during other years will be passed, when possible, for channel maintenance. This will include, when practical, attempts to flush sediment caused by fires so long as it does not cause sedimentation, water quality, or other impacts to the downstream facilities of water users.

As part of the annual operating plan, the participants will determine whether to attempt to provide a channel maintenance flow during spring runoff or attempt to attenuate peak flows to enhance fishery recruitment. The goal will be to maintain successful year-class recruitment for brown and rainbow trout populations at least once every three years.

Spinney, Eleven Mile and Cheesman reservoirs are not designed, sized, or operated for flood control. Large amounts of additional storage would be necessary to manage the naturally high runoff in the South Platte. Typically at the start of runoff, Cheesman Reservoir has had approximately 10,000 to 30,000 acre-feet of space to fill. In wet years, such as 1995, the space is filled within a matter of a few days, without allowing an opportunity to reduce peak streamflows. Reservoirs naturally attenuate peak streamflows even when full due to the configuration of the reservoir and spillway. (See Figure 10 for an example.) It is understood that this goal of reducing peak streamflows is intended to apply to managing operations only and is to work within the existing storage capacity in the South Platte basin. Nothing in this Plan is intended to promote or prevent additional storage capacity in the watershed.

Natural streamflow exceeds desired maximums for trout even in dry years. The storage space in existing reservoirs available for flood control is insignificant. Another limitation is the inability to accurately forecast streamflow, river calls, and water demands. Such predictions are necessarily no better than the ability to forecast long-term weather. The Plan has purposely not set maximum streamflow levels because high streamflow events are difficult to predict and reduce with the existing water storage facilities. Obviously, the continued existence of healthy fisheries below Spinney, Eleven Mile, and Cheesman reservoirs indicates that the brown and rainbow trout populations are fairly resilient to high flow events in these tailwater areas.

Operations: Due to limited storage space and water rights constraints, reducing peak streamflows is the least attainable of the four fishery management goals. There are few opportunities to attenuate peak streamflows by reservoir operations. Denver Water and Aurora will strive to operate Spinney, Eleven Mile, and Cheesman Reservoirs to attenuate peak streamflows recognizing the limited potential.

3. North Fork Plan

For a description of North Fork water operations see Section III.C. For fishery resources, see Section III.A.5.

a. Ramping Flows

Denver Water commits to a gradual ramping schedule for flow changes from the Roberts Tunnel as shown in Table 3. This ramping schedule will help to minimize impacts to trout populations during flow changes. It may not be possible to meet the ramping guidelines during emergencies, maintenance projects, water rights constraints, and power plant upsets.

b. Winter Streamflow

Most winters the Roberts Tunnel discharges at about 75 to 100 cfs which provides important augmentation of fish habitat. Winter deliveries have also provided an important means of managing ice accumulation along the river. In wet years such as 1984 and 1995 the tunnel was not operated in the winter. Winter releases are expected to increase as more people move into Denver Water's service area.

c. Peak Streamflow

Flow easement agreements and channel capacity limit the Roberts Tunnel releases during high streamflows.

d. Channel Modifications

When doing channel work on the North Fork, Denver Water commits to maintaining or enhancing the structural habitat for trout. CDOW will be consulted on this work.

E. Whitewater Recreation

1. Overview

The portion of the South Platte River covered by this Plan is used by over 12,000 kayakers, rafters, and canoeists each year. It accommodates 70 percent of the whitewater boating in the Pike National Forest. It offers over 40 miles of Class I-V whitewater boating opportunities. The two forks of the South Platte are especially important because of late season supplemental streamflows for water supply and their close proximity to the Denver metro area.

2. Mainstem of the South Platte

This Plan recognizes that whitewater boating on the mainstem of the South Platte is an important recreational activity that should be considered along with other needs for

streamflow management. Where other objectives can be met and there is still flexibility to manage streamflows on the river, it is desirable to maintain and enhance streamflows for whitewater recreation. Some streamflow adjustments, such as timing and minor changes in volume to enhance whitewater recreation, within the limited flexibility of water supply demands, are encouraged by this Plan.

Desirable streamflows on the mainstem for whitewater recreation are generally 200 cfs or more from Lake George to Cheesman Reservoir and 300 cfs or more from Cheesman Reservoir to the confluence with the North Fork. It is recognized that peak spring flows are desirable for whitewater recreation and will continue to occur given the limited capability of the water supply system to control runoff.

3. North Fork of the South Platte

The North Fork of the South Platte is a prime whitewater recreation resource. Bailey Canyon, in particular, is a nationally recognized whitewater resource. Enhanced streamflows from the Roberts Tunnel for water supply offer extended season boating opportunities on the North Fork. It is recognized that this watercourse carries unnatural supplemental streamflows for water supply, and this will continue and is supported by this Plan. The Roberts Tunnel will continue to be operated solely for water supply purposes, but some attempt to manage flows, such as timing and minor changes in volume to enhance whitewater recreation, is also encouraged by the Plan. However, this Plan will not require changes to seasonal and annual volumes discharged from the Roberts Tunnel.

Many needs for fishery management are compatible with whitewater recreation, and adjustments for fish management will frequently benefit, or at least not adversely affect, whitewater recreation. Minimum flows are an example. However, high flows, which may be considered undesirable for fish habitat management and productivity, are desirable for whitewater recreation. Desirable streamflows for whitewater recreation on the North Fork at Bailey are over 200 cfs, with an optimum flow of 300-500 cfs.

F. Annual Operating Plans

This section identifies the general coordination and review procedures between Aurora, Denver Water, the Colorado Division of Wildlife, and any other interested groups such as Trout Unlimited, the Wigwam Club, and American Whitewater. Denver Water and Aurora will hold an operation meeting each spring to consult with participants in this Plan and other interested groups. Preliminary operating plans will be developed based on spring runoff forecasts. Denver Water will consult the attached Tailwater Trout Habitat handbook (Appendix B) and the goals for limiting fluctuations described in Section II.C.2.b. in preparation of its operating plans. Operating plans will be adjusted according to actual weather, streamflow, water use and demand, water rights calls, system constraints and other operating conditions.

The annual operating meeting will be a chance for the operators and other interested groups to learn from their experience of managing under this Plan. The annual meeting will include a discussion of how well the goals were met the previous year, and how operations can be improved in the future. The operations of stream temperature moderation below Eleven Mile will be reviewed. Also reviewed will be stream flow and stream temperature records (provided by Denver Water), fish population data (provided by CDOW), and the channel maintenance monitoring program (data to be provided by USFS). Impacts from fires and possible adaptation to this Plan will be reviewed. Adaptations to the Plan will be performed as described in the Appendix on Enforcement Procedures. The participants will also determine, based on snowpack and water supply conditions, whether to attempt to operate to attenuate peakflow or to provide a channel maintenance flow during spring runoff.

III. DESCRIPTION OF RESOURCES

A. Trout Fisheries

1. Resource Overview

The mainstem of the South Platte River represents one of the more important and heavily used fisheries in the state. Rainbow and brown trout comprise the vast majority of trout biomass in this reach. Rainbow and brown trout are imported sport game fish that are not naturally adapted to the streamflow and habitat in Colorado. Rainbow trout are most common below Cheesman Reservoir in the Cheesman Canyon segment of the river where they have, until recently, maintained self-sustaining populations with very high biomass. In fact, these areas are considered "world class" fisheries and are designated as Gold Medal waters. Unfortunately, the rainbow trout are declining in this area due to infection by whirling disease. Apparently this affects juvenile rainbow trout during the first year of their life. Recent data indicate that rainbow trout biomass in Cheesman Canyon is declining and that there has been little recruitment of the younger year classes over the past several years. There has been little impact on brown trout below Cheesman, and there have not been any reported whirling disease impacts to either rainbow or brown trout below Eleven Mile Reservoir.

In the past the area of interest has been stocked with rainbow trout, except for Cheesman and Wildcat canyons.

In rivers such as the South Platte, where fishing harvest is limited by special regulations, trout population fluctuations from year to year are related largely to habitat availability, changing environmental conditions, diseases, streamflow, and to a lesser extent, stream temperature. Streamflow related bottlenecks to trout populations generally occur during extreme streamflow conditions, either the high flow period during spring runoff or the low flow winter period.

Sedimentation and other impacts for the 2002 fires may reduce fish habitat and populations.

2. Spinney Mountain to Eleven Mile Reservoir

The primary sportfish species managed in this reach are brown and rainbow trout. Northern pike, snake river cutthroat trout and kokanee are periodically sampled in this reach, but these species are not used to sustain riverine fishery management goals. Non-sportfish species include western white and longnose suckers (native to South Platte drainage). Brown trout maintain a self-sustaining population in this reach. Rainbow trout natural recruitment has been severely restricted since 1991 primarily due to whirling disease factors. Fingerling size (4 to 5 inch) rainbow trout have been stocked in the fall since 1992 to increase rainbow trout abundance in this section.

Habitat characteristics in this reach range from a stream habitat improvement area completed by the CDOW research section in 1993, to long shallow glides, runs and riffles interspersed with deep pools usually on the outside river bends and an overall large width-to-depth ratio (that is, wide and shallow). The habitat improvement area directly downstream from Spinney Mountain Reservoir dam now has a decreased width-to-depth ratio, several constructed willow/gravel bars, rock vortex structures, better pool spacing along the stream, and improved bank stabilization. Future habitat improvement projects using similar techniques are scheduled for the remaining river areas downstream from the 1993 project site.

CDOW fishery management objectives include maintaining and enhancing wild brown trout and rainbow trout populations. Supplemental stocking with 4 to 5-inch rainbow trout in the fall to increase rainbow trout recruitment will continue as necessary. Management regulations include Gold Medal Water status, flies and lures only, catch and release for all fish species in this entire segment.

3. Eleven Mile to Cheesman Reservoir

The primary sportfish species managed in this reach are brown trout and rainbow trout. Northern pike, yellow perch, cutthroat trout, and kokanee salmon are periodically sampled downstream from Eleven Mile Reservoir (where they are part of the reservoir fishery management program); however, these species are not used to sustain riverine fishery management goals. Non-sportfish species include western white sucker, longnose sucker, and creek chub (all three are native to the South Platte drainage). Rainbow and brown trout are self-sustaining throughout the entire reach. Catchable-size rainbow trout (average length 10 inches) are supplementally stocked from Springer Gulch bridge downstream to the water diversion structure at the mouth of Eleven Mile Canyon and in the Happy Meadows campground stretch to support higher angling pressure typically found in these areas.

Habitat characteristics in Eleven Mile Canyon range from high gradient, boulder cascades and rapids to long shallow riffles, runs and glides. Erosion and depositional areas exist in

manv of the low gradient areas, because of unconsolidated banks heavy recreational use and increased road use. Riverine habitat below the canyon mouth is channelized around Lake George, then it is primarily wide and shallow with little riparian cover downstream from Highway 24 to the Happy Meadows campground stretch. Riparian habitat characteristics improve through the Happy Meadows campground area downstream through Wildcat Canyon, although channel morphology tends to remain wide and shallow except where canyon geological features decrease width-to-depth ratios in some areas down to Cheesman Reservoir. Further details regarding riverine habitat characteristics can be found in the USFS Wild and Scenic River Study and Draft LEIS.

CDOW fishery management objectives include maintaining and enhancing the wild brown and rainbow trout populations from Eleven Mile Reservoir Dam downstream to Cheesman Reservoir, and supplemental catchable-size rainbow trout stocking in lower Eleven Mile Canyon and Happy Meadows campground reaches. Management regulations include artificial fly and lure only—2 trout 16 inches or longer bag and possession limit from Eleven Mile Canyon Dam downstream to Springer Gulch bridge in Eleven Mile Canyon, and standard daily bag and possession limits from Springer Gulch bridge downstream to Cheesman Reservoir. The Wildcat Canyon segment—from Beaver Creek downstream to Cheesman Reservoir—is a Wild Trout water, meaning no supplemental stocking occurs in this reach.

4. Cheesman Reservoir to Confluence with North Fork

At present, the highest trout biomass levels in the South Platte River occur in Cheesman Canyon. The fish populations benefit from the cooler summer and warmer winter bottom releases from Cheesman Reservoir immediately upstream. This "tailwater" allows for more stable, beneficial conditions that can occur downstream in the tailwaters of a reservoir, such as Cheesman Reservoir. The streamflow regime can, at times, be modified to reduce peak high streamflows and augment low streamflows to provide a more stable streamflow regime. In addition, tailwaters have substantially less sediment and turbidity along with elevated levels of nutrients. These conditions favor the overall productivity of the tailwater section of the river and lead to higher trout production. Trout biomass increased in Cheesman Canyon in the late 1970s when special fishing regulations were implemented in this section of the river. Another important factor was the presence of high-quality habitat for fish in this section. Lastly, the warmer water released from the bottom of Cheesman Reservoir in the wintertime allows for improved fish growth, keeps the river ice-free, and allows the food source to grow during the winter. (See Chadwick 1997 for further information on tailwater trout habitat.)

In 1976 a catch and release regulation was established by the CDOW for the Cheesman Canyon section of the South Platte River. Both rainbow and brown trout biomass increased dramatically during the late 1970s so that by 1979 trout biomass in Cheesman Canyon was the highest in the state. Cheesman Canyon is a Gold Medal fishery.

5. North Fork

The North Fork fishery is comprised primarily of brown trout, with rainbow trout constituting a small portion of the biomass. Longnose and white suckers are also found in the system from Grant to the confluence with the mainstem. Special fishing regulations are not in place on the North Fork because the fishery is not productive enough to warrant special regulations. Biomass estimates for the North Fork are approximately seven times lower than biomass estimates on the mainstem below Cheesman Reservoir. Brown trout are self-sustaining in this stream. The CDOW stocked catchable (approximately 10 inches) rainbow trout from Grant down to the confluence with the mainstem until 1997. Due to the whirling disease policy, the CDOW now stocks subcatchable (approximately 4 inches) rainbow trout from Grant to the mainstem to improve the rainbow fishery.

From previous data it is believed that the fishery in the North Fork is limited by acid mine drainage and water fluctuations, with cold water temperature being a potential limiting factor. The acid mine drainage limits growth and minimizes trout reproductive potential. As in the mainstem, water fluctuations can also limit productivity of a fishery by stranding fish when water drops suddenly and pushing them downstream if water flow increases quickly. More information is needed to determine if water temperature limits growth in the North Fork. Trout in the North Fork have not exceeded 13 inches at CDOW sampling stations.

B. Whitewater Recreation

Description of South Platte Whitewater Recreation

Mainstem

Lake George to Cheesman Reservoir

This is a segment of river previously considered unrunnable but which is seeing use by an increasing number of top end paddlers. It is a beautiful wilderness run falling into the category of adventure kayaking. It contains Class V+ rapids with numerous portages. There are some access problems in this stretch of the river.

Cheesman Dam to Deckers

This is a relatively short but very nice Class III to IV-wilderness-type run which is seldom used due to access difficulties at the put-in and through the Wigwam Club.

Deckers to Confluence with North Fork

This section of the South Platte is a very important Class II to III run for whitewater boaters. It is attractive to the paddling community due to periodic late season flows, its proximity to the Denver metro area, and good access along several segments. It offers very good beginner and training opportunities.

North Fork

Bailey to Pine

This section of the North Fork, known as Bailey Canyon, is an upper end Class IV-V whitewater run with a national reputation among whitewater paddlers. It passes through a remote canyon, with the most wild sections of the river in a real wilderness-like setting on National Forest lands. It is especially attractive because it offers rare late season Class V paddling in close proximity to the Denver metro area. There are some access problems in the upper end. Until recently there were also access difficulties in the lower end, but these were solved through the development of a new county park upstream of Pine.

Pine to Buffalo Creek

This is a short section that is seldom run due to the minimal whitewater found there and access problems with one of the area landowners.

Buffalo Creek to Confluence

This section, sometimes called the Foxton run, is a very important Class III-IV section of the North Fork. It offers many public access points and different length and difficulty of runs. It too is especially important to whitewater paddlers due to late season supplemental flows provided by transmountain diversion via the Roberts Tunnel and its close proximity to Denver.

C. Water Supply

1. Water Rights

In Colorado, water rights are established according to the Prior Appropriation Doctrine which can be summarized as "first in time, first in right." Whoever can divert water for a beneficial use, and obtain a decree from State Water Court, is entitled to continue to divert the same amount of water for the same use. Water rights are prioritized or ranked within a basin according to court date and appropriation date, which is the date the water was first diverted and used. In general, the older the dates, the more firm the supply of water. A water right is real property, just as is the ownership of land. Water rights can be bought and sold separately from the land they originally served.

The use of a water right is limited to the beneficial uses included in the decree. For instance, Denver's water rights are generally decreed for municipal uses. In some cases this might prohibit the use of Denver's water to provide minimum fish flows unless those flows were also providing a decreed municipal use.

The three basic types of water rights are direct flow, storage and exchange. Direct flow water is usually used the same day that it is diverted. It is typically diverted for irrigation and potable uses. Storage rights are used to fill reservoirs. A storage right is typically limited to the volume of the reservoir. Water that is available for storage under a storage right, but which otherwise is bypassed by the reservoir owner, may be counted against the

volume of water available under the storage decree. This concept of "storable inflow" makes it difficult to reserve space in a reservoir with which to capture anticipated peak runoff. The reservoir operator takes a risk of not filling the reservoir in order to skim peak runoff. An exchange right allows a reservoir to continue to store water in a reservoir even after the storage right is out of priority. This is in accomplished by supplying downstream senior rights with other water in trade for water stored in the reservoir.

The State Engineer and his network of Water Commissioners administer water rights, making sure they are diverted in priority. If a senior water right holder is not receiving their entitlement, they may place a call on the stream through the Water Commissioner, thereby limiting the diversion of upstream junior water rights. For instance, most senior water rights in the South Platte basin are irrigation rights on the eastern plains dating back to the 1860's. The owners of those rights typically place their call on the river, forcing Denver Water and Aurora to pass all natural water through their reservoirs. Denver Water and Aurora are sometimes able to exchange or trade water with the senior water rights holder and thereby store water.

2. Native Streamflows

The operation of water supply systems is affected by native (natural) runoff of individual years and the cycles or groupings of years. Native streamflows are the surface water streamflows that would occur without the influence of humans. They reflect the hydrology that existed prior to the development of water supply systems or the hydrology that would exist if the effects of water supply systems were removed. Most streams and rivers in Colorado have their native streamflows altered by irrigation, municipal diversions, and reservoirs. As a result, there is little or no measured data of native streamflow for most streams in Colorado. However, a hydrologist can derive reasonably accurate native streamflow data from historical diversion data. Conceptually this is done by using historical non-native streamflow data and:

subtracting out historical water importations (i.e., transmountain diversions)
adding back in historical reservoir evaporation
adding back in the historical diversions
subtracting out historical irrigation and municipal return streamflows
subtracting out storage releases from upstream reservoirs.

Figure 3 shows the annual native streamflows for the South Platte from 1916 through 1996. Using the same data, Figure 4 shows the ratio as compared to average annual native streamflows for the same time period. As these two figures show, there is substantial variation in native runoff. These variations occur from one year to the next along with substantial periods of consecutive wet years and dry years. The operation of water supply systems is not only dependent on these streamflows in the South Platte but also on the streamflows that occur in the various other basins from which entities such as Denver Water and Aurora obtain their water supply. The Streamflow Management Plan seeks to alter the naturally occurring streamflow fluctuations to benefit fisheries and whitewater recreation.

Figure 3: Native Flows, South Platte River at South Platte, 1916-1996

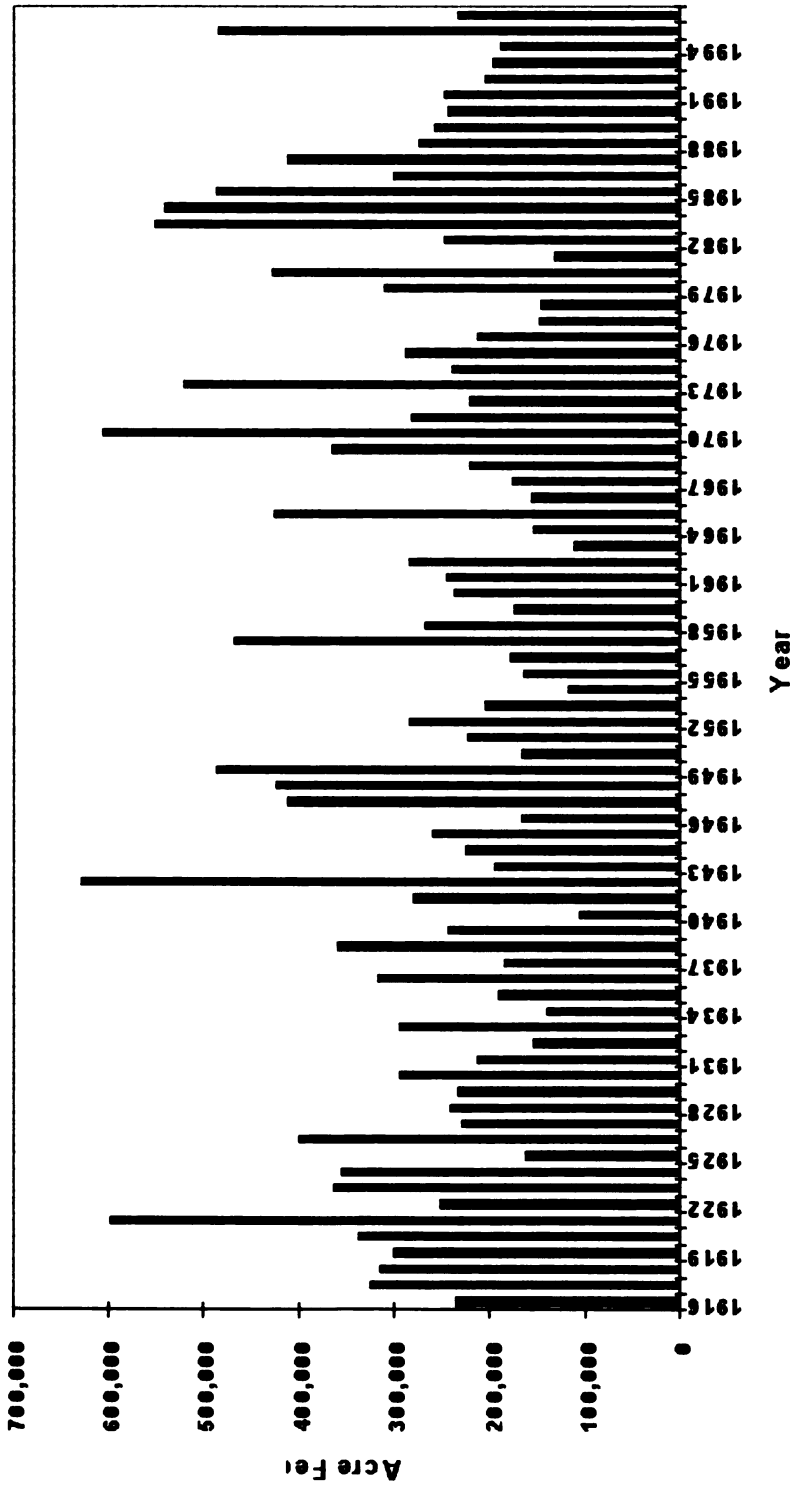
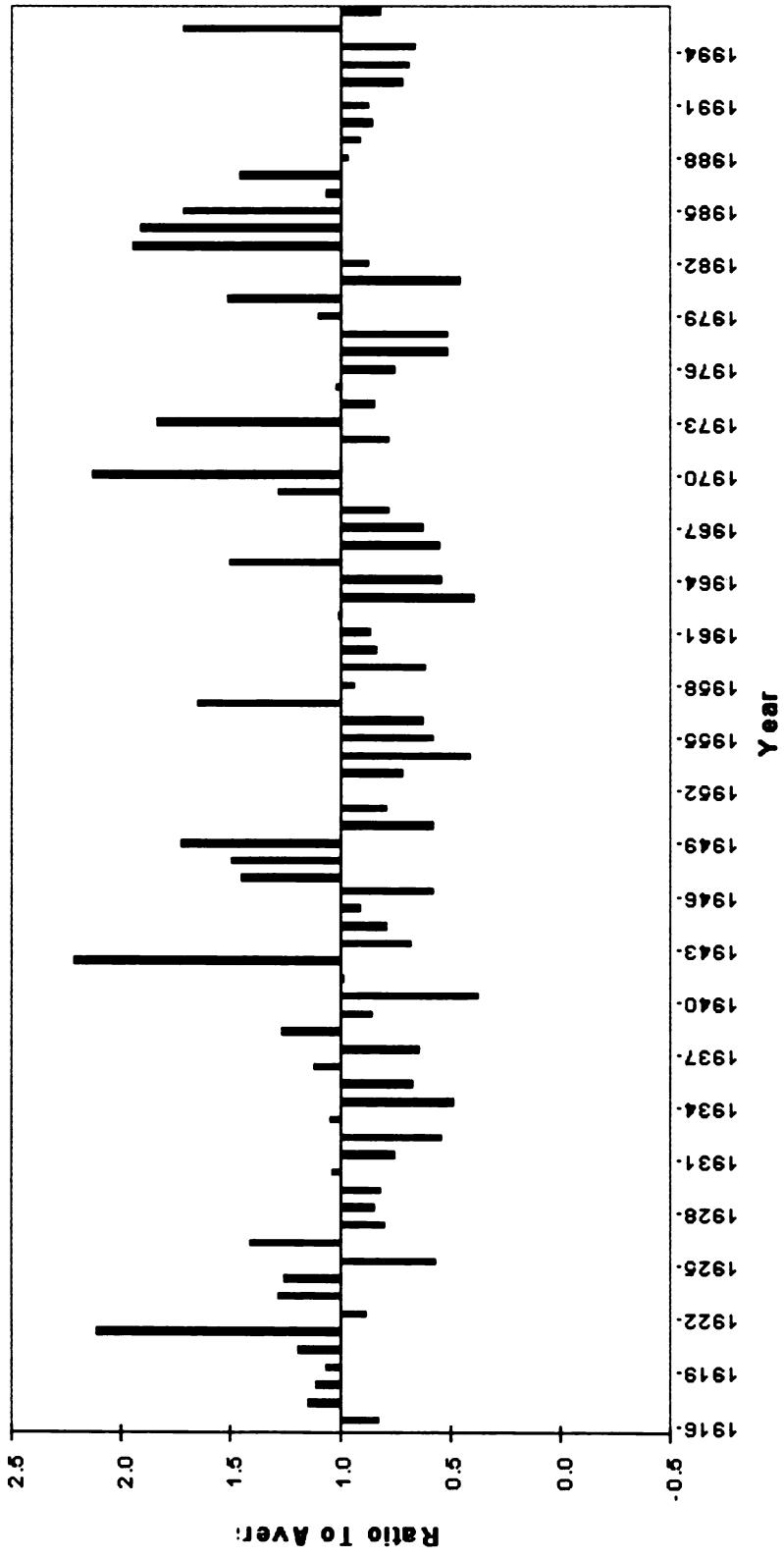


Figure 4: Native Flows Ratio to Average, South Platte River at South Platte, 1916-1996



3. *Historic Streamflows*

In order to gain an understanding of historic streamflows, Table 3 shows seasonal historic outflows from Eleven Mile and Cheesman reservoirs for the time periods 1947 through 1996 and 1985 through 1996. The later 1985 - 1996 time period is more reflective of current operations, but does not include significant periods of successive dry years. The two seasons, April 1 - July 31 and August 1 - March 31, coincide with the periods of the target goal streamflows in the Plan (Table 2). As expected, the longer time period (1947–1996) contains more extreme events in terms of low and high streamflows. Also as shown, the daily data has more extreme values than the average monthly values.

Information from this table is displayed later in the Plan in reference to the streamflow goals.

Appendix A contains twenty figures that show historic mean daily outflow from Eleven Mile and Cheesman reservoirs. Figures A1–A10 display Eleven Mile Reservoir mean daily outflow for each year from 1987 through 1996. Figures A11–A20 display Cheesman Reservoir mean daily outflow from 1987 through 1996.

If you're not yet tired of looking at historic data hydrographs, Figures 5–8 are streamflow duration curves of mean daily outflow for Eleven Mile and Cheesman reservoirs for the April 1 through July 31 and August 1 through March 31 periods. The figures show the following conditions:

native streamflow	1947-1991
historic streamflow	1947-1991
historic streamflow	1947-1996
historic streamflow	1985-1996

Also shown on the figures are the minimum, maximum, and optimum streamflow goals that are described later in the Plan.

Figures 5–8 illustrate two facts about how water supply facilities affect South Platte streamflow. First, the naturally occurring low flows in winter are boosted by storage releases from reservoirs. Second, the naturally occurring high flows in spring and early summer are reduced by reservoirs capturing the water. These two characteristics of reservoir operations create tailwater conditions for high-quality trout populations in the river.

Figure 8 shows the peak mean daily inflows to Cheesman Reservoir that occurred each year from 1976 through 1996. As shown, these peak streamflows occurred as early as April and as late as August. The majority of peak streamflows occurred in June. Figure 9 shows the South Platte River streamflows routed from Spinney Mountain Reservoir to Cheesman Reservoir for June 1 to July 31, 1997. This figure shows how Eleven Mile Reservoir reduces peaks and fluctuations in streamflow. As shown, the inflow to Eleven Mile Reservoir fluctuates more widely than does the outflow.

Figure 5: Streamflow Duration Curve, Eleven Mile Reservoir
April 1 through July 31,
Daily Data

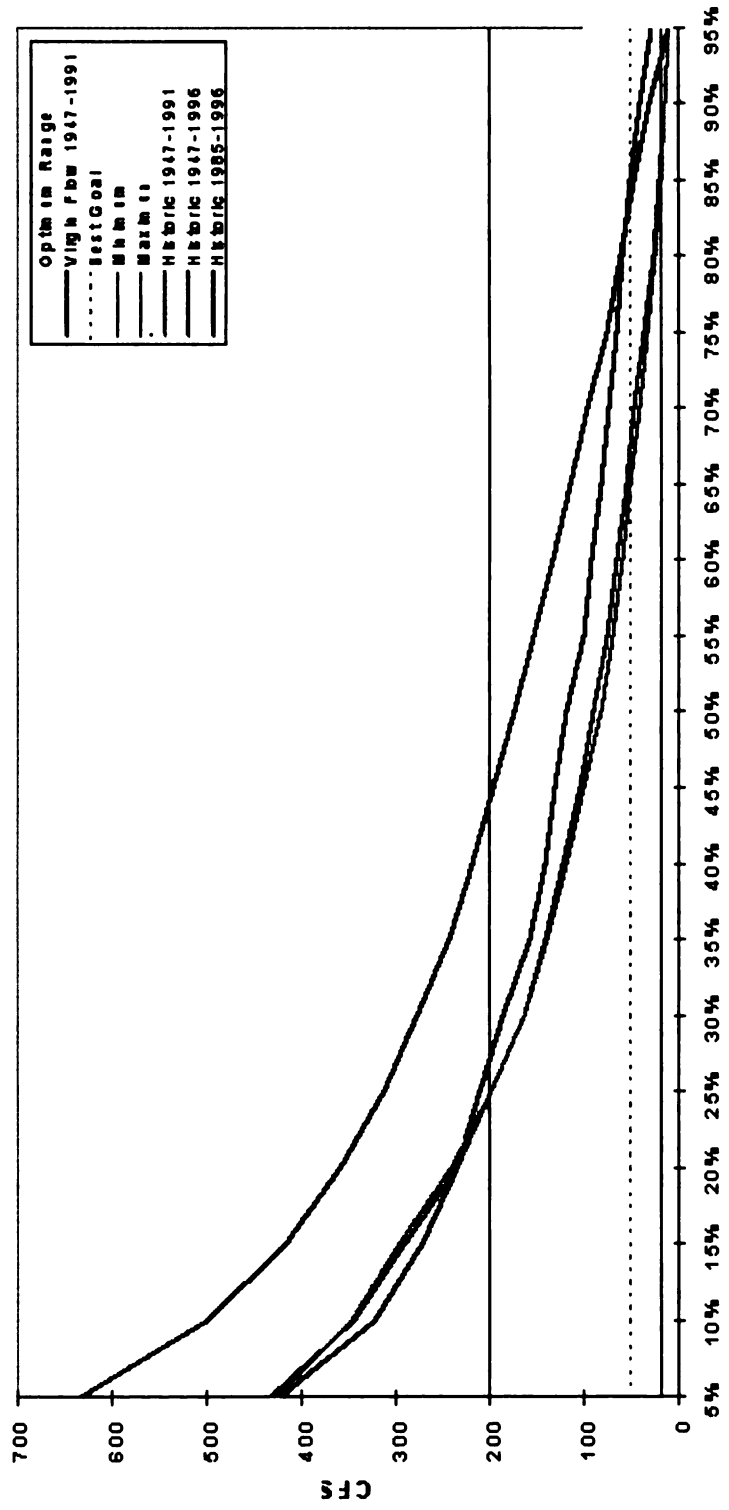


Figure 6: Streamflow Duration Curve, Eleven Mile Reservoir
August 1 through March 31
Daily Data

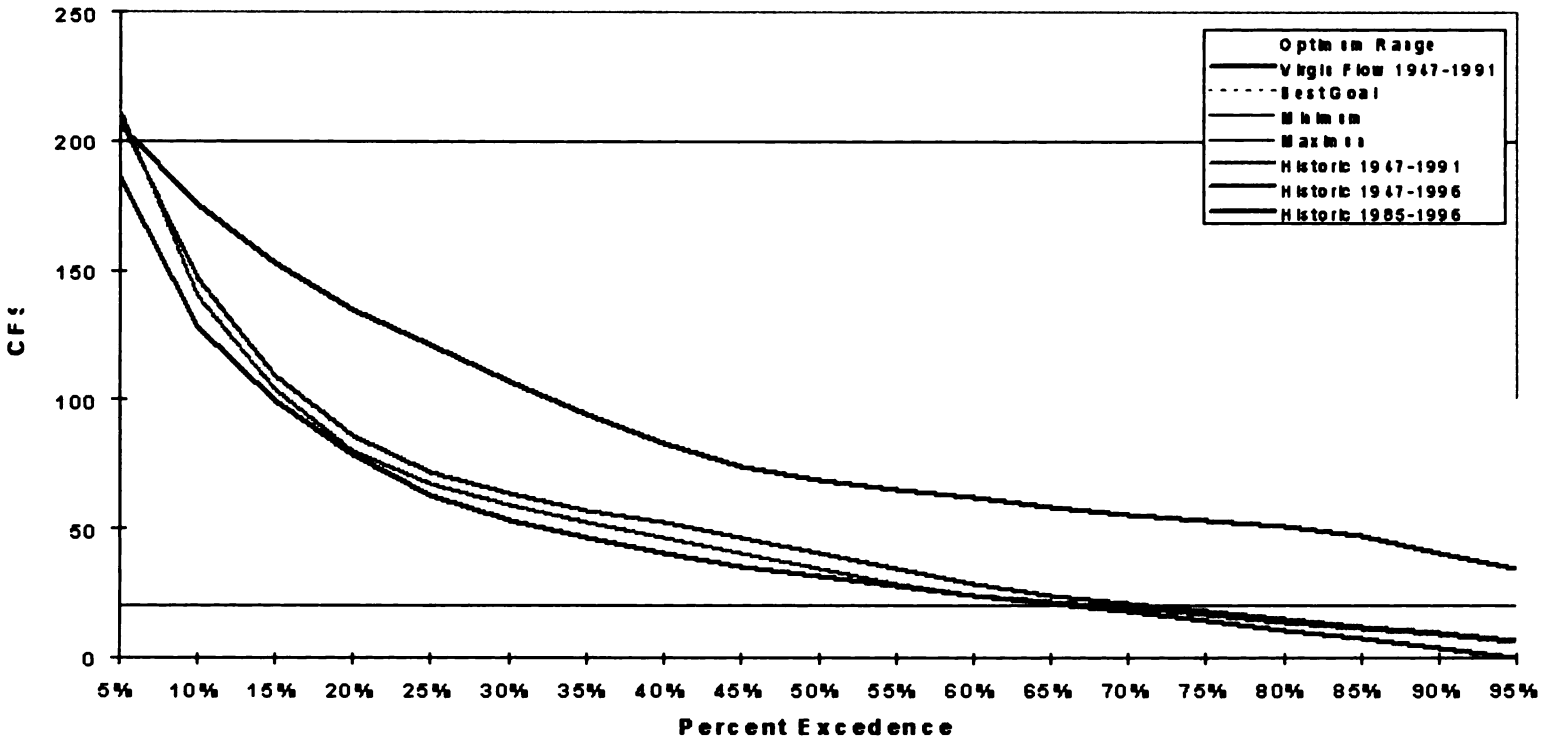


Figure 7: Streamflow Duration Curve, Cheesman Reservoir
April through July

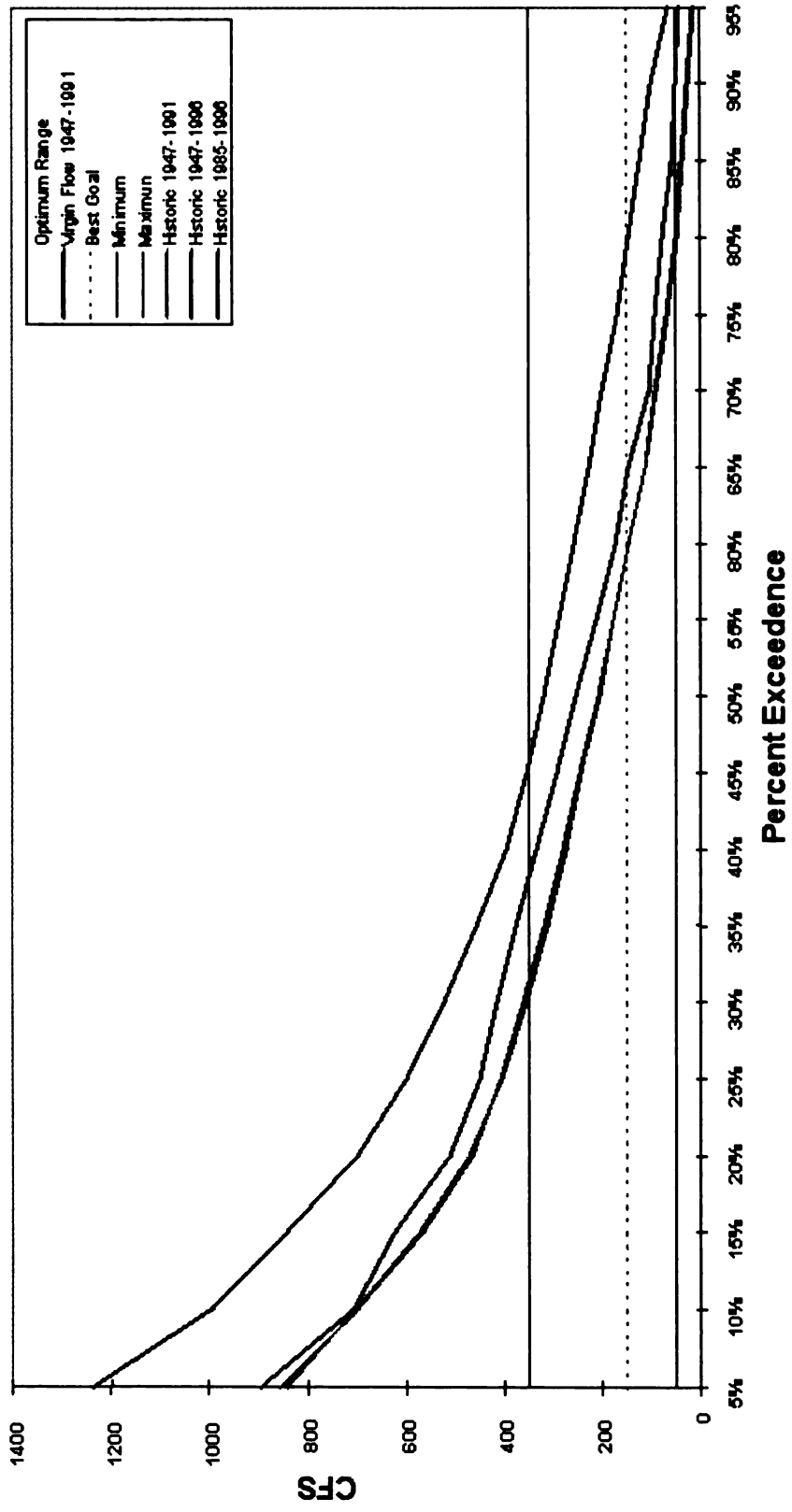


Figure 8: Streamflow Duration Curve, Cheesman Reservoir
August 1 Through March 31,
Daily Data

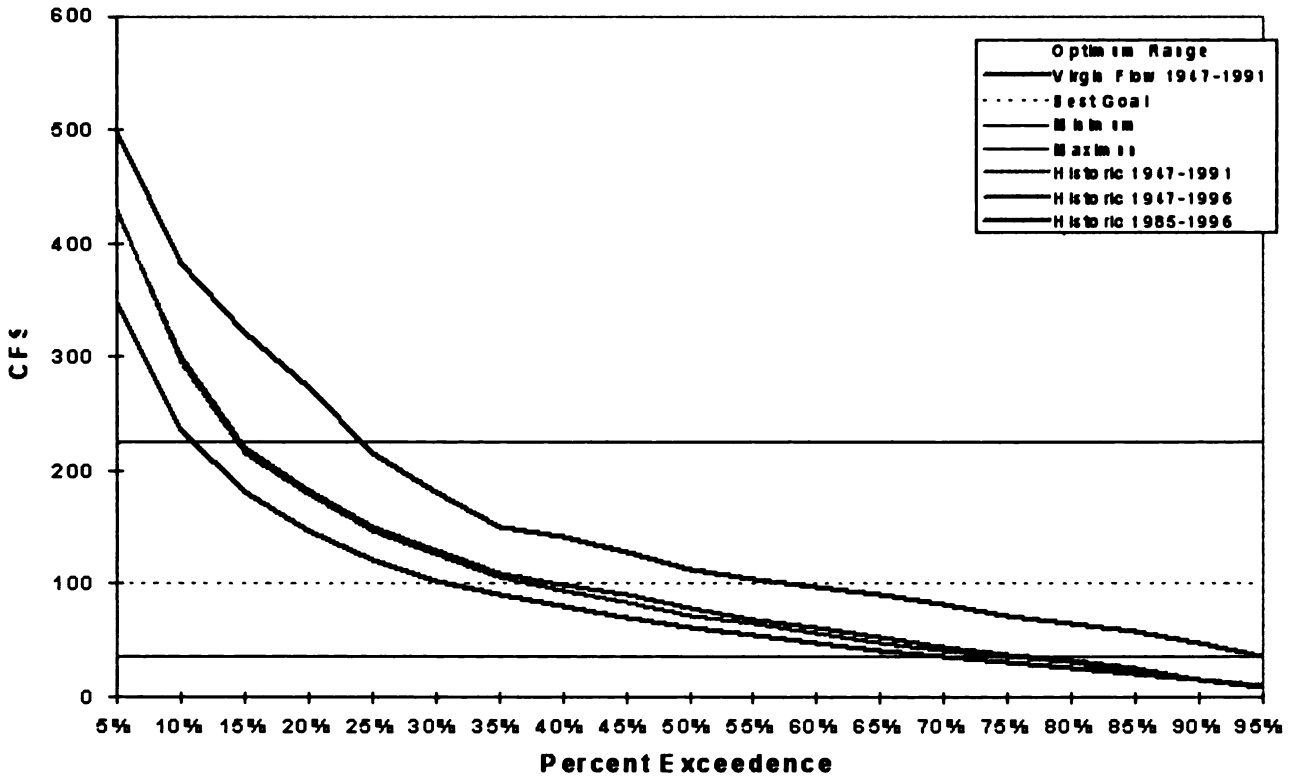


Figure 9: Cheesman Reservoir Peak Daily Inflow, 1976 - 1996

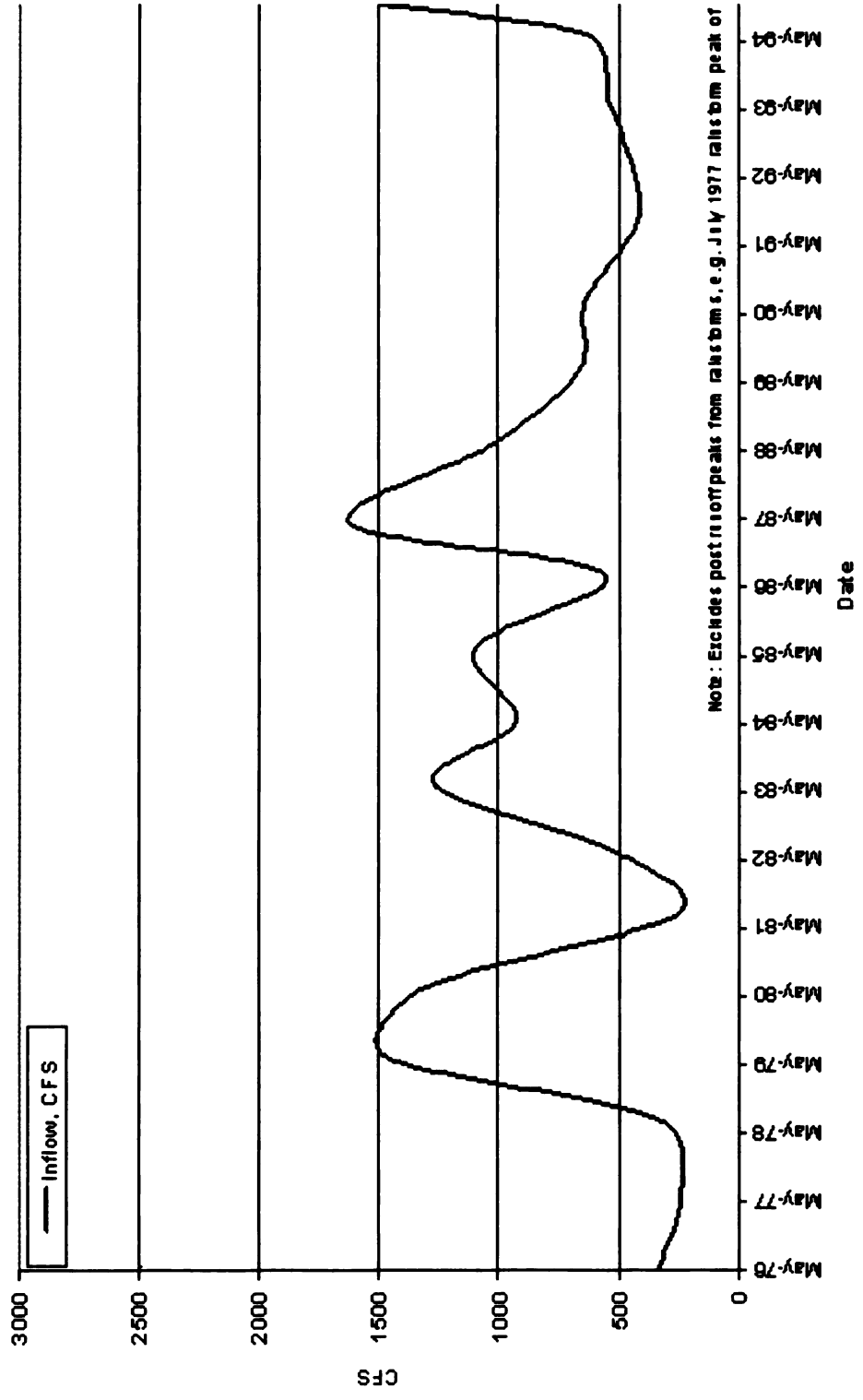
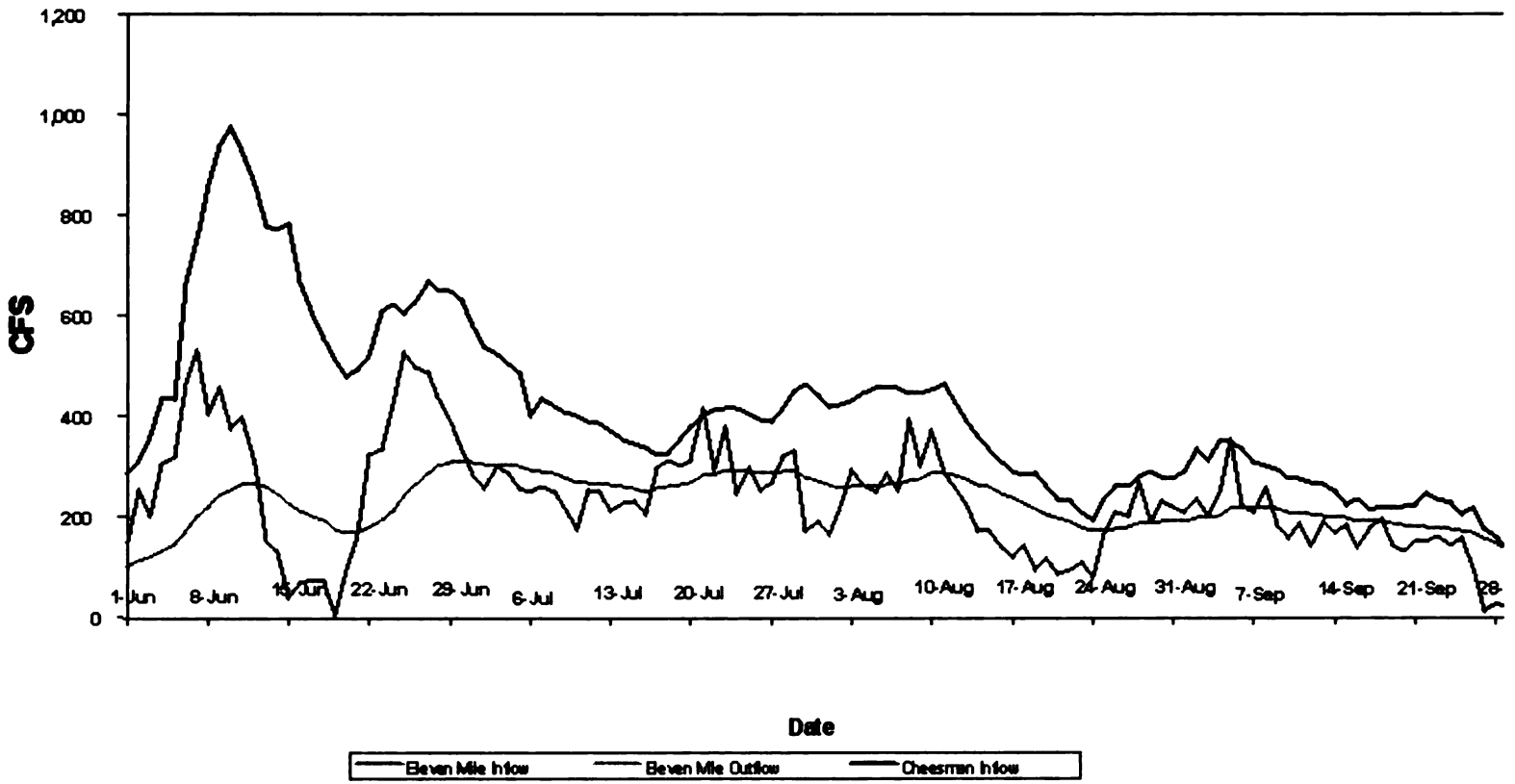


Figure 10: South Platte River Flows Routed from Spinney Mountain to Cheesman Reservoir
June - September 1997



4. Water Facilities

The degree of streamflow management proposed in this Plan is based upon the utilization of native South Platte Basin streamflows, existing Upper South Platte Basin storage facilities, and existing and near-term importations into the Upper South Platte Basin.

The primary source of water for municipalities along the Front Range is from melting snow in the mountains. A limited "window of opportunity" from May to early July exists each year in which to capture enough water from the melting snow to maintain an adequate supply for the entire year. During the rest of the year, natural streamflow is generally inadequate to meet municipal needs. Snowmelt captured in reservoirs is also stored to be used in times of drought. To manage the supply from the snowmelt, water suppliers have built reservoirs to capture runoff and release it for later use.

The amount of water captured by the water supply system varies from year-to-year largely based on four factors:

- Amount and timing of runoff from the melting snow
- Water rights
- Physical constraints, such as reservoir capacity
- Customer use

Reservoirs have increased the naturally low winter streamflows and attenuated the naturally occurring peak streamflows within the constraints of these four factors. Table 4 lists in more detail the constraints on reservoir operations.

Table 4: Reservoir Operation Constraints

LEGAL (WATER RIGHTS)
- In Priority - "Storable" Inflow Rule
- Out of Priority – Bypass or Exchange

WATER SUPPLY AND DEMAND
- Meet Customer's Needs
- No Loss of Yield

FACILITIES
- Dam Safety
- Outlet Capacity
- Spillway Configuration

NATURE
- Daily Variation: Rainstorms
- Seasonal Variation: High Runoff, Low Winter Flow
- Year-to-Year Variation: Droughts and Floods

FORECASTING
- Can't Accurately Forecast Streamflow, Weather, Water Use, River Call, etc

Spinney Mountain, Eleven Mile, and Cheesman reservoirs and the Roberts Tunnel are the primary facilities managed under this Plan. However, to some extent this Plan will correspondingly affect the operation of other components of Denver Water and Aurora's water collection systems, including Antero, Strontia Springs, and Chatfield. These water facilities are needed to ensure that the residents of metropolitan Denver have an adequate supply of water throughout the year and during drought. However, there is flexibility in how these facilities are operated.

Spinney Mountain Reservoir, completed in 1981, with a capacity of 53,651 acre-feet serves as Aurora's primary East Slope storage facility. It stores Aurora's South Park water and Arkansas and Colorado River water imported into the basin through the Otero pump station. As stated in an August 12, 1980 Cooperative Agreement between Aurora and CDOW, "the City shall operate the Reservoir so as to provide a minimum streamflow downstream of the Dam equal to the native streamflow of the South Platte River, or 32 cfs, whichever is less, as measured by the Denver Water Board stream gaging station known as The South Platte River Gaging Station above Eleven Mile Canyon Reservoir near Hartsel. Native streamflows shall be defined as South Platte streamflow entering the Reservoir, less that portion of the streamflow attributable to Aurora's South Park water rights, which historically were not part of the streamflow..." Table 5 summarizes the historic outflow from Spinney Mountain Reservoir.

Eleven Mile Canyon Reservoir was completed in 1932 with a capacity of 97,779 acre-feet. The dam is a gravity arch with a height of 135 feet, making it the second largest storage facility in Denver Water's system and one of the largest bodies of water on Colorado's East Slope. It has a length of over six miles. It is a popular recreation spot managed by the Colorado Division of Parks. The reservoir is operated as a drought reservoir, meaning the reservoir is usually kept full and spilling inflow. However, it is subject to drawdown to meet Denver water needs during periods of drought. There are no formal minimum streamflow requirements below Eleven Mile reservoir.

Eleven Mile has three valve runs. Run No. 1 has a 42" cone valve for a guard valve and a 42" cone valve for regulating. Run No. 2 has a 42" cone guard valve and a 36" ring-jet regulating valve. Run No. 3 has a 30" cone guard valve and a 30" cone regulating valve. The valves have some operating restrictions, and Denver Water is currently considering replacing outlet valves.

With a surcharged reservoir, the spillway capacity is 2,140 cfs, the normal valve capacity is 425 cfs, and the emergency valve capacity is about 1,400 cfs.

Table 5: Spinney Mountain Reservoir Historic Outflow, 1982-1996

Spinney Mountain Reservoir Outflow

Historic Outflow

1982 - 1996

Average Daily CFS

WATER YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	MINIMUM	AVERAGE
1982	30	65	36	26	22	23	67	71	97	200	193	45	22	73
1983	48	49	76	22	43	40	141	85	160	131	238	70	22	92
1984	54	29	35	47	44	57	96	164	367	339	381	113	29	144
1985	191	68	28	38	57	50	103	260	415	293	142	127	28	148
1986	45	46	46	54	58	242	96	47	138	212	177	135	45	108
1987	125	82	58	52	60	60	104	332	355	174	181	122	52	142
1988	88	78	80	50	55	60	75	47	127	192	161	151	47	97
1989	98	75	57	49	44	110	89	73	96	284	211	125	44	109
1990	103	66	129	135	114	126	89	67	186	181	139	119	66	121
1991	97	78	67	58	39	45	80	40	39	141	138	119	39	78
1992	81	80	77	84	53	70	113	80	67	122	125	123	53	90
1993	90	61	52	50	49	62	68	60	120	166	184	77	49	86
1994	101	68	72	56	67	68	94	108	226	161	174	137	56	111
1995	75	47	51	62	52	60	126	63	348	697	365	208	47	179
1996	121	76	101	78	57	55	167	315	209	228	200	143	55	146
VERAGE:	90	64	64	57	54	75	100	121	197	235	200	121	44	115
INIMUM:	30	29	28	22	22	23	67	40	39	122	125	45	22	73
AXIMUM:	191	82	129	135	114	242	167	332	415	697	381	208	66	179

Data Sources: 1982 - 1995 USGS Gage South Platte River Above Elevenmile Canyon Reservoir. 1996 DWD Aurora Operation

Cheesman Reservoir, built in 1905, was the world's highest dam of its type at the time of construction and Denver Water's first mountain reservoir. It is designated a National Civil Engineering historic landmark. It has a gravity arch masonry dam capable of impounding 79,064 acre-feet of water. The reservoir is open to limited recreation. Cheesman is the "workhorse" of Denver Water's South Platte system which serves hundreds of thousands of customers in the Denver area. Cheesman Reservoir typically fills with the spring runoff. Water is released from storage to meet customer needs throughout the summer and winter with the reservoir typically reaching its lowest contents before spring runoff. Cheesman Reservoir provides water to Denver Water's Foothills and Marston Treatment Plant. Water can also be supplied to those plants with water from Dillon Reservoir via the Roberts Tunnel. Generally the Roberts Tunnel is operated to supplement Denver Water's South Platte supply (Figure 1). There are no formal minimum streamflow requirements below Cheesman Reservoir.

Cheesman has five valve runs, all built in 1971. They operate properly and are restricted to the normal openings between 20 percent and 80 percent.

Capacity: With a full reservoir, the spillway capacity at elevation 6850.91 is 22,370 cfs, the valve house capacity is 1,581 cfs, the Johnson valve capacity is 800 cfs.

There are three general factors affecting Cheesman's operation. 1) Cheesman is operated to fill, if possible, each spring. 2) Releases are made from storage lowering the reservoir as needed to meet customer water use throughout the year. Because there is limited downstream storage between Cheesman Reservoir and the water treatment plants to act as a buffer, releases from Cheesman Reservoir generally coincide with changes in water use. 3) Releases are also affected by water rights administration. (See the water rights section for more detail.) When Cheesman Reservoir is out of priority, it is required to bypass all of the natural inflow to the reservoir unless an exchange can be made using downstream water to replace the water that is stored in Cheesman Reservoir. Cheesman Reservoir has limited opportunities in the springtime to store water. Any water that can be stored, but is not, may be counted against Cheesman's water right by the State and is a potential loss of supply. In Section II.C.2., mainstem fishery, reservoir operations of making storage releases are mentioned provided those waters can be recovered. Under current operation of Denver Water's system, at times releases into Chatfield could not be recovered and for water quality management there may be times when level in Marston is held below full.
Strontia Springs Reservoir, downstream of the confluence of the South Platte River mainstem and the North Fork, provides a small regulating facility for Denver Water and Aurora. The reservoir holds 7,700 acre-feet when full. It has 20 feet of elevation or about 2,000 acre-feet of operating range.

Roberts Tunnel:

Denver Water provides storage water from Cheesman Reservoir or Dillon Reservoir to its customers receiving water from its South Platte system. Dillon Reservoir water is released via the Roberts Tunnel into the upper reach of the North Fork at Grant. Traditionally, Dillon Reservoir water has been used to supplement Cheesman releases. As more people move into Denver Water's service area, more Dillon Reservoir water, via the Roberts Tunnel, may be used.

Dillon Reservoir is an important recreation facility for fishing and boating. Its operations also affect the fishery and whitewater recreation on the Blue River below the reservoir.

In order to safely transport Dillon Reservoir water, the carrying capacity of the North Fork has been increased from the Roberts Tunnel to Insmont. Flow easement agreements and channel capacity limits the use of the tunnel during high flow. Practice has been to not add flow if it would cause the Grant gage to exceed 680 cfs for extended periods. Recently the channel work has been designed to enhance structural fish habitat. No large diversions are made on the North Fork. Depending on weather and water supply conditions, Dillon Reservoir water is imported through the Roberts Tunnel all year, none of the year, or one month and not the next. Because it has traditionally been the supplemental supply, water imported from Dillon Reservoir can vary as lawn watering increases or decreases in Denver.

The Roberts Tunnel has a 5.5 megawatt power plant that produces an average annual revenue of $500,000. In order to receive the capacity payment, a minimal amount of energy must be produced each month the generator is in operation. Where possible, water deliveries are scheduled in order to obtain the capacity payment.

IV. BIBLIOGRAPHY

1. Operational Flow Plan of Reservoir Reclamation Program for the Denver Water Department Raw Water System. November 1987.
2. Stream Fisheries Investigation Federal Aid Project F-237R-3. Colorado Division of Wildlife, August 1996.
3. An Overview of Fisheries Management for the South Platte River Below Cheesman Reservoir. Mindy Gasaway. Draft Discussion Paper. Colorado Division of Wildlife, 1997.
4. South Platte River Aquatic Analysis-USFS SPPP Wild and Scenic Alternative Discussion. Greg Gerlich. Colorado Division of Wildlife. July 28, 1997.
5. Wild and Scenic River Study Report and Draft LEIS. USFS, 1997.
6. Water Glossary, Denver Water, 199_.
7. Tailwater Trout Habitat: A Handbook for the Operators of Denver Water Reservoirs. Chadwick Ecological Consultants, Inc., 1997.
8. Wild and Scenic River Study Report and Environmental Impact Statement. U.S. Forest Service, 1997.

V. APPENDICES

A. Mean Daily Outflow. Eleven Mile and Cheesman Reservoirs. 1987 to 1996.
B. Tailwater Trout Habitat: A Handbook for the Operators of Denver Water Reservoirs. Don Conklin, Chadwick Ecological Services. May 1997.
C. Enforcement Procedures for the South Platte Streamflow Management Plan.

APPENDIX A

Appendix B

TAILWATER TROUT HABITAT:

A HANDBOOK FOR THE

OPERATORS OF DENVER WATER RESERVOIRS

Prepared for:

Denver Water

Denver, Colorado

April 1997

Prepared by:

Chadwick Ecological Consultants, Inc.

5575 S. Sycamore Street, Suite 101

Littleton, CO 80120

TABLE OF CONTENTS

INTRODUCTION

The purpose of this document is to serve as a handbook for Denver Water reservoir operators. This handbook was prepared at the request of the operators to better understand the effects of reservoir operations on tailwater trout fisheries when making decisions on the tradeoffs between water supply, hydropower generation, recreational benefits, flood control, fisheries, etc. Part I of the handbook discusses aquatic biological issues relative to operations of the Denver Water Collection System on the South Platte River Basin, with limited information on the Blue and Williams Fork rivers as well. Part II of the handbook provides more specific information on operational flow levels that can benefit trout fisheries. Part III is a collection of tables and graphs related to trout habitat and reservoir operations.

The analyses and recommendations in this handbook apply only to operational effects on trout fisheries. No attempt has been made to consider the effects on water supply, water rights, hydropower, recreation, flood control, etc. These other considerations have to be weighed along with the flow recommendations for trout. At times, these considerations will be in direct conflict. While the Denver Water System exists for the purpose of supplying water to its customers, there is some flexibility in operations to benefit trout fisheries and other considerations.

PART I: TROUT BIOLOGY

Instream Flows and Factors Limiting Trout Abundance

Seasonal differences in habitat availability related to changing environmental conditions, such as changes in streamflow, appear to be the limiting factor determining fish population size in many river systems. Such "bottleneck" effects can occur when habitat levels are low. Population size can be determined by these minimum habitat levels, rather than favorable or average conditions. Yearly average habitat or flow conditions are not appropriate parameters when evaluating conditions for trout populations, since they may mask critical low habitat levels over shorter time periods. These bottlenecks are the important time periods that limit trout population size and can occur within a yearly cycle as well as from year to year.

In Rocky Mountain streams, the bottlenecks to trout populations generally occur during extreme flow conditions, either the high-flow period during runoff in late spring or the low-flow period in winter. These are the two periods when flows cause the lowest habitat levels of the year for trout. The habitat (WUA) versus discharge relationships for rainbow and brown trout generally indicate that habitat levels peak at intermediate discharges, with lower levels of habitat at high and low flows. Depending upon the magnitude of peak flow and low flow, one of these conditions will generally be more stressful for trout than the other.

Reservoir operations can benefit trout populations in the section of river downstream of dams. The "tailwater effect" refers to the more stable, beneficial conditions that can occur downstream in the tailwaters of a dam. The flow regime can be modified to reduce peak high flows and augment low flows to provide a more stable flow regime. This also leads to less severe bottleneck habitat conditions. Downstream of dams the water can be free of sediment and turbidity and have elevated levels of nutrients. These conditions favor the overall biological productivity of the tailwater section of the river and lead to higher trout production. Also, water temperatures are moderated and fluctuate less on a day-to-day basis. The more stable flow, temperature, and sediment conditions can allow trout populations to expand to higher levels in tailwaters.

Downstream of reservoirs in the South Platte River system, the natural pattern of high and low flows is commonly disrupted by demands from the raw water supply system. Instead of gradual increases and decreases in flow that occur naturally, quick changes in flow may result from reservoir spilling, water rights priorities, needs for raw water, etc. Therefore, not only do trout need to adjust and survive the natural high and low flow periods, but they must also adapt to an unnatural flow pattern and flow fluctuations. These factors must be taken into account when operating the raw water system, if one's intent is to benefit trout populations.

General Trout Biology in the South Platte River

Brown trout are fall spawners. Spawning in the South Platte basin probably occurs in October and November, with earlier spawning at higher elevations (cooler temperatures). Eggs are laid in redds (nests) in areas of the river having gravel-cobble bottom at depths of approximately 6 to 18 inches deep. Eggs incubate over winter in the gravel on the stream bottom. Brown trout fry hatch in April and May. For rainbow and cutthroat trout, spawning

occurs in April through May. Because of warmer water temperatures during this period, rainbow and cutthroat trout eggs develop more quickly than do brown trout eggs. Hatching of rainbow and cutthroat trout eggs occurs after one to two months and fry are present in the river beginning in late May or early June.

As trout fry first hatch from the eggs, they remain in the gravels of the redd for several weeks, with brown trout remaining in the gravels for shorter periods than rainbow trout. This period of the year represents an important step for trout fry, as they are vulnerable to high flows. Work conducted in Cheesman Canyon by Barry Nehring and Rick Anderson of the Colorado Division of Wildlife indicates that flow and habitat levels during May, June, and July were critical in determining the number of brown and rainbow trout that survived.

After several months of growth, trout are considered to be juveniles. The juvenile life stages of trout are always present in the South Platte River, as it takes several years for these trout to mature to the adult state. Adult trout are always present in the river. Therefore, habitat versus flow relationships for these two life stages of trout need to be considered for the entire year when evaluating flows.

Rainbow trout are vulnerable to infection by whirling disease. Apparently this affects juvenile rainbow trout after the first summer of their life stage. Brown trout are apparently affected to a much less extent, if at all. At this time, the significance of whirling disease to the long-term status of trout populations in the South Platte River has not been determined. Assuming that the whirling disease problem will be solved at some point in the future, and assuming that the more resistant brown trout will still be present in the river, then the purpose of this document in outlining flow operations that may benefit trout populations is still valid.

The two periods of the year that are most critical to trout in natural river systems are usually the late winter period of lowest yearly flows and the spring runoff period of highest flows. Downstream of reservoirs there is the opportunity to dampen the effects of these natural extreme flow periods, but these two periods are still critical to trout in the South Platte system. During spring runoff fry are present in the river and are vulnerable to high flows, as noted above. Also, although juvenile and adult fry are less vulnerable than fry, they can be displaced downstream or out of optimal habitats by high flows. The detrimental effects of high flow on all

life stages of trout can be lessened by reducing the short-term (daily to weekly) peak high flows, and by gradually ramping changes in flows around the peak flow.

In winter, natural low flows produce low habitat levels for trout. Adult and juvenile trout are present at this time of year, as well as brown trout eggs incubating in the gravels. The winter period of the year is even more stressful to adult brown trout, as they have used energy reserves during fall spawning and also may have to recover from minor injuries suffered during spawning. The detrimental effects of low winter flows can be lessened by gradually decreasing flows in fall to winter levels, minimizing the differences in flows between fall spawning levels (October to November) and winter incubation levels to ensure that redds are not dewatered, choosing a winter base flow level that provides adequate habitat for trout, and minimizing day-to-day fluctuations in flow.

Trout Population Status

Rainbow and brown trout comprise the vast majority of the trout biomass in the rivers in the system. Brook and cutthroat trout are also present in low numbers, especially in the upper segments of the river. Brown trout, native to Europe, have established self-sustaining populations throughout the river from upstream of Antero Reservoir to the Denver metro area and in the North Fork. Rainbow trout, native to the northwestern U.S., are also widely distributed in the river. Rainbow trout are most common in the Cheesman Canyon segment of the river where they have, until recently, maintained self-sustaining populations with high biomass. In other sections of the river, both upstream of Cheesman Canyon into South Park and downstream of Cheesman Canyon into the Denver area, rainbow trout are present but in much lower numbers. Recently, whirling disease has spread into the South Platte River and apparently has reduced the biomass of rainbow trout, especially in the Cheesman Canyon section of the river.

In the discussions below, the various segments of the South Platte River, Blue River, and Williams Fork River are ranked according to their priority for managing flows and trout habitat. This ranking is based on our subjective interpretation of the recreational importance of the individual fisheries as well as our understanding of the relative feasibility of manipulating flow levels in each segment of river. These priority rankings are intended to provide a guide for

addressing conflicts between manipulating flow levels among the various river segments in the system.

The highest levels of trout biomass occur in Cheesman Canyon and Waterton Canyon (Table 1). The fish populations in these sections of the river benefit from the bottom release dams immediately upstream. These sections of the river contain both rainbow and brown trout, although the populations of rainbow trout apparently are declining due to whirling disease. Regardless, these two sections of the river still represent the most valuable fishery resources (Priority ranking 1 and 2) in the basin in terms of fish population quality and in terms of the high use by recreational anglers.

In the Blue River downstream of Dillon Reservoir, the rainbow and brown trout fishery has improved over the last decade as a result of special regulations by the CDOW and habitat improvements. This section of river receives high use by recreational anglers and has been given a priority ranking of three.

Downstream of Spinney and Eleven Mile Reservoirs, trout biomass is somewhat lower than in Cheesman Canyon. Also, the section of the river downstream of Spinney is short, and flows are not under the direct control of Denver Water. However, because of high recreational angling use, these two areas are next most important in priority (rank 4 and 5). Both have self-sustaining populations of brown and rainbow trout.

The Williams Fork River downstream of the dam is part of the Kemp-Breeze Units of the Hot Sulphur Springs State Wildlife area. This section of river now receives higher use by recreational anglers and has been given a priority ranking of six.

TABLE 1: Approximate trout biomass and priority ranking for sections of the Denver Water System.*

River Section	Trout Biomass (kg/ha)		Priority
	Rainbow	Brown	
South Platte River			
Downstream of Antero	1	25	7
Downstream of Spinney**	170	120	5
Downstream of Eleven Mile	40	40	4
Downstream of Cheesman	200	200	1
Downstream of Strontia Springs	30	250	2
Downstream of Chatfield	5	5	10
North Fork			
Downstream of Roberts Tunnel	5	30	8
Downstream of Buffalo Creek	5	50	9
Blue River			
Dillon to Green Mountain	25	75	3
Williams Fork			
Downstream of Williams Fork River	40	40	6

* Approximate long-term average biomass based on CDOW data.
** Spinney Mountain Reservoir is owned and operated by the City of Aurora.

The section of stream between Antero and Spinney Reservoirs has substantial habitat problems. Habitat improvement projects have been initiated in this section. However, trout biomass has historically been low, and this has not improved much in the recent past. Flow manipulations could only marginally improve conditions for fish in this section and, therefore, this section has a priority ranking of only seven.

The North Fork of the South Platte River contains low biomass of brown and rainbow trout. Also, much of this section of river flows through private land, and there is no opportunity to store water in this river. Therefore, the two sections of the North Fork have a lower priority ranking (8 and 9, respectively) than most sections on the mainstem of the South Platte.

Downstream of Chatfield Reservoir, the South Platte River has changed in character from a mountain stream to a plains stream. The suitability of this section of the river for trout is low. Also, low flows, development, siltation, and other issues limit the value of this section of river as a trout fishery. Trout biomass consists of very low levels of brown and rainbow trout.

Cool water game fish, such as walleye, are also present, but in low numbers. This section of the river has the lowest priority (10).

Trout biomass changes substantially from year to year. Also, the effects of whirling disease on rainbow trout in the river are ongoing. Therefore, the trout biomass figures in Table 1 represent an estimate of current conditions for the purpose of ranking the river sections and weighing the effects of flows on brown and rainbow trout. The biomass data in Table 1 were estimated from past CDOW data; but in some cases, the data were collected up to a decade ago. However, we feel the data can be used to estimate current conditions for the purposes stated above.

Rainbow trout are stocked in several sections of the South Platte River. In most instances, these fish inevitably are caught, die, or disperse into other sections of the river and do not represent a significant contribution to the trout biomass. Until 1996, the main goal of stocking rainbow trout was to provide fish for anglers, not to establish resident populations. However, since whirling disease has decreased rainbow trout populations in the river, especially in Cheesman Canyon, the stocking of rainbow trout to augment or restore populations may be conducted in the near future.

In the South Platte River, stocking of catchable sized rainbow trout occurs annually in the section of the river from Eleven Mile Reservoir downstream to Cheesman Reservoir, from Scraggy View Campground downstream to Strontia Springs Reservoir, and in Waterton Canyon. Sporadic stocking of juvenile rainbow trout has been done in many sections of the river, including the section between the Middle Fork and Spinney Mountain Reservoir, between Spinney and Eleven Mile Reservoirs, and between Strontia Springs and Chatfield Reservoirs. In the North Fork of the South Platte, annual stocking of catchable rainbow trout occurs at many locations.

Potential Resource Conflicts

During the day-to-day operation of the South Platte River raw water system, decisions must be made on river flow levels and reservoir water levels. The chosen flows will affect the conflicting needs of the various species and life-stages of fish in the river and reservoirs as well as the conflicting needs of recreational users of the system. In order to minimize the potential

negative effects of these decisions, the conflicts should be identified and understood. Some of the more important conflicts that are anticipated to occur in the South Platte system are identified and discussed below.

One conflict that has been identified is between releasing warm water over the spillway of a full reservoir or releasing cool water from the bottom release valves. Trout can easily tolerate water temperatures up to 70F and can survive temperatures of 75F for short periods. Given the temperatures and altitudes of streams and reservoirs in the South Platte system, lethal high temperatures for trout probably never occur upstream of Chatfield Reservoir. However, trout can be stressed by short-term fluctuations in temperature, such as when a reservoir first becomes full and suddenly shifts from releasing cool bottom water to warm surface water. This conflict can be resolved by anticipating reservoir spills in the short-term, gradually changing the mix of bottom and surface water releases and keeping temperatures in the optimal target for trout. Both rainbow and brown trout prefer water temperatures between 55 to 65F.

Adjusting flows downstream from a reservoir will usually affect the water levels in the reservoir itself. Reservoir populations of trout are sensitive to fluctuating water levels as river trout populations are sensitive to fluctuating flow levels. However, depth and velocity conditions in a river are much more sensitive to changes in flow than reservoir levels, especially at low flow periods of the year, such as winter. For example, a release of water over the winter of an additional 10-20 cfs for river trout populations will probably have a much greater positive effect on the trout in the river than the negative effect of releasing this volume of water will have on reservoir trout due to reduced reservoir levels. Also, as a general rule, it is probably much more beneficial to draw down a reservoir in early spring and allow it to fill during runoff in order to decrease the resulting peak flow downstream of the reservoir. The reservoir trout can easily migrate to deeper portions of the lake during water level changes, whereas river trout have less opportunity to find suitable habitat during extreme high (or low) flows.

When adjusting flow levels downstream of a reservoir, there are two points to consider in order to minimize the negative effects to trout. The first is to adjust flows gradually over a period of days or weeks. This allows trout to seek the appropriate depth and velocity conditions without being forced into unfavorable habitat conditions with abrupt changes in flow. [Reference DWD Fluctuation Table]. The second point to consider is the relative levels of flow between the time of spawning and egg incubation. Trout spawning occurs at depths of approximately 6 inches to 18 inches. Eggs in the gravel must be kept wet and free of ice to survive. Therefore, as a general rule, a change in water depth of 6 inches or less between spawning and egg incubation should have no detrimental effect on the eggs. Decreases in flow

between the spawning period and the egg incubation period that change the stage over the eggs by less than 6 inches, and that still prevent ice from freezing to the river bottom, should be acceptable.

A final conflict concerns competition between suckers and trout. Although it is generally assumed that high densities of suckers in a stream are detrimental to trout, the literature on this topic is not conclusive. However, there is at least the impression that the Eleven Mile Canyon section of the South Platte has a sucker problem. The consensus is that suckers are favored in this section of the river by warm temperatures spilling from Eleven Mile Reservoir. Suckers prefer temperatures in a range similar to trout, although suckers may prefer temperatures up to 70F or so, while trout are starting to become stressed at 70F. The actual temperatures of water spilling from Eleven Mile should probably be documented prior to any future action. However, if warm temperatures are favoring suckers in this section, a solution would be to release (cooler) water from the valves on the dam.

PART II: RESERVOIR OPERATIONS

Flow Recommendations for Trout Habitat

Part II of this handbook provides specific recommendations for reservoir operations to benefit stream fisheries. **These recommendations are based on trout habitat and flow information and are not intended to represent an obtainable flow regime within the water supply operations of the Denver System. These flows represent recommended levels that could benefit fisheries if other operational factors such as water supply, water rights, hydropower, flood control, etc., allow flexibility in flow releases.** The general principles behind these recommended flows are to benefit trout habitat. The recommended flows should be considered with the following goals:

1) Provide suitable winter flow releases from reservoirs;

2) Control high-peak flows during spring runoff;

3) Minimize spills at reservoirs to improve temperature conditions for trout;

4) Operate to produce consistent streamflow conditions from day to day, and provide gradual transitions between major seasonal flow adjustments and during daily operations;

5) Protect specific life stage requirements of stream and reservoir fisheries;

6) Maintain the desired balance between a flow regime downstream of a reservoir to benefit stream fisheries and the maintenance of reservoir levels for the benefit of reservoir fisheries and recreation;

7) Concentrate flow management efforts on the portions of the system which have the greatest physical potential to produce fishery benefits;

Specific Operational Outline

The operational plans are divided into four periods of the year. These four periods of the year were chosen to represent critical stages in the requirements of river trout populations as well as the seasonal hydrologic cycle in the basin. The first period is the brown trout spawning season, from October through November. This is the time of the year when brown trout build nests and lay eggs. Flow considerations during this time of the year are to provide adequate spawning habitat, and to provide suitable flow levels relative to the decreased flows expected over winter. Although a reduction in flows from fall spawning to winter incubation periods is acceptable, the goal is to not leave the incubating brown trout eggs susceptible to drying or freezing.

The second period of the year is the critical winter period. The goals during this period should be flows that are relatively stable and high enough to allow adults and juveniles of both rainbow and brown trout to survive. This period includes the months of December through March, and includes the lowest flow period of the year.

The third period extends from April through June. This period includes the stressful high flow period for trout. Not only are all four life stages of both species present during part or all of this period (adult, juvenile, fry, eggs), but rainbow trout are also spawning. The goal is lower peak flows to allow all four life stages to survive, and also allow rainbow trout to successfully spawn. In most sections of the river, this period of the year probably represents the

critical limiting period (bottleneck). In general, lower peak flows will benefit all life stages and lead to more healthy and numerous trout.

The fourth and final period is the summer growth period for trout. Adult, juvenile, and fry of both species are reaching maximum growth rates and storing energy for the winter. This period extends from July to the end of September. During this period, decisions on flow levels are probably simplified (from a fishery point of view) because flows are intermediate between peak high and low flows. The goal when managing flows during the summer period is to gradually ramp flows up and down as the water needs of the system change.

In general terms, there are three basic techniques for operating reservoirs for the benefit of tailwater trout habitat:

dampen peak high flows,

augment the lowest flows,

and avoid large scale flow fluctuations.

The flow goals in the following table should be used as a guideline when choosing reservoir releases. These flow goals were developed from the habitat versus flow curves, and are not intended to represent an example flow regime for the river.

Downstream of each reservoir, the flow regime can be modified in a similar pattern, as outlined below:

1) October 1 to November 30: Attempt to release flows for spawning brown trout. Anticipate winter low flow to attempt to avoid large reduction between fall spawning season and winter egg incubation season for brown trout.

2) December 1 to March 31: Attempt to meet winter flow goals.

3) April 1 to June 30: Attempt to change flow gradually up to peak runoff flow. Try to dampen peak runoff.

4) July 1 to September 30: Attempt to gradually decrease flow from runoff peak. Try to avoid large fluctuations in flow on a daily basis.

TABLE 2: Flow goals intended to benefit trout habitat. These goals are not intended to represent a yearly flow regime. These goals do not consider water supply, water rights, hydropower, recreation, or other flow values which can compete with flow values for trout.

Flow Period	Most Beneficial	More Beneficial	Least Beneficial
	Antero Reservoir		
October 1 to November 30	30-150	20-30	<20
December 1 to March 31	30-150	20-30	<20
April 1 to June 30	30-150	20-30, 150-250	<20, >250
July 1 to September 30	20-75	10-20, 75-250	<10, >250
	Spinney Mountain Reservoir		
October 1 to November 30	30-100	20-30, 100-300	<20, >300
December 1 to March 31	40-150	30-40, 150-250	<30
April 1 to June 30	40-200	20-40, 200-300	<20, >300
July 1 to September 30	40-200	20-40, 200-300	<20, >300
	Eleven Mile Reservoir		
October 1 to November 30	40-75	20-40, 75-200	<20, >200
December 1 to March 31	50-200	20-50	<20
April 1 to June 30	30-200	20-30, 200-400	<20, >400
July 1 to September 30	30-250	20-30	<20
	Cheesman Reservoir		
October 1 to November 30	50-150	20-50, 150-250	<20
December 1 to March 31	35-250	20-35	<20
April 1 to June 30	30-200	20-30, 200-500	<20, >500
July 1 to September 30	30-200	20-30, 200-500	<35, >500
	Strontia Springs Reservoir		
October 1 to November 30	30-300	20-30	<20
December 1 to March 31	30-250	20-30	<20
April 1 to June 30	30-250	20-30, 250-450	<20, >450
July 1 to September 30	30-300	20-30, 300-450	<20, >450
	Chatfield Reservoir		
October 1 to November 30	80-300	35-80, 300-500	<35, >500
December 1 to March 31	60-200	20-60	<20
April 1 to June 30	60-300	20-60, 300-750	<20, >750
July 1 to September 30	60-300	20-60, 300-750	<20, >750

Flow Period	Most Beneficial	More Beneficial	Least Beneficial
	Roberts Tunnel		
October 1 to November 30	50-100	25-50, 100-200	<25, >200
December 1 to March 31	25-100	10-25, 100-250	<10, >250
April 1 to June 30	50-150	10-50, 150-300	<10, >300
July 1 to September 30	50-200	10-50, 200-300	<10, >300
	Blue River		
October 1 to November 30	75-100	50-75, 100-200	<50, >200
December 1 to March 31	50-100	30-50, 100-200	<30, >200
April 1 to June 30	40-200	30-40, 200-400	<30, >400
July 1 to September 30	50-150	30-50, 150-300	<30, >300
	Williams Fork		
October 1 to November 30	75-150	20-75, 150-250	<20, >250
December 1 to March 31	50-150	20-50, 150-250	<20, >250
April 1 to June 30	50-150	20-50, 150-250	<20, >250
July 1 to September 30	50-250	20-50, 150-250	<20, >250

PART III: ATTACHMENTS

Part III is a collection of tables and graphs related to trout habitat and reservoir operations. The first attachment is a series of graphs prepared by Chadwick Ecological Consultants showing trout habitat at each life stage versus streamflow in tailwaters below Denver Water reservoirs. There are graphs for both rainbow and brown trout. Next is a table showing the effects of streamflow fluctuations on the life stages of rainbow and brown trout. This table was prepared by Denver Water with information provided by the Colorado Division of Wildlife. Finally, there are two tables showing the goals for limiting fluctuation in releases at Antero, Elevenmile, and Cheesman reservoirs. These goals have been in use for many years and were prepared by a fisheries consultant to Denver Water.

Appendix A, Attachment B, Appendix C

Enforcement Procedures for the South Platte Streamflow Management Plan

Index

1) Background and Purpose

In 1998, the USFS was presented with the A-2 Plan (SPPP) alternative to Wild and Scenic designation of the South Platte River, which included the Streamflow Management Plan. In 1999, the Streamflow Plan was revised at the request of the USFS and appeared in the Supplemental DLEIS issued by the USFS in 2000. The USFS and other interest groups that developed the local alternative plan to federal designation (now called the South Platte Protection Plan or SPPP) requested that the Streamflow Plan component be further modified to add Enforcement Procedures for the *commitments* described in the Streamflow Plan. The purpose of these Enforcement Procedures is to provide a process to monitor whether commitments are met and provide remedies should the commitments not be met. Details clarifying the conditions under which the commitments apply have also been added. These Enforcement Procedures are a modification of the Streamflow Plan. Where a conflict occurs between these Procedures and the Plan, the Procedures control.

In the spring of 2003 some modifications were made to these Procedures because of the drought and fires experienced in 2002. As described in the Streamflow Plan, the impacts of the fires are unknown at this time.

2) Minimum Streamflow

The minimum streamflow commitments are expected to be attained with few exceptions.

Drought Clause:

To provide relief from severe drought conditions, when there are opportunities to store water in Spinney Mountain, Eleven Mile, and Cheesman reservoirs, the outflow commitments from those reservoirs will be modified as follows:

> *When Denver Water's customers are on mandatory water use restrictions and the combined contents of Denver Water's major storage reservoirs are less than 50 percent full, the minimum outflow requirement at , Eleven Mile and Cheesman reservoirs) will be 20 cfs or the reservoir inflow (as defined in the Streamflow Plan), whichever is less.*
>
> *When Aurora's customers are on mandatory water use restrictions and the combined contents of Aurora's reservoirs are less than 40 percent full, the minimum outflow from Spinney Mountain reservoir will be 20 cfs or the reservoir inflow (as defined in the Streamflow Plan), whichever is less.*
>
> *Denver Water and Aurora will provide the Colorado Division of Wildlife and the U.S. Forest Service with 24-hour advance notice prior to enacting the minimum flow drought clause.*

Note: For purposes of these procedures, Denver Water's major storage reservoirs are Antero, Eleven Mile, Cheesman, Gross, and Dillon. (Terminal and replacement reservoirs are excluded.) The 20 cfs for Eleven Mile and Cheesman is based on trout habit curves *from Tailwater Trout Habitat: A Handbook for the Operator of Denver Water Reservoirs* by Chadwick Ecological Consultants, April 1997.

Monitoring:

The minimum streamflow will be measured at the streamflow gage directly below the reservoirs. Aurora's and Denver's operating streamflow records (kept as part of the official water rights accounting required by the Colorado State Engineer) will be the official record of the reservoir and tunnel releases for the Streamflow Plan. These records will be available upon request. It is recognized that from time to time, there will be some variation between Aurora's, Denver's, the State's or other's streamflow records. One source of variation is the time at which the gage shift corrections are applied; another is the use of different measuring and recording equipment. Table A at the end of this appendix shows an example of a variation.

Daily and Hourly Minimums:

Denver's releases for minimum streamflows will be calculated by averaging the 24 "top-of-the-hour" readings 8:00 a.m. one-day through 7:00 a.m. the next day. All top-of-the-hour gage readings must be no less than 80 percent of the minimum streamflow.

Exemptions: Because it is difficult to precisely and completely control the outflow when a reservoir is spilling, the hourly minimum does not apply when reservoirs are spilling. (The daily minimum still applies.) Reservoir outflows may be reduced below the hourly minimum to for up to 2 hours to rate, clean and maintain the streamflow gaging stations below the reservoirs.

Reporting:

Any known failure to meet the minimum streamflow commitment will be reported to the USFS and the Colorado Division of Wildlife within one week of occurrence.

Penalties:

Any daily or hourly minimum streamflow violations that are not covered by the exemptions listed above will result in a penalty of $10,000 per violation, at each reservoir. Denver or Aurora, as appropriate, will pay the $10,000 penalties to the Endowment Fund. Minimum streamflow violations that are due to emergencies where public safety or dam safety is concerned will be reported to the USFS. Minimum streamflow violations due to public safety or dam safety emergencies will not be subject to penalty fees. The maximum penalty per daily period (for hourly and daily violations combined) is $10,000 per reservoir. The penalty will be indexed to the Consumer Price Index and adjusted each year at the annual operating meeting.

Note on Eleven Mile Reservoir: New outlet valves capable of regulating low flows are needed at Eleven Mile to meet the minimum flow commitment. These valves are required under the "Equipment" portion of these Enforcement Procedures. The commitment for minimum outflow from Eleven Mile Reservoir flow does not take effect until 1) the valves are installed, or 2) five years after the USFS's acceptance of the SPPP alternative to designation, whichever occurs first.

3) Streamflow Ramping

The ramping guidelines described in the Streamflow Plan are expected to be met most of the time. However, it is difficult to precisely hit a ramping target, and streamflow ramping guidelines need to allow for a 20 percent margin for hourly changes. Ramping reservoir outflows is done by adjusting relatively small amounts of water through very large valves. To ramp a flow change, the reservoir operators increase or decrease the flow with the large outflow valves, then go to the measuring device downstream of the reservoir to check their adjustments. If the flow change is too high or low, then the operator goes back to the valve house to adjust the valve again. This continues until the

correct adjustment is made. Over time the caretakers have developed a system of roughly correlating changes in outflow with revolutions of the wheels operating the outflow valves. But this method is not precise, and variation occurs due to reservoir elevation and other factors. The 20 percent margin is needed due to the inexact nature of reservoir outflow changes.

Exemptions:

The ramping guidelines do not apply during emergencies, maintenance project requirements, mechanical failures, water rights constrained operations, electrical power system upsets, State Engineer, federal, or other governmental authority controlling operations, special requests for streamflow accommodations, efforts to manage floods, forest fire impacts, river ice, and water quality, and the period that the Roberts Tunnel powerplant is transitioning on-line and off-line.

Table 3 of the Streamflow Plan (found in Section IID2 (b) is modified for the Roberts Tunnel to be:

> *a maximum change per hour of 35 cfs for existing flows less than 100 cfs, 50 cfs for existing flow between 100 and 200 cfs, 75 cfs for existing flows greater than 200 cfs and less than 500 cfs, and 100 cfs for existing flows of 500 cfs and greater. The Grant streamflow gage on the North Fork below the Roberts Tunnel discharge will be used to measure the existing flow. The Roberts Tunnel gage will be used to measure the hourly change in tunnel discharge. (Notes: The Grant gage measures both Roberts Tunnel discharge and natural streamflow. Changes in the natural streamflow component of the Grant flow gage are not subject to the ramping guidelines and cannot cause a violation of the guidelines.)*

Monitoring and Corrective Actions:

The streamflow records used to monitor achievement of the guidelines will be the same as those described in the minimum streamflow section (official water rights accounting records). Denver Water does not review its archival hourly ramping records. Any guideline failures known by Denver Water, the USFS, or others will be reported at the annual operating meeting and investigated by Denver Water. A guideline failure is defined as an outflow valve change that exceeds the ramping guidelines by more than the 20 percent margin described above. Should a chronic problem of guideline failures (not covered by the exemptions described above) occur, Denver Water will submit a correction plan to better meet the guidelines or propose adjustments to the guidelines to meet operating needs. The correction plan will be presented for review and acceptance at the annual operating meeting.

4) North Fork Channel Improvements

Page B-15, Section D3(d) of the Streamflow Plan is modified to read:

When doing channel work on the North Fork, the entity doing the work commits to maintaining or enhancing the structural habitat for trout. CDOW will be consulted when doing this work.

Should the entity doing channel work fail to consult with the Colorado Division of Wildlife for channel improvements on the North Fork of the South Platte River, the Colorado Division of Wildlife will instruct that entity on appropriate modifications as needed to improvements on that section of the channel. Entities will report on North Fork channel improvements at the annual meeting.

5) New Equipment

Denver Water commits to installing new equipment to meet the commitments as described in the Streamflow Plan. This includes low flow valves and stream temperature monitors at Eleven Mile Reservoir and stream temperature monitors at Cheesman Reservoir and SNOTEL gages in the South Platte watershed. As originally proposed in the Streamflow Plan, the SNOTEL gages have been installed and are being operated by the National Resource Conservation Service. Investigations of improved forecasting have been completed as well.

Further evaluation of water temperature gages shows that two gages rather than three gages per reservoir are needed. Denver Water shall install the two temperature gages at Eleven Mile and Cheesman reservoirs within two years of the USFS's acceptance of the SPPP alternative to designation.

The minimum outflow from Eleven Mile takes effect after the new valves for Eleven Mile Reservoir as described in the Streamflow Plan have been installed. Failure to install equipment as described in the Streamflow Plan will be subject to specific performance remedies by the USFS.

6) No Loss of Yield

As described in the Streamflow Plan, all commitments are first subject to the principle that no water supply yield is lost from Denver and Aurora's water system as a result of operations under the Streamflow Plan. This was the basis under which the operating goals and commitments were developed.

If future yield analysis shows that an aspect of the streamflow plan is causing a loss of system yield, Denver Water will call a meeting of the USFS and other interested parties to examine modifying the plan according to procedures set forth in the MOU. Denver Water must demonstrate the loss of water supply yield through detailed analysis. Upon demonstration, the Streamflow Plan will be revised accordingly to eliminate the loss of yield consistent with carrying out the Principles of the Streamflow Plan where practical.

7) Annual Operating Meetings

As described in Section II F of the Plan, water facility operations are reviewed and coordinated at the annual operating meeting. These meetings will be open to the public, and Aurora, Denver Water, the Colorado Division of Wildlife, the USFS, Trout Unlimited, the Wigwam Club, and American Whitewater are expected to participate in the meetings. Should there be a coordination group set up under the MOA to monitor the success of the South Platte Protection Plan, the coordination group will participate in the annual operating meetings.

8) Adaptations

The Streamflow Plan is not meant to be all encompassing or to anticipate all circumstances. It is expected that adjustments to the Plan will be needed in the future. The Plan may be modified as needed to carry out its Principles depending on operating experience and adaptive management. Any necessary modifications will be cooperatively developed at the annual operating meeting, taking into account the Principles. A written report of the modifications to the Streamflow Plan will be submitted to the participants of the annual meeting (including the Colorado Division of Wildlife, the USFS, and the coordination group described above) and the South Platte Enhancement Board. Modifications to the commitments described in these Enforcement Procedures, excluding modification described above for ramping guideline failures and loss of yield, require written approval of the MOA signatories. Such approval shall not be unreasonably withheld.

9) Plan Goals

The Streamflow Plan has a number of goals (which are separate from the commitments described above). The attainability of these goals varies with a number of circumstances. Denver and Aurora will strive to attain the goals described in the Streamflow Plan. Failure to achieve goals is not part of the Enforcement Procedures. As described in more detail in the Streamflow Plan, the annual operating meeting will include a discussion of how well the goals were met the previous year, and how operations can be improved in the future.

10) Contacts

Denver Water:

Manager of Raw Water Supply
Denver Water
1600 West 12th Avenue
Denver, CO 80204-3412
Phone: 303-628-6510
Fax: 303-628-6852

Aurora:

Manager of Water Resources
City of Aurora
15151 East Alameda Parkway
Aurora, CO 80012
Phone: 303-739-7370
Fax: 303-739-7491

Attachment C

RECREATION, WILDLIFE AND SCENIC VALUES

A. INTRODUCTION

This section of the Alternative A2, South Platte Protection Plan, addresses the outstanding values of recreation, wildlife and scenery on the mainstem of the South Platte from Elevenmile to the confluence and the area on the North Fork between the confluence and Insmont. The following text was drafted by the recreation, wildlife and scenic values work group in order to identify thoughts coming from one or more members of the work group. The items listed below do not reflect a full consensus by the work group. Rather, they are being presented as information to be provided to the Forest Service for potential future action. Such future action might include Forest Plan amendments. It is also possible that the Colorado State Parks will be involved through creation of a State Park and thereafter utilize this information to develop a management plan. The actual involvement between State Parks and the Forest Service will be further developed over time and is discussed in the management section below as well as in the overview to this Plan. However, given the current economy and the budget shortfall of the state of Colorado State Parks, the involvement of State Parks in the foreseeable future appears unlikely.

Alternative A2 calls for the Forest Service to review this information, conduct further analysis, and then initiate plan amendments as called for given the information set forth in this initial planning review. Furthermore, if State Parks becomes involved in a management role, this information should be used by State Parks in its new role. This effort calls for coordinating Forest Service planning with state and local land planning. The coordination will move forward with assistance from Denver Water, the Wild and Scenic Task Force, and others, should the Forest Service select Alternative A2 and choose to not recommend designation.

B. VISION STATEMENT AND MANAGEMENT GOALS

Vision Statement

The purpose and goal of the recreation, wildlife and scenery work group is to help develop the framework, foundation and goals for a more detailed management plan to be developed for the South Platte River between Elevenmile Reservoir and the confluence of the North Fork of the South Platte River and the North Fork from the confluence to Insmont. It seeks to balance the legitimate demands on the river for water supply, while providing stream flow and habitat necessary to sustain fisheries, recreation and scenic qualities.

The following goals begin to define in a broad manner actions, decisions and relationships necessary to implement future detailed management plans or management strategies.

Management Goals

- Manage uses along the river corridor to improve the quality of the recreational experience while preserving the unique character of the river corridor.
- Provide resource and ecological protection or restoration for wildlife and plant species.
- Recommend methods to implement the management plans and objectives.
- Provide education to the user concerning ethical conduct, safety consciousness, water quality and the importance of the river as a resource.
- Promote cooperative public safety and emergency services.
- Seek adequate funding of projects- through cooperative efforts.
- Seek governmental agreements to implement and enforce the plan.
- Recognize and evaluate unique qualities with each of the stream segments.
-

C. MANAGEMENT SCENARIOS

The recreation work group recognized that unified planning and coordinated management of the South Platte River corridor recreation area would bring some potentially desirable benefits. The geographic area being considered runs from Elevenmile Canyon to the confluence and on the north fork from the confluence to Insmont. This is a large area, which currently is managed for recreation purposes by a wide variety of entities. Given the many different governments and property owners involved, creating coordinated planning and management is a challenge, which will take time. The best way to implement this coordinated planning and management has not been determined. The process to make this decision, however, should be initiated in order to bring the best benefits to this area and its users.

Four different management scenarios are discussed below. These should be further evaluated in a process, which should include participation from the Forest Service, Colorado State Parks, Denver Water, the Wild and Scenic Task Force and other interested users. Denver Water and the Task Force are willing to continue working with these entities to further explore and develop a decision on a management approach while the Forest Service has its wild and scenic decision making process underway.

The area currently includes substantial Forest Service property, managed by the Forest Service, property managed on the North Fork by Jefferson County, provision of road maintenance and safety services by Douglas and Jefferson County, property owned and managed by Denver Water and numerous other private property owners. A coordinated planning and management process would address these different ownerships and authorities held by the different owners. In evaluating and making the final determination on appropriate management for the area, various factors should be considered including:

a) Jurisdiction of potential management agencies
b) Management structure that would be applied by the management agencies
c) Process for decision making on management
d) Some financing considerations. (This particularly includes evaluation of the amount of money that would be available through charging user fees. It is recognized that this can be a challenge in this particular area given its length and the many different areas of access now used.)

Four management scenarios were considered. They are:

1. A partnership, an intergovernmental agreement (IGA) or other legal arrangement lead by the United States Forest Service and another qualified recreation management agency.

A coordinated effort may be developed between the U.S. Forest Service (USFS) and a qualified agency as the principal recreation managers for these properties. One coordinated plan could be developed between USFS and the partner to address recreation needs. It is believed that this would establish as responsible entities those most capable of achieving the necessary resource management, recreation planning, enforcement, operations and maintenance within the South Platte recreation area. The IGA would also serve as an effective tool to address property boundaries and constraints related to different types of ownership.

This would be implemented on Forest Service property as well as property the partner gains authority to manage. This would not include any interference with private property rights. Denver Water owns substantial property along the geographic area included here. This property could be made available to the partner to manage. Furthermore, Jefferson County manages property on the North Fork, including Pine Valley Ranch. The management of this area could also be brought into the coordinated effort as a part of this IGA. Jefferson, Douglas and Park Counties could be involved in the IGA together with Denver Water with regard to issues of managing roads and safety matters. This effort could include the partner managing Cheesman Reservoir for Denver Water. The IGA would address legal and statutory issues. In evaluating this option, significant consideration must be given to the ability to obtain sufficient revenue to ensure long-term operations and maintenance. To the extent subsidies will be needed, identifying where they can be obtained will be an important part of the consideration. It should be noted that the original concept was for Colorado

State Parks to play the role of partner with the USFS. However, under the current economic conditions and the budget shortfall of State Parks, this appears unlikely for the foreseeable future.

2. Concessionaire

The U.S. Forest Service and Denver Water, as well as potentially others, would contract with private sector concession operators under this option. A recreation management and implementation plan should be generally agreed to between USFS and Denver Water, as well as others prior to concession contracts being entered into. The purpose would be to ensure that the visions and goals of this A2 alternative would be met.

USFS and other potential contractors have experience with this approach and could reasonably expect to succeed. Other interested parties could participate in a variety of the opportunities available in this option. Campgrounds, access fees, picnicking day use areas, commercial interests would be managed and maintained in this scenario. Enforcement and some infrastructure issues would need additional consideration with this primarily private sector option.

A key challenge to this effort is the dispersed recreation use in the area. Rather than one key highway linking the whole area, there are many diverse access points. Furthermore, there is limited, if any, private company uses on the river. For example, there are no significant commercial boating uses. Thus, licensing is not an available or at least a major strategy, for funding. Other concerns related to this strategy could include the ability to coordinate between the diverse management entities and adding another layer to that concern with a private concessionaire being brought in.

3. Non Profit Foundation

This option calls for following the successful approach used by entities such as the Greenway Foundation and South Suburban Foundation. However, the multi-agency responsibilities and geographic extent of the South Platte River recreation area makes the potential success of this option low. Issues related to authority for funding sources and enforcement issues would be considerable. The long term operations and maintenance responsibilities and costs would be considerable. This is likely to result in a piecemealing of responsibilities, a significant challenge which can lead to less satisfactory results than the other options.

4. Cooperative Management

This option calls for cooperative management between the Forest Service, Denver Water, Aurora, Jefferson, Douglas and Park Counties, perhaps through an intergovernmental agreement. Each entity would use its respective authorities to manage the area under the umbrella of guidelines developed through the intergovernmental agreement and/or management plan. A board or committee could be formed to regularly meet to coordinate management of the area, discuss current management issues and make decisions on issues that will impact the area as a whole.

This may be used as an interim measure while one of the first three management scenarios is being developed.

D. REVIEW OF EACH SEGMENT – COMMON ELEMENTS

While each segment will be reviewed individually, some common elements prevail and should be considered as appropriate under each of the eight segments. These include the importance of providing education and ethical understanding regarding use and protection of the environment. Strategies could include providing education via TV, radio, signage and other elements. Other common elements include flow management being addressed through all reaches on the mainstem, from Elevenmile to the confluence, segments A through E; addressing noxious weeds; enforcement concerns; provision of emergency services; road maintenance; and fire and safety coordination.

E. ANALYSIS BY SECTION[1]

SEGMENT A: 8.7 miles from Elevenmile Dam (downstream from the fence on Denver's special use area) to Lake George.

> The committee decided to address A and B separately. A largely takes recognition of the recent Forest Service Elevenmile Canyon Ecosystem Management Project, South Park Ranger District, Pike National Forest. May 1995. The plan was based on a user survey. Where there was a dispute, such as where the campsite would be located, the Forest Service made the final decision. This park can be compared to Mueller State Park. There is a higher level of use here than on any other eligible segment. The plan took from 1992 to 1995 to develop. It is estimated that implementation will take about $3.5 million in 1995 money. The common thread running through the plan was emphasizing river day use.

CURRENT USES/VALUES:

- Diversity of vegetation (meadows aspen, willows, Douglas fir, Ponderosa pine) providing low elevation habitat for wildlife.
- Diverse aquatic habitat.
- Entire canyon classified "Class A – Distinctive" with granite rock formations, steep forested canyon, several waterfalls.
- River day use for recreation.

---

[1] The comments for each segment are intended to reflect interests or concerns from various participants in the process but do not necessarily reflect unanimous agreement.

OPPORTUNITIES:

Gather public/private support as money, in-kind and volunteer efforts to implement the Forest Service Elevenmile Canyon Recreation Plan.

CHALLENGES:

Concerns in developing the plan included better day use and access. A decision to have no overnight camping along the river and to maintain two access points to the one campground that will exist. One access point is by 4-wheel drive. Additionally, the decision was to enhance fisheries habitat through erosion and sediment control and to, enhance riparian habitat including recognition of the impacts of social use along the riparian zones. Another goal was to provide modern recreational facilities. Other challenges include:

- Accessibility/parking to serve the facilities as well as to protect the environment.
- Availability of construction funds (will public/private money be available?)
- There is a potential of land exchange with the Boy Scouts, a partnership effort is under way. This is approximately one mile on the river.
- Enforcement challenge to prevent hunting within 1/4 mile of either side of the river. Safety concerns regarding hunting in river corridor.
- Preventing outfitters on pack animals from crossing the river.
- The question of whether or not to pave is a difficult challenge. This includes concerns around the desire to control vehicle speed and how to pay for paving.
- There is a need to develop many forms of partnership including management options and recognizing in-kind and volunteer contributions.
- Wildlife considerations include the presence of wild turkey and the desire to introduce bighorn sheep.
- Flow management, fish habitat and safety management are all concerns.
- Whether to close part of the road and pave the rest.
- Considerations in developing the Forest Service plan included how to enhance the use of the area while protecting the environment. This included: fishing decisions; the desire to provide some recreation opportunities for everyone; the desire to make campers happy as well as staying off private land and minimizing conflicts; addressing the presence of climbers regarding ethics of proper climbing, safety and safety concerns related to road watchers; identifying and communicating volunteer opportunities including signage, and re-vegetating the old campgrounds when the area is moved.
- Avoid conflicts among users.

COMMON CHALLENGES/OPPORTUNITIES:

Education; flow management; addressing noxious weeds; enforcement concerns; provision of emergency services; road maintenance; and fire and safety coordination. Promote common sense conservation and land resource stewardship.

CAPACITIES:

Current use is high. Within the study area, Segment A should be managed for high recreational use while protecting the resources.

SEGMENT B: 7.7 miles from Lake George downstream to Beaver Creek (northernmost boundary of private land).

CURRENT USES/VALUES:

- This 7.7 miles is approximately half public land and half private land. There is one campground with six sites. There is tubing on the South Platte in the vicinity of Happy Meadows campground. There is fishing in the area and there are public access limitations. There are no special regulations. This area includes the subdivision which is known as Sportsmen's paradise. There is a hiking trail around the subdivision that connects back to the South Platte River.
- Low elevation habitat.
- Diverse aquatic habitat.

OPPORTUNITIES:

- The desire for flow management.
- Habitat improvement.
- Increased fishing access in cooperation with willing landowners.
- Sportsman's Paradise subdivision and the County can potentially protect aquatic and riparian habitat values if development addresses the riparian corridor, sedimentation, and general water quality.
- Hiking trail - while remaining low use and non-motorized, providing access to wild canyon downstream.

CHALLENGES:

- There are sedimentation problems primarily caused by the road and by the June 2002 Hayman fire.
- There is a possibility of additional private development.

- Noxious weeds.
- Funding (cooperate with Park County on the road).
- Enforcement concerns.
- Emergency service provision by the County.
- Fire and safety coordination.

COMMON CHALLENGES/OPPORTUNITIES:

Education; flow management; addressing noxious weeds; enforcement concerns; provision of emergency services; road maintenance; and fire and safety coordination. Promote common sense conservation and land resource stewardship.

CAPACITIES:

The current use is low. Within the study area, Segment B should be managed for moderate recreational use while protecting the resources.

SEGMENT C: 10.4 miles. From Beaver Creek downstream to the high water line of Cheesman Reservoir (upstream of the stream gauge).

NOTE: As a result of the Hayman fire, June 2002, this section of the river is closed to motorized use currently and will remain closed to this activity pending a roads analysis by the U.S. Forest Service.

CURRENT USES/VALUES:

- Hiking and backpacking on foot trails.
- Hunting.
- Fishing and guided fishing activities.
- Horseback riding on trails.
- Mountain biking on trails, motorized trails, and low standard roads.
- 4WD vehicle driving on low standard roads. High clearance vehicle greater than 50 inches in width.
- ATV (All Terrain Vehicle) driving on motorized trails and low standard roads. Three or four-wheeled vehicle less than 50 inches in width.
- Motorcycle riding on motorized trails and low standard roads.
- Dispersed camping.
- Wild trout fishery.
- Wide range of vegetation types, including mature ponderosa pine, which provides low elevation habitat for several Region 2 sensitive species of birds, amphibians and mammals, nesting and foraging habitat for raptors, winter range

for deer and elk, and habitat for the Pawnee montane skipper with known populations in the vicinity of Corral Creek.

- Provides connecting landscape linkages for potential wildlife movement corridors to Lost Creek Wilderness and nearby low road density areas of Cheesman watershed, Sheep Rock, Thunder Butte, Green Mountain and Gunbarrel roadless areas.
- A variety of landforms, granite outcrops, topography and river gradients provides outstanding scenic and geologic values.
- Challenging 4WD roads not represented within a one-hour drive of this area. Solitude and scenery for motorized recreationists.

OPPORTUNITIES:

- The present Forest Service designated 4WD roads and motorized trails along Corral Creek, Longwater Gulch and Hackett Gulch are closed currently to motorized use pending a roads analysis subsequent to the Hayman fire. This closure is in effect due to the potential for increased erosion and sedimentation. .
- Enter into volunteer agreements with interested 4WD clubs, motorcycle and ATV clubs.
- Manage flow to protect fisheries.
- Maintain wild character for undisturbed wildlife habitat, high water quality, wild trout fisheries and semi-primitive motorized recreation on Longwater Gulch, Hackett Gulch and Corral Creek connection between them, and non-motorized back country recreation in the rest of this segment.

CHALLENGES:

- Maintain a broad landscape to sustain biodiversity by providing summer and winter range for larger mammals and reproductive and dispersal areas for a variety of other animal species.
- The outstanding values identified by the Forest Service, of scenery, geology, fisheries and wildlife should not be compromised by the current, or future recreation use.
- General protection of water quality and watershed integrity.
- Maintaining the present Forest Service designated 4WD roads and motorized trails while protecting the environment and the wild, challenge character of the area is a high priority. It calls for maintaining the Longwater Gulch 4WD road (FDR#221), including the South Platte River ford allowing connection to the Corral Creek road. Maintaining the Corral Creek 4WD road (FDR#540) including the Tarryall Creek ford allowing connection to the Hackett Gulch road. Maintaining the Hackett Creek 4WD road (FDR#220, 220.A, 220.B), including the South Platte River ford allowing connection to the Corral Creek road. This

will protect the present investment of volunteer work by 4WD clubs of the Colorado Association of 4WD Clubs to maintain access on these roads.

- Establish volunteer agreements between the Forest Service and 4WD clubs, motorcycle and ATV clubs. Define the maintenance level on each 4WD road and motorized trail to protect the motorized challenge and to perpetuate the present low use of this section.
- Develop strategies to address motorized recreation off designated 4WD roads and motorized trails. Include such educational actions as informational maps and signage, travel management posters describing allowed uses on all 4WD roads, motorized trails and foot trails, immediate non designated route rehabilitation, and law enforcement presence.
- Segment C is designated as a Wild Trout water by the Colorado Division of Wildlife (CDOW). Wild Trout waters are not stocked with fish and the resident fish populations are self-sustaining. However, when disasters (natural or man-made) eliminate or severely reduce the existing fish populations or preclude the ability of the fish to maintain self-sustaining populations, the CDOW has the authority to re-stock the stream or river with suitable numbers, species and sizes of fish to re-build the fish community. The CDOW will continue to monitor the fishery over time and may discontinue stocking when self-sustaining fish populations are re-established and/or the in-stream habitat conditions improve.
- Funding to maintain the 4WD roads, motorized trails, and foot trails to control erosion, sedimentation, and impact to the riparian zones.
- Develop a plan to address human sanitation concerns.

COMMON CHALLENGES/OPPORTUNITIES:

Education; flow management; addressing noxious weeds; enforcement concerns; provision of emergency services; road maintenance; and fire and safety coordination. Promote common sense conservation and land resource stewardship.

CAPACITIES:

The current use is low. The desired used is low. Within the study area, Segment C should be managed for low recreational use while protecting the resources.

SEGMENT D – South Platte: 3.1 miles. From Cheesman Dam (downstream of the stream gauge weir) downstream to the Wigwam property (southern end).

CURRENT USES/VALUES:

- Fishing: gold medal and wild trout.
- Hiking-scenic,
- Wildlife viewing.

- Habitat for a number of Region 2 sensitive species, limited habitat for the Pawnee montane skipper, and good habitat for raptors and wintering bald eagles.
- Is part of the connecting landscape linkages from the corridor above Cheesman to the Gunbarrel and Green Mountain and Thunder Butte roadless/low density road areas?

OPPORTUNITIES:

- Trail management
- Public education
- Aquatic/recreation education

CHALLENGES:

- Flows
- Maintain water quality from sediment and ash from burn areas above canyon
- Enforcement
- Retaining wild qualities
- Improve/relocate parking
- Renovate Wigwam trail head parking
- Close old Gill trailhead and parking turnouts on Highway 126. (Jeffco)
- Maintain/enhance aquatic habitat while balancing water supply needs
- Safety/security enhancements
- Continue funding for restoration and new construction to complete a sustainable Gill trail from the Wigwam trail parking area to the Cheesman Reservoir parking area.

COMMON CHALLENGES/OPPORTUNITIES-.

Education; flow management; addressing noxious weeds; enforcement concerns; provision of emergency services; road maintenance; and fire and safety coordination. Promote common sense conservation and land resource stewardship.

CAPACITIES:

The current use is moderate use except high for fly-fishing. The desired use is to reduce commercial permits. There may need to be limited use to preserve

outstanding values. Within the study area, Segment D should be managed for moderate recreational use while protecting the resources.

SEGMENT E – South Platte: 19 miles. From the Wigwam property downstream to the high water line of Strontia Springs Reservoir (6029 foot contour)

CURRENT USES/VALUES:

- Colorado trail: biking/hiking
- Angling
- World renowned mountain biking trails
- Water play
- Kayaking/canoeing
- Scenic driving
- Along with the North Fork, this segment has the largest concentration of Pawnee montane skipper habitat
- Eagle/raptors/ospreys
- Wildlife viewing
- Camping
- Picnicking
- Private property residences
- Climbing
- Wildlife habitat corridor
- Deer/elk winter range
- Gold panning by hand (as a hobby)
- Waterton Canyon bighorn sheep herd

OPPORTUNITIES:

- Colorado trail access across river
- Education
- Increase developed camping
- Improved quality of facilities
- Paved roads - for better water and air quality
- Road access improvements at Kennedy Gulch and Night Hawk
- River bank stabilization
- Aquatic habitat improvements

- Flow enhancement
- Increased public access
- Fire prevention
- Revegetation
- Re-assess road and trail density on west side of river
- Do not rebuild Top of the World campground
- Do not reopen Trail 695
- Create well defined foot trails to stream segment
- Water storage[2]

CHALLENGES:

- Raw sewage from septic/residences and recreation use.
- Minimize human impacts caused by recreation activities
- Looking at a large campground near Trumbull. Number of sites will replace those lost in the Hayman fire. A recreational EA will be developed by the Hayman Restoration Team.
- Jefferson and Douglas county concerns - balance services and cost of law enforcement, trash removal, emergency services, zoning, land use: public v. private, maintain or expand access, open space, resolution of conflicts among various recreation user groups, question capacity of riparian area, angler impact during critical periods, cooperative management plan.
- Preserve integrity of Gunbarrel area (the RARE II area between the South Platte/Highway 126 and from Deckers to the North Platte) as wildlife habitat, landscape linkages to the south and west (Green Mountain and Lost Creek Wilderness) and as a laboratory for understanding stand replacing fire in ponderosa pine and associated ecosystems.
- Reconcile differences of opinion among stakeholders on treatment of the Right-Of-Way ("ROW").

COMMON CHALLENGES/OPPORTUNITIES:

Education; flow management; addressing noxious weeds; enforcement concerns; provision of emergency services; road maintenance; and fire and safety coordination. Promote common sense conservation and land resource stewardship.

---

[2] There is a disagreement about this item.

CAPACITIES:

Current use is high. Desired use is high. Within the study area, Segment E should be managed for high recreational use while protecting the resources.

SEGMENT H – North Fork: 22.9 miles, Insmont downstream to within % mile of the confluence with the South Platte River.

CURRENT USES/VALUES:

-
- One of the premier kayaking waters within the region, with Class IV and V whitewater rapids, as well as excellent stretches for more novice kayakers to practice their skills.
- Suitable habitat for mule deer, elk, bighorn sheep, raptors and a number of Region 11 sensitive species.
- Peregrine falcon aerie at Cathedral Spires whose protected habitat overlaps the study corridor.
- Pawnee montane skipper populations and, along with Segment E, major habitat.
- The Estabrook and Pine Historic Districts, as well as several other sites which are considered regionally significant.
- An important link to maintain connectivity with the Gunbarrel "'Rare II' roadless area which it borders, and other roadless areas to the south and west including Lost Creek Wilderness.
- Timber/firewood resources
- Water conveyance channel
- Mountain biking
- Private residents/property
- Jefferson County Open Space/Parks - Pine Valley, Cathedral Spires
- Fishing
- Hunting
- Rock climbing
- Scientific studies - educational opportunities related to fire.

OPPORTUNITIES:

- Water quality - fishery enhancement.
- Open space increase/expand,
- Wildlife habitats enhance,
- Sediment studies/fire,

- Water storage.[3]
- Enhance and preserve important historical sites.
- Maintain integrity of undisturbed portions of landscape south of the North Fork and west of the South Platte.
- Although not technically "wild" this segment has many wild qualities which can be enhanced by maintaining day use only, providing appropriate pull outs for anglers and suitably placed toilets.

CHALLENGES:

- Pawnee montane skipper/peregrine falcon recovery plan issues.[4]
- Water quality - mines, sewage.
- Coordinate on access - leave some closed to human use; balance for habitat.
- North Fork flow management within the water supply and water rights constraints associated with the Roberts Tunnel.
- Aquatic habitat related to flows.
- Legal access.
- Sedimentation from adjacent pond. (needs clarification as to location.)
- Preserve integrity of Gunbarrel area as wildlife habitat, landscape linkages to the south and west and as a laboratory for understanding stand replacing fire in ponderosa pine and associated ecosystems.
- Reduce road density in north end of Gunbarrel while maintaining Colorado Trail and mountain biking areas.
- Trail Connection from Reynolds Park to Colorado Trail.
- Maintain 'day use only' in face of mounting recreation pressure.

COMMON CHALLENGES/OPPORTUNITIES:

Education; flow management; addressing noxious weeds; enforcement concerns; provision of emergency services; road maintenance; and fire and safety coordination. Promote common sense conservation and land resource stewardship.

CAPACITIES:

Current use is moderate. Desired use is high. Within the study area, Segment H should be managed for high recreational use while protecting the resources.

---

[3] Again there is disagreement about this item.
[4] There is also disagreement about this item.

Attachment D

SOUTH PLATTE PROTECTION PLAN
ENHANCEMENT BOARD

The Enhancement Board is established to support projects that enhance and preserve the values (otherwise referred to as Resource Values,("RVs")) within portions of the South Platte River and the North Fork of the South Platte River (the "Eligible Area"). Among other functions, the Enhancement Board will determine distributions from an endowment fund which will be under the day-to-day management of an independent trustee. Funds contributed to the endowment are restricted as per the provisions of this document and may only revert to the donor upon designation of any or all of the Eligible Area as Wild & Scenic. The endowment fund contributions from members of the Enhancement Board will total at least one million dollars over three years, beginning six months after the Forest Service has taken a final agency action deciding not to recommend designation of the areas which it has identified as eligible along the South Platte and North Fork.

Endowment Fund Management

The Enhancement Board will appoint a trustee for the endowment fund. The trustee shall have all necessary powers within the law to invest, maintain and manage the endowment fund. These powers shall include accepting any and all donations, applying for grants, bequests, loans, or any other financial transactions to maintain or enhance the endowment fund. Powers also include contracting with banks or other depositories for the funds, and lawfully depositing and withdrawing money from the fund. In addition, the trustee shall be responsible for ensuring that all distributions are in accordance with the restrictions placed on endowment contributions. The Board shall adopt a Statement of Investment Policy and Objectives in order that there be a clear understanding on the part of the Board and the trustee of the investment objectives and guidelines for the endowment fund. The Statement will also provide the Board a basis for evaluation of the trustee's performance.

The Statement shall state that the primary investment goal is the preservation of the principal after taking into account inflation. The secondary objective to be set forth in the Statement is that the investments should be configured as to earn the highest possible rate of return consistent with prudent standards for preservation of capital.

Endowment Fund Spending.

The Enhancement Board may allocate funds to projects which, in its view, will further the preservation, protection, or enhancement of the RVs. The Enhancement Board may instruct the trustee to contract with any receiving entity for the completion of such projects, including requirements for escrows, inspection, bonding, collateral, or other guarantees of project completion. Projects may require the Trust to hire staff, purchase or rent facilities, equipment, or other property, and contract for goods and services necessary to further its purposes.

The purpose of the endowment fund is to provide supplemental resources to enhance and protect the RVs in the Eligible Area. Funding is limited to the RVs identified in that study. The RVs are:

- fisheries
- geologic
- historic cultural resources
- recreational
- scenic
- wildlife

Vegetation and ecological values are eligible for funding if they are directly related to the above categories (e.g. wildlife).

The Eligible Area is: (1) From Elevenmile Dam (downstream from the fence on Denver Water's special use area on the South Platte River) downstream to the high water line of Strontia Springs Reservoir; and (2) the South Platte River upstream to Insmont, from the North Fork from its confluence.. These two river segments total 72.3 linear miles of stream. Lands adjacent to the South Platte and the North Fork that the Enhancement Board determines have values of sufficient association to the river segments.

The following provisions limit the Enhancement Board's use and allocation of the endowment funds:

- The Enhancement Board shall control all use of the funds, and all restrictions herein apply to the Enhancement Board.

- The Enhancement Board shall at all times endeavor to maintain the corpus of the endowment. However, it is recognized that opportunities may arise, both during the initial three year funding period and thereafter, where the benefits of utilizing some portion of the corpus significantly outweigh its diminishment. Specifically, where the opportunity to match in-kind or financial contributions on a one-to-one or greater basis for a project or program meeting the allocation guidelines, the Board shall be empowered to authorize expenditure of no more than 15% of the corpus during any fiscal year. Such expenditure shall require a 2/3 vote of all members then active. Any funds expended under this provision shall be credited towards the one million dollar endowment contribution requirements.

- Grants, loans or other disbursements shall be made only for the enhancement, preservation and public access to the RVs within the Eligible Area.

- No more than 15% of expenditures within any calendar year shall be used for administrative costs. This limitation does not apply to non-discretionary expenses such as responding to IRS audits or litigation, financing, repairs or reimbursements caused by accident, unanticipated damage and acts of God.

- No funds shall be used for any political purpose, including but not limited to contribution to political parties or causes, contributions to or promotion of candidates for public office, publication or contribution to flyers, brochures or other printed materials supporting issues or candidates, lobbying or contributing to materials to be used for lobbying.

- No funds shall be used to challenge or oppose water development or water operations.

- The Enhancement Board shall generally restrict its expenditures to projects that further the protection and enhancement of the RVs within the Eligible Area. Generally, expenditures should not be made for ongoing operations and maintenance of such projects.

- When considering a project, the Enhancement Board shall weigh the harms and benefits to all RVs. Funds shall not be used for a project that would unduly harm one RV to benefit another.

- The Enhancement Board shall grant funding only in meetings open to the public. Notice of public meetings must be reasonably provided.

- The Enhancement Board shall grant funding only for projects that are accessible to and/or benefit the public. No funds shall create improvements on private property that would significantly enhance the value of the property unless the property is leased to a public entity and the improvement serves the public purpose of that entity.

Members.

The Enhancement Board shall consist of seventeen (17) Members who are selected by the following entities to represent each entity's interests:

- Three (3) people interested in and knowledgeable about regional fish, wildlife, and ecosystem values
- One (1) representative of motorized recreation users
- One (1) representative of non-motorized, on-land recreation users
- One (1) representative of water recreation users
- One (1) representative from Park County
- One (1) representative from Jefferson County
- One (1) representative from Douglas County
- One (1) representative from Denver Water
- Two (2) representatives of suburban Denver water providers
- One (1) representative who is a private property owner within the Eligible Area
- One (1) representative of the grazing industry
- One (1) representative of the timber or silvicultural industry
- Two (2) at-large Members

Terms.

Enhancement Board Members will serve three (3)-year terms. If a Member is appointed to fill a vacant position, the Member will serve the remainder of that position's term and be eligible for reappointment to two additional three-year terms. Members will serve as unpaid volunteers, although actual expenses may be reimbursed from the Endowment Fund.

Staggered Terms.

Members of the Enhancement Board shall have staggered 3-year terms. Therefore, only the composition of the initial Membership shall be established according to the following:

- Each of the following entities will initially have one Member appointed for a one-year term, a two-year term, or a three-year term, according to the term limit in the parentheses. After that term has expired, all subsequently appointed (or re-appointed) Members shall serve the full three-year term.

    - fish, wildlife, and ecosystem representatives (1-year, 2-year and 3-year initial terms)
    - motorized recreation user (1-year initial term)
    - non-motorized, on-land recreation user (2-year initial term)
    - water recreation user (3-year initial term)
    - Park County representative (1-year initial term)
    - Jefferson County representative (2-year initial term)
    - Douglas County representative (3-year initial term)
    - Denver Water representative (1-year initial term)
    - Suburban Denver water provider representatives (2-year and 3-year initial terms)
    - Private property owner (1-year initial term)
    - Grazing industry representative (2-year initial term)
    - Timber or silviculture industry (3-year initial term)
    - At-large Members (2-year and 3-year initial terms)

Reappointment.

No Member shall be eligible to serve more than two consecutive full three-year terms.

Initial Appointments and Re-Appointments.

The initial Members of the Enhancement Board shall be appointed within four months of a final agency action by the USFS deciding that the Eligible Area will not be recommended for designation under the Wild and Scenic Rivers Act. The initial appointments shall be made as follows:

- The three representatives of fish, wildlife and ecosystem values shall be appointed by the Colorado Environmental Coalition (CEC) upon its consultation with other local environmental organizations. CEC will continue to make future appointments and re-

appointments for these representatives unless CEC gives an alternative organization the power of appointment. Other organizations that CEC could elect to appoint these representatives are: Environmental Defense, Colorado Mountain Club, Sierra Club Rocky Mountain Chapter, Colorado Chapter of the National Audubon Society, Colorado Wildlife Federation, or Colorado Public Interest Research Group.

- The representative of motorized recreation users shall be appointed by the Colorado Off-Hiway Vehicle Association.

- The representatives of non-motorized, on-land recreation users and water recreation users shall be appointed by a joint decision between the following organizations: Trout Unlimited, Colorado Mountain Club, United Sportsmen, and Colorado White Water Association.

- The County Commissioners of Park, Jefferson, and Douglas Counties shall each appoint one representative for the interest of their respective counties.

- The representative of Denver Water shall be appointed by the Denver Board of Water Commissioners.

- The two suburban Denver water supplier representatives shall be appointed by the Wild and Scenic Task Force or its successor organization.

- The representative of private property owners in the Eligible Area, the grazing industry, and the timber or silvicultural industry shall be appointed by a joint decision between the Douglas and Jefferson County Boards of Commissioners.

- The two at-large Members shall be selected by majority vote at the initial Enhancement Board meeting by the other Members. Enhancement Board Members will continue to appoint these Members during annual meetings in the years in which the at-large Members' terms have expired.

Vacancies lasting six months and dissolution of appointing authority.

Members of the Enhancement Board may change the appointing authorities for any of the above categories by majority vote in which a vacancy has existed for more than six months or in which an appointing authority has ceased to exist.

Changes by 2/3 Vote.

Members of the Enhancement Board, by a two-thirds vote, change the appointing authority for any category in which one of the appointing authority indicates that the authorities in that category are unable to work together, or in any other situation in which the Enhancement Board Members determine a change is necessary to maintain good working order for the purposes of Enhancement Board.

Removal by 2/3 Vote.

The Enhancement Board may remove Members by a two-thirds majority vote for cause on the following grounds:

- Unexcused absence from meetings for four months or three consecutive meetings, whichever is greater
- Actions or assumptions of authority in violation of the Bylaws or adopted investment policies
- An action that endangers the independent status of the Enhancement Board
- Criminal prosecution and conviction

Removal by Judicial Proceeding.

A Member may be removed by judicial proceeding for engaging in fraudulent or dishonest conduct, gross abuse of authority or discretion, or for violating a duty.

Removal by appointing authority.

An appointing authority may remove a Member it selected with or without cause. Only the appointing authority may participate in the vote to remove a Member it selected. Removal by the appointing authority must be determined through the same process as appointments.

Notice of Removal.

The authority removing a Member shall give written notice of the removal to the Member and to the Enhancement Board

When Effective.

Removal is effective when notice is received by both the Member to be removed and the Enhancement Board, unless the notice specifies a future effective date.

Members of the Enhancement Board shall not be personally liable to the Enhancement Board for monetary damages for breach of fiduciary duty as a member. However, Members will be personally liable to the Enhancement Board for monetary damages for any breach of the Member's duty of loyalty to the organization or to its members, for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, for unlawful distributions, or for any transaction from which the Member directly or indirectly derived an improper personal benefit.

Annual Meetings.

The Enhancement Board shall have an annual meeting that shall occur within the same month each year, as determined by the Members.

Regular Meetings.

Regular meetings of the Enhancement Board shall be held bi-monthly unless otherwise determined by the Members. Annual and bi-monthly meetings shall be open to the public. Reasonable notice of meetings shall be given to the public, providing the date, time, and location of the meeting. Public participation may include State and Federal agency representatives who are *ex-officio* Members. The day, time, and location of the next regular meeting shall be scheduled during each regular meeting.

Special Meetings.

Special meetings may be called by written request including the signatures of five Members. Members shall be notified at least 3 days prior to a special meeting. Notice of special meetings shall state the purpose of the meeting, time, date and place.

Attendance by Telephone.

Members may participate in a meeting of the Enhancement Board by means of conference telephone by which all persons participating in the meeting can hear each other at the same time. Such participation shall constitute presence in person at the meeting.

Quorum.

A quorum for action by the Enhancement Board consists of a majority of the number of appointed Members positions filled at the time a meeting begins.

Voting.

A majority of the Members present shall prevail in all votes unless otherwise provided in these Bylaws. Each Member is entitled to one vote, which must be cast in person. The Members may elect to conduct a telephone vote where immediate action is necessary. For any action by telephone vote, however, a majority of the Membership positions filled at the time is required.

Officers.

The Enhancement Board shall designate Members for the positions of President, Secretary and Treasurer, and such other Officers as may be designated by the Members. Each Officer shall have the authority and perform the duties prescribed with respect to such Office by the Members, except that the Secretary shall be responsible for preparing and maintaining minutes of the meetings and other records and information required to be kept by the Enhancement Board and for authenticating records of the organization.

Resignation and Removal of Officers.

An Officer may resign at any time by giving written notice of resignation to the Enhancement Board. The Members may remove an Officer at any time with or without cause.

The Members may make provisions for the removal of Officers by other Officers or by the majority vote of the Members.

Members of the Enhancement Board may designate one or more committees, each of which shall consist of two or more Members. No such committee shall have the authority of the Enhancement Board regarding: amending, restating or repealing the Bylaws; appointing or removing any Member; amending, altering, or repealing any resolution of the Enhancement Board; or taking any other action which may hereafter be prohibited to committees by law. The designation and appointment of any such committee and the delegation thereto of authority shall not operate to relieve the organization or any individual Member of any responsibility of that Member by law. Subject to the foregoing, the Enhancement Board may provide by resolution such powers, limitations, and procedures for such committees as the Members deem advisable.

The Enhancement Board shall keep correct and complete minutes of the proceedings.

The fiscal year of the Enhancement Board shall be January 1 through December 31 of each year.

Persons Who Are Entitled to Indemnity.

The following persons (Covered Persons) shall be entitled to seek indemnity from the Enhancement Board:

- Any person who is now serving or who has served as a Member the Enhancement Board and who was or is a party or is threatened to be made a party to any threatened, pending, or completed action or suit by reason of such service, whether civil, criminal, administrative or investigative (including, without limitation, an action by or on behalf of the Enhancement Board); and

- Any person who is now serving at the request of the Enhancement Board or who has served at the request of the Enhancement Board as a fiduciary, employee or agent of a corporation, joint venture, trust, political subdivision, body politic, state agency, or other entity or enterprise and who was or is a party or is threatened to be made a party to any threatened, pending, or completed action or suit by reason of such service, whether civil, criminal, administrative, or investigative (including, without limitation, an action by or on behalf of the Enhancement Board).

Scope and Conditions of Indemnity.

The Enhancement Board shall indemnify a Covered Person against costs arising out of a claim described in Section 1 of this Article, including such person's expenses in defending such claims (including but not limited to reasonable attorneys' fees), judgments, fines, and amounts paid in settlement actually and reasonable incurred by such person in connection with such action; provided, however, that indemnification pursuant to this provision shall not be permitted with respect to any acts or omissions which constitute willful or intentional malfeasance, gross negligence or criminal acts. The Enhancement Board shall indemnify a covered person if such

person acted in good faith and in a manner such person believed to be in or not opposed to the best interests of the Enhancement Board. The termination of any civil action, suit or proceeding by judgment, order, settlement, or its equivalent, shall not of itself create a presumption that any act or omission which was the subject of the action, suit or proceeding constituted willful or intentional malfeasance or gross negligence, or was not in the best interest of the Enhancement Board.

Attachment E

Upper South Platte River Watershed

UPPER SOUTH PLATTE RIVER WATERSHED

Watershed Management

As the South Platte River flows eastward across central Colorado, it provides water for agricultural irrigation, recreation, as well as community and industrial uses. The river provides important habitat for fish and wildlife and is of fundamental value to the communities it flows through. The South Platte River watershed has been significantly transformed over the last century. In addition to water withdrawal for mining operations and agricultural activities, dams along the river have influenced the volume and variability of water flows. Water from other basins has also impacted the watershed. Literally, water from the South Platte River provides water to over one-half of Colorado citizens.

For decades, efforts to protect this watershed have been inhibited by controversies over the proper uses of its resources together with jurisdictional, financial and technical obstacles. Agricultural, urban and environmental interests have frequently clashed on dispute over water allocation and resource uses. The US Forest Service has worked in the middle of the watershed to analyze stressors on and resulting ecological effects on the watershed in order to promote community awareness of the outstanding natural resource values on these portions. These efforts coupled with a strong interest to protect remarkable resource values existing along a middle section of the South Platte River led to the Forest Services initiative to designate a portion of the South Platte River as federal wild and scenic. The A2 alternative to the federal wild and scenic designation was developed to protect the values of the South Platte while retaining strong local government participation and control. As part of, but yet parallel to all other aspects of the A2 alternative to wild and scenic, is the Upper South Platte River Watershed Management program. The Watershed Management program is driven by a larger perspective on water quality throughout the Upper South Platte River watershed, addressing issues beyond jurisdictional boundaries. Even without the proposal for federal designation, this effort was developing to identify a better approach to protect water quality through a locally developed program with local solutions.

The Upper South Platte Watershed Management Program is designed to protect the ecological health of the South Platte River and the water quality for all water uses by balancing watershed land and water use activities. Through a cooperative effort of watershed stakeholders, the program will develop water quality protection strategies that address community values, and economic sustainability for communities and water uses in the watershed as well as concerns of the regulatory agencies.

The Upper South Platte Watershed Management Program will address water quality throughout the Upper South Platte Watershed. Water quality aspects for the corridor protected by the A2 alternative include addressing point sources such as permitted discharges from wastewater treatment plants and septic systems, as well as nonpoint sources, such as erosion, grazing, mining and transportation corridors. In addition, the A2 alternative will coordinate with the Upper South Platte Watershed Management Program and ongoing water quality protection programs that are applicable to the portion of the South Platte River that is subject to the wild and scenic study. Examples of ongoing local water quality monitoring and protection programs include *River Watch* and *Embrace-a-Stream*. Applicable to the A2 corridor, the Upper South Platte Watershed Management program will conduct primary activities, such as:

- **Develop a strong public involvement program** -- The public will be involved throughout the planning and implementation process.

- **Develop an understanding of the watershed** -- This understanding will be achieved by identifying pollutant sources and constituents of concern related to beneficial uses of the river and their implications within the river corridor.

- **Prioritize water quality concerns** -- Prioritizing water quality concerns will focus protection strategies and achieve the most benefit at the lowest cost (both economic and societal costs).

- **Identify and recommend implementation of effective management strategies to protect water quality** -- Management strategies may include structural and nonstructural best management practices, adaptive management strategies, and strategies that consider objectives of regulations including the Clean Water Act, Source Water Assessment and Protection program, Total Maximum Daily Loads, etc.

- **Coordinate long-term water quality monitoring** -- Long-term monitoring will coordinate with existing monitoring efforts and identify additional targeted monitoring to evaluate the effectiveness of Watershed Management program strategies.

The Upper South Platte Watershed Management Program, although distinctly separate from the A2 process will parallel the A2 effort within the corridor and support all appropriate water quality objectives. The program will facilitate coordination among government and private entities and stakeholders to produce more effective solutions for water quality protection, because they will consider the entire watershed and stakeholders.

Steering Committee Membership

The Upper South Platte Watershed Management Program will be guided by a Steering Committee. The Steering Committee will include a total of 12 members with one representative from each of the following entities.

Steering Committee Members

- Douglas County
- Jefferson County
- Park County
- Teller County
- Denver Water
- Aurora
- Upper S. Platte Water Conservancy Dist.
- Center of Colo. Water Conservancy District
- BLM
- USFS
- Soil Conservation Districts
- State Land Board

Organization

The Steering Committee will have primary supervision of the Watershed Management Program and each Steering Committee member will have one vote. Officers of the Steering Committee will consist of Chair, Vice-Chair, Secretary/Treasurer. New officers will be elected during the first month of each calendar year. Officers will be nominated through a nominating committee and confirmed by a majority vote of the Steering Committee.

Participation from other watershed stakeholders is encouraged and the Steering Committee may solicit feedback and be assisted by other groups such as a Watershed Advisory Group (WAG). The members of a WAG may participate in the program for all purposes except voting. WAG members may assist Steering Committee members by soliciting input from various watershed constituents to ensure that all interests are heard and considered in decisions (e.g., private land owners, communities, and special interest groups). The WAG may include, but is not limited to representatives from the following entities. Additional participants may be identified and included throughout the planning process.

Watershed Advisory Group

- CDPHE -- WQCD
- US EPA
- DOW
- CDOT
- NRCS
- USGS
- Park Co. Water Preservation Coalition
- DRCOG
- Northwest COG
- Pikes Peak Area COG
- Platte Canyon Outdoor Resources Council
- South Park Heritage Resource Project
- Trout Unlimited
- Private Landowners
- Representatives from Agriculture, Environmental, Mining & Recreation Interests
- Nature Conservancy

ATTACHMENT F

Principles Regarding Water Development

Basic Principles Regarding Water Development

1. The Plan is neither intended to waive nor approve in advance any permit required by law now or in the future. Any proposal for water development in the Protected Area (as more precisely defined on Page 1 of the Proposed Forest Service Plan Amendment, also attached hereto) would be subject to the normal permit process.

2. The Plan is not a designation under the Wild & Scenic Rivers Act, and therefore no permit application should be denied on the basis of that Act. Any proposal for water development within the Protected Area should be considered on its merits, including its impacts on the values protected under the Plan, unless the proposed development is specifically precluded by the Plan.

3. Because the Two Forks Reservoir proposal is unique to the protected area in that it is larger than any other concept and has an existing federal right-of-way, this Plan contains one set of principles that applies to Two Forks and another set of principles that applies to any other water development proposal.

4. The drinking water plans of Front Range water suppliers place a priority on reducing demand through end-use water efficiency and replacing the need for new water supply by reusing water currently available to the system through non-potable applications. These techniques are useful to defer the need for further water storage.

Principles Regarding Two Forks

Right-of-Way Background. The Denver Water Board was issued a permanent right-of-way in 1931 that is administered by the U.S. Forest Service. It allows Denver Water, subject to obtaining other necessary approvals, to construct a dam at a specified location below the confluence of the South Platte River and the North Fork for a reservoir of approximately 345,000 acre-feet of capacity. That capacity, in turn, would result in a firm annual yield of about 60,000 acre-feet ("Two Forks Water"), utilizing much of Denver Water's conditional water rights in the South Platte, Williams Fork, Fraser, South Boulder Creek and Blue Rivers.

Proposal Concept. The Right-of-Way is an issue of foremost concern to many of the parties that have participated in development of the South Platte Protection Plan. Many recreation users and residents want the Right-of-Way abolished to remove the specter of future inundation of a portion of the river corridor. Denver Water cannot afford to relinquish the Right-of-Way in the absence of viable alternatives that would supply an equivalent yield. Through this Plan, Denver Water will establish a planning process that can result in alternative means of developing the Two Forks Water, which would allow Denver Water to relinquish its Right-of-Way. Denver Water will pursue alternative storage or utilization of the Two Forks Water that would allow it to achieve its yield without the use of the Right-of-Way.

Right-of-Way Moratorium. As a demonstration of good faith in pursuing those options, Denver Water voluntarily imposes a moratorium on applications for development of the Two Forks Right-of-Way for a period of twenty years from the date of a Memorandum of Agreement (MOA) to be negotiated between the Forest Service and local government participants [assumes the MOA will be completed within eighteen months of the submittal of the proposal]. Denver Water may extend this moratorium on permit applications if it determines, in the discretion of its Board, that viable alternative projects are still available that would keep its reliable supply comfortably ahead of demand projections, including a safety factor commensurate with responsible utility planning.

Right-of-Way Relinquishment. Denver Water will relinquish the 1931 South Platte Right-of-Way when development of the Right-of-Way becomes impractical because alternative development of the Two Forks waters has reduced the economic value of the Right-of-Way below meaningful value. Denver Water may perform a residual value assessment of the Right-of-Way at any time, in the discretion of its Board, after some of the Two Forks Water has been developed using alternative means. Denver Water will consider the recommendations of the Denver Water Planning Task Force in making a determination of the timeliness of a residual value assessment.

Denver Water Planning Task Force. Denver Water will form a Denver Water Planning Task Force that will meet periodically to perform the duties described below. The Task Force will include the following members:

- Denver Water's Director of Planning
- Denver Water's Director of Engineering
- Citizens' Advisory Committee (CAC) environmental representative
- one CAC Denver citizen representative
- four representatives from Colorado environmental interest groups or recreation groups involved in activities within the South Platte Protection Plan
- four suburban water providers

Task Force Duties. The Task Force will serve in an advisory capacity to the Denver Board of Water Commissioners. The Task Force will consider projects or proposals as possible candidates to be added to or deleted from the list of alternatives for development of the Two Forks Water. The Task Force may also recommend that Denver Water extend its moratorium on development of the ROW or that Denver Water undertake a residual value assessment to determine if the ROW should be relinquished. Denver Water will consider the input of the Denver Water Planning Task Force in making a determination of the timeliness of a residual value assessment.

To encourage the Task Force to operate by consensus, any recommendations by the Task Force must be approved by a vote of three-fourths of a quorum. Membership on the Task Force can be changed by a consensus of all participating members. The Task Force will meet as often as necessary but at least annually.

List of Alternatives. A complete list of alternative plans for storing or developing Two Forks Water cannot be identified today. Such a list might include alternative storage at other points on the mainstem of the South Platte, along the North Fork of the South Platte, off-channel storage on tributaries along those rivers, and off-channel storage on the high plains east of the mountains. Projects that have been discussed and included in Denver's Integrated Resource Planning Report and related documents, include the following:

Project Description	Estimated Maximum Yield*
Southern Metro Area Conjunctive Use	30,000 acre-feet
Enlargement of Elevenmile Reservoir	5,000 acre-feet
Enlargement of Antero Reservoir	10,000 acre-feet
Enlargement of Gross Reservoir or construction of Leyden Gulch Reservoir	20,000 acre-feet

* The estimated maximum yield is not necessarily all derived from Two Forks Water.

With the exception of conjunctive use, Antero and Leyden Gulch, none of the above projects take into account potential plans of suburban providers in the greater metropolitan Denver area. The list of projects is provided here only because it is instructive of the nature of alternatives that could produce yield from Two Forks Water.

Principles Regarding Other Water Development

Water Development Precluded by the Plan. By agreement of those water users who submitted the Plan ("Water Users"), the following water development would not be permitted under the Plan:

> Water Users will not apply for permits for any water storage or diversion facility located in Elevenmile Canyon or Cheesman Canyon. These restrictions are not intended to preclude repair, enlargement or replacement of Elevenmile or Cheesman Dams or their related structures.
>
> Denver Water and other Water Users will consent to dismissal of the large junior Two Forks water rights filings (780,000 acre-feet in 1984) for conditional storage rights.

Future Water Development in the Protected Area. Water development within the Protected Area would need to demonstrate, after mitigation, the lack of significant long-term adverse effects on the resource values identified and protected by the Plan.

Examples of Possible Future Water Development. As area water demands increase and as water providers develop their systems to meet that demand, a variety of activities may occur that could affect the Protected Area. Some water development activities will definitely occur, although it is impossible to predict with any accuracy the frequency or magnitude of these activities. For example, water development activities could involve physical work in or near the river channel or could affect flows. While these potential activities are not expected to

have significant adverse effects on the "Values" within the Protected Area, detailed assessments of those effects will be made as a part of any required permit procedure.

The following is a list of potential water development activities that, depending on how they are constructed and operated, could affect the Protected Area. This list contains activities that have already received some analysis or attention, but it cannot be exclusive since we do not know what new circumstances, ideas or options may occur in the future. It is unlikely that all of these activities would occur, but some certainly will.

Investigation of and potential development of water storage alternatives for yield that would have been realized if Two Forks Reservoir had been constructed (Two Forks Water):

- Some sites investigated could be within or tributary to the Protected Area (e.g., Estabrook, off-channel tributaries).
- Possible diversion structures to move water to off-channel reservoirs.
- Investigatory sampling and monitoring both in and along the river.

Expansion of upstream reservoirs

- Possible expansion of Eleven Mile Reservoir.
- Possible expansion of Antero Reservoir.

New water sources introduced into the mainstem of the South Platte

- Colorado River rights (Homestake, Eagle River, Ruedi, etc.)
- Other Arkansas River rights.
- Water from other basins.

New water sources introduced into the North Fork

- New West Slope diversions transported through Roberts Tunnel.
- May require additional channel work.

Future projects in South Park

- May be coupled with additional diversions into the South Platte basin.
- May affect the duration of higher flows in the mainstem.

Examples of Activities Not Considered New Water Development. As existing water systems age, they will require extensive maintenance and rehabilitation.

New conditions such as increased sedimentation from forest fires will require modifications to maintain the functioning of existing system. As water demands increase, the use of existing water systems will increase. The operations of Denver's and Aurora's existing water systems will continue to be subject to compliance with the Streamflow Plan during these activities and may require permits depending on the law at the time. However these activities will not be considered new water development pursuant to this agreement. The following lists some examples of these activities.

Sediment management

- Efforts to reduce erosion
- Efforts to capture or impound sediment including check dams and in-channel structures
- Efforts to remove sediment from the river, upstream drainages, and reservoirs.

Rehabilitation of existing reservoirs and other water facilities

- All reservoirs and dams need maintenance and rehabilitation from time to time.
- Safety considerations should dictate changes in reservoirs and reservoir facilities.
- Valve replacement at Eleven Mile Reservoir is a requirement of the Streamflow Plan.
- Maintenance on transbasin conduits and valves that release water into the South Platte basin.

Channel improvement or bank stabilization on the mainstem or tributaries

- Part of the South Platte Protection Plan.

Exchanges of water

- Water flowing in the North Fork is exchanged into mainstem reservoirs to operate system efficiently.
- Water is exchanged to upstream reservoirs.
- Exchanges are subject to the Streamflow Plan including minimum flow commitments.
- Possible purchase of South Park agricultural rights for conversion to municipal and industrial use.

Increased deliveries of water from the Roberts Tunnel

- Water supplied from increased use of existing facilities.
- Increased magnitude of flow rate and possibly increased duration of high flow.
- May require additional channel work.
- These activities are covered by the Streamflow Plan.

Attachment G

Proposed Forest Service Plan Amendment
South Platte River Protection Management Area

Background. Over a period of several years, a group of environmental interests, local governments, water users, and other interested parties have collaborated in developing the "South Platte Protection Plan" (SPPP) as a vehicle for protecting the South Platte River corridor in the general area from Elevenmile Reservoir to Strontia Springs Reservoir and the North Fork of the South Platte below Insmont (as identified in Table 1-1 of the June 29, 2000 *Supplemental Wild and Scenic River Study Report and Draft Legislative Environmental Impact Statement excluding the creeks flowing into Cheesman Reservoir*). The SPPP offers an alternative to designation under the Wild and Scenic Rivers Act. The SPPP contains numerous commitments from water users and local governments, but does not discuss the role of the U.S. Forest Service in protecting and enhancing the resource values identified in the SPPP. Environmental interests also had significant concerns about enforcement of the SPPP. Accordingly, a working group has prepared these proposed amendments to the Land and Resources Management Plan (Forest Plan) for the Pike and San Isabel National Forests. The amendment, if adopted through the Forest Service's public process, will provide enforceable direction to the Forest Service for management of lands along the South Platte River corridor. This amendment is intended to be consistent with, and not supercede, the goals and specific content of the SPPP. We anticipate that the concepts of this Amendment, if adopted, would also be carried into the Forest Plan revision as it proceeds.

The proposed Plan Amendment language is intended to fit under a new management area designation in the Forest Plan, "River Corridor Protection". The working group is still in the process of finalizing its recommendation for what sections of the National Forest should be part of this new management area. Generally, the designation would apply to National Forest lands within ¼ mile of the South Platte River or the North Fork below Insmont. In Elevenmile Canyon, the corridor would be ¼ mile or to the top of the canyon, whichever is larger. In Wildcat Canyon, the corridor would be significantly wider, including the entire "viewshed" from the bank of the river. Collectively, these areas are referred to as the South Platte Corridor Management Area (SPCMA).

In some cases, the working group has attempted to put its recommendations into the standard language of forest planning. In others, we have simply identified the concept we propose – hopefully with sufficient detail to allow the Forest Service to develop Forest Plan language that would reflect the group's intent. Our recommendations have been grouped into general categories: river protection; fish, wildlife, and riparian; vegetation management; special uses (including water development); recreation; travel management and watershed; historic/cultural/archaeological resources; and scenic protection. There is some overlap among the proposed standards and guidelines for these topics. The working group recognizes this duplication, but has chosen to retain it in order to highlight issues of concern as they relate to the different topics.

Segment-specific direction appears in both the recreation and scenic sections. The identified segments are the same as those used in the Wild and Scenic Rivers study for the South Platte River. Direction in the other sections where segments are not specified is intended to apply over the entire SPCMA. The Forest Service's Wild and Scenic eligibility determination for the North Fork of the South Platte and the South Platte rivers identified Outstandingly Remarkable Values for each section of the river studied. For the purposes of the SPPP the Outstandingly Remarkable Values (as well as some values not recognized in the eligibility study) are referred to as "resource values."

River Protection

Background. The purpose of the SPPP is to protect and enhance the resource values of the area on the local level without federal designation or operation under the Wild and Scenic River Act, while preserving the critical role of the river in water supply and maintaining sufficient flexibility in management of the river to accommodate change over time. Accordingly the Forest Service should do the same in its management activities.

The parties recognized that the Forest Service will retain the ability to reopen consideration of a Wild and Scenic River designation if the SPPP fails and cannot be fixed. Prior to such consideration, the Forest Service shall identify the cause of any problems or failures of the SPPP, and shall work in cooperation with the SPPP partners to fix such problems or failures. Some problems may be beyond the capability of the Forest Service or any of the other SPPP partners to address. For example, whirling disease has reduced the quality of the rainbow trout fishery in the South Platte River – but should not serve as a basis for determining the SPPP to have failed and reopen the Wild and Scenic Study. Similarly, the Hayman Fire has caused and may continue to cause significant impacts to the resource values identified in the SPPP. However, the impacts resulting from this or other fires should not serve as a basis for the Forest Service determining the SPPP to have failed and reopen the Wild and Scenic Study.

Where problems can be defined and acted upon, the Forest Service should work with the Friends of the South Platte and the parties to the SPPP to address the cause through management changes, restoration projects, and/or amendments to the SPPP (with approval of SPPP partners). We anticipate that any problems can be resolved through this process. However, if such cooperative efforts fail and the resource values of the river corridor are at significant risk, the Forest Service may at its own discretion reinitiate its Wild and Scenic Study. Should the Forest Service recommend designation based on the renewed study, the obligations of parties under the SPPP would become void.

Goals:

Study River Protection. Protect and enhance the resource values of the South Platte and North Fork of the South Platte as identified in the SPPP.

Standards:

Study River Protection. Management actions, proposed new uses or new facilities on National Forest System lands will not be allowed if they have, after mitigation, significant long-term

adverse effects on the resource values identified and protected by the SPPP. A description of allowable water development projects is included in attachment F of the SPPP and in the Water and Utility Development portion of this submittal.

It is the understanding of those involved in the SPPP that the South Platte river was found to be free-flowing and therefore eligible for Wild and Scenic designation in several segments despite the existence of some water development activity in those segments, such as diversions. Therefore we expect that the water development allowed under the SPPP – would not render the river ineligible for designation in the future. Accordingly, the intent of this standard is not to preclude such water development, but rather to ensure that the South Platte remains eligible for consideration as a Wild and Scenic River in the future should the SPPP fail or its participants withdraw their commitments.

Mineral withdrawal. The Forest Service will file a request with BLM that Federal lands within the special interest area be withdrawn from appropriation and entry under the mining laws, in order to protect the ORVs.

Reopener. When the resource values of the South Platte are found to decline, or when significant action may impact the river's eligibility and resource values, the Forest Service and participating parties should cooperate to address the threat to the values. The Forest Service should first assess the threat/decline and attempt to identify the causes. In cooperation with the participating parties and Friends of the South Platte, the Forest Service will then work to address those causes through cooperative efforts that may include management changes, restoration projects, and modifications to the SPPP (with approval of SPPP partners) . Re-initiation of the Wild and Scenic Study may be undertaken if the Forest Service determines that cooperative approaches, such as those listed here, do not protect the river's values or that there have been sufficient violations of the SPPP agreements to undermine confidence in continued protection of the resource values. If the Forest Service recommends designation based on the renewed study, the obligations of parties under the SPPP would become void.

Fish, Wildlife, and Riparian

Many wildlife habitat issues are also covered in sections such as recreation, travel management and watershed, or vegetation management. Accordingly, discussion here focuses on standards directly relating to fish & wildlife and riparian habitat, including guidance for individual species of concern thought to be present in the study area. By no means does this indicate that factors such as sedimentation, erosion, fragmentation, or disruption, are of little or no concern for fish and wildlife and that they should not be considered in prescribing management plans. Habitat modification techniques such as burning, mowing, thinning, or replanting will be allowed to occur provided there is sufficient evidence that the prescribed practices will benefit wildlife habitat.

Goals:

Viability. Maintain habitat for viable populations of native and desired non-native vertebrate wildlife species.

Maintain habitat needed to support viable populations of all management indicator species found in the South Platte Corridor Management Area (SPCMA).

Manage habitats capable of supporting self-sustaining fish populations to provide for maintenance of those populations.

Riparian protection. In riparian areas, manage for native species composition, age structure, and pattern of vegetation distribution that approach expected conditions under natural disturbance regimes.

Manage riparian areas to maintain their health and function as firebreaks.

Construction and maintenance activities including NFS roads will be conducted to minimize sediment discharge into streams, lakes, and wetlands.

Objectives:

Fishery habitat. Manage fish habitat that provides a fishery at or near its potential, to maintain the quality of that habitat. Manage fish habitat to improve habitat conditions that may be limiting.

Standards:

Riparian protection. Allow new activities and uses within 300 feet or the top of the inner gorge (whichever is greater) of perennial and intermittent streams, wetlands and lakes (over one acre) only if onsite analysis shows that, after mitigation, there is no significant long-term adverse effects on hydrologic function, channel stability, riparian condition, and stream health. Existing use and occupancy activities within this zone, found to be causing degradation (as identified in the monitoring/water quality plan), will be scheduled for closure or mitigation.

Protect aquatic and riparian habitats on tributary streams within the SPCMA as needed to maintain the resource values identified in the SPPP.

Travelways and other disturbed sites will be constructed to avoid riparian areas to the maximum extent possible and to minimize and mitigate adverse effects on riparian habitat where it cannot be avoided.

Instream structures. Design and construct all new stream crossing and other instream structures to provide for passage of flow, withstand expected flood flows, and allow free movement of aquatic and terrestrial life (except where the structure is intended to provide a barrier to migration of non-native aquatic species and to temporarily collect sediment resulting from the Hayman Fire).

Guidelines:

Waterway protection. Where travelway crossings of riparian corridors are needed, they should be constructed so as to bisect perpendicular to the corridor.

Species Specific Management Standards:

MAMMALS

Mule Deer, Elk, Big Horn Sheep: Areas indicated by Division of Wildlife Resource Information Source (WRIS) maps as being severe winter range, winter concentration areas, production areas, summer concentration areas, or migration corridors will have minimal development of trails or roads.
Beaver: Beaver activity will be allowed to occur in a natural manner. Dams will not be removed unless there is a threat to life or property.
Black Bear: Areas indicated by Division of Wildlife WRIS maps as being summer and fall concentration areas will be minimally encroached upon by roads, trails and other development.
Preble's Meadow Jumping Mouse: As this is a federally listed species, areas indicated by U.S. Fish and Wildlife Service as being suitable habitat for PMJM will not be adversely impacted by human development, as governed by the Endangered Species Act. Currently, best habitat for PMJM is believed to include lush, vegetation along watercourses or in herbaceous understories in wooded areas up to 7600' in elevation. They are primarily associated with riparian corridors of small intermittent streams where riparian herbaceous and riparian shrub (primarily willow) dominate.

BIRDS

Peregrine Falcon, Bald and Golden Eagle, Goshawk, Osprey, and other raptors: Active nesting areas will not have trails or roads built within ½ mile of the nest site. A ½ mile buffer will be made off-limits to recreation during the breeding season associated with each of the species. Roost sites will also be buffered by ½ mile.

Peregrine Falcon: No human encroachment should occur within ½ mile of nest site from March 15th to July 31st. No surface occupancy beyond that which historically occurred in the area should occur within ¼ mile radius of the nest site. (Surface occupancy means non-human habitation. Examples include oil and gas wells, roads, trails, etc.)

Bald Eagle: No human encroachment should occur within ½ mile of nest site from November 15th to July 31st. All on-the-ground work of any kind (except for emergency situations) within a ¼ mile area of the communal roost perimeter during November 1st through March 15th tie period will be pre-approved by the U.S. Fish and Wildlife Service and conducted between the hours of 10 a.m. and 3 p.m. to minimize any potential inadvertent disturbance to roosting eagles.

Golden Eagle: No surface occupancy beyond that which historically occurred in the area should occur within ¼ mile radius of the nest site. Seasonal restrictions to human encroachment should be established within ½ mile of the nest and alternate nests from February 1 to July 15th.

Osprey: No surface occupancy beyond that which historically occurred in the area should occur within ¼ mile radius of the nest site. Seasonal restrictions to human encroachment should be established within ½ mile of the nest and alternate nests from April 1st to August 31st.

Merriam's Turkey: Areas indicated by Division of Wildlife as being winter range, and winter concentration areas will have limited, if any development of trails or roads. Further, human activity will be restricted from production areas from March 15th to August 15th.

Mexican Spotted Owl. As this is a federally listed species, critical habitat designated by the U.S. Fish and Wildlife Service may not be adversely impacted by human development, as required under the Endangered Species Act.

AMPHIBIANS

Boreal Toad: A 200 meter buffer zone of undisturbed habitat should be left around each wetland or pond that has been found suitable as boreal toad habitat. This buffer zone should not be left as an isolated island, but should be connected to the forest by (at least) fingers of trees. This will provide 80-90% protection for most boreal toads, which use the forested area for winter habitat.

- Work that will cause disturbance to the area should be conducted between October 1 and May 1; this is the inactive time for most herptiles.
- Avoid sedimentation to wetlands at all times. Documented losses of toads have occurred at individual ponds due to heavy sedimentation by roads and trails.
- Protect hydrologic systems around the wetland. More water is not always better in the case of herptiles – more water may lower temperature, which will increase the tadpole stage of a herptile. This will not allow metamorphosis of the tadpole to the juvenile state in time to allow winter survival.

INSECTS

Pawnee Montane Skipper. As this is a federally listed species, suitable habitat for the skipper must not be adversely impacted by human development (taking into consideration mitigation measures), as governed by the Endangered Species Act.

Recreation

Recreation will be managed to protect and enhance the resource values of the South Platte Corridor Management Area (SPCMA) Using Forest Service Recreation Opportunity Spectrum (ROS) definitions for prescriptions 1, *Rural*, and 2, *Roaded Natural*, developed recreation areas will conform to the pastoral nature of the area, and will be oriented at providing a minimally risky and comfortable experience. Camping will be in developed sites and motorized travel will be restricted to designated routes.

Using ROS definitions for prescriptions 3, *Semi-primitive Motorized*, and 4, *Semi-primitive non-motorized*, recreational experiences in dispersed areas will be backcountry experiences aimed at providing a rustic and somewhat adventurous experience. Camping will be prohibited in some locations and dispersed in others. Visitors should feel as if they are in a wild river canyon far from the sights and sounds of urban environment.

Throughout this section, references to roads, routes, or travelways apply to National Forest System routes. The standards do not apply to the existing county roads within the corridor.

Area-Wide Direction

Standards:

Special Use Permits. SUPs will be based on capacity study; no additional SUPs will be issued when capacity levels are met.

Signage. Signs will be posted at all trailheads that inform visitors about the type of travel permitted on the route and any restrictions that apply.

Scenic integrity. Recreation will be managed to maintain the prescribed scenic integrity levels for the area. Recreation development and management will strive to protect the scenic qualities of the area.

Maps. Designated travelways and travel restrictions will be displayed in an easy-to-understand format on the Forest Visitor Map.

Travel. Motorized or mechanized travel is allowed only on designated routes when the routes are signed open to each type of use. Illegally created routes (non-system routes) shall either be closed, obliterated, revegetated, and sloped to drain as soon as possible, or integrated into the official travel system through a public process and after an environmental analysis.

Guidelines:

Restrictions. Manage road or trail use by seasonal closure if:

- Use causes unacceptable damage to soil and water resources due to weather or seasonal conditions.
- Use causes unacceptable wildlife conflict or habitat degradation.
- Use results in unsafe conditions due to weather conditions.
- The road or trail serves a seasonal public or administrative need.
- The area accessed has seasonal need for protection or non-use.

Separation of use. Trails may be dedicated to a single use where clearly necessary to resolve conflicts.

Management Prescription 1, Rural:

(Applies to Segments H1 – North Fork Insmont to Estabrook, H3 – North Fork Cliffdale to confluence, B – South Platte from Lake George to Beaver Creek, and E – South Platte from Wigwam Club to Strontia Springs)

Opportunity to observe and affiliate with other users is important, as is convenience of locations. Self-reliance on outdoor skills is of little importance. Naturally environment is culturally modified yet attractive. Interactions between users may be high as is evidence of other users.

Standards:

Appropriateness of facility development. Design, construct, and manage developed recreation sites according to the adopted ROS class and scenic integrity objective.

Design, construct, and manage developed recreation sites in such a way that they do not impair the resource values of the SPCMA and are consistent with the recreational, ecological, and scenic setting.

Close, rehabilitate, or otherwise mitigate developed recreation sites when one or more of the following exist: considerable environmental damage is occurring including excessive erosion, soil, or vegetative damage, effects of site occupancy exceeds the adopted scenic integrity objective, or social use conflicts exist.

Waterway protection. Design, construct, and manage developed recreation sites so that riparian health including channel bed and bank integrity is maintained, and threatened, endangered, and sensitive species habitat is protected. Maintain a 100-foot buffer from waterways when siting any new campgrounds.

Guidelines

Facility development. Design recreational facilities to blend with the elements found in the natural landscape.

Strive to construct facilities that require low maintenance, are cost effective, sustainable, and include universal design concepts.

Close facilities if adequate public safety or sanitation cannot be provided.

Campgrounds. When campground occupancy is less than 20% during normal operating season, conduct an analysis to decide future management of the campground.

Ensure that adequate bathroom and garbage collection facilities exist at all campgrounds.

Vegetation management and landscape management in developed areas. Vegetation should be managed so that natural ecological functions prevail unless such functions present health and safety hazards. Water drainage and disturbed areas should be managed so that excessive erosion does not occur.

Capacity. Recreation will be managed to stay within the capacity allowed for the prescribed ROS objective.

Consistency across boundaries. Work to integrate trail systems with other government entities and partners.

Management Prescription 2, Roaded Natural:
(Applies to Segment A – South Platte from Elevenmile Dam to Lake George)

Opportunity exists to affiliate with other users in developed sites but with some chance of privacy. Self-reliance on outdoor skill is of only moderate importance. Little challenge and risk. Mostly natural appearing environment as viewed from roads and trails. Access and travel is limited to conventional motorized vehicles on designated roads (e.g., cars). Vegetative alterations done to maintain desired visual and recreational characteristics.

Standards:

Appropriateness of facility development. Design, construct, and manage developed recreation sites according to the adopted ROS class and scenic integrity objective.

Design, construct, and manage developed recreation sites in such a way that they do not impair the resource values of the SPCMA and are consistent with the recreational, ecological, and scenic setting.

Close, rehabilitate, or otherwise mitigate developed recreation sites when on or more of the following exist: considerable environmental damage is occurring including excessive erosion, soil, or vegetative damage, effects of site occupancy exceeds the adopted scenic integrity objective, or social use conflicts exist.

Waterway protection. Design, construct, and manage developed recreation sites so that riparian health including channel bed and bank integrity is maintained, and threatened, endangered, and sensitive species habitat is protected. Maintain a 100-foot buffer from waterways when siting any new campgrounds.

Quiet. Recreation will be managed to maintain a prescribed level of quiet in the following areas:

- Identified trout fishing areas
- Non-motorized trails
- Identified wildlife areas

NOTE: this issue is flagged for USFS consideration; the working group was unsure of the best way to address this objective. The goal is to avoid user conflicts and conflicts with wildlife resulting from excessive noise.

Guidelines:

Facility development. Design recreational facilities to blend with the elements found in the natural landscape.

Strive to construct facilities that require low maintenance, are cost effective, sustainable, and include universal design concepts.

Close facilities if adequate public safety or sanitation cannot be provided.

Campgrounds. When campground occupancy is less than 20% during normal operating season, conduct an analysis to decide future management of the campground.

Insure that adequate bathroom and garbage collection facilities exist at all campgrounds.

Vegetation management and landscape management in developed areas. Vegetation should be managed so that natural ecological functions prevail unless such functions present health and safety hazards. Water drainage and disturbed areas should be managed so that excessive erosion does not occur.

Capacity. Recreation will be managed to stay within the capacity allowed for the prescribed ROS objective.

Management Prescription 3, Semi-primitive Motorized:

(Applies to Segment C2 – South Platte from ¼ miles upstream of Hackett Gulch to ¼ mile downstream of Corral Creek)

Moderate probability of experiencing solitude, closeness to nature, tranquility. High degree of self-reliance, challenge, and risk in using motorized equipment. Predominantly natural appearing environment. Low concentration of users but often evidence of others on trails. Minimum on site controls on site but subtle. Vegetative alterations may be small in size in number, widely dispersed, and visually subordinate.

Standards:

Waterway protection. Disallow camping within 200 feet of a shoreline or wetlands unless otherwise designated.

Facility Management. Facilities provided at trailheads shall be consistent with the recreation setting and provide for parking, trail information, and appropriate sanitation facilities.

Close, rehabilitate, or otherwise mitigate dispersed sites when on or more of the following exist: considerable environmental damage is occurring including excessive erosion, soil, or vegetative damage, effects of site occupancy exceeds the adopted scenic integrity objective, or social use conflicts exist.

Dispersed camping and recreation activities may be restricted or prohibited if considerable environmental damage is occurring including but not limited to excessive erosion, soil, or vegetative damage, effects of site occupancy exceeds the adopted scenic integrity objective, or social use conflicts exist.

Capacity. Recreation will be managed to stay within the capacity allowed for the prescribed ROS objective.

Travel. Motorized or mechanized travel is allowed only on designated routes when the routes are signed open to each type of use.

Forest Service non-system routes. Illegally created routes (non-system routes) shall either be closed, obliterated, revegetated, and sloped to drain as soon as possible, or integrated into the official travel system through a public process and after an environmental analysis.

Quiet. Recreation will be managed to maintain a prescribed level of quiet in the following areas:

- Identified trout fishing areas
- Non-motorized trails
- Identified wildlife areas

NOTE: this issue is flagged for USFS consideration; the working group was unsure of the best way to address this objective. The goal is to avoid user conflicts and conflicts with wildlife resulting from excessive noise.

Guidelines:

Developed backcountry recreation. In high use areas, consider designating backcountry sites and restricting camping to those sites.

Diverse opportunities. Provide an array of trail opportunities.

Management Prescription 4, Semi-primitive Non-motorized:

(Applies to Segments H2 – North Fork from Estabrook to Cliffdale, D – South Platte from Cheesman Dam to Wigwam Club, C1 – South Platte from Beaver Creek to ¼ mile upstream of Hackett Gulch, C3 – South Platte from ¼ mile downstream of Corral Creek to Cheesman Reservoir)

High probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge and risk. Natural appearing environment. Low interaction between users. Some evidence of other users. Minimal on site controls. Access and travel is non-motorized on trails or is of a cross-country nature. Any vegetative alterations will be very small in size and number, widely dispersed, and visually subordinate.

Standards:

Waterway protection. Disallow camping within 200 feet of a shoreline or wetlands unless otherwise designated.

Facility Management. Facilities provided at trailheads shall be consistent with the recreation setting and provide for parking, trail information, and appropriate sanitation facilities.

Close, rehabilitate, or otherwise mitigate dispersed sites when on or more of the following exist: considerable environmental damage is occurring including excessive erosion, soil, or vegetative damage, effects of site occupancy exceeds the adopted scenic integrity objective, or social use conflicts exist.

Dispersed camping and recreation activities may be restricted or prohibited if considerable environmental damage is occurring including but not limited to excessive erosion, soil, or vegetative damage, effects of site occupancy exceeds the adopted scenic integrity objective, or social use conflicts exist.

Capacity. Recreation will be managed to stay within the capacity allowed for the prescribed ROS objective.

Forest Service non-system routes. Illegally created routes (non-system routes) shall either be closed, obliterated, revegetated, and sloped to drain as soon as possible, or integrated into the official travel system through a public process and after an environmental analysis.

Quiet. Recreation will be managed to maintain the natural level and quality of noise 98% of the time in all areas (e.g., ambient natural sounds). NOTE: this issue is flagged for USFS consideration; the working group was unsure of the best way to address this objective. The goal is to avoid user conflicts and conflicts with wildlife resulting from excessive noise.

Guidelines:

Developed backcountry recreation. In high use areas, consider designating backcountry sites and restricting camping to those sites.

Diverse opportunities. Provide an array of trail opportunities.

Consistency across boundaries. Work to integrate trail systems with other government entities and partners.

Scenic

In discussing scenic objectives for different segments, the working group used the Forest Service's Visual Quality Objectives (VQO) system as a set of measurable goals for the management of the Forest's visual resources. The stated goals are: preservation, retention, partial retention, modification, and maximum modification – corresponding to designation as scenic integrity objectives of very high, high, moderate, low, and very low, respectively. Except for preservation/very high, each goal describes a different degree of acceptable human-induced alterations of the natural-appearing landscape based on the importance of aesthetics (as listed in the Arapaho-Roosevelt Revised Forest Plan):

Very high / Preservation: There are no management activities in areas with this VQO; it is applied to classified Wilderness, Wild Rivers and any administratively designated natural area where only ecological change is allowed. Such minor, localized features as trails and campsites are allowed.

High / Retention: Management activities are not evident; they blend well with the natural landscape and are barely discernible. Timber harvest and roading may occur in areas with a VQO of retention, but they must be designed to appear natural and unnoticeable. This VQO is generally applied to areas in the foreground of sensitive viewing areas.

Moderate / Partial Retention: Alteration to the natural landscape may be apparent, but they are visually subordinate to natural features. Management activities such as timber harvest and roading may occur, but must be designed so they blend into the natural landscape.

Low / Modification: Management activities may be visually dominant. They must be harmonious with features of the natural landscape, in their size, form, and linear characteristics. Recreation developments, timber harvest units, and roads are examples of elements that may be found in a landscape that meets this VQO. Alterations to the landscape may not be in glaring contrast to natural forms.

Very low / Maximum Modification: Human activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

The proposed scenic integrity objectives for each river segment are:

Segment A – South Platte from Elevenmile Dam to Lake George
Moderate

Segment B – South Platte from Lake George to Beaver Creek
Moderate (note: this goal is only for NFS lands, recognizing that private lands may have a greater level of development)

Segment C1 – South Platte from Beaver Creek to ¼ mile upstream of Hackett Gulch
Very High

Segment C2 – South Platte from ¼ miles upstream of Hackett Gulch to ¼ mile downstream of Corral Creek
Moderate

Segment C3 – South Platte from ¼ mile downstream of Corral Creek to Cheesman Reservoir
Very High

Segment D – South Platte from Cheesman Dam to Wigwam Club
High

Segment E – South Platte from Wigwam Club to Strontia Springs
Moderate (note: this goal is only for NFS lands, recognizing that private lands may have a greater level of development)

Segment H1 – North Fork Insmont to Estabrook
Low

Segment H2 – North Fork from Estabrook to Cliffdale
Very High

Segment H3 – North Fork Cliffdale to confluence
Low

Water & Utility Development

Through the SPPP, limitations have been set on water development in the river corridor, with different levels of protection applying to Cheesman and Elevenmile Canyons and to the remainder of the South Platte Corridor Management Area (SPCMA). There is also an existing South Platte right-of-way. The Denver Water Board was issued a permanent right-of-way in 1931 that is administered by the U.S. Forest Service (South Platte ROW). It allows Denver Water, subject to obtaining other necessary approvals, to construct a dam at a specified location below the confluence of the South Platte River and the North Fork for a reservoir of approximately 345,000 acre-feet of capacity. As described in the SPPP, Denver Water will establish a planning process that can result in alternative means of developing the water yield from the South Platte ROW, which would allow Denver Water to relinquish the right-of-way. Denver Water will pursue alternative storage or utilization of the South Platte ROW that would allow it to achieve its yield without the use of the ROW. Denver Water voluntarily agrees to a moratorium on applications for development of the South Platte ROW for a period of twenty years from the date of a Memorandum of Agreement (MOA) for the SPPP to be negotiated between the Forest Service and local government participants.

Standards:

Water Development: Do not approve permit applications for any new water storage or diversion facilities in Cheesman and Elevenmile Canyons.

Do not approve permit applications for new water developments that demonstrate, after mitigation, significant, long-term adverse effects of the resource values identified and protected in the SPPP.

Utilities: Do not plan utility corridors or approve permit applications for gas, electric, or communication utilities in Cheesman and Elevenmile Canyons.

Do not approve permit applications for new gas and electric utility lines that demonstrate, after mitigation, significant, long-term adverse effects on the resource values identified and protected in the SPPP. Where facilities are installed, restrict new facilities to existing corridors.

Guidelines:

Water Development. Any proposal for new water development, other than in the Elevenmile or Cheesman canyon areas, would be subject to the normal permit process. Any proposal for new water development should be considered on its merits, including its impacts on the values protected under the SPPP, unless the proposed development is specifically precluded by the SPPP. Maintenance and repair of existing water structures, stream channel maintenance and bank stabilization, changes in operation of existing structures, and sediment removal, are not considered new water development.

Utilities. Consolidate occupancy of transportation and utility corridors wherever possible and compatible.

Overhead powerlines should be routed in a manner as to minimize visual impacts and conform to designated corridors. Design and construct such powerlines to minimize the risk of raptor electrocution.

To the extent possible, manage activities within linear corridors to be compatible with the goals of the surrounding management area prescriptions.

Vegetation Management

There is little vegetation management taking place in this corridor currently and the working group anticipates that there will be very little vegetation management in the river corridor. Where it takes place, it should be for purposes of ecosystem restoration and not focus on commodity production. Specific guidance for range, timber, and fire is included below.

Standards:

Grazing. No grazing will be permitted in the management area except for the purposes of restoration and noxious weed control.

Timber cutting. The South Platte Corridor Management Area (SPCMA) shall be unsuitable for timber production.

Timber may be cut, sold, or removed from the SPCMA only if the Responsible Official determines that one of the following circumstances exists. The cutting, sale, or removal of timber in these areas is expected to be infrequent.

(1) The cutting, sale, or removal of generally small diameter timber (under 12 inches diameter at breast height) is needed for one of the following purposes and will maintain or improve one or more of the SPCMA's resource values.

(a) To improve threatened, endangered, proposed, or sensitive species habitat; or

(b) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of catastrophic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period;

(2) The cutting, sale, or removal of timber is incidental to the implementation of a management activity not otherwise prohibited in the SPCMA.

(3) Trees may be cut for safety reasons or to allow the construction of new facilities, such as restrooms, that are necessary to protect the resource values of the SPCMA. The number of trees cut for under this provision is expected to be the minimum necessary to accomplish the purpose of the action.

Prescribed fire. Protection of resource values shall be considered in deciding how, or if, to fight fires in the SPCMA. Generally, firelines shall not be constructed with bulldozers or other heavy equipment unless necessary to save lives or property. Hand-constructed firelines are acceptable where needed.

Noxious weeds. In conducting plantings, use only native species of vegetation. Where noxious weeds are established, work to control or eliminate them and replace them with native species.

Guidelines:

Grazing. The Forest Service will seek cooperative agreements with private landowners along the river corridor to encourage grazing management that will protect the riparian habitat and the identified resource values.

Prescribed fire. Prescribed fires, both planned and unplanned ignitions, are permitted in the SPCMA for the following purposes:

1) To reduce unnaturally high accumulations of live and dead fuels caused by fire suppression.

2) To help reduce the risk of catastrophic fire, especially in areas where a large and/or very hot fire would likely degrade resource values.

3) Where needed to improve habitat for threatened or endangered species.

Fires with natural ignitions are allowed to burn only after a fire prescription is written for the area. This prescription will designate areas, if any, where fires will be allowed to burn after ignition and under what conditions. Areas where fires will be allowed to burn generally will be in more remote areas, to the extent feasible, to minimize conflicts with recreational activities in the SPCMA and with adjacent and included private land.

Travel Management and Watershed

These standards speak to containing the impacts of watershed disturbances on the South Platte. Much of the focus is on travelways, but watershed protection standards are also key in evaluating other disturbances (e.g., logging, development of recreation sites, etc.). Through previous discussions on travel management issues, participants in developing the SPPP reached general agreement that continued use of designated off-highway vehicle trails in Wildcat Canyon and the Corral Creek crossing would be allowed in the future, but that illegal routes should be closed and motorized use along the river corridor not expanded. However, it may be necessary to design mitigation measures to address sedimentation impacts. In the case of the non-motorized Gill Trail, a major mitigation project is already underway.

Throughout this section, references to roads, routes, or travelways apply to National Forest System routes. The standards do not apply to the existing county roads within the corridor.

Goals:

Waterway protection. Construct and maintain NFS roads and other disturbed sites to minimize sediment discharge into streams, lakes, and wetlands.

Standards:

Waterway protection. Allow new activities and uses within 300 feet or the top of the inner gorge (whichever is greater) of perennial and intermittent streams, wetlands and lakes (over one acre) only if onsite analysis shows that, after mitigation, there is no significant long-term adverse effects on hydrologic function, channel stability, riparian condition, and stream health. Existing use and occupancy activities within this zone, found to be causing degradation (as identified in the monitoring/water quality plan), will be scheduled for closure or mitigation.

Travelways and other disturbed sites will be constructed to avoid riparian areas to the maximum extent possible and to minimize and mitigate adverse effects on riparian habitat where it cannot be avoided.

Disturbed site management. Stabilize and maintain roads and other disturbed sites during and after construction to control erosion.

Reclaim roads and other disturbed sites when use ends to prevent resource damage.

Travel. Total mileage of National Forest System roads and motorized trails will not be increased within the South Platte Corridor Management Area. Illegal routes will not be considered in establishing this baseline.

Motorized or mechanized travel is allowed only on designated routes when the routes are signed open to each type of use.

Motorized use on Forest Service travelways will only be allowed when:

- Such use is appropriate for the physical and biological setting;
- Such use is consistent with the ROS setting and forest plan objectives;
- Unsafe conditions do not exist;
- Resource damage (including excessive erosion, vegetative, or soil damage) is not occurring;
- It does not interfere with animal migrations or impair threatened, endangered, or sensitive species.
- Travelways serve an existing or identified future public need; and
- A viable plan is in place for monitoring, maintenance, and enforcement of use.

Illegally created routes (non-system routes) shall either be closed, obliterated, revegetated, and sloped to drain as soon as possible, or integrated into the official travel system through a public process and after an environmental analysis.

System travelways determined to be no longer needed to achieve proposed management activities, or where resource damage cannot be adequately mitigated, shall be obliterated, revegetated, and sloped to drain.

Manage road or trail use by seasonal closure if:

- Use causes unacceptable damage to soil and water resources due to weather or seasonal conditions.
- Use causes unacceptable wildlife conflict or habitat degradation.
- Use results in unsafe conditions due to weather conditions.
- The road or trail serves a seasonal public or administrative need.
- The area accessed has seasonal need for protection or non-use.

Guidelines:

Waterway protection. Where travelway crossings of riparian corridors are needed, they should be constructed so as to bisect perpendicular to the corridor.

Historic, Archaeological, and Paleontological Resources

In looking at historic, archaeological, and paleontological resources in the South Platte Corridor Management Area (SPCMA), it became clear that most sites of interest are located on private lands along the North Fork. Accordingly, the working group suggests that these standards apply for any sites that are found on Forest Service lands but also be used in voluntary partnership efforts with private landowners.

Standards:

Heritage and paleontological values. Conduct all land management activities in such a manner as to comply with all applicable Federal, State, and local regulations. Many heritage and paleontological resource values can be protected effectively through application of the provisions of the following acts and regulations:

- *NEPA*
- *The National Historic Preservation Act of 1966* (NHPA), (P.L. 89-665, as amended, P.L. 91-423, P.L. 94-422, P.L. 94-458 and P.L. 96-515)

- *Native American Grave Protection and Repatriation Act* (NAGPRA), (P.L. 101-601, 25 U.S.C. 3001-3013).
- *Antiquities Act of 1906*
- *Archeological Resources Protection Act of 1979* (ARPA) P.L. 96-95.
- *American Indian Religious Freedom Act of 1978* (AIRFA) (P.L. 95 - 341)
- *36 CFR 800*
- *Executive Order 11593 (regarding relations with Tribes)*
- *36 CFR 296*
- *36 CFR 261*

Preserve significant historic, archaeological, and paleontological resources for their association with events or persons, their distinctive characteristics, or the scientific data provided. Known historic and archaeological sites within the management area include but are not limited to:

- Homesteads and ranches
- Cemeteries
- Schools
- Churches
- Fire houses
- Post offices
- Mines
- Sawmills
- Stills
- Dams
- Railroad routes
- Resorts and hotels
- Stagecoach and wagon roads
- Native American sites (artifact locations, campsites, trails, etc.)
- Reported Paleontological Resources
- Historic Sites that are listed in either "The National Register of Historic Places" or "The State Register of Historic Properties"

Seek alternatives that would avoid adverse effects, such as: major alterations, physical destruction, or relocation.

Tribal consultation. Consult with American Indian people during design of projects with potential to affect cultural rights and practices to help ensure protection, preservation, and use of areas that are culturally important to them and to ensure treaty rights.

Human remains. Leave human remains undisturbed unless there is an urgent reason for their disinterment. In case of accidental disturbance of historic graves or re-internment, follow appropriate state or tribal policies.

Recordation. When preservation is not feasible, record site data and/or relocate elements from the site in coordination with the local and state historic preservation officials.

Guidelines:

Interpretation. Enhance and interpret significant historic sites for the education and enjoyment of the public when such development will not degrade the heritage property or conflict with other resource considerations.

Provide appropriate interpretation at important archaeological and paleontological sites.

Provide interpretation for resources that cannot be preserved.

Establish an interpretive center devoted to the importance and preservation of the area's archaeology and prehistory.

Preservation. Protect heritage resources from damage or vandalism through project design, specified protection measures, monitoring, and coordination.

Promote land uses that support preservation and maintenance of historic resources.

Encourage development to sensitively integrate historically significant structures or sites into design and development plans for adaptive reuse.

Create a written record discussing alternatives to be considered, and justifying the preferred alternatives, when resources will be adversely affected.

Protect archaeological resources through the preservation of land or, as a final resort, through recovery of archaeological data before development occurs.

Salvage and recordation. Promote research, recordation and recovery of significant historic, archaeological or paleontological resources when preservation on site is not feasible or the value of the resource would be compromised if left to deteriorate.

Support relocation of significant salvageable historic structures after recordation has occurred as an alternative to preservation on site.

Inventory. An updated inventory of the SPCMA's significant historic, archaeological and paleontological resources should be completed, prior to private development or acquisition of Open Space parcels or other public lands. This inventory should then be assessed by state or local historic preservation officials to determine what structures or sites are important to preserve. The inventory should be updated regularly at intervals of no less than 10 years.

The appropriate agencies and organizations that should be contacted to identify historic and archaeological sites are the Jefferson County Historical Society, the Jefferson County Historical Commission, the Colorado Historical Society, U.S. Forest Service, and local and regional museums.

Archaeological and Paleontological Resource Protection. Significant archaeological and paleontological resources should be protected through the preservation of land surrounding the site or the mitigation of adverse effects of destruction through the recovery of resource elements by qualified professionals before land disturbance or development occurs.

A monitoring plan should be developed to track condition of significant sites. Regular maintenance should be provided for buildings to prevent deterioration.

Alternative use. Any proposed alternative uses should not have any unmitigated adverse effects on the resource.

Research. Encourage scientific or historical research and distribution of the resulting reports, monographs, or books to the interested public where such activities appropriately support specific Forest Land Management Planning goals.

Tribal use. Consider American Indian traditional cultural uses when designing projects and management activities.

Oral history. Oral interviews with long-time residents of the South Platte corridor should be conducted to gather information in order to identify and evaluate historic resources. These oral histories should be collected and recorded in coordination with state and county historical societies in order to preserve the historic knowledge of the area for interpretation to future generations.

Glossary for historic, archaeological, and paleontological resources:

Action:
Any activity, program project or undertaking or the approval, sanction, assistance, or support of any activity, policy, program, project, or undertaking, including but not limited to: (a) recommendations or reports relating to legislation, including requests for appropriations; (b) new and continuing activities, programs, projects, or undertakings directly engaged in by agencies or supported in whole or in part through state contracts, grants, subsidies, loans, or other forms of funding assistance, or involving a state lease, permit, license, certificate, or other entitlement of use; (c) the sale or transfer of state properties; (d) comprehensive or area wide planning in which provision may be made for any actions or which may result in a proposed action.

Archaeological Resource:
Material remains of past human life or activities that include, but are not limited to, pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of the foregoing items that are at least 100 years of age. These resources can be included in the National Register.

Historic Resource or Historic Property:
Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource 50 years of age or older.

Paleontological Resource:
Remains of any ancient organism, including fossilized plants, invertebrates (hard or soft bodied animals without a skeletal structures such as insects, crabs, clams, and snails) and vertebrates (including dinosaurs, mammals, sharks and fish, or any animal with a skeletal structure).

Undertaking:
A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction or a federal agency, including those carried out by on behalf of a federal agency; those carried out with federal assistance; those requiring a federal permit, license or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency.

Monitoring

This monitoring strategy is being developed by the Forest Service to help guide monitoring efforts as they pertain to management of the South Platte Corridor Management Area (SPCMA). It is being developed in cooperation with the partners involved with this project. Partners include signatories to the SPPP, Colorado Division of Wildlife, and Colorado Water Quality Control Division. The objective is to develop a monitoring strategy designed to monitor the resource values identified in the SPPP and the U.S. Forest Service Land and Resource Management Plan (LRMP), as amended, for the Pike and San Isabel National Forests and Comanche and Cimmaron National Grasslands. The monitoring program will be used to establish baseline data and identify over time whether the resource values, including water quality, are experiencing degradation. The resource values are identified in both the Forest Plan and the SPPP. If degradation is found to be occuring the Forest Service will re-evaluate the Forest Plan and determine if changes need to be made and the Friends of the South Platte River will re-evaluate the SPPP to determine if an amendment is needed. In essence, the goal of the monitoring program will be to determine if current management activities meet our objective of protecting resource values identified in the two plans.

In conjunction with the Monitoring Program for the SPCMA, project level and watershed monitoring strategies will be implemented. As an example, the monitoring strategy for the Upper South Platte Watershed Protection and Restoration Project is attached. Watersheds and sub-watersheds with project activities will be monitored for impacts to watershed conditions, riparian area health, and stream hydrology, including water quality and water yield.

Plan Overview

The objective of the monitoring strategy is to protect the resource values by establishing baselines and trigger points. The monitoring results will be used to determine if this overall

project objective has been met. This monitoring strategy is designed to be dynamic and may change as new information becomes available and management activities are identified.

The eligibility determination for the North Fork of the South Platte and the South Platte rivers identified Outstandingly Remarkable Values for each section of the river studied **(See Table A)**. The SPPP recognizes these values (referred to as "resource values") and summarizes how each will be protected. Some values not recognized in the eligibility study are included in the SPPP and will be monitored accordingly. In addition to the resources values, water quality and stream flow will also be monitored.

This strategy utilizes the "above and below" and "before and after" methods of monitoring. Monitoring stations will be established in the upstream portions of the SPCMA as well as in the downstream portions of the SPCMA for some parameters. Other parameters, will be monitored throughout the river corridor at predetermined locations. Baseline data will be the "before" data and data collected after implementation of the SPPP will be the "after" data.

Baseline data will be used to initiate the Monitoring Program. Baseline data has already been established for some of the parameters. An example would be data collected on fish populations by the Colorado Division of Wildlife. For parameters where baseline data has not been established, the Forest Service itself, or the Forest Service in cooperation with its partners, will collect and develop baseline data. Where baseline data has not been established at least one year of data will be collected to establish a baseline. A timeline will be developed for establishing these baselines in a reasonable amount of time. Realistically, this timeline will be determined by available resources and will be modified periodically in response to changes in available resources.

From the baseline data, trigger points will be determined. Trigger points will be determined using the best scientific information available. These trigger points will be an indication that degradation of a value may be occurring. An example would be a decline in fish populations to below sustainable levels. If a trigger point is reached then an assessment will be made to determine the cause for value degradation. Once a cause has been determined, a solution will be developed and implemented. If the cause is the result of a flaw in either the LRMP or the SPPP, the appropriate entities will meet to amend each plan in order to forestall any further degradation of the resource.

Data Management

The Forest Service, PSICC, will provide for data storage. Data collection and analysis will follow established scientific procedures.

The Forest Service will work with the partners to obtain information on existing monitoring efforts taking place within the SPCMA. This information will be utilized as appropriate to aid in establishing baseline measurements and assisting in determining overall effects of proposed activities. For example, the Denver Water water lab will be utilized for water analysis.

Monitoring Program Oversight and Documentation

The monitoring program oversight will be provided through the annual review process by the Forest Service and by the Friends of the South Platte River. Annually, the Forest Service will review the Monitoring Program and report to the Friends of the South Platte. However, information may be shared with the partners any time a request is made.

The monitoring report will contain, at a minimum, an evaluation of the data collected and a description of activities in the SPCMA. The monitoring report will become part of the public record and filed with the Pike and San Isabel National Forest.

Funding

The Forest Service will take the lead in funding monitoring activities and will work with partners to secure additional funding. The Forest Service will work with partners to assign personnel to conduct the monitoring activities, provide quality control and program oversight. Implementation of this stratetgy will be dependent upon funding. It is anticipated that the project will secure funding to implement the above parameters. Items marked with a double asterisk will be added as additional funding becomes available.

It is believed that many of the items in table A could be monitored with current base funding. As more funding is available the Forest Service will work with its partners to establish additional monitoring parameters as identified in **Table B** with a double asterisk.

Values that were identified by the working group as top monitoring priorities (if the full plan cannot be implemented given funding limitations) included: streamflows (minimum & ramping flow rate compliance); fish populations; effects of dispersed recreation on habitat; water quality; riparian habitat condition; and management indicator species and TES species habitat and population monitoring.

Table A
SPPP Resource Values

SEGMENT	Values						
	Cultural Resources, Historic	Fisheries	Geologic	Recrestional	Scenic	Wildlife	Vegetation/ Ecological
Segment A Downstream of Elevenmile Dam to Lake George		X	X	X	X		
Segment B Lake George downstream to mouth of Beaver Creek		X					
Segment C Beaver Creek downstream to inlet of Cheesman Reservoir		X	X		X	X	
Segment D Downstream of Cheesman Dam to the Wigwam Club		X		X		X	
Segment E Upstream boundary of Wigwam Club downstream to confluence with the North Fork		X		X		X	
Segment H (North Fork) Insmont downstream to confluence with the mainstem	X			X		X	

Table B
Monitoring Parameters

Elements to Be Monitored	Parameters and Metrics Identified to Be Measured	Comments	Who Is Responsible	Frequency	Location
Water Quality	Total Suspended Sediment Nitrogen Phosphorus Total Organic Carbon Stream Flow pH Dissolved Oxygen Temperature Macroinvertebrates Fishery	Goal is to evaluate whether chemical, physical and biological integrity are being maintained or improved throughout the SPCMA.			
Vegetation Structure, Diversity and Composition	Stage II Inventory Cover Frequency Arial Photo monitoring Fuel Loading Old Growth Noxious Weeds Wetlands	Goal is to measure change in vegetation structure, diversity and composition over time to determine whether ecological disturbances have occurred.			
Erosion and Sediment	Pebble Counts V* Erosion Bridges Silt Fence monitoring Suspended Sediment and Turbidity	Goal is to evaluate the maintenance of soil productivity by measuring erosion and sediment response.			
Water Quantity	Streamflow monitoring	Goal is to determine if any changes in water yield have occurred on a local scale.			
Suspended sediment and Turbidity	Testing in conjunction with water quality sample processing.	To determine sediment rating curve, sediment flux and TMDL data **(TMDL to be set in 11-Mile Canyon by 2002).**			
Channel Geomorphology	Cross Sections Width/depth rations Channel/water slope	Goal is to determine if channel aggradation or degradation is occurring. Characterize natural and cycle of sediment transport, assess habitat quality, determine baseline for assessing long-term channel response to land-use change.			
Peak Flow**	Install crest-stage stream gages**	To determine peak flow water discharge.			
Precipitation**	Install rain gages**	To determine rainfall duration, intensity and amount and correlate to erosion data.			

Table B
Monitoring Parameters

Elements to Be Monitored	Parameters and Metrics Identified to Be Measured	Comments	Who is Responsible	Frequency	Location
RECREATION: Notes – The goal here is to determine how recreational use is affecting the resource. The parameters measured are to determine how much use is occurring, what kind of use, and how it might change over time. Recreational managers are interested in how changes in management practices might affect use, demographics, etc. As with any other portion of this Monitoring Plan, available resources will have an affect on what can and cannot be accomplished.					
Developed sites	- Actual Use - Demand - Persons At One Time (PAOT) Capacity and number of sites - PAOT Managed at Full or Reduced Service Levels	Goal is to determine carrying capacity, whether carrying capacity is being reached, and whether demand exceeds carrying capacity.	USFS	Annual	
Dispersed	- Actual Use - Miles of Trail Construction or Reconstruction	Goal is to determine carrying capacity, whether carrying capcity is being reached, and whether demand exceeds carrying capacity.	USFS	Annual	
Dispersed Recreation Use	- Effects of Activities on people, other resources and facilities, including roads and trails. - Effects of other resource activities, recreation use and facilities.	Goal is to determine what effect dispersed recreation is having on the resource. This will be tied into Water Quality and the Fish and Wildlife and Vegetation/Ecological values.	USFS	Annual	
CULTURAL RESOURCES – Notes: Most of the cultural resources are not on public lands. The FS can continue to survey under the current plan on FS lands but this section will require cooperative agreements with current landowners and if area is going to be monitored by the FS. Otherwise the SPPP will have to include provision for monitoring these resources.					
Acres surveyed/ Sites Evaluated		Goal is that the SPCMA has been surveyed in its entirety and all eligible sites evaluated and identified.		Annual	
Sites Protected/interpreted		Goal is to protect eligible sites and provide interpretation, where needed, either for mitigation or information purposes.		Annual	
FISH AND WILDLIFE					
Wildlife Habitat Diversity		***Need to address interspersion of habitat types, size of parcels of each type, lsndscape diversity - DOW***			
Acres of Habitat Modified					

Table B
Monitoring Parameters

Elements to Be Monitored	Parameters and Metrics Identified to Be Measured	Comments	Who Is Responsible	Frequency	Location
Acres of Habitat Improved					
Maintain Riparian Habitat		***Need to address cover, understory composition, shrub species composition, etc. - DOW***			
Pawnee Montane skipper Population trends				10 years	
Trend of Management Indicator Species-Habitats and Populations		Goal is to maintain or enhance MIS habitats and populations. **(Note: The FS is currently reviewing the MIS list and updating NEPA documents to reflect population trends (Procass to be completed by March 31, 2001) and changes in habitats since the Forst Plan was released in 1984 (Time frame?). MIS list to be revised (Timeframe?)**	USFS	5-10 years	
SCENIC - Notes: If there are changes over time, what can be done about them?					
Existing Visual Condition	Photo points	Goal is to maintain or enhance the scenic quality of the SPCMA.			
GEOLOGIC					

Grazing allotment – 211 along Wigwam Creek to Lost Creek wilderness - ? Acres. Lease for 10 years. Assessment being done in 2002 (may be changed to 2003) on effects of grazing on resources such as water quality, vegetation, fisheries, etc. Amount of forage looked at. Cows allowed a certain amount of forage—rest needed for native critters. Stock is rotated. Lessee responsible for improvements (stock tanks, etc.). Current lessee stays away from creek because then cows get too close to 126.

Table C
Monitoring Strategy

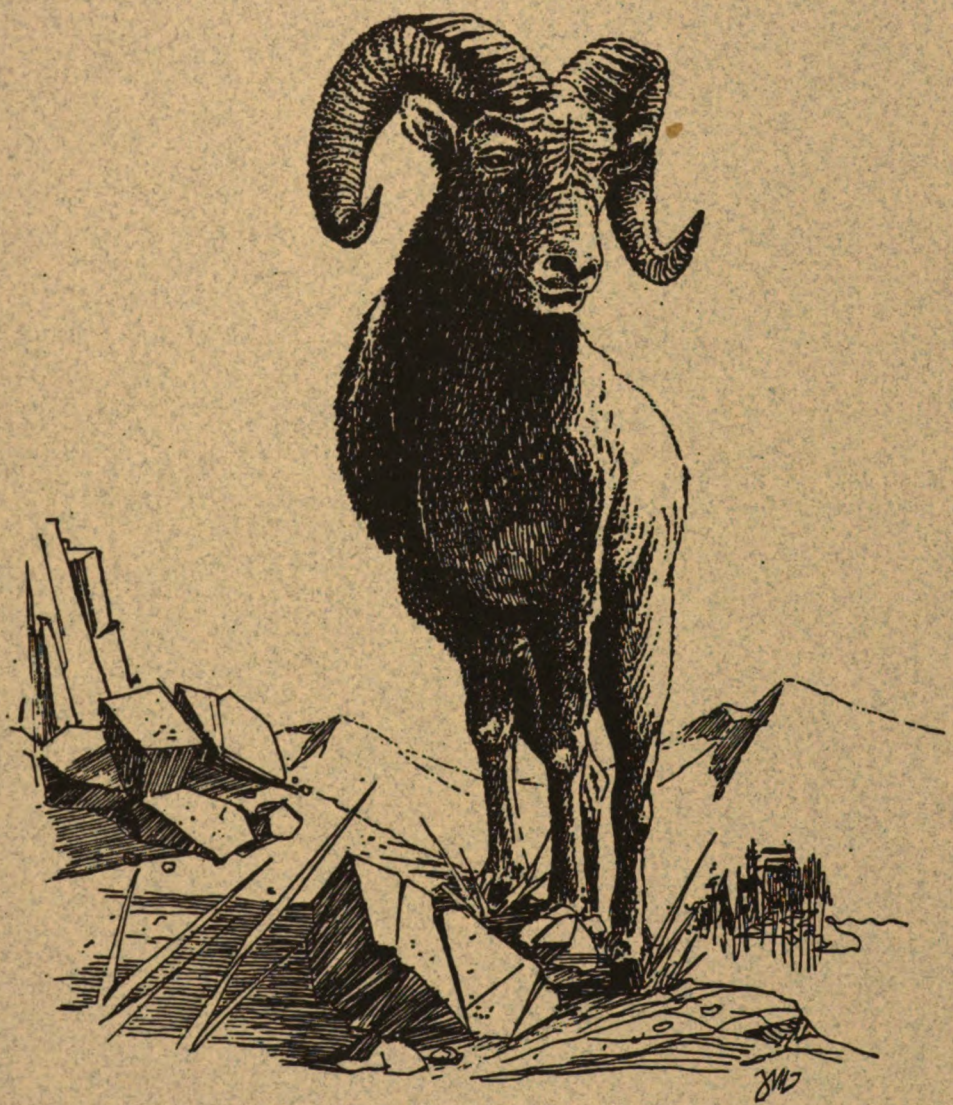
Parameter Description for Water Quality, Vegetation Structure, Erosion and Sediment, and Channel Gemorphology

Element	Parameter and Metrics	Purpose for Monitoring
Water Quality	Total Suspended Sediment	Help identify sediment load and erosion. State water quality parameter, public water supply.
	Nitrogen	State chemical water quality parameter, public water supply.
	Phosphorus	State chemical water quality parameter, public water supply.
	Total Organic Carbon	Public water supply.
	Stream flow	Determine volume of water. Parameter is key to performing other analysis, aquatic environment.
	pH	State water quality parameter, public water supply, indicator of aquatic health.
	Dissolved Oxygen	State water quality parameter, public water supply, indicator of aquatic health.
	Temperature	State water quality parameter, indicator of aquatic health and needed to perform other analysis.
	Macroinverebrates	Indicator species of aquatic health.
	Fishery	Indicator of aquatic health, State designated beneficial use.
Vegetation Structure, Diversity and Composition	Stage II Inventory	Inventory of vegetation which is done at periodic times, measures change in structure, diversity and composition.
	Cover Frequency	Measures change in vegetation cover and size of openings.
	Aerial Photo Monitoring	Monitoring tool used to evaluate change on the landscape over a period of time.
	Fuel Loading	Indicator of fire risk and hazard.
	Old Growth	Indicator of diversity and TES habitat.
	Noxious Weeds	Indicator of invasive plants and State regulations.
	Wetlands	Indication of diversity, structure and composition. Areas have special functions, regulations and controls.

Table C
Monitoring Strategy

Element	Parameter and Metrics	Purpose for Monitoring
Erosion and Sediment	Pebble Counts	Provides size distribution of streambed material. Indicator of changes over time.
	V*	Models depositional patterns in streams. State evaluation tool.
	Erosion Bridges	Measures amount of erosion from a given hill slope.
	Silt Fence monitoring	Used to track erosion from an area upslope from a surveyed silt fence. Elevation changes over time will be used to determine volume of material eroded from the site.
	Suspended Sediment and Turbidity	Taken in conjuction with water quality monitoring, provides a measure of fine sediment in the stream.
Channel Geomorphology	Cross Section Width/Depth Rations Channel/Water Slope	Used to track changes, aggradation or degradation, in channel geometry over time.

Comparison of Alternatives



Appendix B – Comparison of Alternatives Including Key Issues Table of Contents

Appendix B – Comparison of Alternatives Including Key Issues

The following chart is a more comprehensive comparison of the Alternatives and Proposed Action than that displayed in ISSUES and ALTERNATIVES.

Appendix B. Comparison of Alternatives Including Key Issues

South Platte Protection Plan - Alternative A2	Modified SPPP-Alternative A3-*Suitable* and Alternative A3-*Not Suitable*	PREFERRED ALTERNATIVE *Modified SPPP (A3) with silence on suitability*	Designation Recommendation - Alternative B	Designation Recommendation - Alternative C
Affected Area:				
South Platte mainstem from Elevenmile to Chatfield Reservoirs, including Cheesman Reservoir; portions of North Fork managed by USFS or Jefferson County Open Space, and Denver Water lands; precise boundaries fixed in Recreation Management Plan (80 miles).	Eligible segments of National Forest lands and lands contributed by partners.	Eligible segments of National Forest lands and lands contributed by partners.	South Platte Elevenmile Dam to the high water line of Strontia Springs Reservoir (49.4 miles); and North Fork from Insmont to the confluence with the South Platte (22.9 miles).	South Platte Elevenmile Dam to the high water line of Strontia Springs Reservoir (49.4 miles); and North Fork from Insmont to the confluence with the South Platte (22.9 miles).
Classifications:				
None under WSRA. Would use a system similar to that identified by the Forest Service.	Same as A2. **A3 Suitable:** Classifications protected by Forest Plan. **A3 Not-Suitable:** Classifications protected by Forest Plan only if not amended by the Forest Service.	Classifications protected by Forest Plan. Segment A – Recreational (Rec) Segment B – Rec Segment C1 – Wild Segment C2 – Scenic Segment C3 – Wild Segment D – Wild Segment E – Rec Segment H1 – Rec Segment H2 – Scenic Segment H3 – Rec	Segment A – Rec Segment B – Rec Segment C1 – Wild Segment C2 – Scenic Segment C3 – Wild Segment D – Wild Segment E – Rec Segment H1 – Rec Segment H2 – Scenic Segment H3 – Rec	Segment A – Rec Segment B – Rec Segment C1 – Scenic Segment C2 – Scenic Segment C3 – Scenic Segment D – Wild Segment E – Rec Segment H1 – Rec Segment H2 – Scenic Segment H3 – Rec
Decision statement if selected:				
Eligibility/suitability not addressed. ORVs, free-flow and water quality protected by cooperative management and partnership by federal/State/ local governments with public and interest group involvement using existing authorities in lieu of designation.	River corridor is eligible. Manage river corridor through cooperative partnership between federal, State and local government agencies with public and interest group involvement. ***A3-Suitable:*** River corridor is *suitable* for designation, but not recommended at this time; eligibility	The Forest Service intands to protect the outstandingly remarkable values, free-flow and water quality of eligible segments of the South Platte River through the cooperative process described in Alternative A2 with Forest Service legal authorities added as described in Alternative A3. The river corridor's ORVs,	Segments A to E of the South Platte River and Segment H of the North Fork are eligible and *suitable* for designation and recommended with recreational, wild and scenic classifications; as Sec. 5(d)(1) study river, interim management under existing Forest management authorities until designation by Congress.	Segments A to E of the South Platte River and Segment H of the North Fork are eligible and *suitable* for designation and recommended with recreational, wild and scenic classifications; as Sec. 5(d)(1) study river, interim management under existing Forest management authorities until designation by Congress.

South Platte Protection Plan - Alternative A2	Modified SPPP- Alternative A3- *Suitable* and Alternative A3-*Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP (A3) with silence on suitability*	Designation Recommendation - Alternative B	Designation Recommendation - Alternative C
	protected on National Forest lands. ***A3-Not Suitable:*** River corridor is *not suitable* for designation at this time due to need for flexibility in river corridor for reasonably foreseeable future uses of the land and water, which would be foreclosed or curtailed if area included in Wild, and Scenic River System. Maintain eligibility as a management goal, not a requirement.	free-flow, and water quality are to be managed under a federal/State/local government partnership as outlined in the South Platte Protection Plan (SPPP) (Appendix A). The Agency is not completing the wild and scenic river suitability study at this time to allow for a period of review of the adequacy of the SPPP. The Forest Service will, however, amend the Forest Plan (see below) to maintain the findings of eligibility and classification to the maximum extent possible under its existing authorities. Guidance for protection of an eligible river is found in Forest Manual 1924.03 and Forest Service Handbook 1909.12-92-1, Section 8.12 (See Appendix G of this document). River corridor management will be monitored and periodically reviewed to ensure continued protection of free-flow, ORVs, and water quality. The monitoring program will rely on current indicators and the standards and guidelines from the *Forest Plan*.		
Fish and wildlife, recreational, scenery and cultural ORVs identified:				
None under WSRA. Would use a system similar to that identified by the Forest Service.	Same as A2. **A3 Suitable:** ORVs protected by Forest Plan. **A3 Not-Suitable:** ORVs protected by Forest Plan only if not amended by the Forest Service.	ORVs protected by Forest Plan. Segment A – Fisheries, Geologic, Rec, Scenic Segment B – Fisheries Segment C – Fisheries, Geologic, Wildlife, Scenic Segment D – Fisheries, Rec, Wildlife Segment E – Fisheries, Rec, Wildlife Segment H – Cultural, Rec, Wildlife	Segment A – Fisheries, Geologic, Rec, Scenic Segment B – Fisheries Segment C – Fisheries, Geologic, Wildlife, Scenic Segment D – Fisheries, Rec, Wildlife Segment E – Fisheries, Rec, Wildlife Segment H – Cultural, Rec, Wildlife	Same as B.

Appendix B. Comparison of Alternatives Including Key Issues

South Platte Protection Plan - Alternative A2	Modified SPPP-Alternative A3-*Suitable* and Alternative A3-*Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP (A3) with silence on suitability*	Designation Recommendation - Alternative B	Designation Recommendation - Alternative C
Fish and wildlife, recreational, scenery and cultural ORVs Protection:				
Protected and enhanced with: - Streamflow Management Plan - Endowment Fund - South Platte Enhancement Board - Cooperative water quality initiatives - Recreation Management Plan developed - Recreation management partnership recommended with State Parks and/or Jefferson County Open Space.	Same as A2, plus: - Comprehensive river management plan developed by SPPP signatories - Cooperative water quality restoration projects for sediment reduction and control, addressing problems caused by road maintenance, travel management, stream crossings, and degraded areas (e.g., Buffalo Creek and Hayman Fires). - National Forest lands along North Fork managed for big game winter habitat and summer dispersed recreation, no new roads or developed recreation sites.	Same as A3.	Existing federal authorities and WSRA, plus Forest Service recruit volunteer partners to protect and enhance ORVs.	Same as B except protection of Segments C1, Beaver Creek to Hackett Gulch, and C3, Corral Creek to Cheesman Reservoir, would be slightly less than alternative B.

Appendix B. Comparison of Alternatives Including Key Issues

Designation Recommendation – Alternative D	Designation Recommendation – Alternative F	Designation Recommendation – Alternative G	Designation Recommendation – Alternative I	Designation Recommendation – Alternative J
Affected Area:				
South Platte Elevenmile Dam to the high water line of Strontia Springs Reservoir (49.4 miles).	National Forest lands only including 8.1 miles of Segment A (Elevenmile Canyon), 2.0 miles for Segment B (between Tappan Gulch and Vermillion Creek), Segment C (Wildcat Canyon – 10.4 miles, and Segment D (Cheesman Canyon) on the South Platte River and 2.6 miles of Segment H2 (Bailey Canyon) on the North Fork.	South Platte Elevenmile Dam to the high water line of Cheesman Reservoir (26.8 miles).	South Platte Elevenmile Dam to Corral Creek (22.3 miles).	South Platte Elevenmile Dam to the confluence with the North Fork (48 miles).
Classifications:				
Segment A – Recreation (Rec) Segment B – Rec Segment C1 – Wild Segment C2 – Scenic Segment C3 – Wild Segment D – Wild Segment E – Rec	Segment A (Elevenmile Canyon only) – Rec Segment B (Tappan Gulch to Vermillion Creek only) – Rec Segment C1 – Wild Segment C2 – Scenic Segment C3 – Wild Segment D – Wild Segment H2 (Bailey Canyon only) – Scenic	Segment A – Rec Segment B – Rec Segment C1 – Wild Segment C2 – Scenic Segment C3 – Wild	Segment A – Rec Segment B – Rec Segment C1 – Scenic Segment C2 – Scenic	Segment A – Recreational Segment B – Recreational Segment C1 – Scenic Segment C2 – Scenic Segment C3 – Scenic Segment D – Wild Segment E (to confluence with the N. Fork) – Recreational
Decision statement if selected:				
Segments A to E are eligible and *suitable* for designation and recommended with recreational, wild and scenic classifications; as Sec. 5(d)(1) study river, interim management under existing Forest management authorities until designation by Congress.	8.1 miles of Segment A, 2.0 miles for Segment B, Segment C, and Segment D on the South Platte River and 2.6 miles of Segment H2 on the North Fork are eligible and *suitable* for designation and recommended with recreational, wild and scenic classifications; as Sec. 5(d)(1) study river, interim management under existing Forest management authorities until designation by Congress. These segments consist almost entirely of National Forest Land.	Segments A to C of the South Platte River are eligible and *suitable* for designation and recommended with recreational, wild and scenic classifications; as Sec. 5(d)(1) study river, interim management under existing Forest management authorities until designation by Congress.	Segments A to C2 of the South Platte River are found eligible and *suitable* for designation and recommended with recreational, wild and scenic classifications; as Sec. 5(d)(1) study river, interim management under existing Forest management authorities until designation by Congress.	Segments A to D and Segment E except for 1.3 miles from the confluence to Strontia Springs Reservoir are eligible and *suitable* for designation and recommended with recreational, wild and scenic classifications; as Sec. 5(d)(1) study river, interim management under existing Forest management authorities until designation by Congress.
North Fork is found eligible but *not suitable* due to reasonably foresee-	7.7 miles of Segment B and Segment E on the South Platte River and Segment H1, 2.3 miles	Segments D and E and the North Fork are found eligible but *not suitable* due to	Segments C3, D, and E are found eligible but *not suitable* due to reasonably foreseeable	North Fork and 1.3 miles of Segment E of the South Platte River from the

Designation Recommendation – Alternative D	Designation Recommendation – Alternative F	Designation Recommendation – Alternative G	Designation Recommendation – Alternative I	Designation Recommendation – Alternative J
able future uses of the land and water which would be foreclosed or curtailed if area included in Wild and Scenic River System and majority is non-federal land. Support from private landowners and local governments does not exist at this time for designation. The river corridor is released to the Forest Plan's emphasis on big game winter habitat, developed recreation and motorized and nonmotorized recreation activities. Management would be the same as Alternative A1, no federal recommendation action.	of Segment H2 and Segment H3 on the North Fork are found eligible but *not suitable* due to reasonably foreseeable future uses of the land and water which would be foreclosed or curtailed if area included in Wild and Scenic River System and majority is non-federal land. Support from private landowners and local governments does not exist at this time for designation. The North Fork River corridor is released to the Forest Plan's emphasis on big game winter habitat, developed recreation and motorized and nonmotorized recreation activities. Management would be the same as Alternative A1, no federal recommendation action.	reasonably foreseeable future uses of the land and water which would be foreclosed or curtailed if area included in Wild and Scenic River System and majority is non-federal land. Support from private landowners and local governments does not exist at this time for designation. The North Fork River corridor is released to the Forest Plan's emphasis on big game winter habitat, developed recreation and motorized and nonmotorized recreation activities. Management would be the same as Alternative A1, no federal recommendation action.	future uses of the land and water which would be foreclosed or curtailed if area included in Wild and Scenic River System and majority is non-federal land. Support from private landowners and local governments does not exist at this time for designation. The North Fork River corridor is released to the Forest Plan's emphasis on big game winter habitat, developed recreation and motorized and nonmotorized recreation activities. Management would be the same as Alternative A1, no federal recommendation action.	confluence to Strontia Springs Reservoir are found eligible but *not suitable* due to reasonably foreseeable future uses of the land and water which would be foreclosed or curtailed if area included in Wild and Scenic River System and majority is non-federal land. Support from private landowners and local governments does not exist at this time for designation. The North Fork River corridor is released to the Forest Plan's emphasis on big game winter habitat, developed recreation and motorized and nonmotorized recreation activities. Management would be the same as Alternative A1, no federal recommendation action.
Fish and wildlife, recreational, scenery and cultural ORVs identified:				
Segment A – Fisheries, Geologic, Rec, Scenic Segment B – Fisheries Segment C – Fisheries, Geologic, Wildlife, Scenic Segment D – Fisheries, Rec, Wildlife Segment E – Fisheries, Rec, Wildlife	Segment A – Fisheries, Geologic, Rec, Scenic Segment B – Fisheries Segment C – Fisheries, Geologic, Wildlife, Scenic Segment D – Fisheries, Rec, Wildlife Segment H2 – Cultural, Rec, Wildlife	Segment A – Fisheries, Geologic, Rec, Scenic Segment B – Fisheries Segment C – Fisheries, Geologic, Wildlife, Scenic	Segment A – Fisheries, Geologic, Rec, Scenic Segment B – Fisheries Segment C1 and C2 – Fisheries, Geologic, Wildlife, Scenic	Segment A – Fisheries, Geologic, Rec, Scenic Segment B – Fisheries Segment C – Fisheries, Geologic, Wildlife, Scenic Segment D – Fisheries, Rec, Wildlife Segment E – Fisheries, Rec, Wildlife
Fish and wildlife, recreational, scenery and cultural ORVs Protection:				
Same as B except on the North Fork. Cultural, Recreational and Wildlife resources on the North Fork would not be protected under the WSRA.	Same as B from Tappan Gulch to Vermillion Creek, and in Elevenmile, Wildcat, Cheesman and Bailey Canyons.	Same as B except no protection of resources under the WSRA from Cheesman Dam to Strontia Springs Reservoir or on the North Fork.	Same as B except no protection of resources under the WSRA from Corral Creek to Strontia Springs Reservoir or on the North Fork. Protaction in segment C1, Beaver Creek to Hackett Gulch, same as Alternative C.	Same as B except on the North Fork and from the confluence with the South Platte to Strontia Springs reservoir. Cultural, Recreational and Wildlife resources on the North Fork would not be protected under the WSRA. Fisheries, Recreational and Wildlife resources would not be protected under the WSRA from the confluence to Strontia Springs.

Appendix B. Comparison of Alternatives Including Key Issues

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3-*Suitable* and Alternative A3-*Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
Protect river-related values identified by USFS with local government partnership in lieu of designation; preserve water supply functions.	Protect free-flow, water quality and ORVs utilizing existing legal authorities for National Forests lands. Maintain riverine condition by not allowing any new impoundment structures. Water supply is a recognized use of the river corridor to be continued in the future. River corridor managed for no effect on water supply yield, but potential effects of water supply functions are mitigated. Water quality is protected or enhanced as required under existing federal and State laws and regulations. ***A3-Suitable:*** eligibility for future designation maintained. ***A3-Not Suitable:*** management goal of maintaining eligibility but evaluate potential effects to ORVs or free-flow from proposed development projects in public planning process.	Protect free-flow, water quality and ORVs utilizing existing legal authorities for National Forests lands. Maintain riverine condition by not allowing any new impoundment structures. Water supply is a recognized use of the river corridor to be continued in the future. River corridor managed for no effect on water supply yield, but potential effects of water supply functions are mitigated. Water quality is protected or enhanced as required under existing federal and State laws and regulations. Eligibility for future designation maintained.	Protect free-flow, water quality and ORVs with WSRA authorities. Water supply functions accommodated only as ORVs, free-flow, and water quality are protected. Any future water resource project within or outside the river corridor federally assisted by permit or license would be evaluated under Sec. 7(a) of the WSRA. No "direct or adverse" effects to ORVs, free-flow, or water quality from projects within the designated area. Projects outside designated area, cannot "invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values" in a designated area.
Forest Service, Denver Water, Suburban Water Providers, Douglas County, Jefferson County, Division of Wildlife; recruit additional partners (e.g., Colorado State Parks, Park County, environmental/ recreation user groups.	Same as A2.	Same as A2 and A3.	Forest Service; continue existing partnerships with Jefferson, Douglas and Park Counties for law enforcement, road maintenance and fire protection; continue existing cooperation with Denver Water; try to recruit expanded partnerships with agencies and groups.
No water works in Cheesman and Elevenmile Canyons. 20-year development moratorium Denver Water right-of -way.	Same as A2, plus: No new large dams for impoundments approved that would affect National Forest lands in, above, or below the river corridor.	Same as A2, plus: No new large dams for impoundments approved that would affect National Forest lands in, above, or below the river corridor.	No new impoundments allowed in designated river corridor, or above, below or on a tributary if impoundment would invade or unreasonably diminish the scenic, recreational, and fish and wildlife ORVs.
Denver Water and other present and future water suppliers would continue to have access to the river for operational and maintenance purposes, such as channel repair and stabilization, construction of sedimentation ponds and removal of sediment, and construction of diversion dams for off-channel reservoirs. Such projects, if any, would be accomplished in a manner compatible with the natural	Evaluate project proposals using Forest Service Manual 2354 procedures to determine potential effects to free-flow or ORVs. ***A3-Suitable:*** maintaining eligibility standards (FSH 1909.12): 1. To the extent the Forest Service is authorized under law to control stream impoundments and diversions, the free-flowing	Evaluate project proposals using Forest Service Manual 2354 procedures to determine potential effects to free-flow or ORVs. Maintain eligibility standards (FSH 1909.12): 1. To the extent the Forest Service is authorized under law to control stream impoundments and diversions, the free-flowing characteristics	Conduct Sec. 7(a) evaluation on proposals within the designated river corridor, using procedures in Forest Service Manual 2354, with the following decision standards: - "on or directly affecting" river for new FERC jurisdictional projects - have a "direct or adverse effect" on the river for existing FERC and any

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3-*Suitable* and Alternative A3-*Not Suitable*	PREFERRED ALTERNATIVE *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
setting and would have no significant adverse effect on the scenic, recreational, and fish and wildlife values of the river corridor as a whole.	characteristics of the identified river cannot be modified. 2. ORVs of the identified river area must be protected and, to the extent practicable, enhanced. 3. Management and development of the identified river and its corridor cannot be modified to the degree that eligibility or classification would be affected (i.e., classification cannot be changed from *wild* to *scenic* or *scenic* to *recreational*). ***A3-Not Suitable:*** use eligibility protection standards given above as goals, allowing flexibility for project development deemed critical enough to allow some acceptable effects to ORVs or free flow. Non-federal lands administered under existing county, State, and federal authorities (i.e., Corps of Engineers 404 permits, county zoning, State water quality standards). No legal binding for other federal agencies to reject projects as provided by designation.	of the identified river cannot be modified. 2. ORVs of the identified river area must be protected and, to the extent practicable, enhanced. 3. Management and development of the identified river and its corridor cannot be modified to the degree that eligibility or classification would be affected (i.e., classification cannot be changed from *wild* to *scenic* or *scenic* to *recreational*).	other federal agency jurisdictional projects Conduct Sec. 7(a) evaluation on proposals outside (above or below) the designated river corridor, using procedures in Forest Service Manual 2354, with the following decision standard: - "invade or unreasonably diminish the scenic, recreational, and fish and wildlife ORVs present at the date of designation."
"Trigger" and decision process for forwarding designation:			
Not addressed specifically. General reference to Forest Service ability to revisit decision in future.	If partnership is not successful (i.e., ORVs, free-flow, or water quality are threatened by unacceptable impacts, a new dam is proposed, or a partner does not fulfill its commitments), the Forest Service shall: ***A3-Suitable:*** forward a designation recommendation for the South Platte and/or the North Fork. This may initiate another public planning process (NEPA). ***A3-Not Suitable:*** initiate a new suitability study of both river corridors in a public planning process (NEPA) and reconsider a designation recommendation.	If partnership is not successful (i.e., ORVs, free-flow, or water quality are threatened by unacceptable impacts, a new dam is proposed, or a partner does not fulfill its commitments), the Forest Service shall revisit the suitability study and make a final decision on suitability. That decision would establish the agency's position whether the merits of the proposal outweigh the values threatened by it, or visa versa. If the current document has become stale with time, a new NEPA document will be developed and released.	Not applicable.

Appendix B. Comparison of Alternatives Including Key Issues

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
Private Land Controls:			
Existing county authorities.	Existing county authorities.	Existing county authorities.	Existing county authorities, plus: any project in the river requiring a Sec. 404 permit from the Army Corps of Engineers must be reviewed and evaluated under Sec. 7(a). Forest Service can provide technical and financial assistance to landowner to protect free-flow, ORVs, or water quality.
Other water supply operations:			
South Platte has key role in water supply and socio-economic viability in state; role must be protected and maintained with sufficient flexibility to accommodate changes to systems for future growth	**A3 Suitable:** Protect free flow, water quality and ORVs; water supply functions continued as ORVs, free flow, and water quality are protected; no new water development projects that would threaten ORVs and free flow; no affect on water supply/yield; no affect on interstate water compacts. **A3 Not-Suitable:** Same as *A3 suitable* except would allow projects with limited or reasonable effects to ORVs or free-flow.	Protect free flow, water quality and ORVs; water supply functions continued as ORVs, free flow, and water quality are protected; no new water development projects that would threaten ORVs and free flow on National Forest lands; no affect on water supply/yield; no affect on interstate water compacts.	New water resource projects allowed if no direct or adverse effect to ORVs, free flow or water quality (Sec. 7(a)).
Implementing Mechanism:			
Written agreements between the Forest Service and those entities making commitments.	A memorandum of understanding between the Forest Service and agencies making commitments. Agreements for individual project implementation.	A memorandum of understanding between the Forest Service and agencies making commitments. Agreements for individual project implementation.	Congressional designation under WSRA. Until designation occurs, interim management by Forest Service under existing authorities.
Streamflow Management Plan:			
Series of commitments and goals to alter current water facility operations to protect and enhance fisheries. Stream channel maintenance and improvement by joint agency and interests cooperation to identify degraded stream channel areas and sedimentation sources, and develop in-stream channel improvement projects.	Same as A2, plus: Forest Service participate in stream channel maintenance and improvement.	Same as A3.	Sec. 10(a) mandates administration of river corridor to protect and enhance values, without limiting other uses that do not substantially interfere with public use and enjoyment of values. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.

Appendix B. Comparison of Alternatives Including Key Issues

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
Future water projects within, above or below the river corridor, especially those that will significantly extend bank full stream conditions, will require an analysis by the project proponent of channel capacity related to the ORVs. New project proponent is responsible for any necessary analysis and channel reconstruction. Proposals for flow and channel modification for new projects will be reviewed at the annual operating plan meetings.	Same as A2, plus: Forest Service will participate in future water project review for approval of any channel stability or habitat improvement projects within the river corridor.	Same as A3.	Conduct Sec. 7(a) evaluation on proposals within the designated river corridor, using procedures in Forest Service Manual 2354, with the following decision standards: - *on or directly affecting* river for new FERC jurisdictional projects - *direct or adverse effect* river for existing FERC and any other federal agency jurisdictional projects. Decision standard for proposals outside (above or below or tributary of) the designated river corridor, using procedures in Forest Service Manual 2354: - *invade or unreasonably diminish the scenic, recreational, and fish and wildlife ORVs present at the date of designation.*
Temperature goals through mixing top and bottom reservoir releases trout fisheries and recreation ORVs.	Same as A2, plus: Temperature goals adjusted to full aquatic biota needs, not just sport fish species. Consistency of temperature targets from year to year will be emphasized.	Same as A3.	Not mandated by WSR Act. Sec. 10(a) mandates administration of river corridor to protect and enhance values, without limiting other uses that do not substantially interfere with public use and enjoyment of values. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
Commitment for 32 cfs minimum streamflow below Elevenmile, and 35/40 cfs minimum flow below Cheesman during low flow periods and goal of optimal range outflow during remainder of year.	Same as A2.	Same as A2.	Sec. 13(c) provides authority for Federal reserved water right at time of designation for purposes specified in Act, in minimum quantities needed to accomplish purposes of Act.
Ramping outflow changes to minimize rate of change allowing fish to adjust.	Same as A2.	Same as A2.	Not mandated by WSR Act.

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
			Sec. 10(a) mandates administration of river corridor to protect and enhance values, without limiting other uses that do not substantially interfere with public use and enjoyment of values. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
New valves, monitors, gauges to enhance facility operational capabilities for protecting and enhancing ORVs.	Same as A2.	Same as A2.	Not mandated by WSR Act. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
Coordinate with CO DOW on channel restoration work for North Fork	Same as A2, plus: Forest Service participate in channel work design for entire study area, not just on the North Fork.	Same as A3.	Not mandated by WSR Act. Sec. 10(a) mandates administration of river corridor to protect and enhance values, without limiting other uses that do not substantially interfere with public use and enjoyment of values. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
Public input to annual operating plans. Goal of plans to emphasize limiting fluctuations when potential to harm life stages of brown or rainbow trout.	Same as A2, plus: Forest Service will participate in the annual operating plan meetings and participate in developing annual operating plans with water providers.	Same as A3.	Not mandated by WSR Act. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	PREFERRED ALTERNATIVE *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
			into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
Consideration of whitewater and fisheries water level needs in Roberts Tunnel discharges. Due to complex nature of Roberts Tunnel operations, Denver Water cannot make definate commitments for public use needs, but will consider these uses as best as possible when making operational decisions.	Same as A2.	Same as A2.	Not mandated by WSR Act. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
Recreation, Wildlife, Scenery and Other Values:			
Management partnership between CO State Parks or other entity and the USFS, Elevenmile to Chatfield proposed, including Cheesman Reservoir	Potential partnership for recreation management with CO State Parks or other entity, shall be addressed in implementation of decision, as part of the MOU development process. Partnership and cooperative management through MOU with agencies commiting to river protection.	Same as A3.	Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality. Potential partnership for recreation management with CO State Parks or other entity, shall be addressed in implementation of decision.
Until partnership in place, portions of area cooperatively managed by the Forest Service, Denver Water, Jefferson and Douglas Counties. USFS manage Bailey Canyon as a special recreation area emphasizing whitewater recreation, but inclusive of other dispersed recreation activities.	Current cooperative management between Forest Service, Denver Water and Counties would continue until recreation management partner in place. Forest Service lands within corridor along North Fork managed under Forest LRMP with big game winter range emphasis, including: winter habitat for deer, elk, bighorn sheep and mountain goats is emphasized; vegetation treatments to increase forage production and create/ maintain thermal and hiding cover; livestock grazing compatible, but managed to favor wildlife habitat; motorized recreation use managed to prevent unacceptable stress on big game animals; new roads	Same as A3.	Current cooperative management between Forest Service, Denver Water and Counties could continue. Denver Water states that recreation management partnerships and joint planning for Denver Water lands is only offered under local alternative. Sec. 3(d)(1) mandates Forest Service to prepare a comprehensive management plan to provide protection of the river values. Must address resource protection, development of lands and facilities, user capacities, and other management practices necessary to achieve purposes of Act.

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3-*Suitable* and Alternative A3-*Not Suitable*	PREFERRED ALTERNATIVE *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
	located outside area; and close recreation developed sites during winter months. Recreation management allows kayaking and other dispersed activities during the summer season with minimal development. Consistent with 1984 Land and Resource Management Plan.		Required completion in 3 years of designation.
Unified recreation management approach including USFS and Denver Water lands; provided that agreement is developed between USFS and CO State Parks or other entity, Denver Water commits to make its properties from Elevenmile to Chatfield Reservoirs, including Cheesman Reservoir available for lease to the recreation manager.	Same as A2.	Same as A2.	Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality. Potential partnership for recreation management with CO State Parks or other entity, could be pursued.
Denver Water commits to participate in joint recreation management study to include its lands for consideration as part of newly created, jointly managed river corridor recreation area.	Same as A2.	Same as A2.	Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality. Potential partnership for recreation management with CO State Parks or other entity, could be pursued.
Recreation Management Plan development:			
Develop a Recreation Management Plan to meet current recreationists needs as well as those needs that may evolve in the future. Recreation management principles provided addressing: intensity of development; Cheesman Reservoir; wildlife protection; concerns of area residents; other values; and the North Fork.	Develop a River Management Plan with major components for recreation, wildlife, fisheries, scenery, cultural resources, and other values. All parties will participate in planning process, including citizens. No mandated timeframe as under designation.	Signatories to MOU, except for the U.S. Forest Service, would develop a River Management Plan with major components for recreation, wildlife, fisheries, scenery, cultural resources, and other values. All parties will participate in planning process, including citizens. The Forest Service would coordinate with the signatories to ensure synchronization with the *PSICC Forest Land and*	Sec. 3(d)(1) mandates Forest Service to prepare a comprehensive management plan to provide protection of the river values. Must address resource protection, development of lands and facilities, user capacities, and other management practices necessary to achieve purposes of Act. Required completion in 3 years of designation. Forest Service lead

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
		Resource Management Plan. Private landowner concerns about impacts from recreation users would be addressed in this planning effort. No mandated timeframe as under designation.	planning effort, involve other agencies and citizens.
Level of recreation use at Cheesman Reservoir is expected to be controversial, should be planned through an open process with extensive public participation. Future use affected by resource damage from 2002 Hayman Fire.	Same as A2.	Same as A2.	Cheesman Reservoir outside of study area, not affected under designation. Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
Recreation management expected to meet needs of wildlife in the area; provide resource and ecological protection or restoration for wildlife and plant species; special attention to Wildcat Canyon area where wildlife corridors may conflict with OHV use.	Same as A2, plus: Continue management consistent with Endangered Species Act for Pawnee Montane Skipper, if "delisted" manage as "sensitive," on Forest lands. Focused planning effort with interested groups in Wildcat Canyon to address recreation use, wildlife corridors, ORVs and water quality protection needs.	Same as A3.	Continue management consistent with Endangered Species Act for Pawnee Montane Skipper, if "delisted" manage as "sensitive," on Forest lands. Focused planning effort with interested groups in Wildcat Canyon to address recreation use, wildlife corridor, ORVs and water quality protection needs incorporated in comprehensive River Management Plan under Sec. 3(d)(1).
Area residents have concerns primarily protection of private property from unauthorized trespass, wildfire hazards, limited capabilities of local volunteer emergency organizations, and crowding on roads; recommend special effort to include area residents.	Private landowner concerns about impacts from recreationists shall be addressed in the comprehensive River Management Plan completed for the river corridor following decision.	Same as A3.	Private landowner concerns about impacts from recreationists shall be addressed in the comprehensive River Management Plan completed for the river corridor following decision under Sec. 3(d)(1).
Focused primarily on ORVs identified by USFS; future Recreation Management Plan should address other important values; mining and timber policies in area should be planned and managed consistent with recreation, wildlife, and scenic values.	Focused primarily on ORVs identified by USFS; future River Management Plan will address other important values; other resource management, ie. mining and timber, in area will be planned and managed consistent with recreation, wildlife, and scenic values.	Same as A3.	Sec. 3(d)(1) mandates Forest Service to prepare a comprehensive management plan to provide protection of the river values. Must address resource protection, development of lands and facilities, user capacities, and other

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
			management practices necessary to achieve purposes of Act.
Cooperative water quality initiatives:			
Upper South Platte Watershed Steering Committee composed of interested local governments, agencies and parties in the basin; continue independently of SPPP	Same as A2, plus: Forest Service lead cooperative water quality restoration projects for sediment reduction and control, addressing problems caused by road maintenance, travel management, stream crossings, and degraded areas, eg. Hayman Fire. Forest Service activities will be coordinated within the Clean Water Action Plan: Restoring and Protecting America's Waters (U.S. Environmental Protection Agency, 1998)	Same as A3.	Sec. 12(c) mandates Forest Service to cooperate with EPA and CO DPHE to eliminate or diminish water pollution. No specific criteria under WSR Act; other federal and state legislation and regulations provide standards and compliance requirements. Areas with poor water quality at time of study should have improvement plan developed in compliance with applicable Federal and State laws. Under Clean Water Act, river segments could be classified as "outstanding or exceptional resource waters." However, due to pollution problems in South Platte, such classifications would probably NOT be appropriate or pursued.
Endowment:			
Front Range local goverments and water suppliers will contribute at least $1 million to protect and enhance values identified by USFS; encourage use as matching for other grants/monies; funding for on-the-ground improvements only, not operational costs.	Same as A2. Any project proposed for National Forest land requires Forest Service approval, including any necessary NEPA process. No additional authority for federal technical or financial assistance.	Same as A3.	Not mandated by WSR Act. Denver Water and City of Aurora stated that Endowment only part of local alternative if selected as decision. Sec. 11(b)(1) provides for Federal assistance to non-Federal and private entities to protect and manage river resources, including technical and financial assistance, within and outside federally administered area.
South Platte Enhancement Board: [redacted]			
A coordinating forum, will provide comments and responses on activities such as land use or land management planning decisions, and decide expenditures from endowment.	Same as A2. Forest Service will work with Board. Not a FACA Advisory Board, so cannot be used as "sole source of information" in decisionmaking.	Same as A3.	Not mandated by WSR Act. A citizens advisory board could be established with the designation.

Appendix B. Comparison of Alternatives Including Key Issues

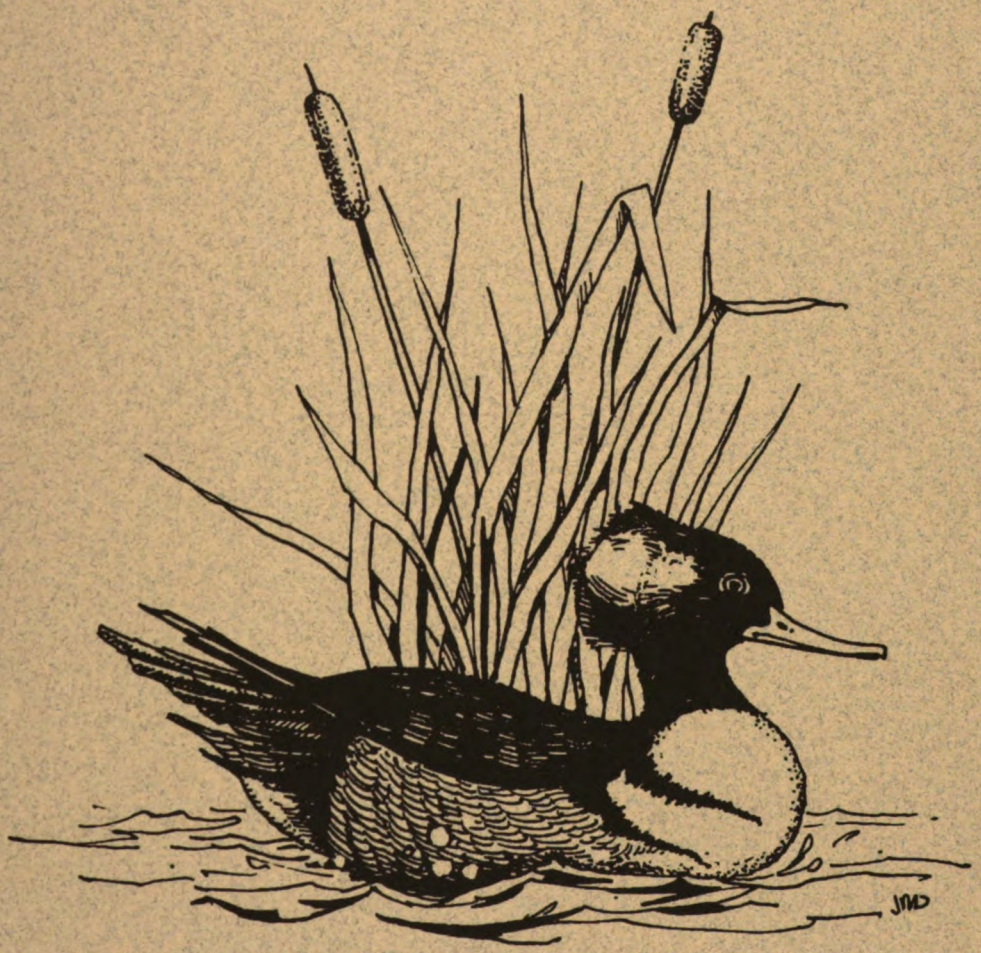
South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
Withdrawal of 1986 applications for conditional storage rights:			
Denver Water and Metropolitan Denver Water Authority withdraw Water Court applications for 780,000 AF of additional storage at Two Forks reservoir site.	Same as A2.	Same as A2.	Not mandated by WSR Act.
Alternatives to development of Denver's ROW:			
Denver Water and environmental groups develop a working relationship that could lead to alternative projects and allow Denver later to relinquish their 1931 ROW; 20 year voluntary moratorium on ROW development proposals.	Same as A2.	Same as A2.	Sec. 12(b) protects valid existing rights under designation, including the Denver Water reservoir ROW. However, if designated, a federal agency is prohibited from issuing any federal permit, license, or other assistance to water resource project that would have direct or adverse effect on ORVs, free flow or water quality (Sec. 7(a)).
Implementation:			
Written agreements between the Forest Service and those entities making commitments within the SPPP.	A Memorandum of Understanding between the Forest Service and agencies making commitments for management of river corridor (Denver Water, Jefferson and Douglas Counties, and City of Aurora). Other entities, such as Park or Teller Counties, or CO State Parks, could join the management partnership and be included in the MOU.	Same as A3.	As Sec. 5(d)(1) study river, management under designation recommendation based on existing land management authorities. WSR Act authorities, such as prohibition of dams, would NOT be applicable unless designated.
	MOU identifies roles and responsibilities of parties, coordination of management oin their own jurisdictions, with standard clauses allowing termination by a party with 60 day notice. MOUs are limited to 5 years and may be extended another 5 years by Forest Service policy. Allows review, update and revision as needed.	Same as A3.	Forest Service would prepare a comprehensive management plan to provide protection of the river values utilizing existing Forest authorities under implementing a National Forest Land Management Plan. Plan would address resource protection, development of lands and facilities, user capacities, and other management practices necessary to achieve purposes of Act. Forest Service lead planning effort, involve other agencies and
	Individual projects conducted under challenge cost share or collection agreements, allowing transfer of monies and services.	Implementation schedule included in Record of Decision listing specific activites with deadlines to implement decision on suitability. Examples of a "trigger" for making a	
	Implementation schedule included in Record of		

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	**PREFERRED ALTERNATIVE** *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
	Decision listing specific activites with deadlines to implement decision. Examples of "trigger" for designation recommendation or reconsidering suitability decision: unmet deadlines in Implementation Schedule; partner identification and MOU not signed within 6 months of decision; a partner not fulfilling commitments in MOU; proposal for new impoundment /dam in study area on National Forest lands.	decision to recommend designation are same as A3.	citizens (Sec. 3(d)(1)). Sec. 10(e) encourages state and local participation in river management, authorizes federal agencies to enter into cooperative agreements with state or local groups for work protecting free flow, ORVs or water quality.
Provide for public participation in the event of significant changes to the written agreement, leases to State Parks or other major concessionalres, or in the event of adoption of a Recreation Management Plan so the public can ascertain and comment on consistency with SPPP.	Same as A2, plus: citizen groups shall be involved in developing or modifying agreements. Citizen involvement through NEPA process and Forest LMP process. A Citizens Advisory Group could be established to work with MOU parties.	Same as A3. Same as A3. Same asA3.	Citizen involvement through comprehensive River Management Plan development process and NEPA processes for individual projects.
Enforcement:			
Agreement shall be written to provide enforcement through Administrative Procedures Act by citizen or group with standing similar to remedies available if a river were designated under Wild/Scenic Rivers Act	Mechanism for citizen groups third party access to enforcing agreements. Periodic management reviews shall be included in the MOU, with citizen group involvement, of the implementation of decision. Reviews could be tied to MOU reissuance and monitoring of values protection success.	Mechanism for citizen groups third party access to enforcement of planning process on National Forest Lands through the Forest LMP process. Same as A3.	The Wild and Scenic Rivers Act itself is the enforcing mechanism. "...no department or agency of the United states shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration."
Other water supply operations:			
South Platte has key role in water supply and socio-economic viability in state; role must be protected and maintained with sufficient flexibility to accommodate changes to systems for future growth	Protect free flow, water quality and ORVs; water supply functions continued as ORVs, free flow, and water quality are protected; no impoundments; no affect on water supply/yield; no affect on interstate water compacts.	Same as A3 on National Forest lands.	New water resource projects allowed if no direct or adverse effect to ORVs, free flow or water quality (Sec. 7(a)).
Land acquisition:			
Not addressed in Plan. No additional authorities or limits on land acquisition.	No additional authorities or limits on land acquisition.	Same as A3.	Sec. 6 Land acquisition. (a) Federal government may acquire land, for congressionally

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	PREFERRED ALTERNATIVE *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
			designated rivers, with certain restrictions: no more than a average of 100 acres per mile acquired in fee; state lands acquired by donation /exhange only; tribal or local government acquired by consent only, so iong as it is being protected for purposes of WSR status. (b) Limitations on land condemnation. If over 50 % lands within WSR boundary are in public own ership (federal, state, local), no condemnation for fee title is allowed.
Land disposition:			
Not addressed in Plan. No withdrawal under public land laws.	No withdrawal under public land laws. Lands in river corridor could be exchanged or disposed. The Forest Service has no intent to do any land exchanges or disposals in the river corridor.	Same as A3.	Sec. 8 Land disposition. Automatic withdrawal of river corridor from entry, sale or other disposition under the public land laws.
Mining and mineral leasing:			
Not addressed in Plan. No automatic withdrawal for WILD segments. Forest Service could complete mineral withdrawal request process under existing authorities.	No automatic withdrawal for WILD segments. Forest Service would complete mineral withdrawal request process under existing authorities. BLM makes final decision.	Same as A3.	Sec. 9 Mining and mineral leasing. Exceptions subject to valid existing rights: mining/l easing subject to regulations determined by Sec/Interior; patent to mineral deposits and rights to surface and surface resources; withdrawal of bed/bank and 1/4 mile any WILD river from mining/mineral leasing laws. Regulations safeguard against pollution and unnecessary impairment of scenery.
Cooperative agreements:			
Not addressed in Plan. No special agreements authority, utilize existing authorities.	No special agreements authority, utilize existing authorities, such as Federal Land Policy and Management Act, National Forest Management Act, Interior and Related Agencies Appropriation Act of 1992, Cooperative Funds Act of 1914, and Granger-Thye Act of 1950.	Same as A3.	Sec. 10(e) Cooperative agreements. Encourages state and local participation in protecting congressionally designated rivers. Authorizes federal administering agencies to enter into cooperative agreements for this purpose.

South Platte Protection Plan – Alternative A2	Modified SPPP – Alternative A3- *Suitable* and Alternative A3- *Not Suitable*	PREFERRED ALTERNATIVE *Modified SPPP with Silence on Suitability*	Designation Recommendation – Alternative B, C, D, F, G, I, and J
Jurisdiction of states:			
Not addressed in Plan, utilize existing state and federal authorities.	Existing federal authorities for forest management. Federal reserve water rights under Organic Administration Act of 1897. Existing State water appropriation system. No affect on interstate water compacts.	Same as A3.	Sec. 13 Jurisdiction of states: (a) fish and wildlife: confirms state jurisdiction for hunting and fishing except for no hunting zones for safety, administrative, or public use. (b) Water rights determined by established principles of law. (c) Federal reserved water rights at time of designation and retain enough water to protect values for which river designated: for purposes in Act and quantities to accomplish purposes. (d) water use management: state jurisdiction unaffected to the "extent that such jurisdiction may be exercised without impairing purpose of Act or administration." (e) interstate compacts: not affected.

1984 Eligibility Report



Appendix C – 1984 Eligibility Report for a Section of the South Platte River from Wild and Scenic River Eligibility Report for Badger Creek, the Cimarron River, and a Section of the south Platte River in Volume II, Appendix F, Final Environmental Impact Statement *Land and Resource Management Plan for the Pike and San Isabel National Forests; Comanche and Cimarron National Grasslands*
Table of Contents

APPENDIX C

1984 ELIGIBILITY REPORT FOR A SECTION OF THE SOUTH PLATTE RIVER from WILD AND SCENIC RIVER ELIGIBILITY REPORT FOR BADGER CREEK, THE CIMARRON RIVER AND A SECTION OF THE SOUTH PLATTE RIVER in VOLUME II, APPENDIX F FINAL ENVIRONMENTAL IMPACT STATEMENT *LAND AND RESOURCE MANAGEMENT PLAN FOR THE PIKE AND SAN ISABEL NATIONAL FORESTS; COMANCHE AND CIMARRON NATIONAL GRASSLANDS*

SOUTH PLATTE RIVER
ELEVEN-MILE DAM TO CHEESMAN RESERVOIR ELIGIBILITY REPORT

Location. The section of river included in this study for eligibility extends from Eleven-Mile Canyon Dam downstream to the head of Cheesman Reservoir. The corridor includes National Forest and private lands along approximately 23 rules of stream. The upper portion of the stream is located on the Pike National Forest in Park County (with a small portion in Teller County, Colorado). From the Douglas County – Teller County line to Cheesman Reservoir, the river forms a boundary between Douglas and Jefferson Counties, Colorado.

River Study Area Boundaries. The total area being considered extends from Eleven-Mile Canyon Dam downstream to the head of the pool at Cheesman Lake. The width of the corridor is generally one-quarter mile on each side of the stream which includes the major portion of the South Platte River Canyon.

This section of the South Platte contains areas with three different characteristics.

A. The Eleven-Mile Canyon Area extends from the Eleven-Mile Canyon Dam downstream to the private land in the vicinity of Lake George, a distance of 8 miles.

B. The section of river flowing through predominately private lands in the Lake George area and extends downstream to the mouth of Beaver Creek, a distance of 6 miles.

C. The section of the stream from Beaver Creek downstream to the head of Cheesman Reservoir travels a distance of 9 miles.

These segments will be referred to in this report as Segments A, B, and C as shown on Map #2 . Where descriptive material is pertinent to a specific segment rather than to the entire study corridor, the segment references will be used to distinguish between descriptions.

General Setting. The study corridor of the South Platte drainage occurs as a river canyon approximately 700 feet in depth and about 1/2 mile wide. The topography is generally steep on the lower slopes of the canyon becoming more gently sloping on the upper slopes. There are no major national interest events that occurred in the canyon although the upper Eleven-Mile Canyon portion (Segment A) was the location of the Colorado Midland Railroad from Colorado Springs to Leadville and on to the Western Slope of Colorado.

The upper portion, Segment A, has developed campgrounds and picnic grounds receiving heavy developed and dispersed recreation use. The central portion of the canyon, Segment B, is mostly subdivided private land used as both yearlong and seasonal recreational property. About 1-½ miles of undeveloped stream occurs on National Forest land. The lower portion of the canyon, Segment C, is generally undeveloped.

Cheesman and Eleven-Mile Reservoirs are large domestic water storage facilities serving the Denver metropolitan area. Water flows through the study area are controlled to meet those domestic water needs. There are no other water developments in the corridor significant to the study area.

Land Ownership and Use. Segment A is National Forest land except for one tract owned by the Boy Scouts of America. The central portion, Segment B, is generally all private land. Segment C is National Forest land except for a short distance immediately above the Cheesman Reservoir which is land owned by the Denver Water Board. Segment A is used primarily for dispersed and developed recreation; Segment B is mountain subdivision development and is heavily urbanized. Segment C is used for dispersed recreation, primarily fishing and ORV use. When water flow is restricted to its minimal volumes, rafting, floating or similar activities are not generally possible. Even when flows are adequate, this recreation activity is very light.

Transportation. The river in Segment A is paralleled by a single lane, graveled, all-weather road on the old Midland Railroad grade. The river in Segment B is paralleled, crossed, and otherwise heavily influenced by subdivision development roads. U.S. Highway 24 crosses the river at Lake George. The river in Segment C contains only foot and off-road vehicle (ORV) trails to and across the river.

Physical, Biologic, Geologic Features. The entire area has been formed from Precambrian granite formations. These rocky outcrops are predominant in the more defined canyon in Segments A and C. The terrain consists of a rocky canyon with interspersed forest cover and scattered meadows. The lower slopes of the canyon generally are very steep while the upper slopes are more gently sloping to the crest of the surrounding ridges. The terrain along the river in Segment B consists of a wide flat canyon bottom which is mostly private and some sub-development has occurred. Vegetation throughout the area is generally ponderosa pine and Douglas fir on the slopes, with willows and interspersed grassy meadows in the canyon bottom.

The water flows are regulated by releases from Eleven-Mile Canyon Reservoir and range from 60 to 80 cubic feet per second to 300 to 350 cubic feet per second. However, during high water periods, flows may reach several thousand cubic feet per second. The flood plain on the National Forest portion of this area, Segments A and C, generally consist of a narrow canyon bottom with steep sidewalls.

The entire section of the river provides a good trout fishery and is stocked by the Colorado Division of Wildlife. Wildlife includes species normally associated with this type of environment such as deer and possibly a few mountain lion. The river otter (classified as endangered by the State of Colorado) has been stocked and more stocking is planned in the future.

Social Economic Features. The major recreation attractions are scenery and use of the water. The upper canyon area, Segment A, is very heavily used for both dispersed and developed recreation, with water-based activities predominant. The lower canyon area, Segment C, is used primarily for fishing. The lower terminus of the river is within five miles of the Lost Creek Wilderness. However, the river does not provide direct wilderness access. The primary scenic and visual resource is the flowing river through the canyon area with associated rapids, smooth stretches, riffles, etc. The visual resource of the central portion of the canyon, Segment B, has been heavily modified by subdivision development. There are no identified cultural resources in the corridor other than the Colorado Midland Railroad Grade. However, it is expected that additional cultural resources would be identified by a complete inventory.

The economic uses of natural resources in the area are limited to some past timber harvesting activity. The primary economic use is the domestic water supply by the Denver Water Board.

ELIGIBILITY EVALUATION

SOUTH PLATTE RIVER

The guidelines for evaluating Wild, Scenic and Recreational River Areas proposed for inclusion in the National Wild and Scenic River System under Section 2, Public Law 90-542 provide five criteria which rivers must meet to be considered for inclusion under the Wild and Scenic Rivers Act. These criteria and the applicability of the South Platte River are as follow:

1. Rivers must be in a free flowing natural condition: The South Platte River from Eleven-Mile Canyon Dam downstream to the head of Cheesman Reservoir is generally free flowing although the amount of flow is controlled by releases from Eleven-Mile Canyon Reservoir.

2. The river must be long enough to provide a meaningful experience: The area of the river under study is approximately 23 miles long and marginally meets this criterion.

3. There should be a sufficient volume of water during normal years to permit, during the recreation season, full enjoyment of water related outdoor recreation activities associated with comparable rivers: There is a sufficient volume of water as illustrated by the attraction and use of the water for a limited range of outdoor recreation activities at the present time.

4. The river and its environment should be outstandingly remarkable and generally pleasing to the eye: It is questionable if the environment of this section of river is truly

outstandingly remarkable in comparison to the rivers identified in the original Wild and Scenic Rivers Act. However, this river and the canyon are unique in that these resources are scarce along the Front Range of Colorado. Therefore, it appears that, considering the Front Range situation, the river generally meets these criteria.

5. The river should be of high quality water: The South Platte River is the source of domestic water for the City of Denver, is high quality water, and will be maintained in this condition.

The Wild and Scenic Rivers Act also provides criteria for the classification of Wild, Scenic, and Recreational River Areas as described by the Act. These criteria and the applicability of the three segments of the South Platte River are described as follows:

a) Wild River Areas

1) Free of Impoundments: The entire South Platte River Study Area meets this criterion.

2) Generally inaccessible except by trail: Segments A and B do not meet this criterion due to numerous roads along and crossing the river. Segment C generally meets the criteria, although there are ORV routes to and across the river. However, these uses could be regulated where they are in conflict with the purposes of the Act.

3) Watersheds or shoreline essentially primitive: Segments A and B do not meet this criterion due to the level of development. Segment C appears to essentially meet the criteria.

4) Waters unpolluted: The entire South Platte River in the study area meets this criteria.

b) Scenic River Areas

1) Free of Impoundments: The entire South Platte River Study Area meets this criterion.

2) Are accessible in places by road: This is defined to mean that roads may occasionally bridge the river area but that long stretches of conspicuous and well traveled roads do not closely parallel the riverbank. The river in Segments A and B do not meet this criterion because they are paralleled and crossed by roads. Segment C meets this criterion.

3) Have shorelines or watersheds still largely primitive and shorelines largely undeveloped: Segments A and B do not meet these criteria due to the level of recreation and subdivision development. Segment C meets these criteria.

c) Recreational River Areas

1) Are readily accessible by road or railroad: Segments A and B meet this criterion with numerous roads.

2) May have some development along their shoreline: This means that the lands may be developed for a full range of agricultural uses and could include small communities as well as dispersed or clustered residential developments. Segments A and B meet this criterion.

3) Undergone some impoundment or diversion in the past: The entire South Platte River Study Area meets this criterion.

Based upon the above evaluation, it appears that Segment C of the South Platte River Study Area meets the criteria for eligibility as a Wild River. It appears that Segments A and B meet the criteria for eligibility as a Recreational River, but do not meet the criteria for a Scenic or Wild River.

A river may have more than one classification for different segments but each classified segment must be long enough to provide a meaningful experience. The length of the segments meeting eligibility requirements for wild and recreational classification (9 and 15 miles, respectively) may be marginal in terms of length to provide meaningful experiences.

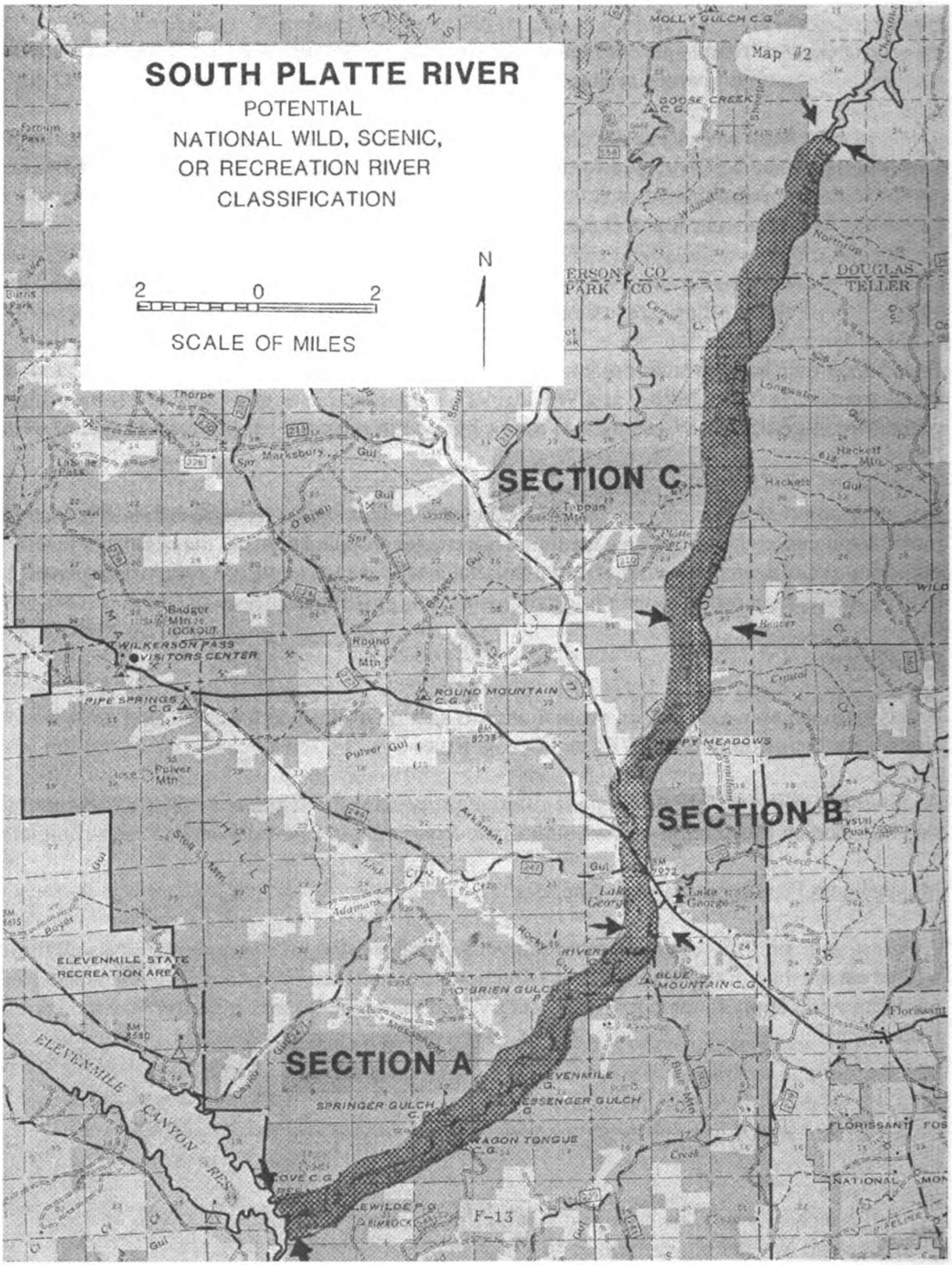
Conclusion

Based upon the above eligibility evaluation, this section of the South Platte River is found to be eligible for inclusion into the Wild and Scenic River System.

A suitability analysis, followed by a legislative proposal if the segment is determined suitable, will be made on this section of the South Platte River after the Forest Plan has been completed.

Management Pending Suitability Analysis

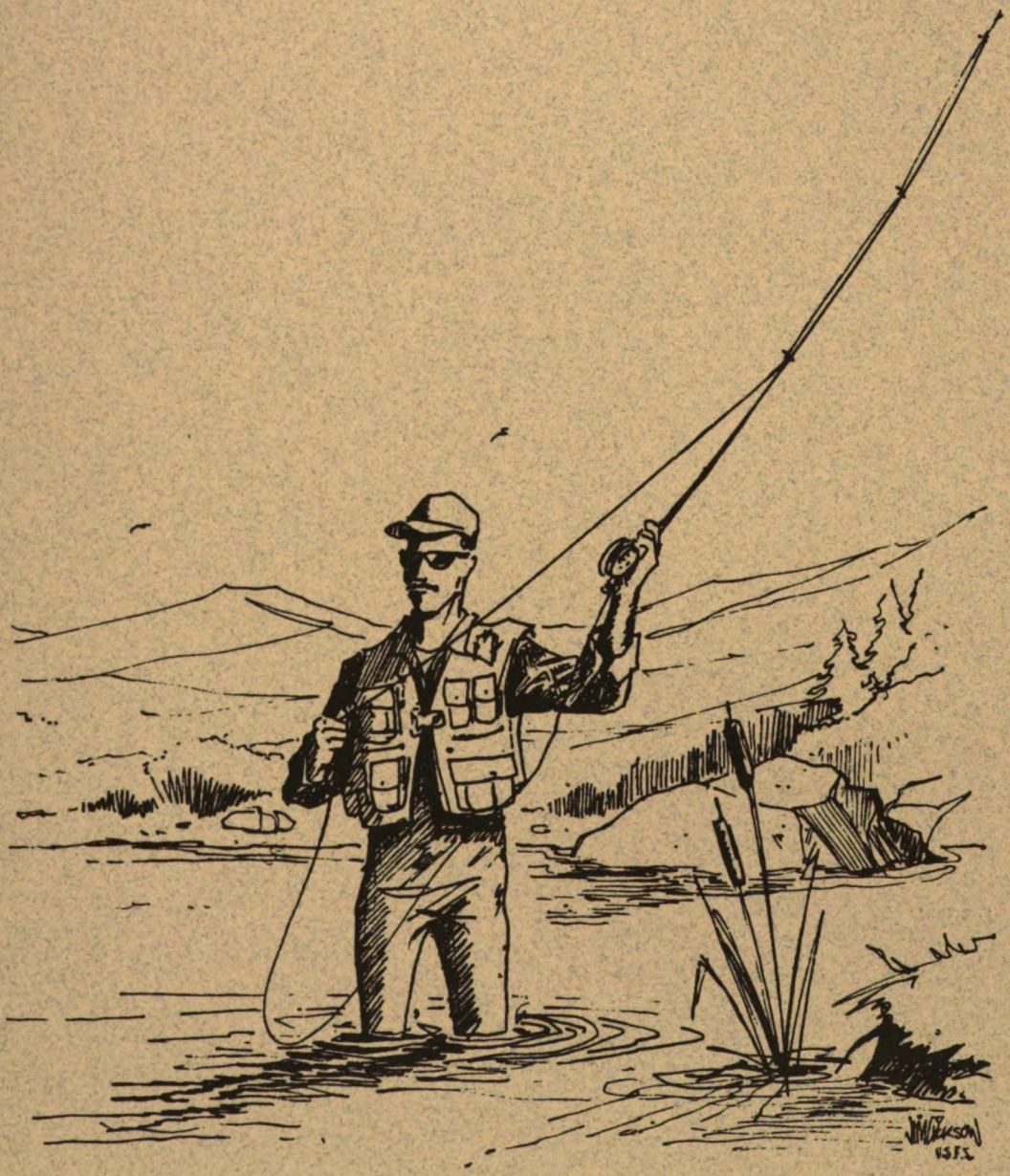
A Forest-wide prescription to protect the river's characteristics so as not to impair its eligibility will be established in the Management Direction section of the Forest Plan. These standards and guidelines will apply to the corridor boundary, generally one-quarter mile from each bank of the river segment.



Map #2

Appendix D

Wild and Scenic River Eligibility and Classification Determination



Appendix D – Wild and Scenic River Eligibility and Classification Determination for the South Platte River and the North Fork of the South Platte River Table of Contents

APPENDIX D

WILD AND SCENIC RIVER ELIGIBILITY AND CLASSIFICATION DETERMINATION

for the

SOUTH PLATTE RIVER

and the

NORTH FORK OF THE SOUTH PLATTE RIVER

PIKE AND SAN ISABEL NATIONAL FORESTS
COMANCHE AND CIMARRON NATIONAL GRASSLANDS

SOUTH PLATTE AND SOUTH PARK RANGER DISTRICTS

Douglas, Jefferson, Park, and Teller Counties, Colorado

June 1996

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY

The Pike and San Isabel National Forests and Comanche and Cimarron National Grasslands is conducting a study to determine the eligibility and classification of the North Fork of the South Platte River and segments of the South Platte River for potential designation as a component of the National Wild and Scenic Rivers System.

This document is a revision of the Preliminary Wild and Scenic River Eligibility and Classification Report that was released on July 28, 1995. The revision incorporated comments received during the public scoping process which closed May 31, 1996.

The purpose of this report is to document determinations concerning:

1. The eligibility of these segments for inclusion in the National Wild and Scenic Rivers System.

2. Potential classification of these segments as a "Recreational," "Scenic," or "Wild" river.

This study includes an area 1/4 mile each side of the ordinary high water mark of the entire 50.1-mile mainstem of the North Fork of the South Platte River from its headwaters to its confluence with the South Platte River (Segments F, G, H), and 22.6-mile portion of the South Platte River from below Cheesman Dam to the high water line of Strontia Springs Reservoir (Segments D & E).

The eligibility of these river segments for Wild and Scenic River (W&SR) designation is being determined under the provisions found in Section 5(d)(1) of the Wild and Scenic Rivers Act of 1968 (P.L 90-542 et *seq).*

To be eligible for inclusion in the National Wild and Scenic Rivers System a river must meet both of the following criteria:

1. It must be free-flowing, and;

2. possess one or more Outstandingly Remarkable Values (OR Values).

The 22.9-mile portion of the North Fork of the South Platte River from the upstream boundary of the Berger property, near Insmont, downstream to within 1/4 mile of Its confluence with the South Platte River (Segment H) and the 22.6-mile portion of the South Platte River downstream from the stream gage below Cheesman Dam to the high water line of Strontia Springs Reservoir (Segments D & E) meet both eligibility requirements. They are free-flowing and possess the following Outstandingly Remarkable Values:

1. Recreational (Segments D, E, H)

2. Fisheries (Segments D & E)

3. Wildlife (Segments D, E, H)

4. Cultural (Historic) Resources (Segment H)

Classification as a "Wild", "Scenic', or "Recreational" river area is determined by the level of water resource development, shoreline development, accessibility, and water quality."Wild" rivers are the most primitive rivers in the W&SR system, 'Scenic" rivers are largely primitive but somewhat developed, and "Recreational" rivers are the most developed rivers in the W&SR system.

The 3.1-mile section (Segment D) of the South Platte River, downstream from the stream gage below Cheesman Dam downstream to the upstream boundary of the Wigwam Club property (NW 1/4 of the NW 1/4 Section 29, Township 9 South, Range 70 West), is classified as a potential "Wild' river.

The 4.9-mile portion of Segment H, from the downstream side of the stone house near Estabrook to the Section line between Sections 29 and 30, downstream from Cliffdale, is classified as a potential 'Scenic" river.

The remainder of Segment H as well as the other 64.3 miles of eligible segments are classified as potential "Recreational' river segments.

A comprehensive river study will be conducted in the future, including a suitability report and accompanying legislative environmental impact statement, to determine if the eligible segments are suitable for addition to the National Wild and Scenic Rivers System. If the recommendation is to include all or part of these river segments in the W&SR System, the suitability study and legislative environmental impact statement will be submitted to Congress for a final decision. In the interim, the Forest Service is required to maintain the eligibility and classification of the eligible segments until a final determination is made (FSH 1909.12, Chapter 8).

II. INTRODUCTION

Section 5(d)(1) of the Wild and Scenic Rivers Act, P.L 90-542 *et seq,* requires all Federal agencies to consider potential national wild, scenic, and recreational river areas in all planning for the use and development of water and related land resources. FSM 1924 states "consideration of the potential wild and scenic rivers is an inherent part of the ongoing land and resource management planning process." The North Fork of the South Platte River (Segments F, G, H) and two segments of the South Platte River (Segments D & E) are being considered for potential Wild and Scenic River designation under the provisions of Section 5(d)(1) of the W&SR Act and as per direction given in the following documents:

Federal Register, National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification and Management of River Areas, (Guidelines), September 1982 (47 FR 39454-39461).

Forest Service Manual, FSM 2354.

Forest Service Handbook, FSH 1909.12, Chapter 8.

Revision Desk Guide, Rocky Mountain Region, (Revision Guide), Chapter 8, September 1993.

For the purposes of this analysis, the Forest Service has established a study area 1/4-mile wide from either side of the ordinary high water mark of the study rivers. The maps included in Appendix A show the area being considered.

National Wild and Scenic River System

The National Wild and Scenic Rivers System currently includes a total of 10,744 miles of river on 151 river segments throughout the United States. These designated rivers are managed under the provisions of the W&SR Act to preserve or enhance their Outstandingly Remarkable Values in the future. The Act encourages a cooperative management relationship between the various levels of government and private organizations or landowners along designated river corridors.

Previous Studies

Several major Federal reports have been written regarding National Wild and Scenic Rivers eligibility status for portions of the South Platte and the North Fork of the South Platte Rivers. These studies concluded that portions of the rivers meet eligibility standards for Wild and Scenic River designation.

In 1972 the "Western U.S. Water Plan, Streams and Stream Systems, Working Document,' a multi-agency report, said that the South Platte River has "free-flowing values" and "should be appropriately considered and evaluated in Federal planning."

In 1974, 'A Conceptual Proposal for a South Platte Canyons Free-Flowing Recreational River' published by the Bureau of Recreation, found that the river was eligible for Wild and Scenic river protection.

In 1977, the Bureau of Outdoor Recreation's 'Water and Land Resources Management Study for Metropolitan Denver and South Platte River and Tributaries, Colorado, Wyoming, and Nebraska' lists the South Platte as "free-flowing" and "potential regional park", "general park", or "recreation area'.

The National Rivers Inventory (NRI), published by the National Park Service in 1982, included the South Platte River from below Elevenmile Dam to the high water line of Cheesman Reservoir (upstream from Segments D and E in this study). It concluded that these segments (A, B, and C) have outstanding values which make them potentially eligible for consideration for addition into the National Wild and Scenic Rivers System. The NRI did not however, include any of the segments under consideration in this eligibility analysis.

In 1984, the eligibility and classification of Segments A, B, and C was analyzed as part of the Forest planning process for the Pike and San Isabel National Forests and Comanche and

Cimarron National Grasslands. The Forest Plan determined that all three segments were eligible for inclusion in the National Wild and Scenic River System. Each segment is considered free-flowing, with outstandingly remarkable scenic, recreational, geologic, fish, and wildlife values. Additional information can be found in Appendix F of the FEIS for the Forest Plan. Because these river segments were identified through the forest planning process, they are recognized as study rivers under the provisions of Section 5(d) (1) of the Wild and Scenic Rivers Act (P.L 90-542 et seq). No further evaluation is included in this eligibility document for these segments of the river.

In May 1988, the Rocky Mountain Regional Office of the National Park Service evaluated the South Platte River from below Cheesman Dam to its confluence with the North Fork of the Platte River (Segments D & E) for possible inclusion in the NRI. In their letter to the Director of the National Park Service they found that the river "possesses outstandingly remarkable recreational, fish, historic, and other (endangered species) values.' Furthermore, their field inspection "disclosed no characteristics which would cause the stream to be considered ineligible as a Recreational component of the Wild and Scenic Rivers System.' This was not however, an official Eligibility Study, and the finding was later withdrawn by the National Park Service at the request of Rocky Mountain Regional Forester Gary Cargill.

Purpose

This document presents the methods and results of the eligibility and classification analyses.

The purpose of this analysis is to determine whether the North Fork of the South Platte River and Segments D and E of the South Platte River meet the minimum requirements for addition to the National Wild and Scenic Rivers System. Although there have been other studies, opinions, or findings concerning the eligibility of the river segments under study here, none constituted an official eligibility study under the Wild and Scenic Rivers Act. This document is the official eligibility study and constitutes the final eligibility and classification determination for these study segments.

The Wild and Scenic Rivers Act specifies that to be eligible, a river must have two characteristics: it must be free-flowing, and it must possess one or more OR values. These resources include, but are not limited to the scenic, recreational, geologic, fish and wildlife, historic, and cultural values of the river and its corridor.

River segments found eligible are classified as either "Wild', "Scenic', or "Recreational", based on the level of development and access in the study corridor.

The sole purpose of this document is to make and eligibility determination and to classify the eligible segments. If any segments are found eligible, a comprehensive river study and suitability determination will be completed at a later date under the provisions of the National Environmental Protection Act (NEPA). The river study and environmental impact statement would include public involvement and take into consideration the social and economic trade-offs of designating the study corridor as a wild and scenic river, as well as alternative methods of managing the river corridor.

III. ELIGIBILITY ANALYSIS

The South Platte River and the lower portion of the North Fork of the South Platte River have been intensively studied in the past. These studies, listed in Appendix B, range from recreational to developmental analyses, and include previous attempts to secure permits to build dams and previous attempts to determine the eligibility of these study segments for potential addition to the National Wild and Scenic Rivers System.

The most recent study is the Metropolitan Denver Water Supply EIS (Two Forks EIS) published in 1988 by the U.S. Army Corps of Engineers. This included a proposal for a dam just below the confluence of the South Platte and North Fork of the South Platte Rivers and other associated projects. The Two Forks EIS was used as a primary source of data for this eligibility and classification analysis. Additional studies and discussions relevant to the analysis were also used to determine the eligibility and classification of the river segments.

To be eligible for inclusion in the National Wild and Scenic Rivers System a river must meet both of the following criteria:

1. It must be free-flowing, and;
2. possess one or more OR values.

Free-Flowing Character

The Wild and Scenic Rivers Act (Section 16(b)) defines free-flowing as:

> "...existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures ... shall not automatically bar its consideration for inclusion: *Provided*, that this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system."

The Federal Register Guidelines relating to free-flow state:

> 'There may be some existing impoundments, diversions and other modifications of the waterway having an impact on the river area Existing low dams, diversion works, rip-rap and other minor structures will not bar recreational classification, provided the waterway remains generally natural and riverine in appearance.'

Four major reservoirs are located above the South Platte River section currently under analysis in this study. They are Antero, Spinney Mountain, Elevenmile, and Cheesman. Two reservoirs are also situated immediately below the sections currently under analysis. These include Strontia Springs and Chatfield. Operational flows of the South Platte River between Cheesman Dam and Strontia Springs Reservoir fluctuate tremendously, from a minimum of 1.6 cubic feet per second (cfs) to a maximum of 4,580 cfs.

The Federal Register Guidelines state:

> 'The fact that a river segment may flow between large impoundments will not necessarily preclude its designation. Such segments may qualify if conditions within the segments meet the criteria.'

There are no major reservoirs or impoundments on North Fork of the South Platte River, but free-flowing conditions are affected in its central portion due to human-caused dams, diversions, impoundments, and modifications for municipal, residential, and agricultural use, and to protect the channel from additional flows from the Roberts Tunnel. Flows of the North Fork are heavily augmented with western slope waters which are brought to the river via this tunnel from Dillon Reservoir.

The Wild and Scenic Rivers System currently includes a number of rivers which are regulated by reservoirs or have augmented flows. One of these rivers is the Cache La Poudre in northern Colorado. The Cache La Poudre has similar regulated flow conditions as segments of the South Platte River and North Fork of the South Platte River under study here.

Segments Studied

In accordance with the procedures specified in the Revision Desk Guide for the Rocky Mountain Region, the rivers were divided into segments for analysis purposes. These segments include:

Segment D - The 3.1-mile section of the South Platte River downstream from the stream gage below Cheesman Dam downstream to the upstream boundary of the Wigwam Club property (NW 1/4 of the NW 1/4 Section 29, Township 9 South, Range 70 West).

Segment E - The South Platte River from the upstream boundary of the Wigwam Club property downstream to the high water line of Strontia Springs Reservoir (6029 foot contour) (19.5 miles).

Segment F - The North Fork of the South Platte River from the headwaters downstream to its confluence with Kenosha Gulch (9.7 miles).

Segment G - The North Fork of the South Platte River from its confluence with Kenosha Gulch downstream to the upstream boundary of the Berger property (NW 1/4 of the SW 1/4, Section 34, Township 7 South, Range 72 West), near Insmont (17.5 miles).

Segment H - The North Fork of the South Platte River from the upstream boundary of the Berger property, near Insmont, downstream to within 1/4 mile of its confluence with the South Platte River (22.9 miles).

There are existing impoundments, diversions, and other modifications in all of the river segments that have some impact on the river area These include existing diversion dams, check dams, rip-rap, stream monitoring gages, jetties, channel relocation, tire and rock walls, bridges, pipes, and culverts. For example, in Segment H, there are six diversion dams, numerous check dams, and evidence of bank stabilization associated with the historic railroad grade and from the County gravel road (Survey of Man-Made Alterations - Denver Water). In Segments D, E, F, and H these developments do not affect the natural or riverine appearance of the area.

Segment G, below the Roberts Tunnel, was found not to be 'free-flowing' as defined by the Wild and Scenic Rivers Act. Although there are no major impoundments or reservoirs within this segment, the river has been principally altered by human activities leaving the majority of the segment no longer in a natural riverine appearance.

These activities include three major activities designed to control the flow and potential flooding of the river and affect its free-flowing characteristics. These activities affect the river bed, the river's appearance, resources associated with the river, and other values located in this segment of the river corridor.

The first is associated with the Colorado Department of Transportation (CDOT) which conducts numerous road improvements along the US Highway 285 transportation corridor. Between the towns of Webster and Bailey, CDOT has relocated the bed of the North Fork in at least 20 locations. In 1988, between the towns of Grant and Webster, approximately 30% of the channel was relocated. In addition to the channel relocation work, extensive bank shoring (rip-rapping), channel clearing, small islands and meanders removal, rock and earthen dams construction, and thousands of cubic yards of wetland and riparian zones have been backfilled or removed. River banks have been steepened, vegetation has been removed, shoulders have been gravelled or paved, and in some areas the banks have been built up so that the river appears more like a canal.

The second major activity affecting the North Fork's free-flowing characteristic within this segment is administered by the Denver Water Department. Approximately 16 miles of the river channel between the town of Grant to the National Forest boundary near Estabrook have been channelized. Most of this activity has occurred from Grant through the property owned by the National Farmers Union below Bailey (upstream from Segment H). The river channelization (done primarily to deepen the underwater canyon called a 'thalweg") was conducted to accommodate the increased water flows from the Dillon Reservoir to the North Fork via the Roberts Tunnel. Much of the natural material normally found in this type of river such as woody debris, large rocks and boulders, or river plants, are absent. Constant maintenance of the channel is necessary because the river valley gradient is low. The deepening of the thalweg combined with the increased flow velocity and volume, and the colder water temperatures of the imported waters have affected the historical fisheries value of the North Fork and have altered the outward appearance of the river by producing a 'manicured' effect.

Both projects have rip-rapped or otherwise stabilized the river bed and banks in many locations. Natural occurring features of a river such as logs, rocks and vegetation have been removed. Tributary streams have been re-routed, and numerous culverts and bridges installed. With all the changes and modifications to portions of Segment G downstream from the Robert's Tunnel, it has lost its natural appearance and is more of an artificial channel.

A third impact to the natural appearance and affecting the free-flowing characteristics of the North Fork between the Roberts Tunnel and the start of Segment H, near Insmont, is the result of local residents, agriculturalists, tourist facilities, and ranching outfits. To support this developed environment, there are small reservoirs, numerous stock ponds, canals, and other water diversion sites. This overall impact, when considered by itself, is relatively minor and would not necessarily remove this portion of Segment G from eligibility consideration. When combined with the other two activities, the overall effect leads to the not free-flowing determination.

There are a few locations within this of the North Fork that appear natural or are otherwise unaffected as a result of these three activities. To attempt to list these few locales as components of the Wild and Scenic River System, would result in excessive segmentation.

Finding

All the study segments are considered free-flowing except for Segment G, downstream from the Roberts Tunnel. Channel modifications and diversions are present, particularly on Segment H and the lower portion of Segment D, but they are not considered significant enough to affect the free-flowing nature of the river. Segment G has undergone extensive alteration by human activities downstream from the Roberts Tunnel and Includes over 20 diversion dams, numerous check dams, the outlet for the Roberts Tunnel, channel relocations, and countless other human-made Intrusions and modifications to the river bed, channel, banks, and vegetation (Survey of Manmade Alterations - Denver Water), leaving a majority of the segments no longer In a natural riverine condition.

Outstandingly Remarkable Value Analysis

The Wild and Scenic Rivers Act specifies that the eligibility for the Wild and Scenic River System shall be based on "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" of the river or its immediate environment. Although a river or river segment may contain multiple outstandingly remarkable values, only one remarkable outstanding value is necessary to qualify the river or river segment as eligible." Some values were determined to be important or "significant" to the river corridor or local area, but were not found to be outstandingly remarkable when viewed at a national or regional level. The regional level defined for this study is the Front Range which includes the Colorado portions of the South Platte and Laramie River watersheds in Colorado (USDA Forest Service, Revision Desk Guide, Rocky Mountain Region).

Although the determination of value significance is a matter of informed judgment and interpretation, the process used by the Forest Service has been standardized to provide consistency. This process includes the following analysis and verification techniques:

- The use of an interdisciplinary team with technical expertise related to each of the values being analyzed.
- Consideration of uniqueness and rarity at a regional and national level.
- Values must be river related in that they owe their existence or contribute to the functioning of the river system and its environment.
- The use of qualitative guidelines to help determine significance
- Verification by other experts in the subject area.

The analysis of OR values followed the Forest Service's approach. These findings will be subject to external review when the river study is completed.

Forest Service specialists provided current information on river-related values in the corridor. The categories that have been considered include:

Scenic
Recreational
Geologic
Vegetation/Ecological
Fisheries
Wildlife
Cultural
Other Resource Values

IV. CRITERIA FOR RATING OUTSTANDINGLY REMARKABLE VALUES

Scenic

The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment length and not common to other rivers in the geographic region.

Recreational

Recreational opportunities are, or have the potential to be, unique enough to attract visitors from outside the geographic region. Visitors would be willing to travel long distances to use the resource for recreational purposes. River-related opportunities could include, but are not limited to: sightseeing, wildlife observations, photography, hiking, fishing, hunting, and boating. Other criteria include diversity, level of use, quality, uniqueness, naturalness, and length of seasonal use.

Interpretive opportunities may be exceptional and attract or have the potential to attract visitors from outside the geographic region.

The river may provide or have the potential to provide settings for national or regional usage or competitive events.

Geologic

The river or the area within the study corridor contains an example(s) of a geologic or hydrologic feature, process, or phenomena that is rare, unusual, one-of-a-kind, or unique to the geographic region. The feature(s) may be in an unusually active stage of development, represent a "textbook" example and/or represent a unique or rare combination of geologic or hydrologic features such as erosional, volcanic, glacial, and other geologic, or hydrologic structures.

Vegetation/Ecological

The river or area within the study corridor contains nationally or regionally important populations of indigenous plant species. Of particular significance are species considered to be unique or populations of federally listed or candidate threatened and endangered species. When analyzing vegetation, additional factors such as diversity of species, number of plant communities, and cultural importance of plants may be considered.

Fisheries

Fish values may be judged on the relative merits of either fish populations and/or habitat - or a combination of these river-related conditions.

Populations

The river is internationally, nationally or regionally an important producer of fish species. Of particular significance is the presence of wild stocks and/or federally or State listed or candidate threatened, endangered, and sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

Habitat

The river provides or has the potential to provide exceptionally high quality fish habitat. Of particular significance is habitat for naturally producing stocks and/or federally or State listed or candidate threatened, endangered, and sensitive species. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

Wildlife

Wildlife values shall be judged on the relative merits of either wildlife populations or habitat - or a combination of these conditions.

Populations

The river or area within the study corridor contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique or populations of Federal or State listed or candidate threatened, endangered, and

sensitive species. Diversity of species is an important consideration and could in itself lead to a determination of outstandingly remarkable.

Habitat

The river or area within the study corridor provides exceptionally high quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for Federal or State listed or candidate threatened, endangered and sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

Cultural

The river or area within the study corridor contains a site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare, unusual, has exceptional human interest value(s), or is one-of-a-kind in the geographic region. A historic site(s) and/or feature(s) in most cases are 50 years old or older; a prehistoric site is older than recorded history. Sites may have national or regional importance for interpreting cultural history; may be rare and represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare or sacred purposes.

Of particular significance are sites or features listed by the Colorado State Historic Preservation Office to be eligible for inclusion in the National or State Register of Historic Places on a regional, state, or national level of significance.

Other Resource Values

The goal of this eligibility analysis is to determine whether the rivers or river segments meet the minimum requirements to be added to the National Wild and Scenic Rivers System. Information on river-related values in addition to those listed above was considered in the analysis process; however, separate sections on each resource present in the study corridor were not developed unless existing information indicated that a resource or value was clearly outstanding or notable in the region. The assessments of all river-related values will be considered in depth in the suitability study process.

V. SPECIFIC DESCRIPTION OF VALUES

Scenic

The scenic beauty of the South Platte and North Fork of the South Platte River corridors has received wide acclaim since at least the 1880s and has been well documented in books, magazines, and newspapers. In both cases, the river and river canyon are distinctive visual features. The streams are largely composed of clear, smooth water interspersed with deep pools

and sections of white water flowing over boulders. Rock outcrops of pink and gray granite and riverside stands of willow are common along the river corridor. Jagged outcrops and massive rounded boulders of Pikes Peak granite are combined with steep vegetated slopes, providing a variety of visual relief. Vegetation types range from wetland and riparian species such as willows and tall grasses that grow within the flood plain, to cottonwoods, pines, spruces and drier forbs and short grasses ranging up the valley slopes. Wildflowers of various hues bloom from March through October. In the fall, the cottonwoods, aspens, vines and willows contrast their reds and yellows with the blue-greens of the spruce-fir forests. Local and regional newspapers highlight the South Platte River and North Fork of the South Platte River corridors as places for exceptional viewing of fall foliage.

The area's popularity for scenic viewing is enhanced by its accessibility from trails or paved and gravelled roads which parallel the majority of the river segments under study. Prior to construction of today's modern transportation network, wagon and coach roads, and later railroads and spurs, provided access to much of the area. Because of the many bends and curves of the river, and subsequently the river road, there are ample opportunities to view the crystal clear waters, diverse vegetation patterns and landforms. The lower portions of the study area are included and are highly visible from the Colorado Trail. The diverse landform and vegetation community supports a variety of animal life. All add to the scenic viewing enjoyment and overall attraction of the river corridor.

The scenery of the area figured into the economic growth and success of the early railroad days. In the 1880s railroads parallelled portions of the study segments bringing tourists into the area to enjoy the scenery and fisheries values. The river canyon's beauty was prominently featured in the advertisements for the Denver South Park and Pacific Railway Company. Remnants of this historic resource are still visible today, and provide history buffs and others with additional scenic viewing opportunities.

Chapter 4 of the Two Forks EIS (Volume 1) sums up the significant visual resources. The EIS describes the area as composed of rugged mountain foothills characterized by forested slopes, rock outcrops, and jagged peaks, with a grassy flood plain in a narrow canyon. The banks of the South Platte River support stands of riparian vegetation which contrast with coniferous vegetation on the hillsides. Deciduous trees and shrubs, such as cottonwood and willow, as well as grassy meadows line the river. The fine branching patterns of these deciduous trees and shrubs soften the texture of surrounding hillsides, and the fall color of the leaves is highly distinct. The scenic quality is also attributed to the diversity of distinct natural (geologic and landform) features found. Some of the more notable features include Skull Rock, Long Scraggy Peak, Noddle Heads, Eagle Rock, and the Chutes. Although most of these features are located outside the study corridor, these distinctive geologic formations provide visual interest and serve as regional landmarks.

Recreational

The recreation features of the study corridor are generally described by the Two Forks EIS. It states that the South Platte River is a significant recreation resource since it is one of three Front Range rivers in Colorado having an annual flow in excess of 200,000 acre-feet. The portion of the South Platte River in the project study area (the same area as for this Wild and Scenic

analysis), represents a limited resource of large river canyons. Its proximity to a large urban area makes it an important and unique recreation resource for the Front Range of Colorado. Public lands and the existing road system make this (area) highly accessible to a large population center...The combination of proximity, accessibility, and fishing quality near a large metropolitan area is unique, and the fishing opportunity is considered to a be a significant resource (pp. 4-98, 4-100.) Recreation use on the National Forest portion of the study area is estimated at 300,000 Recreation Visitor Days which accounts for 10 percent of the recreational use on the Pike-San Isabel National Forests.

The dispersed recreation activities are a significant recreation resource in the regional area The natural stream gradients, level areas, vegetation patterns, and scenic quality along the river provide a variety of dispersed recreation activities. These activities include camping, picnicking, swimming, tubing, sunbathing, motorcycle use, scenic viewing, rock climbing, and organized activities such as volleyball and horseshoes. The majority of these activities are day use activities and are related to the presence of the river either directly, such as for boating, tubing and fishing, or indirectly, such as for scenic viewing. The capacity of the canyon bottom and the designated parking and developed camping are also important to activities such as hiking and off-highway vehicle (OHV) use, which are only marginally related to the river resource.

The project study area includes over 27 miles of white-water boating opportunities, which are a significant recreational resource. This includes approximately 7 miles of the North Fork below Buffalo Creek, 14 miles on the South Platte from Deckers to the North Fork confluence, and 6 miles on the South Platte from Reservoir to Riverside Campgrounds in Elevenmile Canyon. The South Platte River and the North Fork which are used by over 12,000 kayakers and canoeists each year...and represents 70 percent of the river boating activity on the Pike National Forest. The study area offers a broad range of white-water boating opportunities, from Class I to Class V (International Scale of Difficulty). The white-water boating opportunity is an especially valuable resource in that it is close to Metropolitan Denver and there are river segments that are suitable for teaching and practicing boating skills.

Kayakers have been able to access the upper portion of the North Fork at the town of Bailey and at property owned by the Farmer's Home Union located downstream from Bailey. Pine Valley Ranch, part of the Jefferson County Open Space park system will provide take out" points for watercrafts, parking and other amenities that will increase kayak and other recreation uses. River take out points within or downstream of the town of Pine have often presented problems with private land owners. The section of the river between Pine Valley Ranch and the community of Buffalo Creek (approximately three miles) is privately owned and access to the river is not generally open to the public.

Much of the popularity of the South Platte is due to its unique capability to accommodate a wide variety of recreation activities in one location. This diversity of recreation opportunities within the project study area contributes significantly to the popularity and uniqueness of the site (pp. 4-100, 4-101). The same can be said of the North Fork of the South Platte River below Kenosha Creek.

Developed recreation facilities in the study area include four National Forest campgrounds between the Wigwam Club and Strontia Springs Reservoir, with a combined capacity of over 520 people at one time. There are 12 other campgrounds within a half hour drive of the river that

can accommodate another 2,400 people. In addition to the campsites on the South Platte, there are three developed picnic areas that can accommodate 56 persons at one time, numerous trailheads, and two campgrounds on the North Fork of the South Platte River in Segment F. Other cultural recreational attractions in the study include three private resorts, two private fishing clubs, a YMCA camp, and a private campground. There are also 222 recreation cabins in the area, 21 on public lands. The private resorts, cabins, and fishing clubs and a YMCA camp are directly linked to the river and its recreation values.

Rock climbing, or mountaineering, is a popular activity in the area. *South Platte Rock Climbing,* (Hubbel and Rolofson, 1988), is devoted specifically to the South Platte and North Fork. Although most of the climbs associated with the South Platte River are outside the 1/2-mile wide river corridor, the access for these climbs are within the corridor. Primary routes associated with this area of the South Platte River include Top Of The World, Malay Archipelago, and Noddle Heads. There is a lack of comparative data with which to judge the geology and rock climbing values to other regional areas. The lower North Fork area within and adjacent to this 1/4-mile river corridor is a popular rock climbing area and is highlighted in many sporting goods stores and at least two rock climbing books. Many of the popular

rock climbing sites are privately owned and permission to climb on or cross private property to gain access to public climbing spots must first be obtained from the landowner. Within the South Platte and North Fork River area, the North Fork area is higher rated.

Special user groups play a large part in the use and management of the South Platte River. Youth groups such as scouting organizations do public service projects on the river each year. Other service groups, such as Trout Unlimited, also do yearly projects designed to protect and enhance the river while promoting their organization. Trout Unlimited also holds their annual Masterfly fishing event in Cheesman Canyon. The Paralyzed Veterans of America provides recreation opportunities for senior citizens and mentally challenged youths as well as for their own membership, on an annual basis.

Geologic

The corridor from Cheesman to Strontia exhibits notable geologic and/or physiographic landmarks that are located in or visible from the study corridor. These include Cathedral Spires, Cheesman Canyon, Dome Rock, Skull Rock, Long Scraggy Peak, the 'Chutes", the Noddle Heads, and Eagle Rock.

According to Chronic (1980), the predominant geologic formation is Pikes Peak Granite, "a beautiful pink granite that contains stubby interlocking crystals of glass-like quartz and flat-faced white and pink feldspar, with a liberal sprinkling of hornblende and back flaky mica (p. 95)". Formed from an ancient batholith of molten rock about a billion years ago, the weathering of Pikes Peak Granite follows joint planes, separating boulders and rounding the protruding angular edges. Along the river, the erosion of the granite has formed knobs, massive cliffs, and pinnacles of monumental rounded blocks. Many dikes in this area have large crystals of feldspar, smoky quartz and mica. In other places, particularly near the confluence, the granite is cut by pegmatite dikes. Elsewhere it may be cut by white veins composed of muscovite and white milky quartz.

Vegetation/Ecological

The area on the South Platte River from Cheesman Dam to Strontia Springs Reservoir and an area on the North Fork of the South Platte from the upstream end of the Berger property, near Insmont, to 1/4 mile from the confluence (Segments D, E, H) contain riparian and wetland areas important to the health of the river and associated wildlife in the Front Range area of Colorado. Of particular importance is the prairie gayfeather *(Liatris punctata),* necessary for the survival of the Pawnee montane skipper butterfly. Cheesman Canyon may also contain habitat for the spotted owl. The river corridor from Cheesman Canyon to below Scraggy View (Segment D and part of Segment E) has been identified as potential habitat for the Ute-Ladies Tresses orchid, a threatened species.

Habitat types of increasing concern to the State and to the nation are wetland and riparian zones. According to the Two Forks EIS, there are at least 431 acres of wetland along the South Platte River from Cheesman Dam to Strontia Springs Reservoir. Some of this acreage includes the lower five miles of the North Fork above the confluence.

Segments D, E, and H each contains habitat types and diversity which are important and essential to the survival of several wildlife species, some of which are threatened, endangered, or sensitive. The potential for vegetative threatened species, the Ute-Ladies Tresses orchid, is very good. A number of wetland and riparian areas are located along these segments. Although the diversity of vegetative habitats supports the wildlife diversity and the vegetative diversity also contributes to the Recreational OR Value, Vegetative/Ecological was not found to be Outstandingly Remarkable.

Fisheries

The fisheries within the analysis area has been best summed up by Region VIII of the U.S. Environmental Protect Agency in the 1990 report *Recommended Determination to Prohibit Construction of Two Forks Dam and Reservoir Pursuant to Section 404(c) of the Clean Water Act* (EPA Report). Data supporting the population and habitat are presented as follows on page 22 of the EPA Report:

> 'The fishery in the Two Forks dam and reservoir area (Segments D, E, H) is an extremely valuable and unique resource. The Colorado Division of Wildlife (CDOW) examined the historic records concerning the South Platte fisheries and concluded that the entire South Platte basin upstream from Denver possessed a phenomenal native fishery prior to initial settlement of the Denver area. By the late 1880's this quality fishery was being actively promoted by the railroads in an effort to attract fare-paying fishermen. This large area of quality fishery has been reduced to limited portions of the basin today, much of which is in the Two Forks dam and reservoir area
>
> In recognition of the value and uniqueness of the remaining resource, the Colorado Wildlife Commission and the USF&WS each selected the South Platte River in the inundation area for special status. The Colorado Wildlife Commission has designated the stretch of the mainstem of the South Platte from Cheesman Dam to the town of South Platte as a Gold Medal trout fishery, one of the highest quality habitats for trout which offers the greatest

potential for trophy trout fishing and angling success. The primary game fish in the area are rainbow and brown trout.

The USF&WS has designated portions of the stream in the inundation area as Resource Category 1, indicating the "habitat to be impacted is of high value for evaluation species and is unique and irreplaceable on a national basis or in the ecoregion section." The main stem of the South Platte from Cheesman Dam downstream to the Scraggy View picnic area has been designated as Resource Category 1 (p. 21.)

The USF&WS concluded this stretch of stream is unique because of: 1) its combination of high biomass numbers and the large average size of the trout present; 2) the ability of the habitat to support these highly valued populations given the frequent adverse conditions resulting from the operation of Cheesman dam; 3) the ability of the stream reach to provide public fishing within reach of the large metropolitan population; and 4) the stream reach is the best of the Gold Medal segments in the State" (EPA Report, p. 21.).

In addition to the above EPA findings, the USF&WS has rated the South Platte River as Resource Category 2 habitat from the Scraggy View Picnic Ground to the confluence with the North Fork. This habitat is defined as being relatively scarce or becoming scarce. Mitigation goals provide for no net loss of in-kind habitat value.

In addition to its Gold Medal Waters status, the portion of the South Platte River from Cheesman Dam to the Wigwam Club (Segment D) is listed by the DOW as Wild Trout Waters, meaning the area is not stocked but consists of a self-sustaining trout population.

The study area has historically provided excellent recreational fishing opportunities, but the natural fishery capability and fish biomass has been altered by human manipulation. The excellent fish population (biomass) in Segment D and much of Segment E can be attributed to the tailwater effect of Cheesman Dam. Much of the fish biomass in Segment F however, can be attributed to the DOW fish stocking program. Despite these impacts, the habitat and fish populations draw strong year-round angling use from throughout the region.

Wildlife

The Two Forks EIS, the EPA Report, and FS data have determined that the area from Cheesman to Strontia and the first 7 miles of the North Fork contains a highly diverse set of wildlife, including threatened and endangered and sensitive species. The Mexican spotted owl is a threatened species and has been reported in an area less than 6 air-miles from Deckers. Cheesman Canyon (Segment D) has potential owl habitat. Peregrine falcons, an endangered species, have nested adjacent to the lower North Fork study corridor on Cathedral Spires and utilize the study area for feeding. The nest site was the last site on the eastern slope to be abandoned during the peregrine decline in the 1960s and was occupied in 1993, 1994, 1995, and 1996 with four young successfully fledged in 1994 and two falcons successfully fledged in 1996. The bald eagle, a threatened species, uses Cheesman Canyon and other segments on the South Platte and lower North Fork for its wintering grounds. The Waterton Canyon area (lower portion of Segment E) contains a unique low-elevation Rocky Mountain bighorn sheep herd. In addition,

the entire stretch of the South Platte from Cheesman to Strontia (Segment D-E) and portions of Segment H on the North Fork of the South Platte River are home to the threatened Pawnee montane skipper butterfly.

Other sensitive species such as the osprey exist within the area; not all sensitive species have been surveyed for, and there is the high potential for other species, primarily birds, to be present.

Three segments (D, E, H) contain a mixture of various habitat types and structural stages which contribute to a rich habitat diversity. Certain key vegetation cover types provide essential feeding areas for wildlife, and are low in availability. These include high-evaluation riparian areas, mountain grasslands and shrubs, willows and sedges, pastures, and the grass-forb and shrub-seedling stages of forested types. All of these habitats are prime feeding habitats for elk, deer, and bighorn sheep.

According to the Two Forks EIS, 'The diversity components...are important to many species for different portions of their life cycles...they are particularly important to deer and elk for feeding...they are considered to be relatively scarce and extremely valuable.' (p.4-47).

Cultural

Numerous cultural heritage resources exist within the two segments between Cheesman Dam and Strontia Springs Reservoir, and from Insmont to the confluence. The cultural resource reconnaissance surveys conducted for the Two Forks project resulted in the recording of 45 sites between Cheesman Dam and Strontia Springs Reservoir (Segments D-E), which were determined eligible for the National Register of Historic Places. Many of these would be suitable for interpretation and/or scientific research. The Denver South Park and Pacific Railroad Grade, the Pine Historic District and the Estabrook Historic District have been officially listed with the National Register; all are located within Segment H. Cheesman Dam, just outside Segment D, is listed as a National Engineering Landmark.

Prehistoric Native American sites have been documented that exceed 7,000 years in age. However, little data is available that fully explores this period. Only one prehistoric site, a rock shelter located in Segment F, has been examined in any great detail. The previous surveys show that the corridors were used by Native Americans since early Archaic (ca. 7,000 years ago) up to the historic present. It is logical to assume that prehistoric use and/or occupation within the corridor occurred earlier than this.

Historic sites important to our understanding of the past are also present, and reflect themes relating to transportation, recreation, and engineering. Ferguson (1993) states that the first historic Euro-American contact in the area was in 1805, when a Kentuckian named James Purcell was chased to South Park "with an angry band of Sioux hot on his trail' *(Rocky Mountain Walks,* p. 174). In 1806 Zebulon Pike made his first exploration up the South Platte, also traveling to South Park.

The Platte River was a major gateway for the westward migration of Euro-Americans, with travelers following both the North and South Platte Rivers. Pierre and Paul Mallet, traveling from St. Louis, lead an early (1739) exploration party, and named the river Riviere La Platte

because of the flat shallow waters. Between 1800 and 1840, the South Platte River and the North Fork saw mainly trappers seeking fur-bearing animals. In 1858, at least two settlements formed at the junction of Cherry Creek and the South Platte River, known as Placer Camp and Montana City. By the 1850's the search for precious minerals was well underway. Between 1859 - 1860, the boom days had hit Tarryall Creek, upriver of Cheesman Dam, between the South Platte River and South Park. The boom led to organized stage, express and freight line service, and during the 1860's, upwards of 70,000 people immigrated to the Rocky Mountains. In 1860 the Denver, Auraria and Colorado Wagon Road Company and the Denver and South Park Stage Company were formed, serving the traffic up the South Platte and the North Fork. In 1862 the Tarryall and Arkansas River Wagon Road Company offered some competition as a toll and stage road servicing the upper South Platte canyon area above present day Cheesman Reservoir.

Between 1868 and 1870, thousands of pine and spruce were logged in the Platte canyons, primarily the North Fork, and floated to Denver for construction of the Denver Pacific and Kansas Pacific Railroad (Poor, 1949.) This is the only historical evidence found regarding the navigable activities of these rivers.

Between 1870 and 1880, Denver's population grew from 4,760 to 35,000 people, precipitating a "railroad war' between various political and commercial factions. In 1868 the first railroad route up the South Platte was undertaken by the Denver South Park and Pacific Railway, and by January of 1879, the railroad had reached Hall's Valley and crossed Kenosha Pass for South Park. By October of 1942 the line was abandoned, and the longest narrow gage line in the United States was dismantled.

VI. OUTSTANDINGLY REMARKABLE VALUE FINDINGS

South Platte River

From the base of Cheesman Dam to the impoundment waters of Strontia Springs Reservoir, the South Platte River canyon drops approximately 700 feet in elevation (from 6,700 feet to 6,000 feet). The narrowest and steepest gradient on the South Platte is between the base of Cheesman Dam to the Wigwam property boundary. The river drops approximately 300 feet within this three-mile stretch (Segment D). Between the Wigwam property and the community of Nighthawk, the canyon is much more open and broader, with an approximate drop of 200 feet in elevation within a fourteen-mile stretch (upper end Segment E). The gradient and narrowness of the canyon again increases from this point, dropping approximately 300 feet, a distance between Nighthawk and the Strontia impoundment waters, a distance of almost six miles (lower end Segment E).

Several creeks and gulches drain into the South Platte between Cheesman and Strontia Springs reservoirs. Many, like Jenny Gulch and Saloon Gulch, are of low volume or are intermittent in nature. Others, such as Horse Creek, Sugar Creek and Pine Creek, are permanent but also of low volume.

Segment D

The 3.1-mile section of the South Platte River includes the section from below Cheesman Dam downstream to the upstream boundary of the Wigwam Club property (the NW 1/4 of the NW 1/4, Section 29, Township 9 South, Range 70 West). The first mile below Cheesman Dam is owned by the City and County of Denver, and the next two miles are National Forest System lands. It is the finding of this Eligibility/Classification document that Segment D possesses the following Outstandingly Remarkable Values: Recreational - Fishing, and dispersed recreation such as: hiking and scenic viewing.

This segment in Cheesman Canyon attracts people from all over the region for hiking, flyfishing, and scenic viewing in its rugged boulder-strewn canyon. The canyon is one of the most heavily fished sections in the State of Colorado and receives the heaviest fishing use in the Front Range. The Gill Trail, which parallels the river, is heavily used by anglers, hikers, nature observers, and photographers. Outfitters and guides permitted by the South Platte Ranger District cater to local, national and international clients. This area is also the site of the annual Masterfly Tournament sponsored by Trout Unlimited. The tournament is used as a fundraiser to enhance the South Platte River corridor.

Fisheries - Nationally renowned brown and rainbow trout populations and habitat.

The fisheries value for Segment D includes population and habitat. This segment contains exceptionally high fish habitat and is a nationally important producer of wild brown and rainbow trout. According to the Colorado Division of Wildlife (CDOW), there are more than 9,000 miles of trout streams in Colorado. This stretch represents 3 miles of the ii 2.5 miles of wild trout streams, and 3 of the 167.8 miles of Gold Medal trout streams in the state. Wild Trout waters contain fish raised entirely within the natural environment and are not stocked with hatchery fish. Gold Medal waters provide outstanding angling opportunities for large trout. Cheesman Canyon is considered the "crown jewel" with more than 500 pounds of fish over a 14 square foot surface area. The CDOW ranks this among the most productive trout streams in the state if not the country. According to the USD1-Fish and Wildlife Service (USFW), Resource Category 1 waters are unique on a national basis and are irreplaceable in kind.

Wildlife - Pawnee montane skipper butterfly populations and habitat.

The Pawnee montane skipper qualifies under the wildlife population OR Value defined for this analysis. The montane skipper is a globally rare sub-species found only in the area of Platte Canyon from near South Platte up to approximately 7,400' elevation (Pague, et.al., 1993; Carlson, 1991). To add to the significance of this value, this sub-species of the skipper is listed in the *Federal Register* (52 FR 36176) as a Threatened species under the Endangered Species Act. The habitat of the butterfly has been created by the river, over time, resulting in the current canyon topography.

Other values for this segment were evaluated including scenic, geologic, and cultural and were found to be significant but not Outstandingly Remarkable. The geologic features do contribute to the Recreational ORV's, but were not in themselves found to be Outstandingly Remarkable. Vegetation/ Ecological was not considered significant.

Segment E

The South Platte River from the upstream boundary of the Wigwam Club property downstream to the high water line of Strontia Springs Reservoir (19.5 miles). Approximately 50% of the land is National Forest System land; 45% is owned by the City and County of Denver; and 5% is privately owned. It is the finding of this Eligibility/Classification document that Segment E possesses the following Outstandingly Remarkable Values:

Recreational - Dispersed and developed recreation such as: camping, picnicking, hiking, fishing, scenic driving, and other day-use.

The quality and diversity of developed and dispersed recreation opportunities along this segment and the accessibility and proximity of the area to major metropolitan areas provides an excellent year-round recreation resource. The recreational study for the *Two Forks EIS* indicated that the Recreational Visitor Day (RVD) use for the project area exceeds 304,000 RVD's on public land (this includes an area larger than the river corridor). However, most of this visitor use was projected to occur along the river, including the North Fork. A survey conducted by the District in 1993 (Maguire and Alden, 1994) lists the wide range of activities which occur within Segment E and Segment H. In addition to the premier flyfishing activity that occurs in the upper (60%) portion of this, the Paralyzed Veterans of America hosts an annual three-day fishing derby and an outing for over 750 persons with a disability and their families, senior citizens, and developmentally disabled youths. This event occurs near the historic site of Twin Cedars at the lower end of the segment. The area is also popular for waterfowl hunting. This segment is considered the best recreational river segment within the region of analysis primarily because of the amount and diversity of opportunities presented to such a large population base.

Fisheries - Nationally renowned brown and rainbow trout populations and habitat.

The fisheries value for Segment E includes population and habitat. The Colorado Division of Wildlife lists the South Platte from the Wigwam Club to the confluence with the North Fork as Gold Medal waters, approximately 85% of this segment's length. The USFW Resource Category 1 rating extends from the Wigwam Club to Scraggy View Picnic Grounds, approximately 45% of the segment, and Resource Category 2 extends from Scraggy View to Strontia Springs Reservoir. Gold Medal and Resource Category 1 waters were previously described under Segment D. Resource Category 2 waters are also Outstandingly Remarkable in that they represent aquatic habitat that must be mitigated in kind for no net loss.

Wildlife - Pawnee montane skipper butterfly and habitat.

(See description in Segment D)

Other values for this segment were evaluated including scenic, geologic, and cultural and were found to be significant but not Outstandingly Remarkable. Vegetation/Ecological was not considered significant.

North Fork of the South Platte River

Headwater tributaries for the North Fork are located high on the eastern slope of the Continental Divide at 12,500 feet in elevation. The tributaries combine to form the main stem of the river at approximately 11,300 feet. The North Fork flows in an easterly direction for approximately 51 miles before reaching the South Platte River at an elevation of 6,050 feet. Numerous small intermittent and perennial streams contribute to the flow.

The North Fork has three distinct segments. The first is from the headwaters to Kenosha Gulch near the town of Webster (Segment F). This segment is known as Hall Valley. The landscape is a result of alpine glaciation, with a primary geologic substrata composed of the granitic Kenosha batholith. Elevation changes approximately 3,500 feet within the 9.7-mile segment. The overall topography is representative of a typical high mountain glacial valley, with narrow and steep tributary canyons, open vistas interrupted by glacial ridges, and alpine to sub-alpine vegetation.

The second segment is from Kenosha Gulch, near Webster, to Insmont near the community of Estabrook (Segment G). The river valley geology changes from the granitic batholith to a schist-gneiss complex, and the valley is much broader with less gradient drop. The river parallels an ancient fault, with the elevation dropping 1,520 feet in approximately 17.5 miles. Glacial and river gravels form flat terraces along the river. Most of the river is paralleled by US Highway 285. Numerous ranches, communities, and houses are found in this section, taking advantage of the open topography and transportation network. The water from Roberts Tunnel enters the river in this section three miles downstream from the community of Webster. The Forest Service maintains a work and visitor information center along the river corridor.

The third segment (Segment H) is from Insmont to the confluence with the South Platte River. The North Fork canyon takes on different characteristics within this 22.9-mile segment. The overall effect is a narrow and confined river canyon. The gradient rapidly drops 800 feet within the first seven miles. Near the town of Pine, the topography becomes less steep for the next five miles, with the gradient dropping 150 feet. Near the community of Riverview, the canyon again becomes narrower and steeper, dropping 1,500 feet in the next eleven miles before reaching the confluence. Population density within this segment is low as there are only a few small communities in this area and many of the dwellings are occupied on a seasonal basis. The channel has been modified in spots, and the banks have been stabilized in places during the construction of the historic railroad grade and more recently by county road work.

The entire length of Segment H is paralleled by either roads, trails or the historic (abandoned) railroad grade. Access to the river is restricted in places by private lands, but the majority of this segment is accessible to the general public. Jefferson County has recently developed the Pine Valley Ranch near Pine as a day-use Open Space park. Lands jointly managed by the Denver Water Department and the U.S. Forest Service, from near Buffalo Creek to the confluence, are also managed for day-use only. National Forest land in the Crossons area at the upper end of the segment is open for dispersed recreational use. A portion of the land at Crossons is privately owned where non-motorized access only is allowed.

Segment F

The North Fork of the South Platte River from the headwaters downstream to its confluence with Kenosha Gulch (9.7 miles). Approximately 65% of the lands are National Forest System lands and the rest is in private ownership. Also included in this analysis is the upper 2.3-mile portion of Segment G above the Roberts Tunnel. It is the finding of this Eligibility/Classification document that Segment F and the upper 2.2-mile section of Segment G possess no Outstandingly Remarkable Values.

Other values for this segment were evaluated and were found to be significant but not Outstandingly Remarkable. These include the following:

Scenic: In terms of scenic value, the terrain in the area is moderately varied with steep, stable and broad slopes. Rock forms, although present are not distinct or unusual in appearance. Rounded hills, ridges and peaks are not visually dominant. Minor lateral canyons are present.

Vegetation is moderately varied with interspersed patterns and common diversity in plant species or seasonal color. Vegetation offers a normal range of size, form, color, texture and spacing. In this segment the stream channel flows mostly through heavy stands of conifer vegetation. Views from the stream and of the stream are extremely limited except in the upper portion of Segment G where the stream parallels US Highway 285. Also, as a result of the heavy vegetation, sunlight to the stream is limited. The valley offers spring color from wildflowers and fall colors from the aspen.

Waterforms are varied with moderate numbers of water bodies, snow patterns and streams of varying size. Special features are only occasionally present. Poor water quality is found both in surface and ground water. Water clarity from the headwaters to the confluence with Handcart Gulch is excellent. However, below Handcart Gulch water clarity is very poor. The water is cloudy as a result of sediment loads. The high iron content in the water flowing from Handcart Gulch has stained the rocks and stumps in the stream channel. Several stretches of the stream are covered with timbers lying bank to bank, some with rootballs attached. In several locations the stream is heavily braided as a result of dams created by either beavers or flood debris.

Recreation: The lack of recreational fishing may contribute to the lesser amount of recreational use when compared to other parts of the drainage. There are developed recreation facilities which include a picnic area, campground and dispersed campsites located along the river in Segment F. These facilities are assessed as being relatively small, clean, and in good shape but they are not regarded as "destination' sites attracting visitors from outside the Denver metro area or for lengthy stays. Recreation opportunities are present on this segment but nothing outstandingly remarkable.

Geologic: The area is a part of the Front Range, an anticlinal northerly trending feature composed of igneous and metamorphic rocks. The highest portion of the area is the Continental Divide, which has been subjected to glacial action. Some spectacular geologic features occur in this area but nothing outstandingly remarkable.

Fisheries: There are no Outstandingly Remarkable Fisheries values recorded for this area. Up to the confluence of Handcart Creek the stream is murky and obviously polluted with mine drainage. It appears more or less sterile.

Wildlife: The headwaters are habitat for mountain goats. There are sections near US Highway 285 that are critical winter range for deer. These values have local significance but are not outstandingly remarkable. There are no documented threatened or endangered species associated with this segment of the river.

Cultural: There are some cultural values significant to the area but nothing outstandingly remarkable on a national or regional level. No prehistoric sites have been recorded to date. The recorded mining-related resources in Segment F (the Whale and Missouri Mines, the Whale Mill, the tramway, Hallstown, and the Hallstown Smelter) and the railroad resources (railroad grade, and Webster site including the charcoal ovens) are determined locally significant and could be potentially eligible for the National Register of Historic Places but have not been formally evaluated.

Vegetation/Ecological: The area was found to be typical of other high mountain valleys in the region. Primary tree species were Englemann and Colorado blue spruce, subalpine fir, scattered stands of aspen. Lower elevations contained stands of ponderosa pine with scattered Douglas-fir on the north and east aspects. Vegetation/Ecological was not considered significant.

Segment G

The North Fork of the South Platte River from its confluence with Kenosha Gulch downstream 17.5 miles to the upstream boundary of the Berger property (the NW 1/4 of the SW 1/4, Section 34, Township 7 South, Range 72 West) near Insmont. Approximately 14.5 miles of Segment G are private lands and approximately 3 miles are National Forest System lands.

This segment was not examined for Outstandingly Remarkable Values downstream from the Roberts Tunnel because it did not meet the basic free-flowing eligibility criteria. In the short stretch above the Roberts Tunnel, it was evaluated and found similar to Segment F and no Outstanding Remarkable Values were identified. Consequently, Segment G is considered ineligible for designation as a component of the National Wild and Scenic Rivers System.

Segment H

The North Fork of the South Platte River from the upstream boundary of the Berger property near Insmont, downstream to within 1/4 mile of its confluence with the South Platte River (22.9 miles). It is the finding of this Eligibility/Classification document that Segment H possesses the following Outstandingly Remarkable Values:

Recreational - Kayaking, and dispersed recreation such as picnicking, fishing, hiking, riding, scenic driving, and other day-uses.

The quality and diversity of dispersed recreation opportunities along this segment and the accessibility and proximity of the area to major metropolitan areas provides an excellent

year-round recreation resource. The Maguire and Alden (1994) survey conducted for the District shows the popularity of the segment as a day-use site.

The upper portion of the North Fork section (between the Buffalo Creek and the South Platte confluence) contains Class IV and V whitewater rapids, and is considered to be one of the premier kayaking waters within the region due to the presence of the rapids and the longer length of the season (Bowers, 1994; Baker, 1994). Its unique value is attributed to its level of difficulty, as well as sustained seasonal flows (National Park Service, 1995). Kayakers can still run the North Fork after other rivers in the region have passed their peak flows. This is due to the importation of water through the Roberts Tunnel. Kayakers who use the area are accustomed to frequent changes in flow volumes that result from the operation of Denver Water's delivery system.

The lower portion of the North Fork, between Buffalo Creek and the confluence, is important to all levels of kayakers and one of the few areas in the region most suitable for teaching entry-level kayaking.

The portion between Buffalo Creek and the confluence is heavily used by summer home residents, some year-round residents, and the general public. The majority of the land is owned by the City and County of Denver and is currently managed by the Denver Water Department as a day-use area

This segment also contains the Pine Valley Ranch, a Jefferson County Open Space Park which contains group picnic sites, an amphitheatre, several trails, and striking rock outcrops. The park is very popular regionally for picnicking and hiking.

Wildlife - Pawnee montane skipper butterfly populations and habitat, peregrine falcon habitat.

The significance of the skipper butterfly has been described under Segment D. There is a peregrine nest site immediately adjacent to the corridor on Cathedral Spires. The nest is outside the study corridor but the one-mile protective management buffer around the nesting site overlaps the river corridor. The study corridor provides important foraging habitat for the falcon. The nesting site and associated foraging habitat are considered to be of regional importance. The site was the last site to be abandoned during the peregrine decline of the 1960s and thus the habitat in this segment is considered to be outstandingly remarkable.

Cultural - Estabrook Historic District and North Fork Historic District including the Denver South Park and Pacific Railroad grade.

The State Historical Preservation Office (SHPO) provided input on whether the two river corridors contained Outstandingly Remarkable Cultural Values. The SHPO examined all the known National Register sites in the corridor and determined that within the North Fork corridor between the Berger property and the confluence there are two outstandingly remarkable historic sites. These two sites are listed with the National Register of Historic Places (NRHP) for their association with the transportation and entertainment/recreation elements of Colorado history.

The two outstandingly remarkable cultural sites are the Estabrook Historic District (approximately 1/2 mile of the river corridor on either side of the community of Estabrook) and the North Fork Historic District which includes the North Fork corridor 1/4 mile west of Pine to 100 feet east of the South Platte Hotel. Included within the North Fork Historic District, but separate from the district designation, are several other historic sites which are also considered outstandingly remarkable on a regional level (Hartmann, 1994.) The Denver South Park and Pacific Railroad grade between South Platte and Pine is included as one of these sites. (NOTE: A segment of this railroad grade, between the North Fork and Estabrook Historic Districts, has not been officially assessed for the NRHP, yet presents a better physical representation of this historic period than the segments currently listed.)

Other values for this segment were evaluated including scenic, geologic, and fisheries and were found to be significant but not Outstandingly Remarkable. Vegetation/Ecological was not considered significant.

Other Important Values

In addition to the values identified above, there are other values for the river corridors. The South Platte and North Fork Rivers are important corridors through which water is used by the City of Denver and other Front Range municipalities, as well as downstream for agricultural and irrigation purposes. The water is also used to sustain downstream ecological factors, including sensitive, threatened and endangered species. The free-flowing characteristics therefore have important hydrologic considerations.

The economic value of the area, locally and regionally, is important due to the river's recreational values, fisheries values, and rural lifestyles in the proximity of a large metropolitan area.

Finally, the synergistic values of Segments D, E, and H are also important. The overall beauty of the canyons, the free-flowing waters in a semi-arid environment, the presence of wildlife, and the proximity to the Front Range metropolitan area provide a setting unique to the region.

Although there are other important or significant values identified for the river segments studied here, none of these values were determined to be outstandingly remarkable.

VII. ELIGIBILITY DETERMINATION

The South Platte River, from Cheesman Reservoir to Strontia Springs Reservoir, meets the minimum eligibility requirements as specified by the Wild and Scenic Rivers Act. Thus, Segments D and E are found to be free-flowing and contain outstandingly remarkable recreation, fish, and wildlife values.

The North Fork of the South Platte River, from the upstream boundary of the Berger property near Insmont, to the confluence with the South Platte, also meets the minimum eligibility requirements as specified by the Wild and Scenic Rivers Act. Segment H is considered free-flowing and contains outstandingly remarkable recreation, wildlife, and cultural values.

The North Fork of the South Platte River, from its headwaters to its confluence with Kenosha Gulch near Webster, is found to be free-flowing but possesses no Outstandingly Remarkable Values. As a result, this segment (Segment F) is ineligible for inclusion into the National Wild and Scenic River System.

The North Fork of the South Platte River, from its confluence with Kenosha Gulch near Webster to the upstream boundary of the Berger property near Insmont (Segment G), is found not to be free-flowing and is thus, ineligible for inclusion into the National Wild and Scenic River System.

VIII. CLASSIFICATION

Introduction

The Wild and Scenic Rivers Act requires that eligible rivers be classified as one of the following:

1. Wild river areas - Those rivers or sections of river that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America

2. Scenic river areas - Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

Recreational river areas - 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.

The appropriate classification of each study segment will be analyzed from the perspective of the topics contained in the classification definitions. Those individual determinations will then be considered as a whole to determine whether the river segments should be classified as a Wild, Scenic, or Recreational River in the event of inclusion within the National Wild and Scenic River System. This analysis will be conducted using the framework suggested by the 1982 joint guidelines developed by the Secretaries of Agriculture and Interior. This framework is best displayed by the following chart from the September 7, 1982 Federal Register, which published the *National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification and Management of River Areas.* This chart provides an excellent summary of the more lengthy narrative in the *Guidelines.* It is not intended to stand alone and is applied in this analysis in the context of the longer narrative material and in context with applicable Wild and Scenic River legislation. There are four major topics addressed in the classification definitions of Wild, Scenic, and Recreational rivers. These topics are: Water Resource Development, Shoreline Development, Accessibility, and Water Quality.

ATTRIBUTE	WILD	SCENIC	RECREATIONAL
Water Resource Development	Free of impoundment.	Free of impoundment.	Some existing impoundment or diversion. The existence of low dams, diversions, or other modifications of the waterway is acceptable, provided the waterway remains generally natural and riverine in appearance.
Shoreline Development	Essentially primitive. Little or no evidence of human activity, The presence of a few inconspicuous structures, particularly those of historic or cultural value, is acceptable. A limited amount of domestic livestock grazing or hay production is acceptable. Little or no evidence of past timber harvest. No ongoing timber harvest,	Largely primitive and undeveloped. No substantial evidence of human activity. The presence of small communities or dispersed dwellings or farm structures is acceptable. The presence of grazing, hay production, or row crops is acceptable. Evidence of past or ongoing timber harvest is acceptable, provided the forest appears natural from the riverbank.	Some development. Substantial evidence of human activity. The presence of extensive residential development and a few commercial structures is acceptable. Lands may have been developed for the full range of agricultural and forestry uses. May show evidence of past and ongoing timber harvest.
Accessibility	Generally inaccessible except by trail. No roads, railroads, or other provision for vehicular travel within the river area. A few existing roads leading to the boundary of the river area is acceptable.	Accessible in places by road. Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads or rail-roads is acceptable.	Readily accessible by road or railroad. The existence of parallel roads or railroads on one or both banks as well as bridge crossings and other river access points is acceptable.
Water Quality	Meets or exceeds Federal criteria or Federally approved State standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming) except where exceeded by natural conditions.	No criteria prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendments of 1972 have made it a national goal that all waters of the United States be made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study, provided a water quality improvement plan exists or is being developed in compliance with applicable Federal and State laws.	

Classification Determination

The overriding determinant for classification decisions is the degree of naturalness, or inversely, the degree of evidence of man's activity in the river area. It is determined that the potential classifications of the 3.1-mile segment of the South Platte River from below Cheesman Dam downstream to the upstream boundary of the Wigwam Club property (Segment D) is classified as a potential "Wild" river. The remainder of the eligible segments, the North Fork of the South Platte River from the Berger property to the confluence with the South Platte (Segment H), and the South Platte River from the Wigwam property downstream to the high water line of Strontia Springs Reservoir (Segment E), are classified as potential "Recreational' river segments.

Segment Analysis

Segment D: This segment is accessible at either end by the Gill (foot) trail. Some cultural development has occurred in the past, primarily relating to mining and fishing activities. Numerous non-system trails are evident along both river banks. It is recommended as 'Wild" because the area within this segment lacks road access and human development.

Segment E: This segment is paralleled by paved and gravel roads. Several small communities and isolated houses are located along the river and there are several developed picnic and camp sites. Numerous parking areas accommodate the large number of day-users and anglers. Several resorts and private camps are also located in this segment. This segment is recommended to be classified as "Recreational" due to road access and the amount of human development.

Segments Hi and H3: These segments, including the North Fork from the upstream end of the Berger property to the downstream side of the old stone house downstream of Estabrook (Segment HI - 1.5 miles) and from the Section line between Sections 29 and 30 downstream of Cliffdale to 1/4-mile from the confluence of the South Platte (Segment H3 -16.5 miles), are classified as "Recreational" since they are paralleled by an historic railroad grade and graveled county roads, and contain developed recreation areas (such as Jefferson County's Pine Valley Ranch), numerous dwellings, and minor diversions and channel work.

Segment H2: This 4.9-mile segment, from the downstream side of the old stone house downstream of Estabrook to the Section line between Sections 29 and 30 downstream of Cliffdale, is classified as "Scenic' since the area is predominately undeveloped National Forest System lands with very limited access. There is an old abandoned railroad grade through the area, a footbridge, some small check dams, and a few dwellings at Crossons, but the area remains largely primitive and undeveloped.

IX. INTERIM MANAGEMENT

As a river segment identified for study via the land management planning process (Section 5(d)(1) study river), a ½-mile wide corridor (1/4 mile from average high water mark on both sides of the river) will be managed to protect river eligibility and classification. Interim

management requirements are in effect until the river study and resulting decision process is complete. These interim management guidelines only apply to Federal lands and have no effect on private lands within the study corridor.

1. To the extent the Forest Service is authorized under law to control stream impoundments and diversions, the free-flowing characteristics of the identified river segments cannot be modified.

2. OR values of the identified river area must be protected and, to the extent practicable, enhanced. This will be accomplished by applying direction found in FSH 1909.15, Chapter 8 (Interim Management Direction for Section 5(d)(1) Study Rivers) and forest plan standards and guides for Management Area 7 (Wild and Scenic Rivers).

3. Management and development of the identified river and its corridor cannot be modified to the degree that eligibility or classification would be affected (i.e., classification cannot be changed from wild to scenic or scenic to recreational).

To ensure these interim management responsibilities are met, an analysis of potential effects on free-flow and OR values of all proposed projects within and adjacent to the study corridor shall be completed and documented by the interdisciplinary team.

X. REFERENCES

In addition to the previous studies cited in Appendix B, the following sources were used for this analysis:

Hartmann, James E. 1994. Colorado Historical Society, letter on file

Maguire, Patti and Dr. Howard Alden. 1994. *South Platte River Corridor Recreation User Study Report.* Manuscript on file, South Platte
Ranger District, Morrison, CO. 80465.

National Park Service, September 8, 1995 letter on file.

Obmascik, Mark. 1993. "South Platte River No. 1 attraction demands attention." *Denver Post,* April 14, 1993, p.8D, Denver, CO.

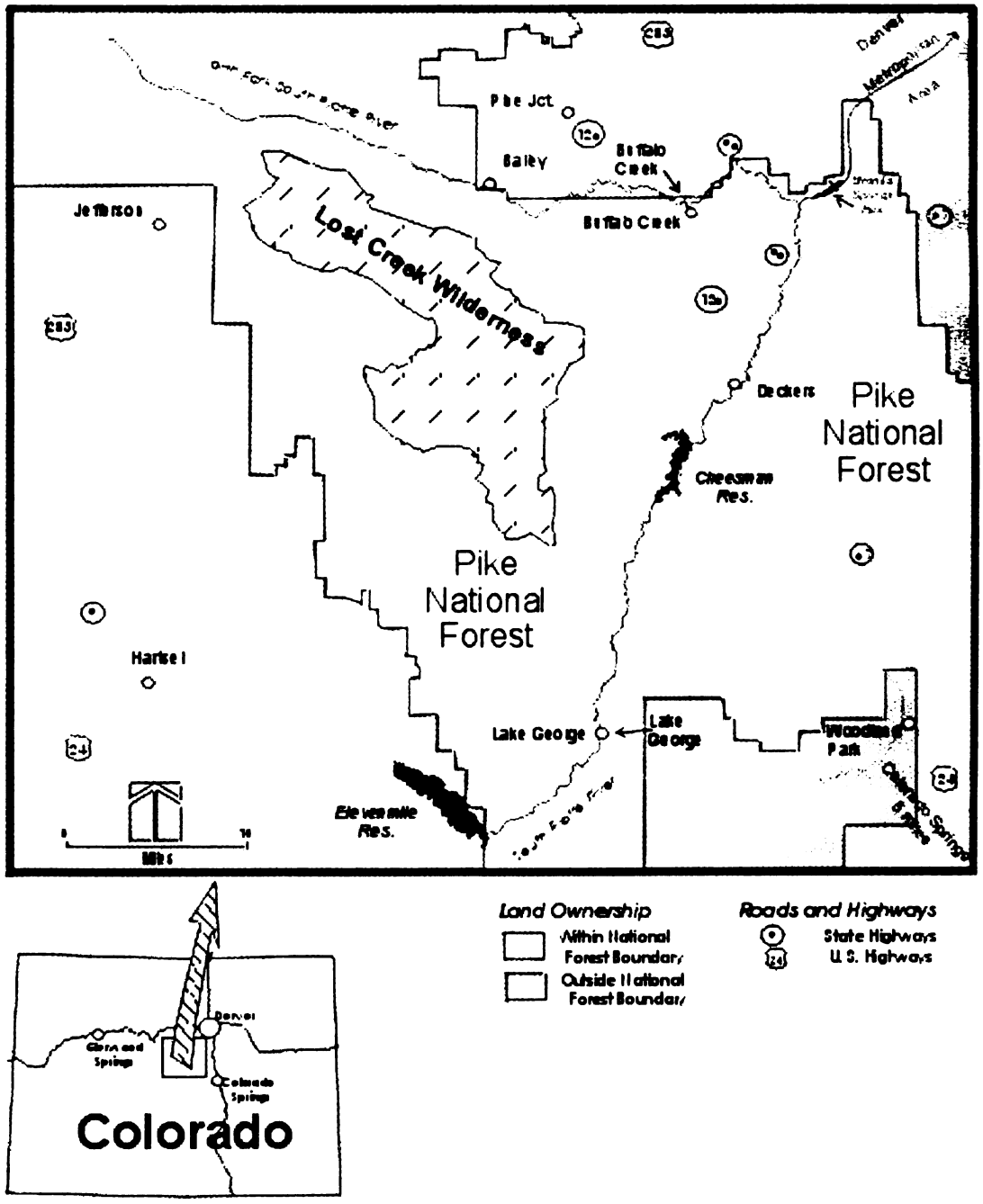
Pague, Christopher A., Renee Rondeau, Mark Duff. 1993. *Natural Heritage Inventory of Jefferson County, Colorado.* Prepared for Jefferson County
Open Space, Colorado Natural Heritage Program, University of Colorado Museum, Boulder, CO. 80309-0315.

Rocky Mountain News Staff. 1988. "Area near Two Forks valued at $2 billion." *Rocky Mountain News,* June 3, 1988, Denver, CO.

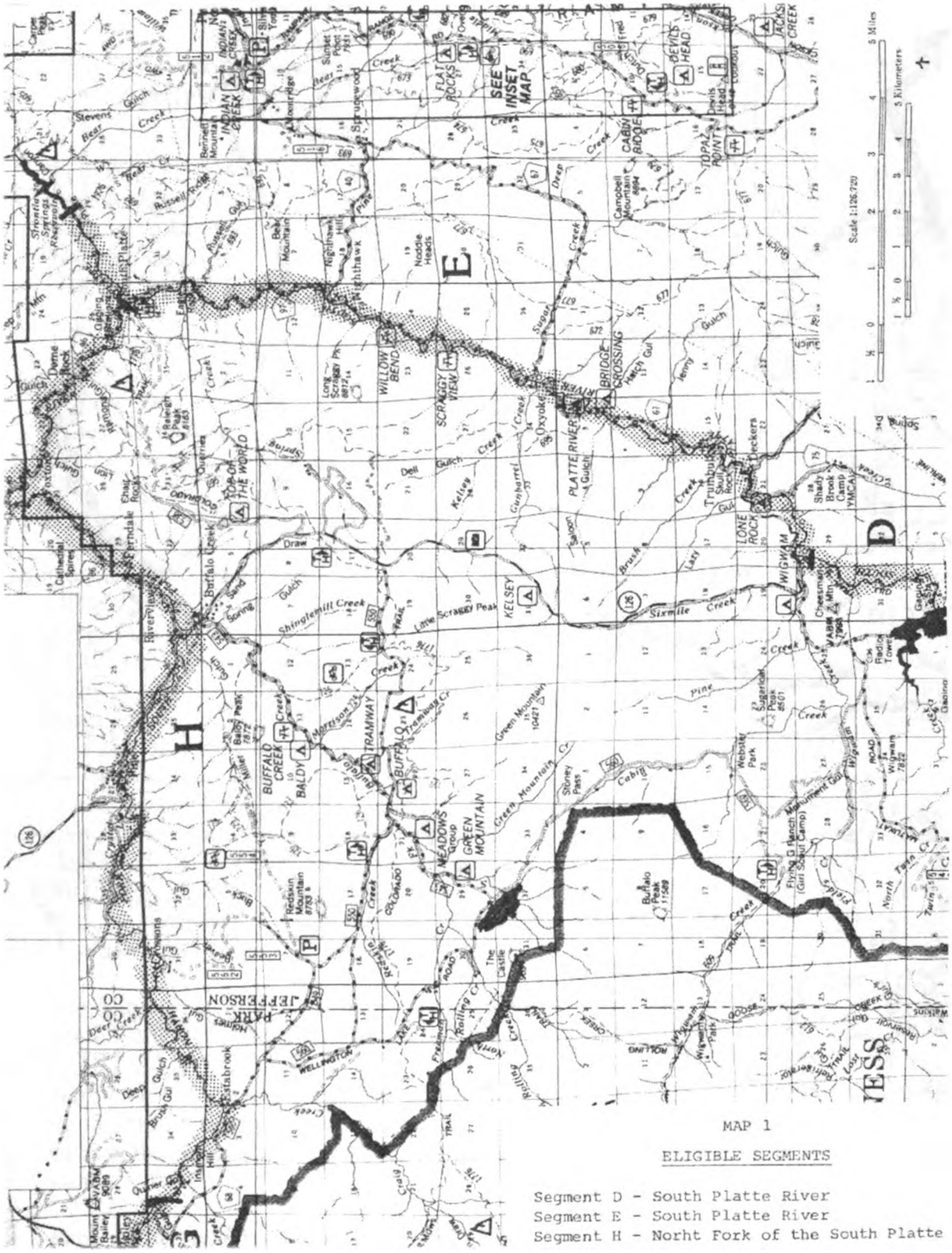
Survey of Man-Made Alterations to the North Fork of the South Platte River. Denver Water 1994.

USDA Forest Service, "Revision Desk Guide", Rocky Mountain Region 1994.

ATTACHMENT A – VICINITY MAP



SOUTH PLATTE MAP

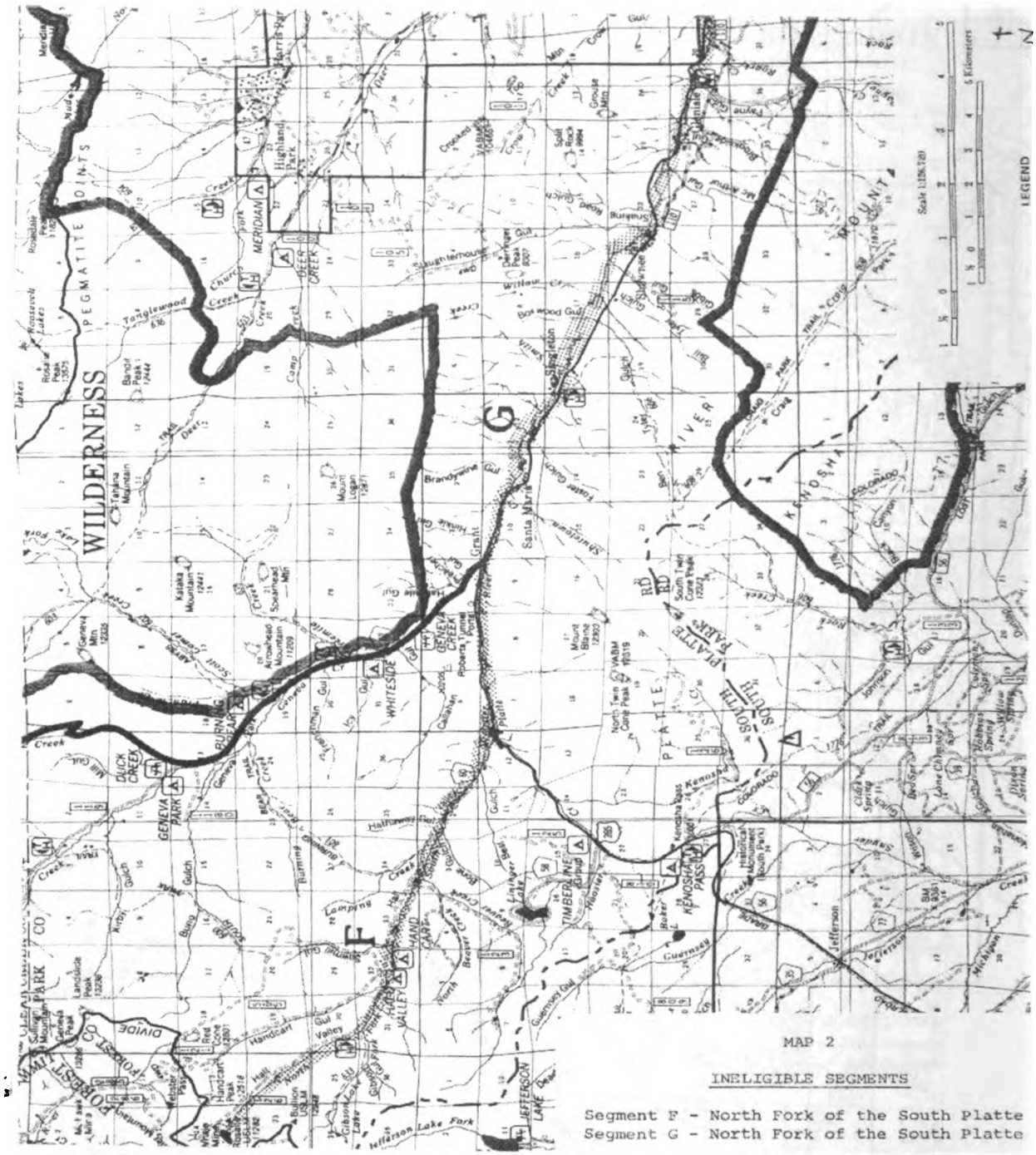


MAP 1

ELIGIBLE SEGMENTS

Segment D - South Platte River
Segment E - South Platte River
Segment H - Norht Fork of the South Platte

NORTH FORK MAP



ATTACHMENT B - PREVIOUS STUDIES

The Eligibility Determination relied upon previously documented studies, supplemented with field trips and more recent documentation. Studies include:

Western U.S. Water Plan: Streams and Stream Systems. Working Document, Bureau of Outdoor Recreation, Part 2 "Other Rivers with Identified Free-Flowing Values.' 1972. This document identified 56 miles of the South Platte River, from Elevenmile Reservoir to Waterton, as a free-flowing river that should be considered and evaluated during the BOR's planning process for Wild and Scenic Rivers.

A Conceptual Proposal for a South Platte Canyons Free-Flowing Recreational River (And Identification of Related Potentials). Draft, Bureau of Outdoor Recreation, Mid-Continent Region, Denver. June, 1974. The draft tentatively identified the South Platte from Cheesman to Waterton, and the North Fork from Bailey to the confluence, as a Recreational River component, and from Cheesman to Elevenmile as a Scenic River component.

Assessment of South Platte River for Wild and Scenic River Designation. U.S. Forest Service. n.d. This report was published by the Forest Service as an alternative to the proposed Two Forks and Ferndale water storage projects. The report looked at the South Platte's South and Middle Forks, the North Fork from Ferndale to the confluence, and the South Platte from Elevenmile to Waterton. The report appears to have been written post 1980. The assessment was based upon previous Guidelines and disqualified certain segments because of cultural development, length, and flow sizes. All of the South Platte qualified, as did the North Fork from Ferndale down. The Middle and South Forks would have but for the small size and cultural development.

Heritage Conservation Resource Assessment; Cultural Development Scoring Sheet. Unpublished documentation, Nationwide Rivers Inventory, n.d. Conducted as part of the Nationwide Rivers Inventory, the documentation addressed which rivers would qualify as NRI rivers for later suitability studies for Wild and Scenic River status. The South Platte from the confluence to Cheesman and from above Cheesman to Elevenmile qualified, as did all of the North Fork.

The Nationwide Rivers Inventory. National Park Service. 1982. The inventory listed the South Platte from Elevenmile to Cheesman as qualified.

Metropolitan Denver Water Supply Final EIS. Corps of Engineers. 1988. The baseline study for this report, the EIS listed numerous unique and outstanding resource values, but did not address the South Platte below Cheesman or the North Fork for Wild and Scenic River status.

Regional Director Memorandum to the Director, National Park Service, 1988, on American Rivers' request to have a segment of the South Platte River evaluated for the Nationwide Rivers Inventory. The letter requested the Director to list the South Platte from Cheesman to

the confluence as a segment of the NRI system. The letter identified recreational, fish, historic and endangered species Outstandingly Remarkable Values.

Recommended Determination to Prohibit Construction of Two Forks Dam and Reservoir Pursuant to Section 404(c) of the Clean Water Act. U.S. Environmental Protection Agency. 1990. This report recommended denial of a 404 permit for Two Forks based upon the adverse effects to the unique fisheries, wildlife and recreation of the area. The report also cites past Wild and Scenic studies for the South Platte and North Fork.

Final Determination of the U.S. Environmental Protection Agency's Assistant Administrator for Water Pursuant to Section 404(c) of the Clean Water Act Concerning the Two Forks Water Supply Impoundments Jefferson and Douglas Counties, Colorado. 1990.

ATTACHMENT C - SUMMARIES

SOUTH PLATTE RIVER:

Two segments are recommended as Eligible. The segment lengths total 22.6 miles. Approximately 12.6 miles are within the Pike National Forest, approximately 8 miles are owned by the City and County of Denver, Colorado, and approximately 2 miles are owned by private clubs or individuals.

SEGMENT D:

From Cheesman Dam (downstream of the stream gage weir) downstream to the Wigwam Club property (southern end).

Classification: "Wild"

Outstandingly Remarkable Value(s):

RECREATIONAL - Fishing, and dispersed recreation such as hiking and scenic viewing.
FISHERIES - Nationally renowned brown and rainbow trout populations and habitat.
WILDLIFE - Pawnee montane skipper butterfly populations and habitat.

Legal Description:

T95; R7OW; 5 29-32. Ti OS; R7OW; 5 6.

Douglas and Jefferson Counties.

Segment Length:	3.1 miles.	
Land Ownership:	National Forest	2.19 miles.
	City and County of Denver (DWD)	0.91 miles.

SEGMENT E:

From the Wigwam Club Property (southern end) downstream to the high water line of Strontia Springs reservoir (6029 foot contour).

Classification: "Recreational"

Outstandingly Remarkable Values:

RECREATIONAL- Dispersed and developed recreation such as camping, picnicking, hiking, fishing, scenic driving, and other day-use.

FISHERIES - Nationally renowned brown and rainbow trout populations and habitat.

WILDLIFE - Pawnee montane skipper butterfly and habitat.

Legal Description:

T75; R69W; 5 19, 20, 29, 30, 31.
T75; R7OW; 5 25, 36.
T85; R69W; 5 6, 7, 18.
T85; R7OW; 5 1, 12,13, 23-26, 34, 35.
T95; R7OW; 5 2, 3, 9, 10, 15, 16, 20-22, 28-30.
Douglas and Jefferson Counties.

Segment Length: 19.5 miles.

Land Ownership:	National Forest	10.41 miles.
	Private	2.0
	City and County of Denver (DWD)	7.09 miles.

NORTH FORK OF THE SOUTH PLATTE RIVER:

Three segments were identified, but only Segment H is recommended as being eligible. Segment lengths total 50.26 miles. Approximately 14.17 miles are within the Pike National Forest, 17.7 miles are privately owned, 17.62 miles are owned by the City and County of Denver, Colorado, and .77 miles are owned by Jefferson County.

Segment F:

From its headwaters downstream to Kenosha Gulch, near Webster (also known as the Hall Valley).

Classification: Not classified - ineligible

Outstandingly Remarkable Values: None.

Legal Description:

T65; R76W; 5 13, 14, 23-25.
T65; R7SW; 5 30-34.
T75; R75W; 5 1-3, 12.

Park County

Segment Length: 9.70 miles.

Land Ownership:	National Forest	6.47 miles.
	Private	3.23 miles.

SEGMENT G:

From Kenosha Gulch, near Webster, downstream to Insmont (upstream boundary of Berger property).

Classification: Not classified - ineligible - not free-flowing downstream from Roberts Tunnel, no Outstandingly Remarkable Values upstream from Roberts Tunnel.

Outstandingly Remarkable Values: None *Legal Description:*

T75; R75W; S 12.
T75; R74W; 5 3-13
T75; R73W; 5 16-18, 20-23, 25-27.
T75; R72W; 5 28, 29, 30, 32, 33, NW1/4, SW1/4.

Park County

Segment Length: 17.50 miles.

Land Ownership:	National Forest	3.03 miles.
	Private	14.47 miles.

SEGMENT H:

From Insmont (upstream end of Berger property) to within 1/4 mile of the confluence with the South Platte River.

Divided into 3 subsections for classification:

SEGMENT H1 - (1.5 miles):

From Insmont (upstream end of Berger property) downstream to Estabrook (downstream side of old stone house).

SEGMENT H2 - (4.9 miles):

From Estabrook (downstream side of old stone house) to Cliffdale (Section line between Sections 29 and 30 east of Cliffdale).

SEGMENT H3 - (16.5 miles):

From Cliffdale (Section line between Sections 29 and 30 east of Cliffdale) to within 1/4 mile of the confluence with the South Platte River.

Classification: Segments Hi and H3 - "Recreational", Segment H2 - "Scenic' *Outstandingly Remarkable Values:*

RECREATIONAL - Kayaking, and dispersed recreation such as picnicking, fishing, hiking, riding, scenic driving, and other day-uses.
WILDLIFE - Pawnee montane skipper butterfly populations and habitat.
CULTURAL - Pine and Estabrook Historic Districts; D SP & P Railroad Grade.

Legal Description:

T75; R72W; 5 25, 33, NE1/4, SE1/4, 5 34, 35, 36.
T85; R72W; S 2,3.

Park County

T7S; R71W; 5 26-31, 33-36.
T85; R71W; 5 1
T75; R7OW; 5 16, 20-23, 25, 26, 29-32.
T85; R7OW; 5 6

Jefferson County

Segment Length:	2.9 miles.	
Land Ownership:	National Forest	4.67 miles.
	Bureau of Land Management	0.2 miles Pvt.,
	Jeff. Co Parks, City/County of Denver	8.03 miles.

Appendix E

Biological Report

Appendix E – Biological Report, Wild and Scenic River Study for the South Platte River and North Fork of the South Platte River, Pike and San Isabel National Forests Comanche and Cimarron National Grasslands Table of Contents

United States Department of Agriculture
Forest Service
Pike and San Isabel National Forests
Cimarron and Comanche National Grasslands
South Platte Ranger District
19316 Goddard Ranch Court
Morrison, CO 80465
(303) 275-5610
Fax (303) 275-5642
www.fs.fed.us/r2/psicc

File Code: 1950-3-1
Date: April 25, 2003

Lee Carlson
U.S. Fish and Wildlife Service
755 Parfet Street
Suite 361
Lakewood, CO 80215

Dear Lee:

I'm enclosing the final Biological Evaluation for the South Platte River Wild and Scenic River Study Report and Draft Legislative Environmental Impact Statement. This document reflects changes to the habitat as a result of the Hayman and Schoonover fires.

Based on the analysis, my staff has determined that the action alternatives associated with this study would have a beneficial effect on the pawnee montane skipper, bald eagle, Mexican spotted owl, Preble's meadow jumping mouse, and Ute ladies tresses' orchid.

I am requesting your review of this document and official concurrence. If you have questions, please contact Denny Bohon at 303-275-5625. I know your days are numbered now; we're just trying to make them sweeter!

Sincerely,

J. R. HICKENBOTTOM
District Ranger

Enclosure

Biological Report

Wild and Scenic River Study for the South Platte River and North Fork of the South Platte River

Pike and San Isabel National Forests
Comanche and Cimarron National Grasslands

Prepared By:

/s/ D. Bohon	***4-25-03***
Denny Bohon, South Platte District Biologist	Date

INTRODUCTION

The purpose of this biological report is to document the effects of the proposed study on any threatened, endangered, or proposed species under the Endangered Species Act of 1973, as amended (ESA); sensitive species as designated by the Region 2 Regional Forester; and Management Indicator Species (MIS) as designated by the Forest Supervisor as part of the Pike and San Isabel Forest Plan.

Section 7 of the ESA, requires federal agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of Proposed, Endangered or Threatened species or result in the destruction or adverse modification of their critical habitats.

The Forest Service has established direction in Forest Service Manual 2670 and in Region 2 Supplement 2600-94-2 to guide habitat management for Proposed, Endangered, Threatened and Sensitive species. This process insures that these species receive full consideration in the decision-making process.

The National Forest Management Act of 1976 directs the Forest Service to manage habitats to maintain viable populations of existing native and desired non-native vertebrate species. In accordance with 36 CFR 219.19, fish, wildlife and plant management indicator species (MIS) are selected as a basis for evaluating the potential effects of federal actions on the biota of the forest. These effects are discussed in the MIS report.

STUDY DESCRIPTION

The purpose of the Wild and Scenic River Study is to determine the suitability of the North Fork of the South Platte River and portions of the South Platte River for inclusion into the National Wild and Scenic Rivers System. These rivers were identified for study for possible inclusion into the System through the forest planning process under Section 5(d)(1) of the Wild and Scenic Rivers Act. The study area is located in Douglas, Jefferson, Park and Teller Counties, Colorado. The 11 alternatives considered are: A1) No action - no recommendations for designation; A2) Protect outstandingly remarkable (OR) values by means other than designation; A3) Modify the A2 alternative, with suitable and not-suitable options; B) Recommend designation of all eligible segments of both study rivers, totaling 72.3 miles, at their most protective inventoried classifications; C) Recommend designation of all eligible segments of both study river, totaling 72.3 miles, with a portion at a classification less protective than that inventoried; D) Recommend designation of all eligible segments of the South Platte River, totaling 49.4 miles, at their most protective inventoried classifications; F) Recommend designation of one segment of the North Fork and four segments of the South Platte River that are entirely on National Forest System land and free of encumbrances at their most protective classifications totaling 26.1 miles; G) Recommend designation of 26.8 miles of the South Platte River upstream from Cheesman Reservoir at its most protective inventoried classifications; I) Recommend designation of the South Platte upstream from Corral Creek with a "Scenic" classification upstream to Beaver Creek and a "Recreational" classification from Beaver Creek to Elevenmile Dam, totaling 22.4 miles; J) Recommend designation on 48.1 miles in segments similar to Alternative D, but

excluding the portion of the South Platte from the North Fork confluence to Strontia Springs Reservoir. The DLEIS and Supplemental DLEIS (USDA 1997 and 2000a) provide more details on these alternatives. **Map 1** shows the river segments within the study area.

HABITAT ASSESSMENT

The study area is approximately ½-mile wide (¼-mile on each side of the river's ordinary high water mark). On the South Platte it begins at 11-mile dam and extends downstream to the confluence with the North Fork of the South Platte. The North Fork portion begins at Insmont and extends downstream to the same confluence. The study area is within the montane forest of the Southern Rocky Mountain geographic area and ranges between 6029 to 9240 feet in elevation. The study area is dominated by mature stands of ponderosa pine and Douglas-fir with fewer acres of riparian habitat, open grasslands and shrublands. Table 1 provides estimates of vegetated acres and structural stages within the study area, as derived from the Forest's RIS database. Approximately 3,400 acres of private land are not included in this summary. For a description of habitat structural stages, see Hoover and Wills (1984).

Table 1. Summary of Habitat Structural Stages (acres) within the Study Area

Cover Types	Habitat Structural Stages									
	1	2	3A	3B	3C	4A	4B	4C	5	Total acres
Riparian/aquatic		2216								2216
Grass/forbs	309									309
Shrubland		218								218
Ponderosa pine	260		100	497	205	4277	4237	1456	248	11280
Douglas-fir	270			366	164	578	3407	537	324	5646
Lodgepole pine				134						134
Total	839	2434	100	997	369	4855	7644	1993	572	19803

The Hayman Fire burned approximately 3,400 acres of the study area in segments B, C, D and E from the Lake George area to Oxyoke. Segment C had the most acres burned (2269) with fewer acres in Segment B (520), E (373 upland) and D (232 upland). In the study area, the fire burned primarily under low and moderate severities. The effect of the fire on species and habitat as is currently known is briefly described in each section.

PREFIELD REVIEW

The Colorado Natural Heritage Program database (CNHP 2002) was used to determine if TES species exist in the study area. A list of threatened, endangered and proposed

species that may occur in the study area was provided by the U.S. Fish and Wildlife Service (USDI 2003). The U.S. Forest Service's Region 2 sensitive species list was also used (Ryke et al 1994).

FIELD RECONNAISSANCE

Wildlife and plant surveys were not conducted specifically for this study. Studies have been conducted for other purposes on individual species and these results are provided in the species analysis section. Existing data from CNHP was also used to determine species' occurrences. I have visited most portions of the study area during my 13 years on the District.

ANALYSIS OF EFFECTS

The alternatives affect varying miles of the study area and the classifications (wild, scenic, recreational) determine the types of activities that can occur in the different segments. A summary table is provided below and additional details can be found in the DLEIS and Supplemental DLEIS.

Table 2. Summary of Alternatives by Classification (Wild-W, Scenic-S, Recreation-R)

Alter-native	RIVER MILES AS					CLASSIFICATIONS OF THE RIVER SEGMENTS							
	Wild	Scenic	Rac	Total		A	B	C	D	E	H1	H2	H3
A1													
A2													
A3s													
A3ns													
B	10.5	7.9	53.9	72.3		R	R	W/S/W	W	R	R	S	R
C	3.1	15.3	53.9	72.3		R	R	S/S/S	W	R	R	S	R
D	10.5	3.0	35.9	49.4		R	R	W/S/W	W	R			
F	10.5	5.6	10.1	26.1		R	R	W/S/W	W			S	
G	7.4	3.0	16.4	26.8		R	R	W/S/W					
I	0	6.0	16.4	22.4		R	R	S/S					
J	10.5	3.0	34.6	48.1		R	R	W/S/W	W	R			

Wild segments are those that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive. Scenic segments are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. Recreational segments are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past.

In the "Wild" classification, new roads to access the river would not be allowed and existing OHV use could be restricted, vegetation management would be allowed only under emergency conditions for insects, disease, fire, natural catastrophe, or public safety. The construction of major public-use areas would be precluded.

In the "Scenic" classification, some constraints may be placed on road building to limit its impacts on the OR values, vegetation management could be more costly and less likely to occur, and recreational development could occur if such structures were screened from the river.

In the "Recreational" classification, some constraints may be placed on road building to limit its impact on the OR values, vegetation management could be slightly more costly and less likely to occur, and major public use areas would be allowed in close proximity to the river as long as the OR values were protected.

In all designation alternatives, timber management, grazing, road construction and other ground disturbing activities outside the designated river corridors could not diminish the OR values within the corridors but may be used to protect or enhance them. Visitation is not expected to increase as a result of any of the action alternatives. However, in all alternatives, the projected population increase in the state may result in incremental habitat losses from the development of private lands and the development of visitor facilities on public lands. Increased human activity in the area could also reduce the effectiveness of the habitat. Secondary negative effects include the increased risk of wildfire and the introduction of non-native species, particularly noxious weeds.

Designation under the Wild and Scenic Rivers Act would prohibit future impoundments of the designated rivers by any major water resource project requiring Federal approvals, subject to prior existing rights. The opportunity to implement ongoing and planned water delivery improvements such as channel modification, bank stabilization, diversions and other modifications of the waterway would be subject to an evaluation of effects on the free-flowing condition of the river, and the protection and enhancement of the outstandingly remarkable values. Designation under the Wild and Scenic Rivers Act would require strong political support.

Alternatives A2 and A3 (suitable and not suitable) would protect the river values but would not recommend designation. These alternatives would protect Elevenmile and Cheesman canyons by not allowing water supply-related facilities to be constructed in segments A and D. Alternatives A2 and A3 (suitable and not suitable) would allow water supply-related improvements in Sections B, C, E and H, although Denver Water has committed to not have significant impacts on the OR values considering the river as a whole for the next 20 years. A3 (suitable) protects eligibility on National Forest System lands and A3 (not suitable) allows critical development projects to have limited or reasonable effects on OR values or free-flow. Under alternatives A2 and A3 (suitable and not suitable), long-term protection of the river values is not a certainty and more complex implementation measures would be required.

Species Analysis: **Threatened, Endangered and Proposed Species**

Of the list of species provided by the U.S. Fish and Wildlife Service, the pawnee montane skipper, bald eagle, Preble's meadow jumping mouse, Mexican spotted owl and Ute ladies tresses orchid may occur in the study area. This is based on an analysis of records of occurrence, known range and availability of suitable habitat in the proposed study

area. The other species on the list are not known or suspected to occur within the study area, would not be affected by the study, and were not analyzed further (see appendix A).

Pawnee montane skipper (*Hesperia leonardus montana*), Status: Threatened species
Natural History and Distribution
The skipper is found in sparsely wooded grasslands and open pine forest at elevations from 6,000 to 7,500 feet. They depend on two plants, the prairie gayfeather (*Liatris punctata*) and blue grama (*Bouteloua gracilis*). The skipper occurs only in the South Platte River drainage in Colorado, in portions of Jefferson, Douglas, Teller, and Park counties. It occurs along approximately 20 miles of the mainstem of the South Platte River and approximately 15 miles of the North Fork (USDI 1998a). An extensive study of skipper presence and habitat was conducted in 1986 for the proposed Two Forks Reservoir project (ERT 1986). Based on the results of this study, there are approximately 4950 acres of skipper habitat in the study area, or about 20% of the known occupied range. The skipper was determined to be an Outstandingly Remarkable (OR) value in segments C, D, E, and H (see DLEIS for more details). These segments have occupied habitat. Approximately 350 acres of skipper habitat in segment C, D and E burned in the Hayman fire under low fire severities. Studies are currently in progress to determine the effect of the fire on skipper habitat and skipper populations.

Direct and Indirect Effects
As a listed species, the skipper would be protected in all alternatives by the Endangered Species Act of 1973, as amended (ESA). Should the species be delisted in the future, lesser protection measures, such as sensitive species status, may be established. The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the skipper would not be inundated under these alternatives. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Under Alternatives B through J, the skipper would have additional protection in segments C, D, E and H from the authorities of the Wild and Scenic Act which require protection of the OR values. Alternative B has more acres of skipper habitat (4950 ac) in more protective classifications. This would be followed, in descending order of protection, by Alternatives C, D, J, F, G, and I, then A3(suitable), A3 (not suitable), A2 and A1.

Environmental Baseline and Cumulative Effects
The ERT study (1986) found 24,256 acres of occupied skipper habitat and estimated the population between 67,900 to 166,100 individuals. Approximately 50% of this habitat, or 12,100 acres, burned in the Hayman, Schoonover, Hi-meadow and Buffalo Creek fires. Range-wide population studies have not been conducted since the ERT studies. With the modern settlement of Colorado, skipper habitat has likely been lost and modified as a result of fire suppression and increased forest densities, the invasion of noxious weeds, and ground disturbing construction projects. These threats, along with the threats of inundation and large-scale fires, can be expected to continue in the future. The skipper Recovery Plan (USDI 1998a) identified stochastic events and isolation resulting in the loss of genetic exchange as additional threats. The Upper South Platte Watershed Protection and Restoration Project (USDA 2000) was previously consulted on and it would seek to reduce some of these threats by improving 3,846 acres of skipper habitat,

creating new habitat, and reducing fire risk on 17,000 acres of forested land. These numbers will be revised downward as a result of the Hayman fire. The Hayman and Schoonover fire's suppression and rehabilitation efforts would affect approximately 2200 acres of skipper habitat. Future rehabilitation efforts will likely be conducted on public lands in the fire area, as well as private and state lands, over the next 5 years. There are no other known or reasonably foreseeable projects in the analysis area that are projected to have an adverse effect on the skipper or its habitat for the skipper.

Determination
Through designation and outstandingly remarkable value status, or through protection of the river values, all action alternatives would to varying degrees help protect skipper habitat in the river corridor for 20 years or more. As such the action alternatives may affect, but are not likely to adversely affect the skipper. A1 would have no effect.

Bald eagle (*Haliaeetus leucocephalus*), Status: Threatened species
Natural History and Distribution
The bald eagle migrates in summer to northern breeding grounds but returns to lower latitudes during the winter. An abundant, readily available food supply in conjunction with one or more suitable night roosts is the primary characteristic of winter habitat (USDI 2001b). Winter communal roost sites are located at Lake George and Cheesman Reservoir. Five to six eagles are recorded at Lake George each winter (Howard pers comm. 2001). Seven to 22 eagles were recorded from December 2000 to January 2001 at Cheesman Reservoir. Following the Hayman fire, the eagles continued to use the Cheesman site in the winter of 2002/2003. Use of this site will likely be monitored in the future. Cheesman Reservoir is outside of the study area but the eagles forage in the winter along the South Platte River and North Fork. Sections A, B, C, D, E and H are considered occupied habitat. The eagle was not determined to be an OR value.

Direct and Indirect Effects
With the exception of alternative A2, there are no specific measures in these alternatives to protect the bald eagle. However, under all alternatives, the eagle would be protected by the ESA, the Bald and Golden Eagle Protection Act and the Migratory Bird Act (USDI 2001b). Should the species be delisted in the future, it would still be protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Act. The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, roosting and foraging habitat for the eagle would not be inundated under these alternatives. Alternatives A2 and A3 (suitable and not suitable) provide protection similar to the designation alternatives but with less permanence and more complex implementation. Alternative A2 also recommends that active nest sites not have trails or roads built within ½ mile of the nest site and that human activities should be restricted within ½ mile of the nest site from November 15 through July 31. *(Since there are not any known nest sites in the study area, these recommendations would not be implemented at this time.)* Further, A2 recommends all on-the-ground work (except for emergency situations) within ¼ mile of a communal roost perimeter during November 1 through March 15 would be pre-approved by the U.S. Fish and Wildlife Service and be conducted during the hours of 10 am and 3 pm to minimize any inadvertent disturbance to roosting eagles. *(This would apply to the*

Cheesman communal roost site but not to private lands near the Lake George communal roost.) Alternative B has more acres (19,360) of bald eagle winter foraging habitat and one communal roost site in more protective classifications. This would be followed, in descending order of protection, by Alternatives C, D, J, F, G, and I, then A3(suitable), A3 (not suitable), A2 and A1.

Environmental Baseline and Cumulative Effects
The bald eagle in the lower 48 states has been proposed for delisting based on the recovery of the species. The date of the delisting is not known at this time (USDI 2001b). In the study area, the remaining threats to the eagle include human disturbance and the loss of winter roosting and foraging habitat from incremental or large-scale events such as stand-replacing fire. Along the river corridor, the remaining threats to the eagle include human disturbance and the loss of the fishery from ash and sediment flows. Denver Water is conducting additional restoration and fuel reduction treatments on their lands. Future rehabilitation efforts will likely be planned for public lands in the fire area, as well as private and state lands, over the next 5 years. There are no other known or reasonably foreseeable projects in the study area that are projected to have an adverse effect on the eagle or its habitat.

Determination
Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect bald eagle winter roosting and foraging habitat in the river corridor for 20 years or more. As such the action alternatives may affect but are not likely to adversely affect the bald eagle. A1 would have no effect.

Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*), Status: Threatened
Natural History and Distribution
Armstrong and others (in USDI 1998b) described typical Preble's meadow jumping mouse habitat as "well-developed plains riparian vegetation with relatively undisturbed grassland and a water source in close proximity." Surveys conducted in 1999 found the mouse along the South Platte River and its tributary streams (Schorr 1999). Little is known about montane populations of the Preble's meadow jumping mouse (Meaney 2000). While the upper elevation for the mouse has not been determined, 7600' is the highest elevation for a recorded voucher specimen in Colorado and is the elevation currently being used to develop critical habitat (Plage 2002 pers comm). About 13,200 acres of the study area provided suitable habitat for Preble's and Segments C, D, E, and H were considered occupied prior to the Hayman fire. Approximately 2000 acres of Preble's habitat in segments C, D and E burned under primarily low and moderate conditions. Over 90% (1315 acres) of the mouse habitat in segment C was burned. Depending on flood events, the riparian vegetation is expected to recover in five to ten years. The mouse was not determined to be an OR value.

Critical habitat for the mouse was proposed in 2002 (USDI 2002) and included a portion of segment E. The effect of the fire on critical habitat designation is not yet known.

Direct and Indirect Effects
There are no specific measures in these alternatives to protect the Preble's meadow jumping mouse. However, under all alternatives the mouse would be protected by the ESA. Should the species be delisted in the future, lesser protection measures such as sensitive species status may be established. In addition, the designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the mouse would not be inundated under these alternatives. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternative B has more acres (13,200) of suitable mouse habitat in the most protective classifications. This would be followed, in descending order of protection, by Alternatives C, D, J, F, G, and I, then A3(suitable), A3 (not suitable), A2 and A1.

Environmental Baseline and Cumulative Effects
In the Final Rule to list the species, the Fish and Wildlife Service (USDI 1998b) stated that habitat alteration, degradation, loss and fragmentation from, in part, recreational developments, have adversely impacted Preble's populations. Over time, recreational developments in the study area have likely resulted in the loss of habitat for the mouse. Additional threats in the study area include increasing forest densities, large-scale catastrophic fires, flood events, the invasion of noxious weeds, and ground disturbing construction projects. These threats, along with the threat of inundation, can be expected to continue in the future. The Upper South Platte Watershed Protection and Restoration project (USDA 2000) was previously consulted on and it would seek to reduce some of these threats by reducing fire risk on 17,000 acres of forested upland while avoiding adverse impacts to the mouse. These numbers will be revised downward as a result of the Hayman fire. The proposed Trout/West project has similar fuel reduction objectives.

Within the Pike National Forest, there are approximately 36, 150 acres of potential Preble's habitat. About 21% of this burned in the Hayman and Schoonover fires, as well as about 26% of the proposed critical habitat within the forest boundary. The Hayman and Schoonover fire's suppression and rehabilitation efforts would affect approximately 2600 acres of mouse habitat. Future rehabilitation efforts will likely be planned for public lands in the fire area, as well as private and state lands, over the next 5 years. There are no other known or reasonably foreseeable projects in the analysis area that are projected to have an adverse effect on Preble's meadow jumping mouse or its habitat.

Determination
Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect Preble's habitat in the river corridor for 20 years or more. As such the action alternatives may affect but are not likely to adversely affect Preblee's meadow jumping mouse. Alternative A1 would have no effect. For this same reason, the alternatives would not cause the destruction or adverse modification of proposed critical habitat.

Mexican Spotted Owl (*Strix occidentalis lucida*), Status: Threatened

Natural History and Distribution

The Mexican spotted owl is one of three subspecies occurring in the United States and its range extends from northern Mexico into the southwest states of Arizona, New Mexico, Texas, Colorado and Utah. Nesting habitat is typically in areas with complex forest structure or rocky canyons, and contains mature or old-growth stands that are uneven-aged, multi-storied, and have high canopy closure. In Colorado, most nests are in caves or on cliff ledges in steep-walled canyons (USDI 1995). The study area does not provide the rock features and associated complex forest structure used by the species for nesting. While Segments C, D, E and H contain dominant rock features, the rock outcrops are not associated with forested canyons or complex forest structure. Surveys conducted in segments A (1993, 1994), D (1994) and H (1995) did not locate the owl. Two nearby sites that have been occupied in the recent past are approximately 4-5 air miles from the study area. While the owl's home range appears to vary considerably, even the upper estimates of approximately 3,900 acres (Ganey et al 1999) would not extend to the study area. Since the study area does not provide suitable nesting habitat and is outside of theoretical home ranges for two nearby sites, the study area is not considered occupied.

The Recovery Plan (USDI 1995) for the spotted owl provides a basis for management actions by land management agencies to remove recognized threats. The Recovery Plan recommends identifying protected and restricted areas for the owl and offers further definitions and management guidelines for those areas. All segments of the study area have some stands of mixed conifer with slopes greater than 40% where timber harvest has not occurred in the past 20 years. As such, these stands are considered protected areas under the guides of the Recovery Plan. Following the fire, all segments of the study area except segments C and D have stands of mixed-conifer forest outside of protected areas that may meet certain conditions suitable for roosting stands, based on the presence of 4C and 5 structural stages. These stands would be considered restricted areas. The plan recommends managing protected and restricted areas to provide nesting and roosting habitat for future owl occupancy. The study area lacks suitable nesting habitat but may provide future roosting habitat.

Critical habitat for the owl was designated effective March 5, 2001 (USDI 2001) and segments D, E and H of the study area are within this boundary. However, the Final Rule recognizes that not all lands within the designated boundary provide suitable habitat for the owl and that lands must meet the primary constituent elements needed by the owl in order to be considered critical habitat (USDI 2001). Segments E and H have approximately 450 acres of dense ponderosa pine/Douglas-fir stands with 4C or 5 structural stages. It is not known if these stands provide or are capable of providing the primary constituent elements as established in the Recovery Plan, but they do have some large diameter trees. Because ground truthing has not been conducted, for the purpose of this analysis, it is assumed that the stands are capable of providing the primary constituent elements.

Direct and Indirect Effects

There are no specific measures in these alternatives to protect critical habitat or restricted or protected areas for the Mexican spotted owl. However, under all alternatives, the owl

would be protected by the ESA. Should the species be delisted in the future, lesser protection measures may be established. In addition, the designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, restricted areas and critical habitat for the owl would not be inundated under these alternatives. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternative B has more acres of steep, mixed conifer and mature to old growth habitat in the most protective classifications. This would be followed, in descending order of protection, by Alternatives C, D, J, F, G, and I, then A3(suitable), A3 (not suitable), A2 and A1.

Environmental Baseline and Cumulative Effects
The Recovery Plan (USDI 1995) states that the Southern Rocky Mountains – Colorado Recovery Unit (which includes the study area) contains only 1.8% of the known owl sites. The Plan indicates that the greatest risk to the owl is from catastrophic fire and the continued use of even-aged timber management. The Hayman fire burned one of the closest known occupied sites near the study area. Within segment E, the Upper South Platte Watershed Protection and Restoration Project (USDA 2000) would reduce the risk of catastrophic fire using uneven-age vegetation treatments and prescribed fire. The Trout/West project has similar fuel reduction objectives. The Hayman and Schoonover fire's suppression and rehabilitation efforts would affect approximately 20,000 acres within the designated critical habitat boundary; these lands likely did not meet the primary constituent elements criteria. There are no other known or reasonably foreseeable projects in the study area that are projected to have an adverse effect on the Mexican spotted owl or its habitat.

Determination
Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect MSO habitat in the river corridor for 20 years or more. As such the action alternatives may affect but are not likely to adversely affect the Mexican spotted owl. A1 would have no effect. For this same reason, the action alternatives would not cause the destruction or adverse modification of designated critical habitat for the owl and A1 would have no effect.

Ute Ladies Tresses Orchid (*Spiranthes diluvialis)* Status: Threatened
Natural History and Distribution
This species has been found along the South Platte River drainage from the Front Range and eastern plains. The orchid is found in seasonally moist soils near perennial streams and their associated floodplains below 6,500 feet. Typical sites include old stream channels, abandoned meanders, and alluvial terraces, subirrigated meadows and other sites where soils are saturated to within 18 inches of the surface, at least temporarily, during the spring/summer growing season (Ryke et al 1994). Segments E and H are within the range of this species and both segments are considered potential habitat for this study. The fire did not directly affect potential orchid habitat within these segments, but segment E may be affected by future flood events.

Direct and Indirect Effects
There are no specific measures in the alternatives to protect the orchid; however, in all alternatives, the species would be protected by the ESA. Should the species be delisted in the future, lesser protection measures may be established. In addition, the designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the orchid would not be inundated under these alternatives. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternatives B and C have the most potential orchid habitat (approximately 1000 acres) in more protective classifications. This would be followed, in descending order of protection, by Alternatives D and J, then A3(suitable), A3 (not suitable), A2, then A1, F, G and I.

Environmental Baseline and Cumulative Effects
At the time of listing (1992) there were fewer than 6,000 individuals in 10 known populations from Colorado and Utah. Most of the historic populations on the Wasatch Front and in the Great Basin are believed to have been extirpated, and two of the four Colorado populations appear to have been extirpated. The threats to the species include projects that affect the hydrology and vegetation of riparian systems, over-collection for private or commercial use, and overgrazing (USDI 1992). Within the study area the greatest threats are impacts to the riparian systems from high levels of recreational use, noxious weed invasion, catastrophic fire and the increased potential for flood events, and the potential for inundation from water development projects. Within segment E, the Upper South Platte Watershed Protection and Restoration project (USDA 2000) would reduce the risk of catastrophic fire and the potential for flood events. There are no other known or reasonably foreseeable projects in the study area that are projected to have an adverse effect on the Ute Ladies Tresses orchid or its habitat.

Determination
Through designation or protection of the river values, seven of the action alternatives would, to varying degrees, protect Ute Ladies Tresses orchid habitat in the river corridor for 20 years or more. As such, these seven alternatives may affect but are not likely to adversely affect the Ute Ladies Tresses orchid. The remaining alternatives (A1, F, G and I) would have no effect.

SUMMARY
The pawnee montane skipper, Bald eagle, Preble's meadow jumping mouse and Mexican spotted owl would receive the most benefit from alternative B, then in descending order of protection, from alternatives C, D, J, F, G, I, A3 (suitable), A3 (not-suitable) and A2. Alternative A1 would have no effect on these species. Ute ladies tresses orchid would receive the most benefit from alternatives B and C, then in descending order of protection, from alternatives D and J, A3 (suitable), A3 (not suitable) and A2. Alternatives F, G, I and A1 would have no effect on this species.

CONSULTATION HISTORY

There has been no consultation with the U.S. Fish and Wildlife Service on this project but I have discussed it informally with L. Ellwood of the Service. Based on the not likely to adversely affect (beneficial effect) determinations, concurrence would be requested from the Service.

RISK DETERMINATION

It is my professional judgment that this study has a low level of risk to all threatened, endangered, and proposed species that may occur in the study area. The action alternatives would tend to protect habitat for the species from inundation for 20 years or more.

Appendix A

The following list includes federally threatened, endangered, candidate and proposed species located in counties on the Pike National Forest. This list was provided by the U.S. Fish and Wildlife Service, dated April 15, 2003. The species noted as excluded on the table below will not be discussed further in this document.

Common Name	Species	Status	Species Excluded	Reason for Exclusion
Arkansas darter	*Etheostoma cragini*	Candidate	Yes	El Paso county only
Bald eagle	***Haliaeetus leucocephalus***	**Threatened**	**No**	
Black-footed ferret	*Mustela nigripes*	Endangered	Yes	Study area is outside of sps range & lacks suitable habitat
Black-tailed prairie dog	*Cynomys ludovicianus*	Candidate	Yes	Study area is outside of sps range & lacks suitable habitat
Boreal toad (Southern Rocky Mtn population)	***Bufo boreas boreas***	**Candidate**	**No**	**Considered in sensitive sps report**
Canada lynx	*Lynx Canadensis*	Threatened	Yes	Study area is outside of sps range
Colorado butterfly plant	*Gaura neomexicana ssp. Coloradensis*	Threatened	No	Mixed grass prairie species
Eskimo curlew	*Numenius borealis*	Endangered	Yes	Study area is outside of sps range & lacks suitable habitat
Greenback cutthroat trout	*Oncorhynchus clarki stomias*	Threatened	Yes	Does not occur in study area; aquatic sps considered in fisheries section
Mexican spotted owl	***Strix occidantalis lucida***	**Threatened**	**No**	
Mountain plover	*Charadrius montanus*	Proposed Threatened	Yes	Study area is outside of sps range & lacks suitable habitat
Pawnee montane skipper	***Hesperia leonardus Montana***	**Threatened**	**No**	
Penland alpine fen mustard	*Eutrema penlandii*	Threatened	Yes	Study area is outside of sps range & lacks suitable habitat
Preble's meadow jumping mouse	***Zapus hudsonius preblei***	**Threatened**	**No**	
Slender moonwort	*Botrychium lineare*	Candidate	Yes	El Paso county only
Uncompahgre fritillary butterfly	*Boloria acrocnema*	Endangered	Yes	Study area is outside of sps range & lacks suitable habitat
Ute Ladies tresses orchid	***Spiranthes diluvialis***	**Threatened**	**No**	
** Whooping Crane	*Grus americana*	Endangered	Yes	No water depletions would occur (DW 2002)
** Pallid sturgeon	*Scaphirhynchus albus*	Threatened	Yes	No water depletions would occur (DW 2002)

Note: ** water depletions in designated counties may affect these species

Species Analysis: **Sensitive Species**

The following Region 2 Sensitive Species may occur in the study area. This is based on an analysis of records of occurrence, known range, availability of suitable habitat and the likelihood of impacts from the proposed study. See Appendix B for the species that were considered but excluded from further analysis.

Amphibians: Boreal western toad, northern leopard frog, tiger salamander
Birds: Pygmy nuthatch, Lewis's woodpecker, three-toed woodpecker, olive-sided flycatcher, golden-crowned kinglet, fox sparrow, flammulated owl, northern goshawk, osprey, common loon
Mammals: Dwarf shrew, wolverine, ringtail, Townsend's big-eared bat
Plants: Addersmouth orchid, Weber's monkey flower, *Carex livida*

Amphibians:

Natural History and Distribution

The boreal western toad (*Bufo boreas boreas),* northern leopard frog (*Rana pipien*s) and tiger salamander (*Ambystoma tigrinum*) are typically associated with non-flowing water but may occur in or adjacent to perennial streams. Breeding and overwintering sites are also typically closely connected with aquatic habitats. After breeding, adult boreal toads and salamanders disperse and may move into upland habitats (Hammerson 1999, Loeffler 2001). There are no records of boreal toads in the study area, but there are records of northern leopard frogs and tiger salamanders. Slow moving reaches and small ponds in and adjacent to the river provide suitable habitat. The acreage of this habitat is not known. All segments in the study area provide potential habitat for the tiger salamander and northern leopard frog. During the Hayman fire, these amphibians were likely closely associated with aquatic habitats. The riparian areas burned under low to moderate fire severities and the amphibians may have survived. The upland habitats that burned would not immediately provide cover or foraging opportunities. As the boreal toad is closely associated with lodgepole or spruce-fir forests at elevations of 7,500 –12,000 ft (Loeffler 2001), only the upper reaches of segment H provide potential habitat for the toad. This segment did not burn in the Hayman fire.

Direct and Indirect Impacts

With the exception of the A2 proposal, there are no specific measures in the alternatives to protect amphibians. However, habitat for these species on NFS lands would be managed according to sensitive species direction (under FSM 2672.2) and Forest Plan standards and guidelines for managing riparian and wetland habitats (USDA Forest Service 1984). The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the amphibians would not be inundated under these alternatives. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. In addition, Alternative A2 recommends a 650-foot buffer zone of undisturbed habitat placed around each wetland or pond suitable as boreal toad habitat and limits activity within this zone from October 1 to May 1 For the northern leopard frog and tiger salamander, alternative B provides more acres of habitat in the most protective classifications, followed by alternatives C, D, J, F, G, I, then A3 (suitable), A3 (not suitable), and A2. For the boreal toad, alternatives B and C provide

the most protection, followed by alternatives F, A3 (suitable), A3 (not suitable), and A2. The remaining alternatives (A1, D, G, I, J) would have no impact on the toad.

Environmental Baseline and Cumulative Effects
Boreal toads are absent from many historically occupied locations. Surveys conducted in 1986-1988 found that toads had disappeared from 83% of historic locations in Colorado (Loeffler 2001). The toad is considered vulnerable in Colorado (NatureServe 2002). Breeding areas have not been located on the Pike National Forest and the closest known non-breeding individual was recorded approximately 17 direct miles from the study area. Potential threats in the study area include chytrid fungus, habitat alteration, inundation and predation (Loeffler 2001).

Tiger salamanders occur throughout the lower 48 states and are considered secure in Colorado (NatureServe 2002). Breeding areas and non-breeding individuals have been recorded on the Forest in several locations. The closest known breeding site is about 3 miles from the study area. Potential threats to the species in the study area include fish predation, the loss of non-flowing ponds behind temporary beaver dams, and inundation.

Northern leopard frogs range throughout the US and southern Canada. They are still widespread and common in many areas but many other populations have declined, especially in the Rocky Mountains of Colorado, Wyoming and Montana. They are considered vulnerable in Colorado. Threats include the loss of habitat, inundation and competition/predations by introduced species (bullfrogs) (NatureServe 2002).

The Upper South Platte Watershed Protection and Restoration Project (USDA 2000) overlaps with the study area and was determined to not have an impact on these species. The Hayman and Schoonover fire's suppression and rehabilitation efforts seek to protect aquatic habitats from increased sediment loads and would be beneficial to these species. There are no other known or reasonably foreseeable projects in the study area that are projected to have an impact on the boreal toad, tiger salamander or northern leopard frog.

Determination
Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect amphibian habitat in the river corridor for 20 years or more. Most action alternatives would have a beneficial impact on habitat for the boreal toad, tiger salamander and northern leopard frog, except D, G, J and I which would have no impact on the boreal toad. A1 would not impact any of these amphibians.

Birds:
The study area provides suitable habitat for the pygmy nuthatch, Lewis' woodpecker, three-toed woodpecker, olive sided-flycatcher, golden crowned kinglet, fox sparrow, flammulated owl, northern goshawk, osprey and common loon.

Passerine, woodpeckers and waterfowl

Natural History and Distribution

The pygmy nuthatch (*Sitta pygmaea*) and Lewis' woodpecker (*Melanerpes lewis*) use mature and old-growth ponderosa pine trees for feeding, nesting and perching. These species were found closely associated with ponderosa pine forests in the Colorado Breeding Bird Atlas surveys (Kingery 1998). The three-toed woodpecker (*Picoides tridactylus*) is found primarily in spruce-fir forest but it will also use other forest types where insect populations are high due to fire or disease (Kingery 1998). Olive-sided flycatchers (*Contopus borealis*) depend on snags or tall residual trees for foraging and singing perches. While they primarily breed in spruce-fir and Douglas-fir forests, they may be more dependent on forest structure than on tree species composition (Kingery 1998). The golden-crowned kinglet (*Regulus satrapa*) uses the ponderosa pine and Douglas-fir forests during the winter months (Kingery 1998). Fox sparrows (*Passerella iliaca*) inhabit dense shrubby understory associated with watercourses and typically are found between 7500 to 11,000 feet in the breeding season, but lower during migration and winter (Kingery 1998). The common loon (*Gavia immer*) occurs mostly as a fall migrant at mountain lakes and reservoirs (Ryke 1994). There is suitable habitat for these species in all study area segments, except the loon which is restricted to reservoir areas. There are approximately 4,800 acres of habitat for the pygmy nuthatch and Lewis's woodpecker; 9,500 acres of habitat for golden-crowned kinglets; 2,000 acres of riparian habitat for fox sparrows; and 150 acres for the common loon. Within the river corridor, the Hayman fire created approximately 3,400 acres of snag-rich habitat for the snag dependent species.

Direct and Indirect Impacts

There are no specific measures in the alternatives to protect these birds. However, habitat for these species on NFS lands would be managed according to sensitive species direction (under FSM 2672.2) and Forest Plan standards and guidelines for managing riparian and old-growth habitat and snag features (USDA Forest Service 1984). Also, actions affecting migrants would be guided by the Migratory Bird Treaty Act (MBTA 1918). The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the birds would not be inundated under these alternatives. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternative B has more acres of habitat in the more protective classifications followed in descending order of protection by alternatives C, D, J, F, G, I, then A3 (suitable), A3 (not suitable), A2 and A1.

Raptors

Natural History and Distribution

The flammulated owl (*Otus flammeolus*) uses mature ponderosa pine trees for feeding, nesting and perching (Kingery 1998). The Northern goshawk (*Accipiter gentilis atricapillus*) is a forest habitat generalist that uses a variety of forest types, ages, structural conditions and successional stages. Goshawks forage in fairly open understories that allow the birds to maneuver under the canopy, although they will forage over open meadows as well (Kingery 1998). Osprey (*Pandion haliaetus*) are generally associated with lakes, rivers and reservoirs (Ryke and others 1994). The osprey is a

migrant in the study area and is not known to nest here. In the study area, there are approximately 4,800 acres of habitat for the owl, approximately 9,500 acres of habitat for goshawks and approximately 400 acres of foraging habitat for osprey.

Direct and Indirect Impacts
With the exception of A2, there are no specific measures in the alternatives to protect these raptors. However, habitat for these species on NFS lands would be managed according to sensitive species direction (under FSM 2672.2) and actions affecting migrants would be guided by the Migratory Bird Treaty Act (MBTA 1918). The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the raptors would not be inundated under these alternatives. A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. In addition, Alternative A2 recommends that active raptor nesting areas not have trails or roads built within ½ mile of the nest site. Further, human activity should be restricted within ½ mile of an osprey nest site between April 1 - August 31. *(This recommendation would be implemented if osprey begin to nest in the study area).* Alternative B has more acres of habitat in the more protective classifications followed in descending order of protection by alternatives C, D, J, F, G, I, then A3 (suitable), A3 (not suitable), A2 and A1.

Environmental Baseline and Cumulative Impacts for Passerines, waterfowl and Raptors
Below are the global and statewide population trends, and threats to these species as presented by NatureServe (2002). Additional details can be found on the NatureServe website.

Species	State Status	Global Status	Threats
Pygmy nuthatch	Apparently secure	Secure	Loss of snags, fire suppression
Lewis' woodpecker	Apparently secure	Declining	Loss of snags, riparian degradation
3-toed woodpecker	Vulnerable	Stable	Loss of snags, fire suppression
Olive-sided flycatcher	Vulnerable	Declining	Unknown, possibly fire suppression
Golden-crowned king.	Apparently secure	Stable	Logging, nest predation
Fox sparrow	Apparently secure	Secure	Degradation of riparian habitat
Flammulated owl	Apparently secure	Unknown	Habitat fragmentation, pesticides
Northern goshawk	Vulnerable	Unknown	Loss of oldgrowth, fire suppression
Osprey	Vulnerable	Increasing	Pesticides, egg shell thinning
Common loon	Migrant	Stable	Human disturbance, water levels

Within the study area, the largest established project is the Upper South Platte Watershed Protection and Restoration effort (USDA 2000). The evaluation for this project determined it would not adversely impact any of these bird species such that it would result in a loss of viability on the Planning Area, in a trend to federal listing, or in a loss of species viability rangewide. The project would reduce the threat of catastrophic wildfire and habitat loss in the study area for many of these bird species. The Hayman and Schoonover fire's rehabilitation efforts seek to reduce the effects of flood events in the river corridor. Future rehabilitation efforts will likely be conducted on public lands in the fire area, as well as private and state lands, over the next 5 years. Salvage logging may remove trees outside of the river corridor but not within it. Forest Plan standards for snags and downed material would still be met and no impacts are anticipated on the snag dependent bird species.

With the exception of innundation, there are no other known or reasonably foreseeable projects in the study area that are projected to have an impact on these bird species.

Determination
Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect habitat for these birds in the river corridor for 20 years or more. The action alternatives would have a beneficial impact on habitat for the pygmy nuthatch, Lewis' woodpecker, three-toed woodpecker, olive-sided flycatcher, golden-crowned kinglet, fox sparrow, flammulated owl, northern goshawk, osprey and common loon. A1 would have no impact.

Mammals:
Natural History and Distribution
The dwarf shrew (*Sorex nanus*) has been found in a variety of habitats in Colorado from alpine to open woodlands. It occurs at elevations above 5,500 feet and all of the study area is within its range. The ringtail (*Bassariscus astutus*) is typically associated with rocky canyon country and foothills areas of p-j woodlands, montane shrublands, or mixed conifer-oakbrush. The ringtail has been reported in Segments A and E, but all of the study area is within its range (Fitzgerald et al 1994). Wolverines (*Gulo gulo luscus)* are solitary, wide-ranging animals that exist in large, sparsely inhabited areas (Ruggiero et al 1994). While recent CDOW surveys did not find any definitive wolverine sign in the State, wolverine potential distribution includes segments A and B (Fitzgerald et al 1994). Townsend's big-eared bat (*Plecotus townsendii*) inhabits open montane forests and is frequently associated with caves and abandoned mines for day roosts and hibernacula, but will also use buildings and crevices on rock cliffs for refugia. All of the study area is within its range (Fitzgerald et al 1994).

Direct and Indirect Impacts
There are no specific measures in the alternatives to protect these mammals; however, habitat for these species on NFS lands would be managed according to sensitive species direction (under FSM 2672.2). The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for these mammals would not be inundated. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. For the dwarf shrew, ringtail and Townsend's big-eared bat, Alternative B has more acres of habitat in the most protective classifications followed in descending order of protection by alternatives C, D, J, F, G, I, then A3 (suitable), A3 (not suitable), A2 and A1. For wolverine, all of the designation alternatives protect segments A and B as recreational, except alternative F. For the wolverine, alternatives B, C, D, G, I, and J provide the most protection, followed by F, A3 (suitable), A3 (not suitable), A2 and A1.

Environmental Baseline and Cumulative Impacts
Little is known about dwarf shrew ecology or natural history. It is considered imperiled in Colorado and its global trend is unknown (NatureServe 2002). The ringtail is more widely distributed than was previously recognized (Fitzgerald et al 1994) and its population is apparently secure in the state (NatureServe 2002) Wolverine are considered critically imperiled in Colorado and have been extirpated from most of its

historic range in the contiguous 48 states, with promising signs of semi-recovery in selected western states. In Colorado, surveys have not located definitive wolverine sign but the CDOW maintains of list of Class B (probable) sightings. Townsend's big-eared bats are considered imperiled in the state but apparently secure in the western U.S. Threats include disturbance at breeding sites and hibernacula (NatureService 2002).

Within the study area, the largest established project is the Upper South Platte Watershed Protection and Restoration effort (USDA 2000). The evaluation for this project determined it would not adversely impact any of these mammalian species such that it would result in a loss of viability on the Planning Area, in a trend to federal listing, or in a loss of species viability rangewide. The project would reduce the threat of catastrophic wildfire and habitat loss in the study area for many of these mammals. The Hayman and Schoonover fire's rehabilitation efforts seek to reduce the effects of flood events in the river corridor. Future rehabilitation efforts will likely be conducted on public lands in the fire area, as well as private and state lands, over the next 5 years. Salvage logging may remove trees outside of the river corridor but not within it. Forest Plan standards for snags and downed material would still be met and no impacts are anticipated species that use dead and down material.

With the exception of innundation, there are no other known or reasonably foreseeable projects in the study area that are projected to have an impact on these mammals.

Determination
Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect mammalian habitat in the river corridor for 20 years or more. All of the action alternatives would have a beneficial impact on habitat for the dwarf shrew, ringtail, wolverine and Townsend's big-eared bat. A1 would not impact these mammals.

Plants:
Natural History and Distribution
None of the sensitive plants are known to occur in the river corridor but potential habitat may exist for eleven of these species in Segments A, B and C. Many of these plants have very specific habitat requirements. Surveys have not been conducted to determine if these potential habitats possess the exact features needed by these plants. The plants are listed with descriptions of their community or habitat type (NatureServe 2002, Spackman et al 1997) and potential acres in the study area. The Hayman fire may have affected habitat in Segments B and C.

WETLAND SPECIES
Carex livida, Livid sedge

- Rich fens; graminoid dominated mineral rich wetlands
- 9,000 to 10,000 feet
- Very upper reaches of Segment A; approximately 20 acres of riparian habitat within this elevation range; not known if rich fens or wetlands exist

Malaxis monophyllos ssp brachypoda, Adder's mouth orchid

- Shaded streamsides, mossy wet areas
- 7,200 to 8,000 feet
- Segment B and the upper reaches of Segments C and H; approximately 30 acres of streamside habitat within this elevation range
- Known population: 18 air-miles from study area

Mimulus gemmiparus, Weber monkeyflower

- Granitic seeps, slopes and alluvium deposits in open sites within spruce-fir and aspen forests
- 8,500 to 10,500
- Upper reaches of Segment A; small inclusions of spruce-fir may exist along the river and tributary streams. Unknown number of acres.
- Known population: Six air-miles from study area

Primula egaliksensis, Greenland Primrose

- Wet meadows, streambanks, willow carrs and rich fens, on hummocks
- 9,000 to 9,800 feet
- Very upper reaches of Segment A; approximately 20 acres of riparian habitat within this elevation range.

Ptilagrostis porterii, Porter feathergrass

- Hummocks in fens and willow carrs
- 9,200 to 12,000 feet
- Very upper reach of Segment A; less than 5 acres of riparian habitat within this elevation range
- Known population: 30 air-miles from the study area

Rubus arcticus ssp. acaulis (syn. Cylactis arctica ssp acaulis), Northern Blackberry

- Willow carrs, mossy streamsides
- 8,600 to 9,700 feet
- Upper reaches of Segment A; approximately 10 acres of streamside habitat within this elevation range

UPLAND SPECIES

Botrychium lineare, Narrow leaved moonwort (Candidate species)

- Grassy slopes, among medium height grasses, along edges of streamside forests
- 7,900 to 9,500 feet
- Segment A; approximately 35 acres of grassland habitat within this elevation range

Draba smithii, Smith's Whitlow grass

- Talus slopes, in crevices and between rocks in shaded, protected sites
- 8,000 to 11,000 feet

- Small inclusions of talus slopes may occur in Segment A within this elevation range. Unknown number of acres.

Machaeranthera coloradoensis, Colorado tansy-aster
- Gravelly areas in mountain parks, slopes and rock outcrops up to dry tundra
- 8,500 to 12,500 feet
- Upper reaches of Segment A may have small inclusions of rock outcrops and gravelly areas. Unknown number of acres.

Potentilla rupincola, Rocky Mountain Cinquefoil
- Granitic outcrops or thin, gravelly granitic soils with west or north exposure. Often associated with ponderosa or limber pine
- 6,900 to 10,500 feet
- Segments A, B and upper reaches of Segments C and H; Granite outcrops may occur within approximately 3000 acres of ponderosa pine forests. Unknown number of acres.
- Known population: Seven air-miles from study area

Viola selkirkii, Selkirk violet
- Cold mountain forests, moist woods (aspen) and thickets
- 8,500 to 9,100
- Upper reaches of Segment A, especially on north-facing slopes; approximately 400 acres of Douglas-fir forests that may have patches of aspen.
- Known population: 20 air-miles from study area, last located in 1945

One other CNHP rare plant species, Pale Blue Eyed Grass (*Sisyrinchium pallidum*) is known to occur within the study area in Segment B.

Direct and Indirect Impacts
There are no specific measures in the alternatives to protect these plants. However, habitat for these species on NFS lands would be managed according to sensitive species direction (under FSM 2672.2). The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for these plants would not be inundated. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternatives B through J provide the same level of protection for Segments A and B and hence, the same level of protection for nine of the sensitive plants and the one CNHP rare plant. The Adder's mouth orchid and Rocky mountain cinquefoil would have slightly less protective measures (2.9 miles as scenic rather than wild) in Alternatives C and I. In descending order of protection, Alternatives B, D, F, G and J are followed by alternatives C and I, then A3 (suitable), A3 (not suitable), and A2. A1 would have no impact.

Environmental Baseline and Cumulative Impacts
Many of these plants are endemic to Colorado and are considered either imperiled or critically imperiled in the state (NatureServe 2002). The livid sedge is critically imperiled in Colorado but has a G5 ranking; Adder's mouth orchid occurs in small

scattered populations and is relatively stable across its range but is critically imperiled in Colorado; Weber's monkey flower has small/moderate populations and is imperiled in the state; Greenland primrose has a G5 ranking but is also imperiled in the state; Porter's feathergrass has a restricted range and is imperiled in the state; northern blackberry is critically imperiled in the state but has a G5 ranking; Narrow leaf moonwort (candidate species) is only known to occur in the Pikes Peak massif in Colorado and globally is also critically imperiled with fewer than 100 individuals; Smith's Whitlow-grass has only nine occurrences and is considered imperiled in the state; Colorado tansy aster is also considered state imperiled; populations of Rocky mountain cinquefoil are not threatened and over 7000 individuals are recorded. It is also considered state imperiled; Great spurred violet has a G5 ranking but is considered critically imperiled in Colorado.

The only on-going project that may impact these plants is the fire rehabilitation which seeks to reduce the effects of flood events in the river corridor. Future rehabilitation efforts will likely be conducted on public lands in the fire area, as well as private and state lands, over the next 5 years. Salvage logging may remove trees outside of the river corridor but not within it. Minor recreation developments have occurred in 11-mile canyon in the past.

With the exception of inundation, there are no other known or reasonably foreseeable projects in the study area that are projected to have an impact on these plants.

Determination
Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect sensitive plant species habitat in the river corridor for 20 years or more. All of the action alternatives would have a beneficial impact on habitat for the eleven sensitive species and one CNHP rare species. A1 would not impact these plants.

CONFLICT DETERMINATION

All alternatives, except the No-Action alternative, would have a beneficial impact on the northern leopard frog, tiger salamander, pygmy nuthatch, Lewis' woodpecker, golden-crowned kinglet, three-toed woodpeckers and olive-sided flycatcher, flammulated owl, northern goshawk, osprey, common loon, dwarf shrew, ringtail, wolverine, Townsend's big-eared bat, livid sedge, Adder's mouth orchid, Weber's monkey flower, Greenland primrose, Porter's feathergrass, Northern blackberry, narrow leaf moonwort, Smith's Whitlow-grass, Colorado tansy aster, Rocky mountain cinquefoil, and Selkirk's violet. The A1 alternative would have no impact on all these species. All action alternatives would have a beneficial impact on the boreal toad except Alternatives D, G, J, I and A1, which would have no impact.

Appendix B

The sensitive species list for the Pike and San Isabel National Forests was used to identify those species that could occur in the study areas (Ryke et al. 1994). Based on that publication and research of other species records (CNHP, 2002) it was determined that the habitat in the study area could be suitable for the species identified in the table below with a Y (Yes) in the last column. Only those species that may occur or have habitat that could be affected by the study were carried forward in the analysis. Other species were excluded because this study is outside their distributional range, the area does not have habitat for them, or this study will not affect the species or its habitat.

Table 1. Pike National Forest - Sensitive Species by Habitat Type (Habitats used derived from Andrews, etsl, 1992; Spackman, etal. 1997; Fitzgerald, et al. 1994; and Hammerson, 1999)

SPECIES	STATUS	HABITAT TYPE	SPECIES OR HABITAT OCCURS IN PROJECT AREA
Northern leopard frog	S	RSS, WET, AQ	Y
Tiger salamander	S	RSS, WET, AQ	Y
Boreal toad	S, C	RSS, AQ, WET, SF	Y
Northern goshawk	S	PP, MC, AS, LPP, SF	Y
Flammulated owl	S	PP, MC, AS	Y
Three-toed woodpecker	S	MC, LPP, SF	Y
Pygmy nuthatch	S	PP, AS	Y
Boreal owl	S	LPP, SF	N
Olive-sided flycatcher	S	MC, SF	Y
Golden crowned kinglet	S	MC, SF	Y
Purple martin	S	AS	N
Harlequin duck	S	RSS, AQ	N
Osprey	S	RSS,	Y
Common loon	S	RSS, AQ	Y
American bittern	S	RSS, WET	N
White-faced ibis	S	RSS, WET	N
Black tern	S	RIP, WET	N
Fox sparrow	S	RIP	Y
Lewis' woodpecker	S	RIP	Y
Sandhill crane	S	WET, RSS, RIP	N
Western snowy plover	S	RSS	N
Black swift	S	AQ, RO	N
Southern red-belly dace	S	AQ	N
Plain's topminnow	S	AQ	N
Arkansas darter	S	AQ	N
Rocky Mountain capshell snail	S	AQ	N
Ringtail cat	S	MS, PJ, RO, RIP	Y
Hog-nose skunk	S	MS, PJ, RO	N
Marten	S	MC, LPP, SF, AL	N
Wolverine	S	LPP, SF, AL	Y
Dwarf shrew	S	SF, AL, MG, RO, MS, WET, MC	Y
Townsend's big-eared bat	S	RO, PP, MC, MS, PJ	Y
Fringed-tailed bat	S	RO, PP, MS, PJ, MC	N
Botrychium lineare Narrow-leaved moonwort	S, C	MG, RSS	Y

SPECIES	STATUS	HABITAT TYPE	SPECIES OR HABITAT OCCURS IN PROJECT AREA
Armeria maritime var *siberica* Sea pink	S	AL	N
Astragalus molybdenus Leadville milk-vetch	S	AL	N
Botrychium echo Reflected moonwort	S	MG, RO	N
Botrychium pallidum Pale moonwort	S	MG	N
Braya glabella ssp. glabella Smooth rockcress	S	AL	N
Carex livida Livid sedge	S	WET	Y
Draba smithii Smith's whitlow grass	S	RO	Y
Eriophorum altaicum var *neogaeum* Altai cottongrass	S	WET	N
Festuca hallii Hall fescue	S	AL, MG	N
Ipomopsis globularis Globe gilia	S	AL	N
Machaeranthera coloradoensis Colorado tansy-aster	S	AL, MG, RO	Y
Malaxis brachyopoda White adder's-mouth orchid	S	RSS, RIP	Y
Mimulus gemmiparus Weber's monkey-flower	S	SF, AS, RIP	Y
Primula egaliksensis Greenland primrose	S	RSS, WET	Y
Potentilla rupincola Rocky Mtn. Cinquefoil	S	PP, RO	Y
Ptilagrostis mongholica ssp. *porteri* Porter feathergrass	S	WET	Y
Rubus arcticus ssp. acaulis Northern blackberry	S	RSS, WET	Y
Salix lanata ssp. *calcicola* Woolly willow	S	AL, RSS	N
Salix myrtillifolia Myrtle-leaf willow	S	WET	N
Scirpus rollandii Rolland's bulrush	S	WET	N
Viola selkirkii Great-spurred violet	S	AS, MC, RIP	Y

Code	Habitat Types	Code	Habitat Types
AL	Alpine	PJ	Pinyon-juniper woodlands
AQ	Riparian/aquatic	PP	Ponderosa pine
AS	Aspen	RO	Rock, cliff, caves, canyon, mines
LPP	Lodgepole pine	RSS	Riparian/streambanks & shorelines
MC	Mixed conifer	SF	Spruce-Fir
MG	Mountain grasslands & meadows	WET	Riparian/wetlands
MS	Shrublands	C/S	Federal Candidate/ FS Sensitive

MANAGEMENT INDICATOR SPECIES REPORT

The National Forest Management Act (NFMA), 36 CFR 219.19 and Forest Service Handbooks (FSM 2621) direct the Forest Service to preserve and enhance plant and animal diversity, consistent with overall multiple use objectives, to maintain viability of all native and desirable non-native species on the Planning Area (i.e. National Forest and/or Grassland). Viable populations are defined as those with the estimated numbers and distribution or reproductive individuals to ensure that their continued existence is well-distributed (USDA Forest Service 1997).

Species Selection

In accordance with 36 CFR 219.19, fish, wildlife and plant management indicator species (MIS) are selected as a basis for evaluating the potential effects of federal actions on the biota of the forest. Management indicator species identified in the Forest Plan (USFS 1984) include a mixture of game and non-game species, as well as threatened, endangered and sensitive species.

The following MIS were selected for the Wild and Scenic River Study from the list of species provided in the Forest Plan. Appendix A provides more information on this selection.

Species	Habitat Association
Peregrine falcon *Falco peregrinus*	Cliff faces; rock features
Mountain bluebird *Sialia currucoides*	Mountain grasslands
Wilson's warbler *Wilsonia pusilla*	High elevation riparian
Abert's squirrel *Sciurus aberti*	Ponderosa pine

These species were selected because they are known to occur in the study area and the population trends of the species selected could be influenced by changes in habitat composition, structure or function due to ecological processes and/or human activities. It is possible to monitor the local populations of these species. Breeding Bird Survey data exists for portions of segments E and H, annual surveys are conducted on a peregrine site in the study area and Abert's squirrel occurrences adjacent to the study area are being monitored as part of the Upper South Platte Watershed and Protection project.

MIS Habitat Relationship and Population Trends

The following habitat relationship and population trend information are summary excerpts from the Management Indicator Species Review for the Pike and San Isabel National Forests, Comanche and Cimarron National Grasslands (Ryke and Wagner, 2002). Additional details can be found in this monitoring report.

Falco peregrinus, Peregrine falcon

The peregrine falcon was selected as a MIS to reflect conditions of cliff faces or rocky outcrops as these features are used for nesting. The falcon forages in riparian areas and other areas that concentrate prey (Ryke et al 1994). Known nest sites and suitable

foraging habitat are within the study area. A peregrine nest site and associated foraging habitat was determined to be an OR value in Segment H. The recent fire in the study area did not affect this nest site or adjacent foraging habitat.

The falcon is considered imperiled in the state (S2) and is considered to be recovered or increasing globally (NatureServe 2002). Population trend information for the Planning Area has not been collected long enough to produce accurate trend data. Many known nest sites on the Forest are monitored each year by the CDOW. The Rocky Mountain Region of the Forest Service is currently considering placing this species on the revised sensitive species list (USFS 2003).

Sialia currucoides, **Mountain bluebird**
Mountain bluebirds were selected as a MIS to reflect conditions of open woodland or edge habitat. As secondary cavity nesters, they can also provide related information on cavity excavating species. In summer, mountain grasslands and sage shrublands adjacent to open coniferous forest (especially ponderosa pine and pinyon-juniper) and aspen forests make up most of their habitat. The mountain bluebird is the most ecologically tolerant of the three bluebird species, is usually found above 7,000 feet during the breeding season in Colorado, and nests in natural cavities, old woodpecker holes in dead/dying trees 10"-29" DBH, or in nest boxes (Ryke and Wagner 2002). Mountain bluebirds are known to occur in the Wild and Scenic River Study area. Approximately 5,400 acres of the study area contains suitable foraging and nesting habitat. Habitat is segments B, C, D and E was burned in the Hayman fire.

Population trend was estimated from Breeding Bird Survey (BBS) routes. Estimates generated from data collected 1966-1998 in the Southern Rockies Province and in Colorado indicate an increasing but non-significant trend. BBS data on Forest routes have not been collected long enough to produce accurate trend data. Cumulatively the dense forest structure, insect-related mortality of mature trees, fire suppression, and lack of vegetation management are trends leading toward a reduction in habitat capability for mountain bluebird on the Planning Area (Ryke and Wagner 2002). The recent fire in the study area affected approximately 3400 acres and dramatically increased potential bluebird habitat by creating forest openings and increasing future grass and shrubland habitat.

Wilsonia pusilla, **Wilson's warbler**
Wilson's warblers were selected as a MIS because they are an ecological indicator in high elevation riparian habitat type. They nest in willow and alder thickets of stream banks, lakeshores and wet meadows. They may be the most common breeding bird in Colorado's montane and subalpine willow habitats. Riparian areas are impacted from human activities causing habitat loss and degradation, disturbance, dewatering, and pollution. Management recommendations include reducing or eliminating activities that degrade the structure/quality of willow shrub riparian systems, no timber cutting within 100 feet of riparian areas, locating recreation facilities (roads, trails, campgrounds, etc) way from riparian areas, limit dewatering, and tightly control or eliminate livestock grazing in high elevation riparian areas.

This species has a moderately high conservation need throughout their range. Breeding Bird Survey (BBS) data in the Southern Rocky Mountain Province during 1966-1996 do not show a statistically significant annual rate of change. They were present on an average of 51% of BBS routes from 1988-1997 with an average abundance of 4.3 individuals per route (mean # routes = 21). This species is monitored by Colorado Bird Observatory's "Monitoring Colorado's Birds" program using point transects.

There are approximately 2200 acres of streamside riparian habitat in the study area. These narrow bands of vegetation provide approximately suitable nesting and foraging habitat for Wilson's warbler. Approximately 700 acres of habitat burned in segments B, C, D, and E, primarily under low and moderate burn severities. The riparian areas are expected to recover in 5-10 years, depending on flood events.

Sciurus aberti, Abert's squirrel
Abert's squirrel is a MIS and an obligate in ponderosa pine. They are ecologically dependent on ponderosa pine for both nesting sites and food and are thus restricted to open montane forests. Target feed trees represent less than 10% of the trees in stands populated by Abert's along the Front Range and are chemically and physiologically different from non-feeding trees. Tree chemistry also affects nest-site selection. Approximately 92% of nests were in a tree group with 75% having 3 or more interlocking canopy trees. Earlier this century, the species was not common in Colorado but subsequently increased after closure of the hunting season. Abert's squirrel is classified as a small game mammal in Colorado.

The state population trend is suspected to be stable or increasing. The NDIS database states that the species is "fairly common" in all seven counties within the Forest where habitat is suitable and sufficient information is known. Extensions of the known range have occurred in recent years in southwest and western Colorado. Population dynamics are poorly known. Population estimates range from 12 to 30 animals per km2 in the Black Forest of El Paso County, Colorado, and from 82 to 114 km2, near Boulder, Colorado. Spring populations are lowest. Populations fluctuate widely over time and space, possibly in response due to cyclic variations in biomass of pinecone crops.

Stands of ponderosa pine account for over 11,000 acres of the study area. If 10% of the trees are assumed to be chemically suitable for Abert's, an unknown, but presumably many fewer acres of suitable habitat exist in the study area. In the study area, approximately 3200 acres of ponderosa pine habitat burned in the recent fire under low to moderate severities.

MIS Habitat Estimates
Based on the habitat requirements provided above, the following table provides an estimate of the acreage of suitable habitat for each MIS in the study area.

Table 1. Acres of suitable habitat for MIS in the Wild and Scenic River Study area

Species	Study Area
Peregrine falcon	640
Mountain bluebird	5482
Wilson's warbler	2216
Abert's squirrel	11, 280 or less

Table 2. Estimated acres of vegetation within river segments of the Study Area

	Riparian	Grassland	Shrubland	Ponderosa pine	Douglas-fir	Lodgepole Pine	Total
A	200	35	14	1474	840	0	2563
B	395	45	0	840	95	0	1375
C	262	0	81	1657	1170	0	3170
D	22	0	0	572	347	0	941
E	522	92	123	2944	1693	0	5374
H3	715	106	0	2529	1181	0	4531
H1&2	100	31	0	1264	320	134	1849
Total	2216	309	218	11280	5646	134	19803

Direct, Indirect and Cumulative Effects of Alternatives on MIS Habitat Types (including special habitat features) and Populations

Cliff and Rock features

Cliff and rock features provide nesting, foraging and roosting sites for selected MIS (peregrine falcon). This habitat component occurs in all segments of the study area. Recreation activities such as climbing have the potential to disturb nesting raptors during critical breeding seasons.

With the exception of alternatives A2, B and C, there are no specific measures in the alternatives to protect the peregrine falcon. The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the peregrine would not be inundated under these alternatives. A2 and A3 provide similar protection but with less permanence and more complex implementation. In addition, alternative A2 recommends not building roads or trails within ½ mile of nest sites and restricting human activity within ½ mile of occupied nest sites between March 15 and July 31. In Alternatives B and C, the peregrine would have additional protection in segment H under the authorities of the Wild and Scenic Act which require protection of the OR values. Alternatives B and C have the most acres of peregrine habitat in more protective classifications. This would be followed, in descending order of protection, by Alternatives F, A3 (suitable), A3 (not suitable), and A2. Alternatives D, G, I, J and A1 would offer no protection beyond the current conditions.

Cumulatively, herbicide use, increasing recreation activities adjacent to nest sites, and declining riparian habitat quality are trends leading toward a reduction in habitat capability for peregrine falcon on the Planning Area. Only some of the action alternatives would contribute toward maintaining this habitat on the Forest.

Mountain grasslands

Mountain grasslands and shrublands provide foraging habitat for selected MIS (mountain bluebird). This habitat occurs in non-forested areas as well as in the understory of open ponderosa pine and Douglas-fir stands (3A, 4A). The forested stands also provide suitable nesting habitat. Fires and insect and disease outbreaks contribute to the perpetuation and recruitment of this habitat on the landscape. There are approximately 527 acres of non-forested mountain grassland and shrublands in the study area. There are approximately 4955 acres of open canopy forested stands, many of which have a grassland understory.

Effects on Mountain Bluebird: Mountain bluebirds are closely correlated with early post-fire conditions (Hutto 1995). As a result of the Hayman fire, in most alternatives, the number of mountain bluebirds would increase and the birds would continue to use the fire area as long as open meadow conditions and snags provide suitable nesting and foraging habitat. There are no specific measures in the alternatives to protect this bird; however, habitat for it on NFS lands would be managed according to MIS direction in the Forest Plan. The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the bluebird would not be inundated. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternative B has more acres of habitat in the most protective classifications followed in descending order of protection by alternatives C, D, J, F, G, I, then A3 (suitable), A3 (not suitable), A2 and A1.

Mountain bluebird population data in Colorado indicate an increasing but non-significant trend. Identified threats include fire suppression and subsequent changes to the forest structure (Ryke and Wagner 2002). Forest-wide, approximately 1% or 8,000 acres of ponderosa pine and Douglas-fir habitat are killed annually by insects and wildfire (Thinnes 2001). High levels of tree mortality would likely continue as a result of decades of fire suppression activities and the vulnerability of the mixed conifer forests to insects and fire. This should result in an increasing trend in habitat availability for the mountain bluebird. There are 161911 acres of mountain grasslands on the Forest. These alternatives would affect <1% of this habitat.

High Elevation Riparian

This habitat provides breeding, nesting, foraging, singing and perching sites for selected MIS (Wilson's warbler). This habitat typically occurs in narrow bands adjacent to streams and wetlands. There are approximately 2200 acres of riparian habitat in the study area.

Effect on Wilson's warbler: This species is closely associated with willow riparian vegetation. As a result of the Hayman fire, the number of Wilson's warblers may decrease until the riparian vegetation is reestablished. There are no specific measures in the alternatives to protect this bird; however, habitat for it on NFS lands would be managed according to MIS direction in the Forest Plan. The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for the warbler would not be inundated. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternative B has more acres of habitat in the most protective classifications followed in descending order of protection by alternatives C, D, J, F, G, I, then A3 (suitable), A3 (not suitable), A2 and A1.

The population of Wilson's warbler in the Southern Rocky Mountain Province during 1966-1996 did not show a statistically significant annual rate of change. Riparian areas are under constant pressure from human activities causing habitat loss and degradation, disturbance, dewatering, and pollution (Ryke and Wagner 2002). All of the action alternatives would contribute to maintaining Wilson's warbler habitat on the Forest.

Ponderosa pine

Ponderosa pine trees provide nesting and foraging habitat for selected MIS species (Abert's squirrel). Studies by Snyder and Linhart (1994) have shown that target feed trees represent less than 10% of the trees in stands populated by Abert's along the Front Range and are chemically and physiologically different from non-feeding trees. Tree chemistry also affects nest-site selection. There are approximately 11280 acres of ponderosa pine in the study area. Not all of these acres provide suitable habitat for the squirrel.

Effect on Abert's squirrel: Abert's are ecologically dependent on ponderosa pine for nesting and feeding. As a result of the Hayman fire, the number of squirrels likely decreased in the study area as a result of direct mortality or loss of food resources. There are no specific measures in the alternatives to protect this small mammal; however, habitat for it on NFS lands would be managed according to MIS direction in the Forest Plan. The designation alternatives prohibit the potential for federally approved water development projects in the river corridors and as a result, habitat for Abert's would not be inundated. Alternatives A2 and A3 (suitable and not suitable) provide similar protection but with less permanence and more complex implementation. Alternative B has more acres of habitat in the most protective classifications followed in descending order of protection by alternatives C, D, J, F, G, I, then A3 (suitable), A3 (not suitable), A2 and A1.

The state population trend is suspected to be stable or increasing and the species is "fairly common" in all seven counties within the Forest (Ryke and Wagner 2002) Forest-wide, approximately 1% or 8,000 acres of ponderosa pine and Douglas-fir habitat are killed annually by insects and wildfire (Thinnes 2001). This indiscriminate loss of suitable trees is the greatest threat to this species on the Forest, as most planned treatments have protective measures for the squirrel. The action alternatives have the potential to

maintain foraging and nesting habitat on 11280 acres of the study area. There are 367,320 acres of ponderosa pine habitat on the Forest. These alternatives would affect 3% of this habitat.

Cumulative Effects for MIS
Ongoing activities contributing towards cumulative effects on wildlife habitats include development on private lands, recreation, timber harvest, prescribed burning, wildfire, livestock grazing, and drought.

Private Lands and Recreation– Park, Teller, Jefferson and Douglas counties have seen marked increase in populations during the last decade. The amount of subdivision has increased and the trend is projected to continue. Human activities, alterations to wildlife habitat, watershed concerns all contribute to a decline in wildlife species sensitive to disturbance throughout these areas (Odell et al. 2003).

Timber Harvest, Fuels Projects, and Prescribed Burning
The Hayman Hazardous Tree Removal Project is currently underway in the Hayman Burn. Hazardous trees (fire burned snags leaning towards the road) are being harvested along approximately 80 miles of road within the burn perimeter. Approximately 46.5 miles will be sold commercially and removed from the site; approximately 40 miles will be dropped by fuels crews and left on site (Finn 2003). This project will affect approximately 655 acres commercially.

Several commercial timber sales and fuels treatments have occurred in the surrounding area and within the burn perimeter: Sledgehammer, Sheepnose, Trout Creek, Trumbell, Spring Creek and portions of Denver Water Board. Their main objectives have been to reduce the risk of fire and insect/disease within the montane forest ecosystem. Polhemus Burn, Sledgehammer, Trumbull and the Trout Creek Timber Sale have increased the amount of acres that are in a condition more like those of a historic Ponderosa Pine/Douglas-fir forest. The NEPA for these projects has resulted in beneficial or non-declining trends for many MIS.

Several similar projects are planned: continuing work associated with the South Platte Watershed Restoration and Protection Project, Rocky Messenger, Fish Creek, Trout West and AG Ranch. The majority of the MIS species, which evolved with and inhabit the Ponderosa pine/Douglas-fir forest, were predicted to benefit with the return of the ecosystem to more natural conditions and more frequent burning.

Wildfires
Several large wildfires have occurred within the last 7 years within the South Platte Watershed: Buffalo Creek, High Meadow, Schoonover, Snaking, Platte Springs, Black Mountain, and now the Hayman Fire – affecting approximately 168,000 acres total. Wildfire remains a high risk due to the overstocking of fuels created by fire suppression. Wildfire would reduce the density of live trees in forested areas in burned over areas and decrease habitat for MIS species such as the Abert's squirrel for several decades. Most species are able to tolerate low-intensity fire with few significant effects to population; however multiple fires with high intensity burning would likely have cumulatively

significant effects. Past fires in the area have provided an immediate increase of suitable habitat for the MIS Lewis's and Three-toed woodpeckers and Mountain Bluebird.

Salvage logging has occurred on the High Meadow fire, portions along Cheesman Reservoir, and private lands within the Hayman fire.

Livestock Grazing
The Wigwam, Badger and Crystal Allotments are located within the Hayman fire. If drought conditions continue, grazing of these allotments will be restricted. Grazing occurs throughout the surrounding area on private and public lands. Effects of grazing include plant defoliation, mechanical changes to soil and plant material, and nutrient redistribution. These and other factors also influence successional trends. Grazing frequency, duration, intensity and timing can affect succession.

Drought
Drought conditions throughout Colorado have reduced the overall amount of forage for a majority of terrestrial, herbivorous wildlife species. Continuing drought could lead to a continuing decline in new forage growth. Decadent plant materials can make nutrient availability difficult. This factor may attract these wildlife species into the areas of the fire where decadent materials have been reduced, and new growth is more available and palatable.

Monitoring
The following specific MIS monitoring efforts are currently on-going:

1) Annual review of peregrine nest site in Segment H by the Colorado Division of Wildlife. Results are transmitted annually to the Forest Service.

2) Annual BBS route along segment H. All bird species, including MIS are recorded and entered in to the National BBS database. One other route on the Forest is completed annually (includes mountain bluebird and Wilson's warbler locations) and submitted to the National BBS database.

3) Initial Abert's squirrel feeding sign monitoring is occurring in locations throughout the District.

Forest Plan Wildlife Management Direction
The Pike and San Isabel National Forests, Cimarron and Comanche National Grasslands Forest Plan (1984) identified many goals for wildlife. These goals include the following:

1) Increase diversity for wildlife and habitat improvement
2) Protect riparian areas and wetlands from degradation

The Forest Plan also established general management direction including:

1) Provide for the habitat needs of management indicator species in the National Forest,
2) Manage and provide habitat for recovery of endangered and threatened species
3) Maintain habitat for viable populations of all existing vertebrate wildlife species.

Through designation or protection of the river values, all action alternatives would, to varying degrees, help protect habitat for MIS in the river corridor for 20 years or more. These action alternatives would contribute toward meeting the stated goals and direction for wildlife in the Forest Plan.

Appendix A. Criteria for selecting MIS for the Wild and Scenic River Study

MIS[1]	Habitat Present in Study area	Native species	Ecological indicator for habitat type[1]	Pop trend data/ or habitat relationship data	Special habitat needs[1]
Beaver	x	x			
Bighorn		x		x	x
Muledeer	x	x		x	
Elk	x	x		x	
Marten		x	SF, DF, LP	/x	x
Abert's squirrel	x	x	PP	/x	x
Mtn. Bluebird	x	x	FM	x	x
Peregrine	x	x	RK	x	x
Mallard	x	x	WA	x	
Pipit		x	AL	x	
RN Sapsucker		x	AS	x/x	x
GT Towhee		x	SB	x	
Wild Turkey	x	x		x	x
Lewis' WP	x	x	PP, CW	x/x	x
3-toed WP	x	x	SF, LP, PP	x/x	x
BTG warbler		x	PJ	x	
Virginia's "		x	OK	x	
Wilson's "	x	x	HR	x	
Brook trout	x			x	
GBCT trout		x	WA	x	x

[1] As presented in the Forest Plan, Table 111-27, Management Indicator Species for Pike and San Isabel National Forests

For each of the species provided in the Forest Plan list, I determined which species can find suitable habitat in the Study area, whether they are native, the habitat type associated with the species according to the Forest Plan, whether population trend data is available in some form or the species have established habitat relationship models, and whether the species require special habitat features and are more likely to be influenced by changes in habitat occurring on a local level.

From this exercise, I selected Abert's squirrel, mountain bluebird, peregrine falcon and Wilson's warbler to serve as the MIS for the Wild and Scenic River Study. These species occur in the study area, they are native species, they were identified in the Forest Plan as being ecological indicators for habitat types present in the study area, and they represent each of the major habitat types found in the study area. Individuals of these species could be influenced by changes in local habitat conditions. Population trend information is available for each of these species.

The other species on the Forest Plan list will not be analyzed further because they were already discussed in other portions of the Wild and Scenic River study (brook trout), they

are redundant to the species selected (Lewis's, three-toed woodpecker), the study area does not provide suitable habitat for these species, there are not any recorded occurrences of these species in the study, they do not represent the habitat types which occur in the study area, and/or they are habitat generalist's, such as mule deer, elk, turkey, and mallards whose populations would be affected by habitats and influences (hunting, disease) beyond the scope of this study.

REFERENCES

Andrews, Robert and Robert Righter. 1992. Colorado Birds; A Reference to Their Distribution and Habitat. Denver Museum of Natural History. 442 pp. Denver, CO.

Colorado Natural Heritage Program (CNHP). 2002. Pike and San Isabel National Forest, Cimarron and Comanche National Grasslands. Rare, threatened, endangered and sensitive species overlays and accompanying reports (on CD). College of Natural Resources, 254 General Services, Fort Collins, CO 80523.

Denver Water 2002. Ltr from D. Little to Forest Service regarding no water depletions and no flow changes below Strontia Springs Reservoir.

ERT Company. 1986 . Pawnee Montane Skipper 1986 Field Studies. Prepared for the Denver Water Department, Denver, Colorado. ERT, a Resource Engineering Company, Fort Collins, CO 40 pp.

Finn, C. 2003. Personal Communication. Forest Service Sale Prep Forester. February 10, 2003. Fairplay, CO

Fitzgerald, James P., Carron Meaney, and David M. Armstrong. 1994. Mammals of Colorado. Denver Museum of Natural History. Denver, Colorado.

Ganey, J.L., Block, W.M., Jenness, J.S. 1999. Mexican spotted owl home range and habitat use in pine-oak forest: implications for forest management. Forest Science. Vol. 45. No. 1 (Feb. 1999): p. 127-135.

Hammerson, Geoffrey A. 1999. Amphibians and Reptiles in Colorado: 2nd Edition. University Press of Colorado. 484 pp.

Hayward, G.D. and J. Verner, tech editors, 1994. Flammulated, Boreal, and Great Gray Owls in the United States: A Technical Conservation Assessment. General Technical Report RM-253. Fort Collins, Colorado. USDA Forest Service, Rocky Mountain Range and Forest Experiment Station. 214 pp, 3 Maps.

Hoover, R.L. and D.L. Wills, ed. 1984. Managing Forested Lands for Wildlife. Colorado Division of Wildlife in cooperation with USDA Forest Service, Rocky Mountain Region, Denver, Colorado. 459 pp.

Howard, S. 2000. Personal communication discussing bald eagle winter communal roost site at Lake George. December 2000.

Kingery, Hugh, editor. 1998. Colorado Breeding Bird Atlas. Colorado Bird Atlas Partnership and CDOW. Denver CO.

Knight, Richard L. and Gutzwiller, Kevin J. (eds.) 1995. Wildlife and Recreationists: Coexistence through Management and Research. Island Press, Washington D.C.

Loeffler, Chuck (ed.). 2001. Boreal Toad Conservation Plan and Agreement. Boreal Toad Recovery Team and Technical Advisory Group. 76 pp.

Meaney, Carron. 2000. Survey for Preble's Meadow jumping mice, Wigwam Campground, Jefferson County. For the Pike National Forest, South Platte Ranger District, Morrison, Colorado.

Meaney, Carron. 2001. Survey for Preble's Meadow jumping mice, Trout Creek at Rainbow Falls, Manitou Experimental Forest. For the Pike National Forest, Pikes Peak Ranger District, Colorado Springs, Colorado.

Natural Diversity Information Source. 2002. On-line. (NDIS 2002).

NatureServe: An online encyclopedia of life [web application]. 2002. Version 1.4 . Arlington, Virginia, USA: Association for Biodiversity Information. Available: http://www.natureserve.org/.

Odell, E., D. Theobald and R. Knight. 2003. Incorporating Ecology into Land Use Planning, The Songbirds' Case for Clustered Development. Journal of the American Planning Association. Vol 69, No. 1, 2003. Chicago, IL.

Plage, P. 2002. Personal communication with P. Plage (U.S. Fish and Wildlife Service) discussing critical habitat elevation. February 5, 2002.

Reynolds, Richard T.; Graham, Russell T.; Reiser, M. Hildegard; and others. 1992. Management recommendations for the northern goshawk in the southwestern United States. Gen. Tech. Rep. RM-217. Ft. Collins, CO: USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. 90 p.

Ryke, N and T. Wagner, 2002. Management Indicator Species Review for the Pike and San Isabel National Forests and Cimarron and Comanche National Grasslands. Forest Service, Pueblo, CO. * *citations within can be found in the document, but not here._*

Ruediger, et al. 2000. Canada Lynx Conservation Assessment and Strategy. USDA Forest Service, USDI Bureau of Land Management, US Fish and Wildlife Service, and National Park Service. 132 pp.

Ruggiero, L.F, K.B. Aubry, S.W. Buskirk, G.M. Koehler, C.J. Krebs, K.S. McKelvey, and J.R. Squires. 2000. Ecology and Conservation of Lynx in the United States. University Press of Colorado and USDA, Rocky Mountain Research Station.

Ruggiero, L.F., K.B. Aubry, S.W. Buskirk, J.L. Lyon, and W.J. Zielinski, tech eds. 1994. The Scientific Basis for Conserving Forest Carnivores: American Marten, Fisher, Lynx, and Wolverine in the Western United States. USDA Forest Service General Technical Report RM-254. 184 pp.

Schorr, Robert. 1999. Small mammal surveys on Pike National Forest. Douglas County, Colorado. Trout Creek, South Platte River and Indian Creek. For the Pike National Forest, South Platte Ranger District, Morrison, Colorado.

Ryke, Nancy, D. Winters, L. McMartin, and S. Vest. 1994. Threatened, Endangered and Sensitive Species of the Pike and San Isabel National Forest and Comanche and Cimarron National Grasslands. Version 8.4.00.

Spackman, S., B. Jennings, J. Coles, C. Dawson, M. Minton, A. Kratz, and C. Spurrier. 1997. Colorado Rare Plant Field Guide. Prepared for the Bureau of Land Management, the U.S. Forest Service and the U.S. Fish and Wildlife Service by the Colorado Natural Heritage Program.

Thinnes, J. 2001. Pike and San Isabel National Forests Lower Montane Forest Vegetation Trends. Silviculturist, South Platte Ranger District, Morrison, Colorado.

Thinnes, Jim. 2002. Personal Communication. U.S. Forest Service, South Platte Ranger District. August 2, 2002. Morrison, CO.

USDA Forest Service. 1984. Land and Resource Management Plan: Pike and San Isabel National Forests, Comache and Cimarron National Grasslands.

USDA Forest Service. 1994. FSM 2670 Threatened, Endangered and Sensitive Plant and Animal Species. Exhibit 1: R2 Regional Forester's Sensitive Species List.

USDA Forest Service. 1994. Flammulated, Boreal, and Great Gray Owls in the United States: A Technical Conservation Assessment. GTR-RM-253. Fort Collins, CO.

USDA Forest Service. 1994. The Scientific Basis for Conserving Forest Carnivores in the Western United States: American Marten, Fisher, Lynx, and Wolverine. GTR-RM-254. Fort Collins, CO.

USDA Forest Service. 1997. Wild and Scenic River Study Report and Draft Legislative Environmental Impact Statement. North Fork of the South Platte River and South Platte Rivers. Pike and San Isabel National Forests, Comanche and Cimarron National Grasslands. Pueblo, CO.

USDA Forest Service. 2000a. Supplemental Wild and Scenic River Study Report and Draft Legislative Environmental Impact Statement. North Fork of the South Platte River and South Platte Rivers. Pike and San Isabel National Forests, Comanche and Cimarron National Grasslands. Pueblo, CO.

USDA Forest Service. 2000. Environmental Assessment for the Upper South Platte Watershed Restoration and Protection Project. Pike National Forest, Morrison, Colorado.

USDI, Fish and Wildlife Service. 1992. Final rule to list the Ute ladies'-tresses (*Spiranthes diluvialis*) orchid as a threatened species. Vol 57, No 12: 2048-2054 U.S. Fish and Wildlife Service, Denver Colorado.

USDI, Fish and Wildlife Service. 1995. Recovery plan for the Mexican spotted owl: Vol. I. Albuquerque, New Mexico. 172 pp.

USDI, Fish and Wildlife Service. 1998a. Pawnee montane skipper butterfly recovery plan. Denver, Colorado. 16 pages.

USDI, Fish and Wildlife Service. 1998b. Final rule to list the Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*) as a Threatened species. 50 CFR Part 17; Vol. 63, No. 92 (May 13, 1998) U.S. Fish and Wildlife Service, Denver Colorado.

USDI, Fish and Wildlife Service. 2001. Final Designation of Critical Habitat for the Mexican Spotted Owl (*Strix occidentalis lucida*). 50 CFR Part 17; Vol 66, No.22 (February 1, 2001) U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

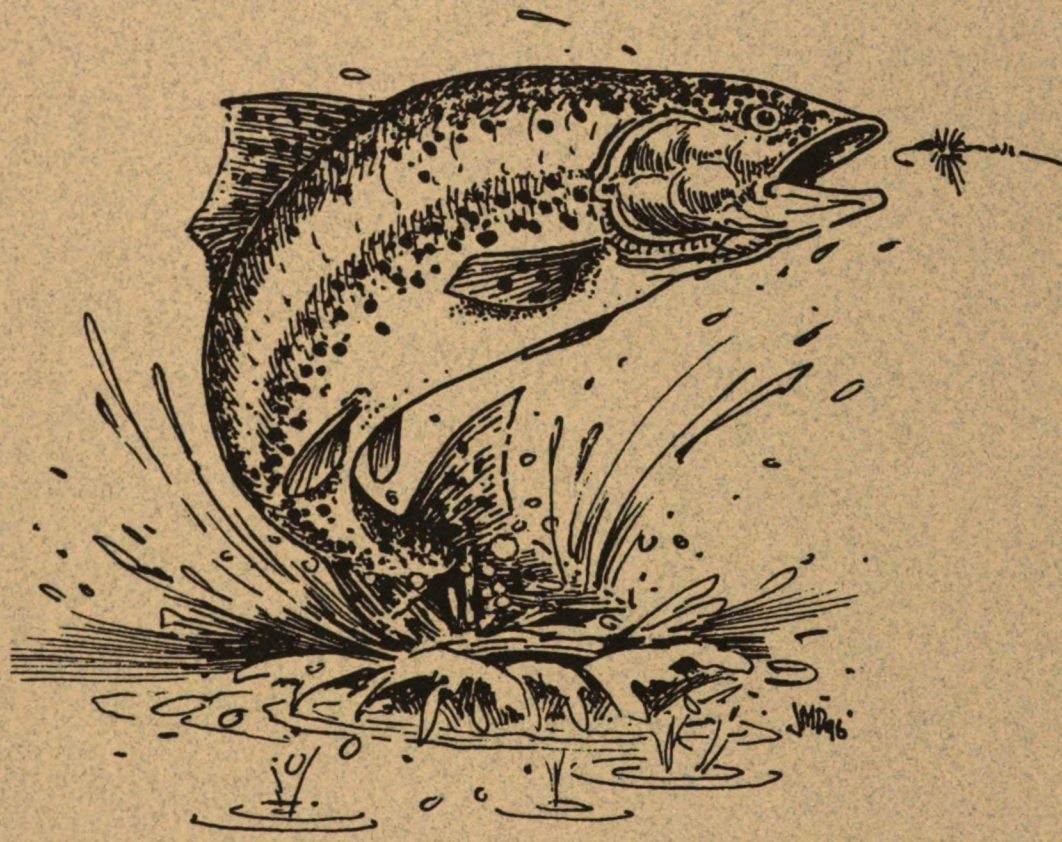
USDI, Fish and Wildlife Service. 2001b. Final Biological Opinion for the Upper South Platte Watershed Protection and Restoration Project. Ltr to District Ranger, dated 1-10-2001.

USDI, Fish and Wildlife Service. 2002. Proposed rule to create critical habitat for the Prebles Meadow Jumping Mouse (*Zapus prebleii*). 50 CFR Part 17; Vol. 67 , No.137 (July 17, 202) U.S. Fish and Wildlife Service, Denver Colorado.

USDI, Fish and Wildlife Service. 2003. Federally listed and candidate species and their status in Colorado. For the Pike and San Isabel National Forests, Comanche and Cimarron National Grasslands. Dated 4-15-2003.

Weber, W.A., and R.C. Whittmann. 1996. Colorado Flora: Eastern Slope. University Press of Colorado, Niwot, CO.

Wild and Scenic Rivers Act



Appendix F – Wild and Scenic Rivers Act (Public Law 90-542, as amended) (16 United States Code 1271-1287) Table of Contents

APPENDIX F

Wild and Scenic Rivers Act

(P.L. 90-542, as amended)
(16 U.S.C. 1271-1287)

[1]An Act
To provide for a National Wild and Scenic Rivers System, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that,

(a) this Act may be cited as the "Wild and Scenic Rivers Act."

Congressional declaration of policy.

(b) It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.

Congressional declaration of purpose.

(c) The purpose of this Act is to implement this policy by instituting a national wild and scenic rivers system, by designating the initial components of that system, and by prescribing the methods by which and standards according to which additional components may be added to the system from time to time.

Composition of system; requirements for State-administered components.

SECTION 2. (a) The national wild and scenic rivers system shall comprise rivers (i) that are authorized for inclusion therein by Act of Congress, or (ii) that are designated as wild, scenic or recreational rivers by or pursuant to an act of the legislature of the State or States through which they flow, that are to be permanently administered as wild, scenic or recreational rivers by an agency or political subdivision of the State or States concerned, that are found by the Secretary of the Interior, upon application of the Governor of the State or the Governors of the States concerned, or a person or persons thereunto duly appointed by him or them, to meet the criteria established in this Act and such criteria supplementary thereto as he may prescribe, and that are

approved by him for inclusion in the system, including, upon application of the Governor of the State concerned, the Allagash Wilderness Waterway, Maine; that segment of the Wolf River, Wisconsin, which flows through Langlade County; and that segment of the New River in North Carolina extending from its confluence with Dog Creek downstream approximately 26.5 miles to the Virginia State line. Upon receipt of an application under clause (ii) of this subsection, the Secretary shall notify the Federal Energy Regulatory Commission and publish such application in the *Federal Register*. Each river designated under clause (ii) shall be administered by the State or political subdivision thereof without expense to the United States other than for administration and management of federally owned lands. For purposes of the preceding sentence, amounts made available to any State or political subdivision under the Land and Water Conservation [Fund] Act of 1965 or any other provision of law shall not be treated as an expense to the United States. Nothing in this subsection shall be construed to provide for the transfer to, or administration by, a State or local authority of any federally owned lands which are within the boundaries of any river included within the system under clause (ii).

Classification.

(b) A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in Section 1, subsection (b) of this Act. Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the national wild and scenic rivers system and, if included, shall be classified, designated, and administered as one of the following:

(1) *Wild river areas* -- 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. These represent vestiges of primitive America.

(2) *Scenic river areas* -- Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

(3) *Recreational river areas* -- 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.

Congressionally designated components.

SECTION 3. (a) The following rivers and the land adjacent thereto are hereby designated as components of the national wild and scenic rivers system:

(designation language for individual W & S study rivers) (156 listed)

Establishment of boundaries; classification.

(b) The agency charged with the administration of each component of the national wild and scenic rivers system designated by subsection (a) of this section shall, within one year from the

date of designation of such component under subsection (a) (except where a different date if [is] provided in subsection (a)), establish detailed boundaries therefor (which boundaries shall include an average of not more than 320 acres of land per mile measured from the ordinary high water mark on both sides of the river); and determine which of the classes outlined in section 2, subsection (b), of this Act best fit the river or its various segments. Notice of the availability of the boundaries and classification, and of subsequent boundary amendments shall be published in the *Federal Register* and shall not become effective until ninety days after they have been forwarded to the President of the Senate and the Speaker of the House of Representatives.

Public availability of maps and descriptions.

(c) Maps of all boundaries and descriptions of the classifications of designated river segments, and subsequent amendments to such boundaries, shall be available for public inspection in the offices of the administering agency in the District of Columbia and in locations convenient to the designated river.

Review requirements for early designations and management plans.

(d)(1) For rivers designated on or after January 1, 1986, the Federal agency charged with the administration of each component of the National Wild and Scenic Rivers System shall prepare a comprehensive management plan for such river segment to provide for the protection of the river values. The plan shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act. The plan shall be coordinated with and may be incorporated into resource management planning for affected adjacent Federal lands. The plan shall be prepared, after consultation with State and local governments and the interested public within 3 full fiscal years after the date of designation. Notice of the completion and availability of such plans shall be published in the *Federal Register.*

(2) For rivers designated before January 1, 1986, all boundaries, classifications, and plans shall be reviewed for conformity within the requirements of this subsection within 10 years through regular agency planning processes.

Requirements for study reports.

SECTION 4. (a) The Secretary of the Interior or, where national forest lands are involved, the Secretary of Agriculture or, in appropriate cases, the two Secretaries jointly shall study and submit to the President reports on the suitability or nonsuitability for addition to the national wild and scenic rivers system of rivers which are designated herein or hereafter by the Congress as potential additions to such system. The President shall report to the Congress his recommendations and proposals with respect to the designation of each such river or section thereof under this Act. Such studies shall be completed and such reports shall be made to the Congress with respect to all rivers named in subparagraphs 5(a) (1) through (27) of this Act no later than October 2, 1978. In conducting these studies the Secretary of the Interior and the Secretary of Agriculture shall give priority to those rivers (i) with respect to which there is the greatest likelihood of developments which, if undertaken, would render the rivers unsuitable for inclusion in the national wild and scenic rivers system, and (ii) which possess the greatest

proportion of private lands within their areas. Every such study and plan shall be coordinated with any water resources planning involving the same river which is being conducted pursuant to the Water Resources Planning Act (79 Stat. 244; 42 U.S.C. 1962 et seq.). Each report, including maps and illustrations, shall show among other things the area included within the report; the characteristics which do or do not make the area a worthy addition to the system; the current status of land ownership and use in the area; the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the national wild and scenic rivers system; the Federal agency (which in the case of a river which is wholly or substantially within a national forest, shall be the Department of Agriculture) by which it is proposed the area, should it be added to the system, be administered; the extent to which it is proposed that such administration, including the costs thereof, be shared by State and local agencies; and the estimated cost to the United States of acquiring necessary lands and interests in land and of administering the area, should it be added to the system. Each such report shall be printed as a Senate or House document.

(b) Before submitting any such report to the President and the Congress, copies of the proposed report shall, unless it was prepared jointly by the Secretary of the Interior and the Secretary of Agriculture, be submitted by the Secretary of the Interior to the Secretary of Agriculture or by the Secretary of Agriculture to the Secretary of the Interior, as the case may be, and to the Secretary of the Army, the Secretary of Energy, the head of any other affected Federal department or agency and, unless the lands proposed to be included in the area are already owned by the United States or have already been authorized for acquisition by Act of Congress, the Governor of the State or States in which they are located or an officer designated by the Governor to receive the same. Any recommendations or comments on the proposal which the said officials furnish the Secretary or Secretaries who prepared the report within ninety days of the date on which the report is submitted to them, together with the Secretary's or Secretaries' comments thereon, shall be included with the transmittal to the President and the Congress.

Review requirements for State components.

(c) Before approving or disapproving for inclusion in the national wild and scenic rivers system any river designated as a wild, scenic or recreational river by or pursuant to an act of the State legislature, the Secretary of the Interior shall submit the proposal to the Secretary of Agriculture, the Secretary of the Army, the Secretary of Energy, and the head of any other affected Federal department or agency and shall evaluate and give due weight to any recommendations or comments which the said officials furnish him within ninety days of the date on which it is submitted to them. If he approves the proposed inclusion, he shall publish notice thereof in the *Federal Register*.

Study boundaries.

(d) The boundaries of any river proposed in section 5(a) of this Act for potential addition to the National Wild and Scenic Rivers System shall generally comprise that area measured within one-quarter mile from the ordinary high water mark on each side of the river. In the case of any designated river, prior to publication of boundaries pursuant to section 3(b) of this Act, the boundaries also shall comprise the same area. This subsection shall not be construed to limit the

possible scope of the study report to address areas which may lie more than one-quarter mile from the ordinary high water mark on each side of the river.

Study rivers.

SECTION 5. (a) The following rivers are hereby designated for potential addition to the national wild and scenic rivers system:

(designation language for individual W & S study rivers)

(b)(4) For the purposes of conducting the studies of rivers named in subsection (a), there are authorized to be appropriated such sums as necessary.

Additional study requirements.

(c) The study of any of said rivers shall be pursued in as close cooperation with appropriate agencies of the affected State and its political subdivisions as possible, shall be carried on jointly with such agencies if request for such joint study is made by the State, and shall include a determination of the degree to which the State or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the national wild and scenic rivers system.

Federal agency consideration of wild and scenic values.

(d)(1) In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved.

(2) The Congress finds that the Secretary of the Interior, in preparing the Nationwide Rivers Inventory as a specific study for possible additions to the national wild and scenic rivers system, identified the Upper Klamath River from below the John Boyle Dam to the Oregon-California State line. The Secretary, acting through the Bureau of Land Management, is authorized under this subsection to complete a study of the eligibility and suitability of such segment for potential addition to the national wild and scenic rivers system. Such study shall be completed, and a report containing the results of the study shall be submitted to Congress by April 1, 1990. Nothing in this paragraph shall affect the authority or responsibilities of any other Federal agency with respect to activities or action on this segment and its immediate environment.

Acquisition procedures and limitations.

SECTION 6. (a)(1) The Secretary of the Interior and the Secretary of Agriculture are each authorized to acquire lands and interests in land within the authorized boundaries of any

component of the national wild and scenic rivers system designated in section 3 of this Act, or hereafter designated for inclusion in the system by Act of Congress, which is administered by him, but he shall not acquire fee title to an average of more than 100 acres per mile on both sides of the river. Lands owned by a State may be acquired only by donation or by exchange in accordance with the subsection (d) of this section. Lands owned by an Indian tribe or a political subdivision of a State may not be acquired without the consent of the appropriate governing body thereof as long as the Indian tribe or political subdivision is following a plan for management and protection of the lands which the Secretary finds protects the land and assures its use for purposes consistent with this Act. Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to the use of appropriations from other sources, be available to Federal departments and agencies for the acquisition of property for the purposes of this Act.

Federal agency consideration of wild and scenic values.

(2) When a tract of land lies partially within and partially outside the boundaries of a component of the national wild and scenic rivers system, the appropriate Secretary may, with the consent of the landowners for the portion outside the boundaries, acquire the entire tract. The land or interest therein so acquired outside the boundaries shall not be counted against the average one-hundred-acre-per-mile fee title limitation of subsection (a)(1). The lands or interests therein outside such boundaries, shall be disposed of, consistent with existing authorities of law, by sale, lease, or exchange.

(b) If 50 per centum or more of the entire acreage outside the ordinary high water mark on both sides of the river within a federally administered wild, scenic or recreational river area is owned in fee title by the United States, by the State or States within which it lies, or by political subdivisions of those States, neither Secretary shall acquire fee title to any lands by condemnation under authority of this Act. Nothing contained in this section, however, shall preclude the use of condemnation when necessary to clear title or to acquire scenic easements or such other easements as are reasonably necessary to give the public access to the river and to permit its members to traverse the length of the area or of selected segments thereof.

(c) Neither the Secretary of the Interior nor the Secretary of Agriculture may acquire lands by condemnation, for the purpose of including such lands in any national wild, scenic or recreational river area, if such lands are located within any incorporated city, village or borough which has in force and applicable to such lands a duly adopted, valid zoning ordinance that conforms with the purposes of this Act. In order to carry out the provisions of this subsection the appropriate Secretary shall issue guidelines, specifying standards for local zoning ordinances, which are consistent with the purposes of this Act. The standards specified in such guidelines shall have the object of (A) prohibiting new commercial or industrial uses other than commercial or industrial uses which are consistent with the purposes of this Act, and (B) the protection of the bank lands by means of acreage, frontage, and setback requirements on development.

(d) The appropriate Secretary is authorized to accept title to non-Federal property within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress and, in exchange therefor, convey to the grantor any federally owned

property which is under his jurisdiction within the State in which the component lies and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged either shall be approximately equal or, if they are not approximately equal, shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances require.

(e) The head of any Federal department or agency having administrative jurisdiction over any lands or interests in land within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress is authorized to transfer to the appropriate Secretary jurisdiction over such lands for administration in accordance with the provisions of this Act. Lands acquired by or transferred to the Secretary of Agriculture for the purposes of this Act within or adjacent to a national forest shall upon such acquisition or transfer become national forest lands.

(f) The appropriate Secretary is authorized to accept donations of lands and interests in land, funds, and other property for use in connection with his administration of the national wild and scenic rivers system.

(g)(1) Any owner or owners (hereinafter in this subsection referred to as "owner") of improved property on the date of its acquisition, may retain for themselves and their successors or assigns a right of use and occupancy of the improved property for noncommercial residential purposes for a definite term not to exceed twenty-five years, or in lieu thereof, for a term ending at the death of the owner, or the death of his spouse, or the death of either or both of them. The owner shall elect the term to be reserved. The appropriate Secretary shall pay to the owner the fair market value of the property on the date of such acquisition less the fair market value on such a date of the right retained by the owner.

(2) A right of use and occupancy retained pursuant to this subsection shall be subject to termination whenever the appropriate Secretary is given reasonable cause to find that such use and occupancy is being exercised in a manner which conflicts with the purposes of this Act. In the event of such a finding, the Secretary shall tender to the holder of that right an amount equal to the fair market value of that portion of the right which remains unexpired on the date of termination. Such right of use or occupancy shall terminate by operation of law upon tender of the fair market price.

(3) The term "improved property", as used in this Act, means a detached, one-family dwelling (hereinafter referred to as "dwelling"), the construction of which was begun before January 1, 1967, (except where a different date is specifically provided by law with respect to any particular river), together with so much of the land on which the dwelling is situated, the said land being in the same ownership as the dwelling, as the appropriate Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, together with any structures accessory to the dwelling which are situated on the land so designated.

Restrictions on hydro and water resource development projects on designated rivers.

SECTION 7. (a) The Federal Power Commission [FERC] shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063), as amended (16 U.S.C. 791a et seq.), on or directly affecting any river which is designated in section 3 of this Act as a component of the national wild and scenic rivers system or which is hereafter designated for inclusion in that system, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation of a river as a component of the national wild and scenic rivers system. No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration, or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior or the Secretary of Agriculture, as the case may be, in writing of its intention so to do at least sixty days in advance, and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act. Any license heretofore or hereafter issued by the Federal Power Commission [FERC] affecting the New River of North Carolina shall continue to be effective only for that portion of the river which is not included in the national wild and scenic rivers system pursuant to section 2 of this Act and no project or undertaking so licensed shall be permitted to invade, inundate or otherwise adversely affect such river segment.

Restrictions on hydro and water resource development projects on study rivers.

(b)The Federal Power Commission [FERC] shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, as amended, on or directly affecting any river which is listed in section 5, subsection (a), of this Act, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river might be designated, as determined by the Secretary responsible for its study or approval -- (i) during the ten-year period following enactment of this Act [October 2, 1968] or for a three complete fiscal year period following any Act of Congress designating any river for potential addition to the national wild and scenic rivers system, whichever is later, unless, prior to the expiration of the relevant period, the Secretary of the Interior and where national forest lands are involved, the Secretary of Agriculture, on the basis of study, determine that such river should not be included in the national wild and scenic rivers system and notify the Committees on Interior and Insular Affairs of the United States Congress, in writing, including a copy of the study upon which the determination was made, at least one hundred and eighty days while Congress is in session prior to publishing notice to that effect in the *Federal Register*: *Provided*, That if any Act designating any river or rivers for

potential addition to the national wild and scenic rivers system provides a period for the study or studies which exceeds such three complete fiscal year period the period provided for in such Act shall be substituted for the three complete fiscal year period in the provisions of this clause (i); and (ii) during such interim period from the date a report is due and the time a report is actually submitted to the Congress; and (iii) during such additional period thereafter as, in the case of any river the report for which is submitted to the President and the Congress for inclusion in the national wild and scenic rivers system, is necessary for congressional consideration thereof or, in the case of any river recommended to the Secretary of the Interior for inclusion in the national wild and scenic rivers system under section 2(a)(ii) of this Act, is necessary for the Secretary's consideration thereof, which additional period, however, shall not exceed three years in the first case and one year in the second.

Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a potential wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or diminish the scenic, recreational, and fish and wildlife values present in the potential wild, scenic or recreational river area on the date of designation of a river for study as provided in section 5 of this Act. No department or agency of the United States shall, during the periods hereinbefore specified, recommend authorization of any water resources project on any such river or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture in writing of its intention so to do at least sixty days in advance of doing so and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act.

(c) The Federal Power Commission [FERC] and all other Federal agencies shall, promptly upon enactment of this Act, inform the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, of any proceedings, studies, or other activities within their jurisdiction which are now in progress and which affect or may affect any of the rivers specified in section 5, subsection (a), of this Act. They shall likewise inform him of any such proceedings, studies, or other activities which are hereafter commenced or resumed before they are commenced or resumed.

Grants under Land and Water Conservation Fund Act of 1965.

(d) Nothing in this section with respect to the making of a loan or grant shall apply to grants made under the Land and Water Conservation Fund Act of 1965 (78 Stat. 897; 16 U.S.C. 460l-5 et seq.).

Limitations to entry on public lands.
(a) Designated rivers.

SECTION 8. (a) All public lands within the authorized boundaries of any component of the national wild and scenic rivers system which is designated in section 3 of this Act or which is hereafter designated for inclusion in that system are hereby withdrawn from entry, sale, or other

disposition under the public land laws of the United States. This subsection shall not be construed to limit the authorities granted in section 6(d) or section 14A of this Act.

(b) Study rivers.

(b) All public lands which constitute the bed or bank, or are within one-quarter mile of the bank, of any river which is listed in section 5, subsection (a), of this Act are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States for the periods specified in section 7, subsection (b), of this Act. Notwithstanding the foregoing provisions of this subsection or any other provision of this Act, subject only to valid existing rights, including valid Native selection rights under the Alaska Native Claims Settlement Act, all public lands which constitute the bed or bank, or are within an area extending two miles from the bank of the river channel on both sides of the river segments referred to in paragraphs (77) through (88) of section 5(a) are hereby withdrawn from entry, sale, State selection or other disposition under the public land laws of the Unites States for the periods specified in section 7(b) of this Act.

Limitations on mineral entry and development on Public Lands; designated rivers.

SECTION 9. (a) Nothing in this Act shall affect the applicability of the United States mining and mineral leasing laws within components of the national wild and scenic rivers system except that -- (i) all prospecting, mining operations, and other activities on mining claims which, in the case of a component of the system designated in section 3 of this Act, have not heretofore been perfected or which, in the case of a component hereafter designated pursuant to this Act or any other Act of Congress, are not perfected before its inclusion in the system and all mining operations and other activities under a mineral lease, license, or permit issued or renewed after inclusion of a component in the system shall be subject to such regulations as the Secretary of the Interior or, in the case of national forest lands, the Secretary of Agriculture may prescribe to effectuate the purposes of this Act; (ii) subject to valid existing rights, the perfection of, or issuance of a patent to, any mining claim affecting lands within the system shall confer or convey a right or title only to the mineral deposits and such rights only to the use of the surface and the surface resources as are reasonably required to carrying on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of the Interior, or in the case of national forest lands, by the Secretary of Agriculture; and (iii) subject to valid existing rights, the minerals in Federal lands which are part of the system and constitute the bed or bank or are situated within one-quarter mile of the bank of any river designated a wild river under this Act or any subsequent Act are hereby withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto. Regulations issued pursuant to paragraphs (i) and (ii) of this subsection shall, among other things, provide safeguards against pollution of the river involved and unnecessary impairment of the scenery within the component in question.

Study rivers.

(b) The minerals in any Federal lands which constitute the bed or bank or are situated within one-quarter mile of the bank of any river which is listed in section 5, subsection (a) of this Act are hereby withdrawn from all forms of appropriation under the mining laws during the periods specified in section 7, subsection (b) of this Act. Nothing contained in this subsection shall be

construed to forbid prospecting or the issuance of leases, licenses, and permits under the mineral leasing laws subject to such conditions as the Secretary of the Interior and, in the case of national forest lands, the Secretary of Agriculture find appropriate to safeguard the area in the event it is subsequently included in the system. Notwithstanding the foregoing provisions of this subsection or any other provision of this Act, all public lands which constitute the bed or bank, or are within an area extending two miles from the bank of the river channel on both sides of the river segments referred to in paragraphs (77) through (88) of section 5(a), are hereby withdrawn, subject to valid existing rights, from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto, during the periods specified in section 7(b) of this Act.

Management direction.

SECTION 10. (a) Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its aesthetic, scenic, historic, archaeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

(b) Any portion of a component of the national wild and scenic rivers system that is within the national wilderness preservation system, as established by or pursuant to the Act of September 3, 1964 (78 Stat. 890; 16 U.S.C., ch. 23),[39] shall be subject to the provisions of both the Wilderness Act and this Act with respect to preservation of such river and its immediate environment, and in case of conflict between the provisions of these Acts the more restrictive provisions shall apply.

(c) Any component of the national wild and scenic rivers system that is administered by the Secretary of the Interior through the National Park Service shall become a part of the national park system, and any such component that is administered by the Secretary through the Fish and Wildlife Service shall become a part of the national wildlife refuge system. The lands involved shall be subject to the provisions of this Act and the Acts under which the national park system or national wildlife refuge system, as the case may be, is administered, and in case of conflict between the provisions of these Acts, the more restrictive provisions shall apply. The Secretary of the Interior, in his administration of any component of the national wild and scenic rivers system, may utilize such general statutory authorities relating to areas of the national park system and such general statutory authorities otherwise available to him for recreation and preservation purposes and for the conservation and management of natural resources as he deems appropriate to carry out the purposes of this Act.

(d) The Secretary of Agriculture, in his administration of any component of the national wild and scenic rivers system area, may utilize the general statutory authorities relating to the national forests in such manner as he deems appropriate to carry out the purposes of this Act.

(e) The Federal agency charged with the administration of any component of the national wild and scenic rivers system may enter into written cooperative agreements with the Governor of a State, the head of any State agency, or the appropriate official of a political subdivision of a State

for State or local governmental participation in the administration of the component. The States and their political subdivisions shall be encouraged to cooperate in the planning and administration of components of the system which include or adjoin State-or county-owned lands.

Federal assistance to others; cooperation; use of volunteers.

SECTION 11. (a) The Secretary of the Interior shall encourage and assist the States to consider, in formulating and carrying out their comprehensive statewide outdoor recreation plans and proposals for financing assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act of 1965 (78 Stat. 897), needs and opportunities for establishing State and local wild, scenic and recreational river areas.

(b)(1) The Secretary of the Interior, the Secretary of Agriculture, or the head of any other Federal agency, shall assist, advise, and cooperate with States or their political subdivisions, landowners, private organizations, or individuals to plan, protect, and manage river resources. Such assistance, advice and cooperation may be through written agreements or otherwise. This authority applies within or outside a federally administered area and applies to rivers which are components of the national wild and scenic rivers system and to other rivers. Any agreement under this subsection may include provisions for limited financial or other assistance to encourage participation in the acquisition, protection, and management of river resources.

(2) Wherever appropriate in furtherance of this Act, the Secretary of Agriculture and the Secretary of the Interior are authorized and encouraged to utilize the following:

(A) For activities on federally owned land, the Volunteers in the Parks Act of 1969 (16 U.S.C. 18g-j) and the Volunteers in the Forest Act of 1972 (16 U.S.C. 558a-558d).

(B) For activities on all other lands, section 6 of the Land and Water Conservation Fund Act of 1965 (relating to the development of statewide comprehensive outdoor recreation plans).

(3) For purposes of this subsection, the appropriate Secretary or the head of any Federal agency may utilize and make available Federal facilities, equipment, tools and technical assistance to volunteers and volunteer organizations, subject to such limitations and restrictions as the appropriate Secretary or the head of any Federal agency deems necessary or desirable.

(4) No permit or other authorization provided for under provision of any other Federal law shall be conditioned on the existence of any agreement provided for in this section.

Management policies

SECTION 12. (a) The Secretary of the Interior, the Secretary of Agriculture, and the head of any other Federal department or agency having jurisdiction over any lands which include, border upon, or are adjacent to, any river included within the National Wild and Scenic Rivers System or under consideration for such inclusion, in accordance with section 2(a)(ii), 3(a), or 5(a), shall take such action respecting management policies, regulations, contracts, plans, affecting such lands, following November 10, 1978, as may be necessary to protect such rivers in accordance

with the purposes of this Act. Such Secretary or other department or agency head shall, where appropriate, enter into written cooperative agreements with the appropriate State or local official for the planning, administration, and management of Federal lands which are within the boundaries of any rivers for which approval has been granted under section 2(a)(ii). Particular attention shall be given to scheduled timber harvesting, road construction, and similar activities which might be contrary to the purposes of this Act.

(b) Nothing in this section shall be construed to abrogate any existing rights, privileges, or contracts affecting Federal lands held by any private party without the consent of said party.

(c) The head of any agency administering a component of the national wild and scenic rivers system shall cooperate with the Administrator, Environmental Protection Agency and with the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river.

Reservation of State and Federal jurisdiction and responsibilities; access to and across wild and scenic rivers.

SECTION 13. (a) Nothing in this Act shall affect the jurisdiction or responsibilities of the States with respect to fish and wildlife. Hunting and fishing shall be permitted on lands and waters administered as parts of the system under applicable State and Federal laws and regulations unless, in the case of hunting, those lands or waters are within a national park or monument. The administering Secretary may, however, designate zones where, and establish periods when, no hunting is permitted for reasons of public safety, administration, or public use and enjoyment and shall issue appropriate regulations after consultation with the wildlife agency of the State or States affected.

(b) The jurisdiction of the States and the United States over waters of any stream included in the national wild, scenic or recreational river area shall be determined by established principles of law. Under the provisions of this Act, any taking by the United States of a water right which is vested under either State or Federal law at the time such river is included in the national wild and scenic rivers system shall entitle the owner thereof to just compensation. Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.

(c) Designation of any stream or portion thereof as a national wild, scenic or recreational river area shall not be construed as a reservation of the waters of such streams for purposes other than those specified in this Act, or in quantities greater than necessary to accomplish these purposes.
(d) The jurisdiction of the States over waters of any stream included in a national wild, scenic or recreational river area shall be unaffected by this Act to the extent that such jurisdiction may be exercised without impairing the purposes of this Act or its administration.

(e) Nothing contained in this Act shall be construed to alter, amend, repeal, interpret, modify, or be in conflict with any interstate compact made by any States which contain any portion of the national wild and scenic rivers system.

(f) Nothing in this Act shall affect existing rights of any State, including the right of access, with respect to the beds of navigable streams, tributaries, or rivers (or segments thereof) located in a national wild, scenic or recreational river area.

(g) The Secretary of the Interior or the Secretary of Agriculture, as the case may be, may grant easements and rights-of-way upon, over, under, across, or through any component of the national wild and scenic rivers system in accordance with the laws applicable to the national park system and the national forest system, respectively: *Provided*, That any conditions precedent to granting such easements and rights-of-way shall be related to the policy and purpose of this Act.

Land donations.

SECTION 14. The claim and allowance of the value of an easement as a charitable contribution under section 170 of title 26, United States Code, or as a gift under section 2522 of said title shall constitute an agreement by the donor on behalf of himself, his heirs, and assigns that, if the terms of the instrument creating the easement are violated, the donee or the United States may acquire the servient estate at its fair market value as of the time the easement was donated minus the value of the easement claimed and allowed as a charitable contribution or gift.

Lease of Federal lands.

SECTION 14A. (a) Where appropriate in the discretion of the Secretary, he may lease federally owned land (or any interest therein) which is within the boundaries of any component of the national wild and scenic rivers system and which has been acquired by the Secretary under this Act. Such lease shall be subject to such restrictive covenants as may be necessary to carry out the purposes of this Act.

(b) Any land to be leased by the Secretary under this section shall be offered first for such lease to the person who owned such land immediately before its acquisition by the United States.

Exceptions for Alaska.

SECTION 15. Notwithstanding any other provision to the contrary in sections 3 and 9 of this Act, with respect to components of the national wild and scenic rivers system in Alaska designated by paragraphs (38) through (50) of section 3(a) of this Act -- (1) the boundary of each such river shall include an average of not more than six hundred and forty acres per mile on both sides of the river. Such boundary shall not include any lands owned by the State or a political subdivision of the State nor shall such boundary extend around any private lands adjoining the river in such manner as to surround or effectively surround such private lands; and (2) the withdrawal made by paragraph (iii) of section 9(a) shall apply to the minerals in Federal lands which constitute the bed or bank or are situated within one-half mile of the bank of any river designated a wild river by the Alaska National Interest Lands Conservation Act.

Definitions.

SECTION 16. As used in this Act, the term –

(a) "River" means a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes.

(b) "Free-flowing", as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic rivers system shall not automatically bar its consideration for such inclusion: *Provided*, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system.

(c) "Scenic easement" means the right to control the use of land (including the air space above such land) within the authorized boundaries of a component of the wild and scenic rivers system, for the purpose of protecting the natural qualities of a designated wild, scenic or recreational river area, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement. For any designated wild and scenic river, the appropriate Secretary shall treat the acquisition of fee title with the reservation of regular existing uses to the owner as a scenic easement for purposes of this Act. Such an acquisition shall not constitute fee title ownership for purposes of section 6(b).

Authorization of appropriations for land acquisition.

SECTION 17. There are hereby authorized to be appropriated, including such sums as have heretofore been appropriated, the following amounts for land acquisition for each of the rivers described in section 3(a) of this Act:

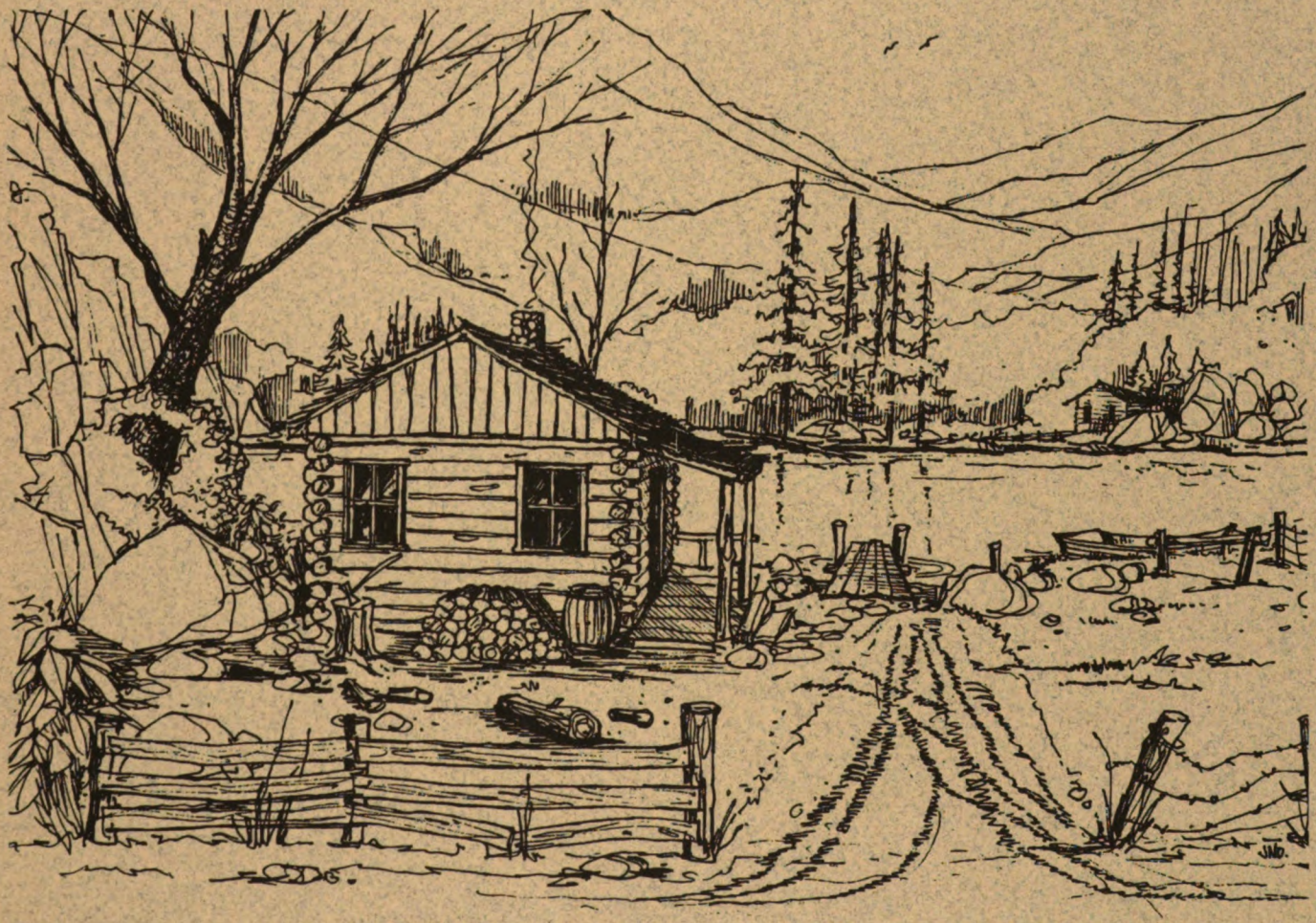
- Clearwater, Middle Fork, Idaho, $2,909,800;
- Eleven Point, Missouri, $10,407,000;
- Feather, Middle Fork, California, $3,935,700;
- Rio Grande, New Mexico, $253,000;
- Rogue, Oregon, $15,147,000
- St. Croix, Minnesota and Wisconsin, $21,769,000;
- Salmon, Middle Fork Idaho, $1,837,000; and
- Wolf Wisconsin, $142,150.

Laws Amending or Related to the Wild and Scenic Rivers Act.

- 92-560
- 93-621
- 94-199
- 94-486
- 95-87
- 95-625
- 96-87
- 96-312
- 96-487
- 99-590
- 99-663
- 100-33
- 100-150
- 100-412
- 100-552
- 100-534
- 100-557
- 100-605
- 100-633
- 100-677
- 101-175
- 101-357
- 101-612
- 101-628
- 102-50
- 102-220
- 102-249
- 102-271
- 102-275
- 102-301
- 102-432
- 102-460
- 102-536
- 103-162
- 103-170
- 103-242
- 103-313

Forest Service Directives

Forest Service Handbook 1909.12, Chapter 8, Wild and Scenic River Evaluation
Forest Service Manual 1924, Wild and Scenic River Evaluation
Forest Service Manual 2354, Recreation River Management



Appendix G – Forest Service Directives Related to Wild and Scenic River Studies Table of Contents

FSH 1909.12 - LAND AND RESOURCE MANAGEMENT PLANNING HANDBOOK
WO AMENDMENT 1909.12-92-1
EFFECTIVE 8/3/92

CHAPTER 8 - WILD AND SCENIC RIVER EVALUATION

This chapter describes the process for identifying and evaluating potential additions to the National Wild and Scenic Rivers System on National Forest System lands. It also identifies procedures for obtaining public review and comment on rivers proposed for inclusion in the System.

8.01 - Authority. The purpose and authority for study of wild and scenic rivers are in the Wild and Scenic Rivers Act of October 1, 1968, as amended. Revised USDA-USDI Guidelines for Eligibility, Classification, and Management of River Areas dated September 7, 1982, supplements the Act. The text of the Act and guidelines are set forth in chapter 9. The Nationwide Rivers Inventory (NRI) published January, 1982, by the National Park Service identifies potential wild and scenic rivers. Further requirements for evaluation and designation of wild and scenic rivers are found in FSM 1924.

8.1 - IDENTIFICATION AND DESIGNATION OF RIVERS FOR WILD AND SCENIC RIVER STATUS. Rivers can be designated as part of the National Wild and Scenic Rivers System (as specified in Section 2(a) of the Act) through:

1. An Act of Congress. Designated rivers are managed by one or more agencies of the Federal government - Forest Service, Fish and Wildlife Service, National Park Service, etc. - depending on which agencies manage the adjacent lands.

2. An Act of the Legislature of the State or States through which a river flows, and subsequent applications by the Governor(s) of the concerned State(s) to the Secretary of the Interior.

8.11 - Identification of Study Rivers. Rivers are identified for study for potential inclusion in the System by several means:

1. Federal statute that mandates Federal agencies to study a river pursuant to Section 5(a) of the Act.

2. Identification for study by the Secretary of Agriculture or the Secretary of the Interior pursuant to Section 5(d) of the Act.

3. The Nationwide River Inventory (NRI) developed by the National Park Service, U.S. Department of the Interior. Each river identified in this inventory that crosses National Forest System lands should be studied as part of the forest land management planning process.

4. The land management planning process.

Consideration of other rivers is particularly important where the NRI is incomplete, as in Montana, Alaska, and the Pacific Northwest. Also give consideration to rivers identified in the Pacific Northwest Rivers Study, in State river assessments, or by other Federal or State agencies or by private interests.

8.12 - Interim Management of Study Rivers. Management prescriptions for river corridors identified in the National River Inventory, or otherwise identified for study, should provide protection in the following ways:

1. To the extent the Forest Service is authorized under law to control stream impoundments and diversions, the free flowing characteristics of the identified river cannot be modified.

2. Outstandingly remarkable values of the identified river area must be protected and, to the extent practicable, enhanced.

3. Management and development of the identified river and its corridor cannot be modified to the degree that eligibility or classification would be affected (i.e., classification cannot be changed from wild to scenic or scenic to recreational).

Specific management guidance for each of the river classifications can be found in the revised USDA - USDI Guidelines for Eligibility, Classification, and Management of River Areas (ch. 9), and in the additional standards for study river assessment and management in section 8.2 of this chapter. These management guidelines should be followed, to the extent of Forest Service authority, for all identified study rivers.

The protection requirements specified above must be documented in the forest plan prescriptions and continued until a decision is made as to the future use of the river and adjacent lands. Congressionally authorized rivers must be protected, as specified in Section 12(a) of the Wild and Scenic Rivers Act, until action is taken by the Congress.

The protection may be modified or discontinued for NRI rivers or other rivers identified in the forest planning process in the following cases:

1. For the entire river or segment(s) of the river that are determined to be ineligible for the Wild and Scenic Rivers System (section 8.32b).

2. For the entire river, if determined to be unsuitable for the Wild and Scenic Rivers System, following the appropriate review process (section 8.4).

3. For unsuitable segment(s) of a river recommended for Wild and Scenic River designation after the Record of Decision is signed by the Secretary of Agriculture.

4. Following Congressional action for suitable segments of the river that are not included in the Wild and Scenic Rivers System.

8.13 - Establishing Study River Boundaries. As a minimum, a river study area must cover an area extending the length of the river segment and one quarter mile in width from each bank of the river. Boundaries may include adjacent areas needed to protect the resources or facilitate management of the river area. This is particularly true of those resources identified as outstandingly remarkable. An example would be to extend the study river corridor to the top of the ridge, to the edge of the flood plain, or to include the confluence area of a tributary stream. Another example would be to establish the starting or ending boundary of the study river at an identifiable feature such as a bridge, recreation site, takeout site for floaters, or significant natural feature such as a lake or waterfall.

8.14 - Wild and Scenic River Studies Included in the Land Management Planning Process. Forest planning must address all rivers designated by Congress for study, in the Nationwide River Inventory, or identified as a potential wild and scenic river by a National Forest, wholly or partially on National Forest System lands. Treatment may vary, but except as noted in this section, the planning teams should evaluate each river to verify that it meets the eligibility criteria specified in sections 1(b) and 2(b) of the Wild and Scenic Rivers Act. Document the finding of eligibility or noneligibility and the river's potential classification in the forest plan.

Beyond this point, there is some latitude in treatment of eligible rivers. The preferred process is to proceed with determining suitability by completing a river study in the draft forest plan. An alternative is to delay the suitability determination on eligible rivers until a subsequent separate study is carried out. If this latter alternative is used, the forest plan must provide for protection of the river area until a decision is made as to the future use of the river and adjacent lands. Unless the study process would be unduly delayed, subsequent study of eligible rivers may be coordinated with a general revision of the forest plan.

Where an identified river touches only a small part of a National Forest, the lead responsibility for studying the river should rest with either another Federal agency or the State depending on who has jurisdiction over the largest proportion of the lands involved. In this case, use the following approach:

1. The National Forest should contact the other Federal agency to determine if or when it plans to study the river as a part of its land management planning process. The National Forest may invite the agency or State to participate in a joint study for the river.

2. The Forest Service and other Federal or State agencies should prepare a joint river study report, either as part of the forest plan/EIS or as a separate study report.

3. If the responsible agency or State declines to study the river or if its study schedule does not coincide with forest planning, develop prescriptions in the forest plan that provide protection for the river and adjacent lands of the river segment(s) on National Forest System lands.

4. Where the river segment that extends into the National Forest would make a viable addition to the National Wild and Scenic Rivers System without the remainder of the river, the National Forest should proceed to assess the segment's suitability on its own merits.

8.2 - ASSESSMENT OF STUDY RIVER. The assessment of a river's potential as a Wild and Scenic River should follow a three-step process:

1. Determination of eligibility.

2. Potential classification (wild, scenic, or recreational).

3. Determination of suitability.

The following guidelines set forth standards for making these determinations on study rivers by classification (wild, scenic, or recreational). These guidelines should be applied to the extent of the Forest Service's jurisdiction over Federal lands, Federal scenic or access easements, and other interests. They do not apply to privately owned lands. Use these guidelines in conjunction with the USDA-USDI Interagency Guidelines (47 Fed. Reg. 39454). As noted in section 8.12, these guidelines also govern interim management of study rivers and designated 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 1/4 mile of the river. 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 1/4 mile of the river bank. 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 is generally 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 practiced. 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 the 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.

8.21 - Eligibility. The eligibility of a river for the National System is determined by applying the criteria in section 1(b) and 2(b) of the Wild and Scenic Rivers Act as interpreted by the USDA-USDI Guidelines. To be eligible for inclusion, a river must be free-flowing and, with its adjacent land area, must possess one or more "outstandingly remarkable" values.

8.21a - Segments. To determine eligibility and the possible later determination of river classification, an identified study river should first be divided into segments. In defining segment limits, consider such factors as:

1. Obvious changes in land status or ownership.

2. Changes in river character such as the presence of dams and reservoirs.

3. Significant changes in development.

4. Or, the presence of important resource values.

There is no standard established for segment length. A river segment should be long enough to enable the protection of any outstandingly remarkable values, if the area were managed as a wild, scenic, or recreational river.

8.21b - Free-flowing. The Wild and Scenic Rivers Act defines "free-flowing" as existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence of low dams, diversion works, or other minor structures at the time any river is proposed for inclusion in the Wild and Scenic Rivers System does not automatically disqualify it for designation, but future construction of such structures is not allowed. The Guidelines state that, "The fact that a river segment may flow between large impoundments will not necessarily preclude its designation.

Such segments may qualify if conditions within the segment meet the eligibility criteria."

8.21c - Outstandingly Remarkable Values. For a river to be eligible for designation to the National System, one or more of the following values within the river area must be outstandingly remarkable:

1. Scenic.
2. Recreational.
3. Geological.
4. Fish and wildlife.
5. Historical.
6. Cultural.
7. Other values, including ecological values.

The determination that a river area contains "outstandingly remarkable" values is a professional judgment on the part of the study team.

There is no known way to write criteria to mechanically or automatically determine that certain values are so rare or unique as to make them outstandingly remarkable. Dictionary definitions of the two words would indicate that such a value would be one that is a conspicuous example of a value from among a number of similar values that are themselves uncommon or extraordinary. One possible procedure would be to list all of the special values of the area and then to assess whether they are very rare or unique within the State or Nation, or are superior examples of values that may be found elsewhere. If so, they could be deemed to be outstandingly remarkable. Only one such value is needed for eligibility.

Although several rivers on a National Forest may possess values which are similar to each other, each river's values may be outstandingly remarkable when considered in the context of the State or Nation.

Another approach is appropriate for cases where a value such as an anadromous fishery would be considered common in a physiographic section or region and therefore, not sufficient to establish eligibility. The Nationwide Rivers Inventory recognized the desirability of representative wild and scenic rivers in each physiographic section of the Nation. Therefore, the planning team should identify one or more rivers that best represents the values or combination of values in that geographic area and assess its suitability for designation.

8.21d - Flows. There are no specific requirements concerning minimum flows for an eligible segment. The Wild and Scenic Rivers Act provides definitions in Section 16(a) and (b). Flows are considered sufficient for eligibility if they sustain or complement the outstandingly remarkable values for which the river would be designated.

8.21e - Ineligible Rivers. Section 8.32 provides direction on how to conclude and document studies where the study river is found to be ineligible for inclusion in the system.

8.22 - Classification. The potential classification of a river is based on the condition of the river and the adjacent lands as they exist at the time of the study. The Act specifies three classification categories for eligible rivers: wild rivers, scenic rivers, and recreational rivers. See the standards in section 8.2 and the Wild and Scenic River Act (ch. 9) for definitions of each category. The interagency guidelines provide further definition of the criteria for classification of each segment.

The standards in section 8.2 provide a description of developments and activities that are permitted, restricted, or prohibited within the designated river corridor for each of the three classifications.

8.23 - Suitability. The final step in the river assessment is the determination of suitability. This step provides the basis for the decision to recommend designation or nondesignation of the river. It is advantageous to carry the river assessment through the suitability determination and make the decision in the forest plan. If a decision is deferred on those rivers where the Forest Service has primary responsibility, the forest plan must establish a special management area requiring future evaluation. The forest plan must document protection to be provided pending a decision on suitability and, when necessary, subsequent action by the Congress. In order to provide realistic protection prescriptions, the forest plan must establish the probable classification; that is, wild, scenic, recreational, or a combination thereof.

Some of the factors to consider in the determination of suitability are:

1. The characteristics which do or do not make the area a worthy addition to the National System.

2. The current status of land ownership and use in the area, including the amount of private land involved and the uses on such land.

3. The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the Wild and Scenic Rivers System, and the values which could be foreclosed or diminished if the area is not protected as part of the System.

4. Public, State, and local governmental interest in designation of the river, including the extent to which the administration of the river, including the costs thereof, may be shared by State and local agencies.

5. The estimated cost of acquiring necessary lands and interests in land and of administering the area if it is added to the System.

6. Other issues and concerns identified during the planning process.

If a river is found to be eligible, its suitability is considered in the analysis of alternatives in the environmental impact statement accompanying the forest plan or in a separate study report.

8.3 - THE STUDY REPORT.

A detailed study report must be prepared for all rivers designated for study pursuant to Section 5(a) of the Wild and Scenic Rivers Act, and for all other rivers identified by the Forest Service as eligible for inclusion in the National System. The purpose of the study is to document the Forest Service's conclusions regarding the suitability of such rivers for designation as components of the System.

When the river study is accomplished during the forest planning process, the report should be included as an integral part of the forest plan and EIS, usually as an appendix to either the plan or the EIS. The report should be self-contained so that it can be extracted from the forest plan and eventually forwarded to the President and Congress as a separate document accompanying the Forest Service's recommendations concerning Congressionally designated study rivers and other rivers found to be suitable.

When the river study is not accomplished during the forest planning process, or when Congress mandates a study with due dates not compatible with the forest planning process, a separate study report and environmental document pursuant to NEPA must be prepared. Where a National Forest contains more than one river designated by Congress for study or otherwise identified as eligible, the forest may combine study of such rivers into a comprehensive, forest-wide study report as long as this approach meets Congressionally mandated deadlines.

8.31 - Environmental Analysis and Documentation. To meet the requirements of the National Environmental Policy Act, implementing Council on Environmental Quality regulations, FSM 1950, and FSH 1909.15, the river study report should be accompanied by or combined with an environmental impact statement (EIS) or environmental assessment (EA), as appropriate. Where a study is conducted in conjunction with the forest planning process, the environmental impact statement accompanying the forest plan should address the proposed action pertaining to wild and scenic river designation.

Study reports prepared as separate documents should be accompanied by or combined with an EIS or EA. Follow the procedures in FSH 1909.15. Study reports covering more than one river, such as a forest-wide study report, should follow the same NEPA requirements as study reports for individual rivers.

8.32 - Ineligible Rivers.

8.32a - Legislatively Mandated Studies. If a legislatively mandated study river is found ineligible, the study report should describe the basis for the ineligibility determination. The report should then be submitted to the Congress in accord with Section 7(b) of the Wild and Scenic Rivers Act, and the Secretary of Agriculture shall publish a notice in the Federal Register 180 days after the Congressional notification that such a determination has been made. This notice should also include a reference to termination of related NEPA analysis actions, thereby concurrently terminating activities for which a notice of intent to prepare an environmental impact statement was earlier published.

8.32b - All Other Studies. Studies of rivers other than those mandated by Congress may be discontinued upon a finding of ineligibility in the forest planning process or a subsequent wild and scenic river study. In forest planning, the eligibility assessment documentation will normally be in an appendix to either the plan or the EIS. In other cases, it should be documented in the planning records and an appropriate notification should be sent to interested parties.

8.33 - Contents of the Study Report. The Wild and Scenic Rivers Act, Sections 4(a) and 5(c), (ch. 9), require each study report that is submitted to the Congress to show, among other things, the following:

1. The characteristics that do or do not make the area a worthy addition to the System.

2. The current status of land ownership and use in the area.

3. The reasonably foreseeable potential uses of the land and water that would be enhanced, foreclosed, or curtailed if the area were included in the System.

4. The federal agency that will administer the area, should it be added to the System.

5. The extent to which the agency proposes that administration of the river, including the costs thereof, be shared by State and local agencies.

6. The estimated cost to the United States of acquiring necessary lands and interests in land and of administering the area, should it be added to the System.

7. A determination of the degree to which the State or its political subdivisions might participate in the preservation and administration of the river, should it be proposed for inclusion in the System.

Study reports prepared for rivers which the Forest Service has identified as eligible for inclusion in the System should address the same factors as those required for Congressionally mandated studies.

The USDA-USDI Guidelines describe the way in which the required information should be presented in the study report. The following must be included in the study report/EIS.

8.33a - Summary. The first page of the report should contain a brief summary of the study and the findings and recommendations.

8.33b - Table of Contents. Include a table of contents formatted as follows. The approximate number of pages listed for each chapter is a guide to maintain the appropriate size and balance of the report.

	Content	Approximate Pages
Summary		1
Table of Contents		1
Chapter I	Purpose and Need for Action	1
Chapter II	Description of Area	5
Chapter III	Findings of Eligibility and Classification	3
Chapter IV	Alternatives Including the Proposed Action	10
Chapter V	Environmental Consequences	5
Chapter VI	Distribution of the Report	2
Chapter VII	List of Preparers	2
Appendix		5
	Total Pages	35

8.33c - Purpose and Need for Action - Chapter I. State the reasons for preparation of the study report and EIS. Indicate whether the river study was conducted in response to either Congressional direction, the Nationwide Rivers Inventory, or because the river was identified in the regional or forest land management planning process. If other circumstances or actions resulted in nomination of the river as a potential candidate for the Wild and Scenic Rivers System, they should be described.

8.33d - Description of Area - Chapter II. This chapter is an overall description of the river corridor and the surrounding area. Follow the requirements of 40 CFR 1502.15 for description of the "Affected Environment" in this chapter. Provide the

status of land ownership and use in the area, a brief description of the regional setting, and clear and detailed maps and illustrations that show the area covered by the report. Describe as specifically as possible potential developments such as water resource projects, roads, or private land use conversions.

8.33e - Findings of Eligibility and Classification - Chapter III. Summarize the eligibility study to provide a clear and concise description of the river and its immediate environment. This section should focus on the free-flowing conditions and the outstandingly remarkable values that characterize the river. Emphasize the unique, special, and unusual nature of the river's values. It is not necessaryto discuss each of the values listed in Section l(b) of the Act separately if they are not outstandingly remarkable. The descriptions should be nontechnical and graphic but not effusive. Quantitative terms are preferred. Do not use systems that attempt comparisons to qualitative terms such as high, medium, or low.

The description of the river values should enable persons who have never seen the river to determine that the river has outstanding values worthy of protection.

Potential classification should be based on the values and situation existing at the present time. It should not anticipate expected development or other changes along the river corridor; this is an aspect of evaluating suitability which is documented in chapters IV & V. The criteria listed in the USDA-USDI Guidelines should be used to classify each segment of the river.

8.33f - Alternatives Including the Proposed Action - Chapter IV. The suitability of the river for designation must be evaluated in a series of alternative actions. Alternatives must reflect pertinent issues, conditions, and needs. An analysis of the existing situation provides the foundation for the proposal and alternatives. The impacts of continuing present trends and uses should be identified in order to formulate realistic alternatives.

The CEQ regulations (40 CFR 1502.14) and FSH 1909.15 define the type and range of alternatives that must be considered. These will vary depending on the problems, opportunities, and issues associated with each specific river. However, every study report must present an array of alternatives that encompass all reasonable proposals for use of the river area.

Generally, study reports will include the following types of alternatives:

1. National designation of all eligible segments of the river.

2. Protection of eligible segments by means other than national designation. (State designation and protection.)

3. Nondesignation of all or portions of eligible segments; this alternative(s) could include uses that are incompatible with national designation or uses that could change the values that caused the segment to be found eligible.

4. Designation of eligible segments with alternative classifications. This could allow construction or other uses that alter the current preliminary classification but not the eligibility values.

5. No action. Maintain current management. No specific protection would be provided for potential wild and scenic river corridors.

8.33g - Environmental Consequences - Chapter V. This chapter must include the discussions detailed in 40 CFR 1502.16 and FSH 1909.15. Drawing upon material in chapter II, this chapter of the study report should also include a tabular presentation, by alternative, of the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed. State the general reasons and principles for acquisition of land or interest in land as the basis for disclosure of consequences. Include an estimate of the kinds and amounts of public use that can be tolerated without long-term or irreversible impacts on the values of the river area. Include general management measures needed to meet the objectives of each alternative. If the objective is to protect the outstandingly remarkable values by means other than designation, describe the proposed measures or actions which would be needed. These principles and measures will provide the basis for a management plan should Congressional designation of the river corridor occur.

8.33h - Remaining Chapters. For preparation of chapters VI and VII and the appendices, follow the guidance in chapter 40 of FSH 1909.15.

8.4 - THE REVIEW AND APPROVAL PROCESS. The procedure for review and approval of wild and scenic river study reports and accompanying environmental impact statements varies depending on whether the study report was required by Congress pursuant to Section 5(a) of the Wild and Scenic Rivers Act or was initiated by the Forest Service. The review procedure also varies according to whether the studies are conducted as a part of the forest planning process or conducted separately.

For studies in which the Forest Service recommends designation of a river, follow the procedures in sections 8.41 or 8.42 as appropriated.

Forest Service initiated river study reports which do not recommend any river segments for inclusion in the Wild and Scenic Rivers System need not follow the full procedure set forth below. In such cases, the study report and environmental document should be transmitted to the Washington Office for review, as indicated.

Unless the Washington Office requests changes in the recommendations, the study report and environmental document should then be printed and circulated to the public. No further action is required.

8.41 - Proposals Resulting from Forest Planning. The review and approval of wild and scenic river recommendations resulting from or developed in conjunction with the forest plan is depicted in exhibit 01. Specific instructions are as follows:

1. Prepare, review, and file the draft forest plan and accompanying EIS as required by FSM 1922.3. Information on rivers that were evaluated for potential wild and scenic river designation should be included in the draft forest planning documents and reviewed concurrently by the public. If this information is not adequately reviewed along with the forest plan and EIS, it is necessary to prepare a separate draft study report and legislative EIS for each affected river and circulate it for public review. This is particularly true where a river was determined to be eligible for wild and scenic river status, but was recommended for further study to complete the suitability analysis.

2. Prepare the final forest plan and EIS following analysis of the comments received on the draft. File the final with the Environmental Protection Agency as an administrative EIS. Information on rivers proposed for wild and scenic river designation or for further study to determine their suitability can be extracted from the forest plan and EIS and incorporated in a study report/legislative EIS (as described in the previous paragraph). The wild and scenic river proposal in both EIS's should be identified as a "preliminary administrative recommendation for wild and scenic river designation." It should be qualified by stating that:
This recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States. The Congress has reserved the authority to make final decisions on designation of rivers as part of the National Wild and Scenic Rivers System.

3. With these qualifications in the final documents, the forest plan may be implemented 45 days after the Regional Forester signs the Record of Decision or 30 days after publication of the notice of availability of the final EIS and Record of Decision in the Federal Register, whichever period is longer. Implementation of the forest plan is not dependent on final resolution of the wild and scenic river proposal.

4. When a final forest plan includes the determination that a river is suitable and recommended for designation, the Regional Office shall prepare a summary sheet and location map (exhibits 02 and 03) and submits these documents to the Washington Office, Land Management Planning. These documents are used as background information for the Department, Office of Management and Budget, Congressional members and staffs, etc. This information is particularly important

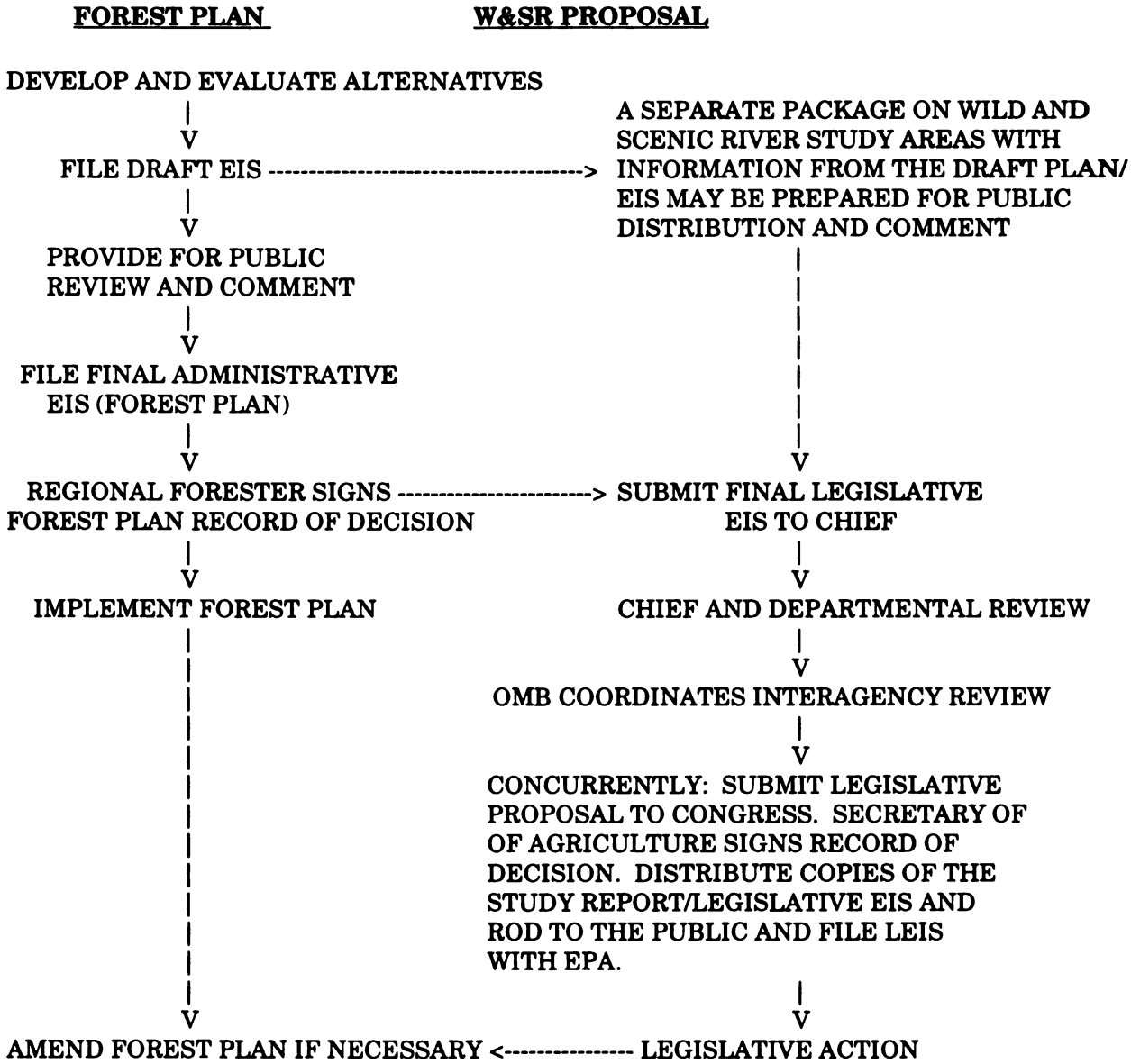
where legislative action regarding designation of a river precedes completion of the river study report for it serves as a basis for testimony at Congressional hearings.

5. The wild and scenic river study report/legislative EIS is submitted to the Washington Office, Land Management Planning for review and administrative processing. To the extent feasible, it should summarize and incorporate by reference, relevant information contained in the forest plan and EIS. Review and approval of the study report/legislative EIS follows the same steps described in section 8.42 for special studies.

6. Following Congressional action, the forest plan may require amendment if the action taken by Congress is different from that in the forest plan.

8.41 - Exhibit 01

OVERVIEW OF PROCESS FOR HANDLING WILD AND SCENIC RIVER PROPOSALS RESULTING FROM FOREST PLANNING



8.41 - Exhibit 02

KINGS RIVER
PROPOSED WILD AND SCENIC RIVER

State of California Sequoia & Sierra NFs
Fresno County

The Kings River was studied for potential Wild and Scenic River designation by the Sequoia National Forest in conjunction with their Forest planning process. The draft forest plan and environmental impact statement were completed in December 1985. The Kings River is identified as a potential Wild and Scenic River in the National Rivers Inventory published by the National Park Service in 1982.

Location: (Study Area and NRI) From Pine Flat Reservoir upstream to the confluence of the Middle Fork and South Fork of the Kings River.

Segment 1 -- Pine Flat Reservoir to Garlic Meadow Creek (13 miles).
Segment 2 -- Garlic Meadow Creek to confluence of Middle and South Forks of the Kings River (5.0 miles).

Recommended for Designation:

Segment 2 -- From Garlic Meadow Creek to the confluence of Middle and South Forks of the Kings River (5.0 miles).
Segment 1 -- A recommendation was deferred until a detailed study of the proposed Rogers Crossing dam is completed.

River Mileage:

Study:	18.0 miles
Eligible:	18.0 miles
Forest Plan:	5.0 miles recommended for designation

Outstanding Values: Totally freeflowing -- no impoundments or diversions. Outstanding values include geology, scenic, fisheries, recreation, and historic and prehistoric sites. The forest plan provides this information only for Segment 2, however, many of the same values exist in Segment 1.

The Kings River has premium whitewater and several cataracts. Along with the Middle Fork Kings and South Fork Kings, it is one of the largest rivers on the western slopes of the Sierra. Numerous Indian village sites and remnants of one of the longest logging flumes in the world are located along the river.

8.41 - Exhibit 02--Continued

Proposed Classification:

Segment 2 -- Wild
Segment 1 -- Classification not documented in the draft forest plan.

Landownership: The river corridor (Segments 1 & 2) is entirely within the Sequoia NF (south side of river) and the Sierra NF (north side of river) boundaries. There is one parcel of land near Pine Flat Reservoir (Segment 1) owned by Pacific Gas and Electric, otherwise entirely public ownership.

Mining Activities: There are active tungsten mining claims along the north side of the river, but production is small in quantity.

Water Resource Developments: The entire river is under Federal power withdrawals. The Kings River Conservation District (KRCD) has proposed a dam and reservoir at Rodgers Crossing. A detailed feasibility study has been conducted by the Bechtel Corporation for the KRCD. Also, a small hydropower project has been proposed near the confluence of Tenmile Creek and the Kings (Segment 2). Under the proposal, water from Tenmile Creek would generate about 5 megawatts of power.

Transportation Facilities: The lower half of the river (Segment 1) is accessible by the paved Balch Camp Road, Forest Service unimproved roads, one special use mining access road, and the Kings River Trail. The upper portion of the river (Segment 2) is inaccessible except for a Forest Service trail which runs down to the river from Yucca Point (Sequoia side).

Recreation Activities: Excellent river rafting occurs between Garnet Dike and Keller's Ranch. There are four Forest Service campgrounds within this area of the river. White water rafting is popular from April to August. There are three commercial operations with permits to conduct rafting operations.

Land Use: In addition to the developments described above, there is a Forest Service guard station at Camp 4-1/2, along with a cattle permittee corral and cabin. There are also three gaging stations along the river.

Wildlife and Fish: The Kings River above the North Fork junction is designated and managed under the California Wild Trout Program. The objective of the program is to maintain wild trout populations, mainly rainbow and brown trout. The river from Garnet Dike to Rough Creek is restricted to fly fishing only. Fishing is most popular in the lower, accessible portions of the river.

The North Fork Kings and Hume deer herds rely heavily on land adjacent to the river for winter range. Approximately 150 species of riparian associated wildlife live along the river, including the endangered peregrine falcon and bald eagle.

Geology: The Kings River Canyon is unique in the Sierra Nevada. The upper reaches of the Canyon (in Segment 2) are over 7,000 feet deep - considerably deeper than the Grand Canyon. Geologically, the river canyon is comprised of granitic rocks, with some pre-cretaceous limestones, metasedimentary rocks and metavolcanic outcrops.

Archaeology & History: A total of twenty-five prehistoric sites have been recorded to date. Although much of the area is uninventoried, sites located include villages, burial grounds, and fishing camps. The ethnographic group which occupied this area was the Choinimni of the northern foothill Yokuts. The Choinimni used the Kings River for transportation and fishing extensively. They also gathered acorns and hunted deer along the river.

In 1889, the Kings River Lumber Company began construction of a fifty-four mile long lumber flume from Hume Lake on the Sequoia NF. This flume followed the Kings River all the way to the town of Sanger in the San Joaquin Valley. The scattered remains of this flume and the associated logging activities are an important part of the early history along the Kings River. Some of this flume is within the 1/4 mile corridor on the south side of the river.

Other Resource Activities: There is no commercial timber within the river corridor. Vegetation is mostly chaparral, hardwoods, and some conifers (Western Hardwood ecosystem).

Livestock grazing in the lower, accessible portions of the canyon includes seven permittees on Forest Service allotments. WSR designation should have no effect on existing livestock activities.

Funding: The following estimated expenditures are for the entire Kings River Wild & Scenic River (proposed) including the Middle Fork and South Fork. Expenditures by the NPS and BLM are not included.

No purchase of private lands or scenic easements on private lands will be necessary.

Development of WSR Management Plan and amendment to the Sequoia and Sierra Forest plans ---------- $125,000

Annual maintenance and administrative costs -- $ 25,000

Forest Service capital investments - facilities and transportation routes (associated with WSR) -- $ 0

Total Cost - First 5 years ---------- $250,000

Added annual cost if Segment 1 designated ---- $ 10,000

Forest Plan Recommendations: The draft Sequoia Forest plan completed the Wild and Scenic River study and recommended designation forSegment 2. The draft Sierra Forest plan notes that the joint study of the Kings River is being presented in the Sequoia Forest plan; however, there does not appear to be any significant impact on the Sierra National Forest if the river is designated.

The Sequoia Forest plan included designation of Segment 2 in four of the ten alternatives considered. The only significant impact would be on proposed hydropower development (Tenmile Creek).

Six alternatives recommended non-designation. No significant impacts to Forest Service management, land use, or resource values would be anticipated if the river is not designated.

Other Information: The Committee to Save the Kings River is the most active group advocating WSR designation (Don Furmann). The Sierra Club, Friends of the River, and American Rivers Conservation Council are also actively supporting WSR designation for the Kings River, including Segment 1 (Rodgers Crossing).

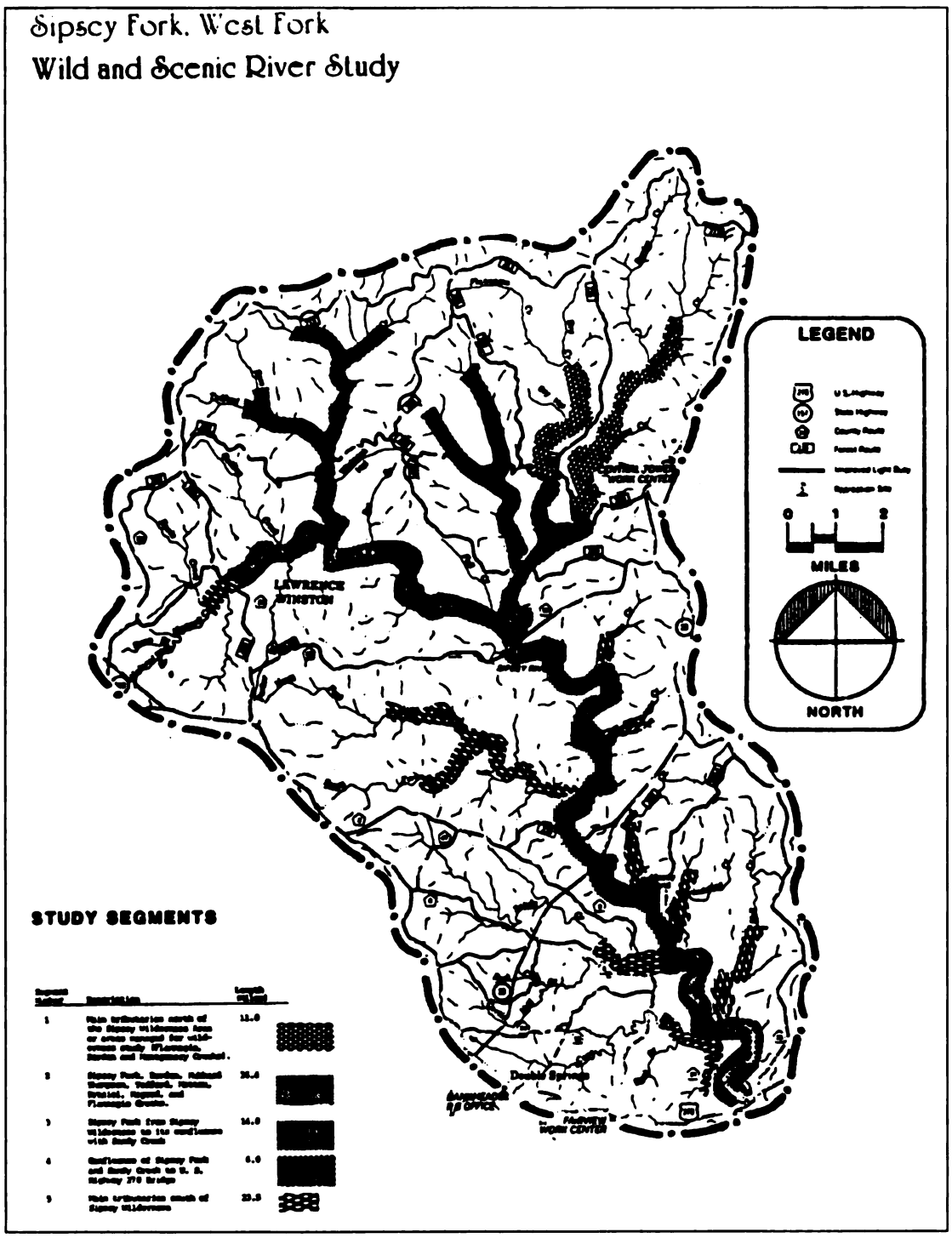
H. R. 361 (Lehman) and H. R. 799 (Lehman, et.al.) have been introduced for 2(a) designation of both Segments 1 and 2 of the Kings River.

H.R. 799 is the bill currently being considered.

H.R. 361 was introduced on January 6, 1987, with the California National Parks Expansion Act.

A hearing was conducted by the House Committee on Interior and Insular Affairs, Subcommittee on National Parks and Public Lands, on March 5, 1987. USDA testified recommending enactment of H.R. 799, if amended to delete the 13-mile segment from Garlic Meadow Creek to Pine Flat Reservoir.

8.41 - Exhibit 03



8.42 - Proposals Resulting From Special Studies. Prepare reports and accompanying EIS's for river studies conducted outside the Forest planning process as a single document. The key steps in the process are:

1. The Regional Forester sends the preliminary draft study report and draft EIS to the Washington Office (WO) for review by appropriate staffs. Comments are returned to the Region by the Land Management Planning staff with approval to print or a request to make changes.

2. When the draft study report and EIS are printed, the WO Environmental Coordinator's office files the combined study report and EIS with the Environmental Protection Agency which subsequently publishes a notice of availability in the Federal Register. The Region and Forest make the draft available to the public at the same time.

3. The Regional Office sends fifty copies to the WO for review by WO staffs and other federal agencies. Land Management Planning transmits the draft to other WO staffs. The Secretary of Agriculture transmits the draft to other agencies and the Governor of the involved state(s).

4. The Land Management Planning staff collects all WO staff and interagency comments and returns them to the Regional Office.

5. The region responds to the comments, prepares a final study report/EIS and sends 25 copies of the final and a proposed record of decision to the Washington Office (Land Management Planning).

6. The WO Land Management Planning staff reviews the document and may request changes. The document may also be reviewed by Environmental Coordination, Recreation Management, and State and Private Forestry (S&PF) staffs, where appropriate.

7. When the final study report/EIS is completed, the WO LMP staff coordinates with the Regional Office in the preparation of the following documents:

a. A summary fact sheet highlighting key information about the study river. See exhibit 02, section 8.41.

b. A location map showing the study river corridor and segments of the river recommended for designation. See exhibit 03.

c. A draft transmittal letter from the Secretary of Agriculture to the President. This letter may serve a dual purpose as a record of decision; in which case, it should be prepared in a format which meets NEPA requirements for a ROD. FSM 1950 and FSH 1909.15, chapter 4 provide

a detailed description of these requirements. See exhibit 01 this section. In other cases, the ROD may be a separate document transmitted to the President as an enclosure to the transmittal letter.

8. The WO Legislative Affairs staff prepares proposed legislation for the designation recommended in the study report. This is usually a suggested amendment to the Wild and Scenic Rivers Act. The proposed legislation is then transmitted to the Secretary of Agriculture for review.

9. Following approval by the Secretary's Office, the study report/EIS is transmitted to the Office of Management and Budget (OMB) for review. OMB coordinates the final review by other Federal agencies. Recommended changes resulting from this interagency review are usually incorporated into the transmittal letter or the draft legislation wording. Occasionally, where significant changes occur, it may be necessary to revise the study report/EIS.

10. When the OMB review is complete, the Secretary signs the transmittal letter to the President and forwards the combined study report and EIS to the White House.

11. When the President finalizes his recommendation, the study report/legislative EIS is transmitted to the Congress. This may be done either directly from the President or from the Secretary.

12. The Secretary signs and dates the Record of Decision at the time the study report/LEIS is transmitted to the Congress. Copies of the study report/LEIS and the Record of Decision are then distributed to the public. The LEIS is simultaneously filed with the Environmental Protection Agency (a copy of the Record of Decision should also be sent to EPA). EPA publishes a Notice of Availability in the Federal Register.

13. The proposal then awaits legislative action by the Congress.

8.42 - Exhibit 01

Sample Transmittal Letter and Record of Decision

The President
The White House
Washington, DC 20500

Dear Mr. President:

Based on the analysis documented in the Study Report and Final Environmental Impact Statement for Black Creek, it is my decision to recommend for inclusion in the National Wild and Scenic Rivers System, 21 miles of Black Creek in Mississippi as shown in Alternative III.

The study of Black Creek found that the entire 41 mile study segment met the criteria for inclusion in the National Wild and Scenic Rivers System. The recommended 21 mile segment is the main stem of the river between Moody's Landing and Fairley Bridge Landing. The other 20 miles of the study river possess outstanding values, but were not recommended for designation to the Wild and Scenic Rivers System primarily because the land in the river corridor is predominantly in private ownership.

The 21 miles of river corridor recommended for designation would be classified as scenic.

The proposal for designation of Black Creek has no apparent conflicts with the programs of other Federal agencies. The lands involved are predominantly in Federal ownership and administered by the Forest Service.

The 1,573 acres within the river corridor recommended for designation include 1,080 acres of the DeSoto National Forest, 201 acres owned by the State of Mississippi, and 292 acres of private land. The Black Creek Wilderness, established by the Mississippi Wilderness Act (P.L. 98-515), overlaps 365 acres of the river corridor (325 acres National Forest and 40 acres private).

The entire length of the Black Creek channel is set within a depression of 15 to 30 feet depth. The dense vegetation and flat terrain of the adjoining flood plain limit the view from the river to a narrow distance and provide effective protection for water quality. With this situation in mind, a corridor width of 200 feet minimum rather than the quarter mile study corridor on either side of the river was determined to be adequate for protection of the river's values. This reduced corridor width will also lessen the impact on private landowners and other resource activities adjacent to the river.

This recommendation is based on the study and report as directed by the Wild and Scenic Rivers Act (82 Stat. 906, as amended; 16 U.S.C. 1271-1287). The detailed study of the river was conducted by the Forest Service in cooperation with other

Federal agencies. The Environmental Impact Statement and Study Report have been through the 90 day review required by Section 4(b) of the Wild and Scenic Rivers Act and public review required by Section 102 of the National Environmental Policy Act of 1969. The comments received during the review are a part of the report.

Other alternatives considered included: (I) no designation with continuation of present management, no action; (II) designation of the entire 41 mile study river (the environmentally preferable alternative); (III) the preferred alternative; (IV) designation of 33 miles from Big Creek Landing to Fairley Bridge Landing; and (V) designation of 29 miles from Moody's Landing to Old Alexander Bridge.

We do not anticipate that acquisition of private lands will be necessary for protection and management of the river corridor. Scenic easements could be acquired where necessary for protection and management of the river corridor.

Addition of Black Creek to the National Wild and Scenic Rivers System would not have a significant adverse effect on other resource values in the area. There are no proposed water resource developments within this segment of Black Creek recommended for designation. Oil and gas production would not be affected since it does not require developments within the 200 foot corridor. Potential timber harvest in the river corridor would be reduced by an estimated 92 thousand board feet annually. Recreational use of the river and adjacent developed recreation sites is expected to increase if the river is designated as a National Wild and Scenic River. The action of recommending designation (Alternative III) itself preserves the values of the 21 mile river corridor, therefore, no additional mitigation measures are necessary.

An oil refinery and a coal-fired electrical generating plant are upstream from the proposed Wild and Scenic River segment. Water quality is closely monitored on Black Creek to reduce the potential for water quality degradation.

Black Creek is close to the major population centers of New Orleans, Biloxi, and Mobile. There are no rivers in the State of Mississippi in the National Wild and Scenic Rivers System at the present time.

The natural and scenic qualities of Black Creek are unique and irreplaceable resources. We believe that the best use of the proposed river segment and immediate environment would be served by designation as a component of the National Wild and Scenic Rivers System.

Proposed legislation consistent with this decision is enclosed.

Sincerely,

Forest Service Manual 1924

From FOREST SERVICE MANUAL 1920
LAND AND RESOURCE MANAGEMENT PLANNING

1924 - WILD AND SCENIC RIVER EVALUATION. Consideration of potential wild and scenic rivers is an inherent part of the ongoing land and resource management planning process. A river study assesses the eligibility of a river for designation as a unit of the National Wild and Scenic River System and evaluates the potential physical, biological, economic, and social effects of adding the river to the National System. See chapter 8 of FSH 1909.12 for eligibility criteria and the river study process. The studies form the basis for reports and recommendations to the President and Congress and for legislative action regarding a river's designation.

1924.01 - Authority. The principle authority for study and designation of wild and scenic rivers is the Wild and Scenic Rivers Act of October 2, 1968, as amended. The revised USDA-USDI Guidelines for Eligibility, Classification, and Management of River Areas dated September 7, 1982, supplement the Act and provide more specific direction. In addition, the Nationwide Rivers Inventory published in January, 1982, by the National Park Service identifies some of the potential wild and scenic rivers.

1924.03 - Policy.

1. Complete river studies as expeditiously as possible. Give priority to studying those rivers most threatened by adverse developments and use and those bordered by the greatest proportion of private lands.

2. Conduct studies in close cooperation with affected Federal agencies and with agencies of the affected State(s) and its political subdivision. The studies include a determination of possible State participation in the preservation and administration of the river if it is added to the System.

3. Rivers identified for study are managed to maintain their outstanding values. Refer to the USDA-USDI Guidelines for Eligibility, Classification, and Management of River Areas dated September 7, 1982, for specific management guidance for each of the river classifications and chapter 8 of FSH 1909.12 for additional direction.

1924.04 - Responsibility. The Secretary of Agriculture has designated the Forest Service as the lead coordinating agency for the Department in the studies of rivers that involve National Forest System lands.

1924.04a - Chief. The Chief reserves the authority to:

1. Approving the draft environmental impact statement/study report for Congressionally designated study rivers and to authorize submission of the report for interdepartmental and intradepartmental review of the proposal as required in section 4(b) of the Wild and Scenic Rivers Act.

2. Approve the final environmental impact statement/study report for all river studies and to submit a recommendation for the Secretary of Agriculture's consideration.

1924.04b - Deputy Chief for National Forest System. The Deputy Chief is responsible for:

1. Approve designation of the lead region when a Congressionally designated study river involves more than one region.

2. Coordinating the Department's review of other agency and State wild and scenic river proposals that are submitted pursuant to section 2(a)(ii) of the Wild and Scenic Rivers Act.

1924.04c - Regional Forester. The Regional Forester:

1. Designates the lead forest when a study river involves more than one National Forest.

2. Invites the concerned State(s) to participate jointly in the study of potential wild and scenic rivers where USDA is the lead agency.

3. Approves management direction for noncongressionally designated study rivers that are found eligible during land management planning but await completion of a suitability analysis.

1924.04d - Forest Supervisor. The Forest Supervisor:

1. Prepares a plan of study for assigned study rivers. The study plan provides for the completion of all tasks within the time period specified in the legislation or by other policy.

2. Arranges for public meetings to inform the public of the purposes and objectives of a study and to obtain public views and concerns that should be addressed during a study.

3. Assigns an interdisciplinary team to conduct the study. The team shall possess skills commensurate with the resource values associated with the river and adjacent lands.

4. Prepares the necessary environmental impact statements/study reports either as part of the forest land management planning process or as required for a Congressionally designated study.

5. Ensures that the forest plan contains management direction for rivers or segments of rivers that have been recommended for inclusion in the National Wild and Scenic River System.

1924.1 - Report. The Forest Supervisor must prepare a detailed study report to be submitted to the Congress for all Congressionally designated study rivers and those rivers identified through the forest planning process as suitable for wild and scenic river designation. The report describes the river's eligibility and suitability for designation as a component of the National Wild and Scenic Rivers System.

1924.2 - Review and Approval. FSM 1924.04 prescribes the review and approval responsibilities for recommending Congressionally designated study rivers. Review and approval of rivers identified or studied for designation in the course of the forest planning process shall follow the process set forth in FSM 1922.3.

Forest Service Manual 2354

Note: This appendix in included as background material for the discussion of environmental consequences and comparison of alternatives. Section 2354.7 is of particular importance because it describes the evaluation of proposed water resource projects.

From FOREST SERVICE MANUAL 2300
RECREATION, WILDERNESS, AND RELATED RESOURCE MANAGEMENT

Contents

2354 - RIVER RECREATION MANAGEMENT.

2354.01 - Authority. Administration of the rivers within the National Forest System falls under the general statutory and regulatory authorities, including mining and mineral leasing, laws, that apply to lands. The basic authority to regulate public use of waters within the boundaries of a National Forest or Wild and Scenic River derives from the property clause of the U.S. Constitution as implemented through the laws pertaining to the administration of the National Forests. The authority of the Secretary of Agriculture to regulate the public use of waters found at 16 USC 551 has been upheld in many court decisions. The most notable cases are:

1. United States v. Lindsey, 595 F.2d 5 (1979). The court held that within a federally designated area the Federal Government had the authority to regulate camping on State-owned land below the high water mark of a river.

2. United States v. Richard, 636 F.2d 236 (1980) and United States v. Hells Canyon Guide Service, 660 F.2d 735 (1981). The courts held that the Forest Service can regulate use of a river notwithstanding the fact that users put in and take out on private land.

The principal laws with special applicability to river management are:

1. Wild and Scenic Rivers Act (82 Stat. 906, as amended; 16 U.S.C. 1271 (Note), 1271-1287) herein referred to as the Act. The Act establishes the National Wild and Scenic River System, designates the rivers included in the System, establishes policy for managing designated rivers, and prescribes a process for designating additions to the system.

2. Federal Power Act (16 U.S.C. 791 et seq.). This law governs the development of hydroelectric projects on rivers. The Federal Energy Regulatory Commission is responsible for implementing the Act. However, the Secretary of Agriculture is empowered under section 4(e), 16 U.S.C. 797, to prescribe conditions for any project license which he deems "necessary for the adequate protection and utilization of the national forests."

3. Federal Water Pollution Control Act Amendments of 1972 (86 Stat. 816, as amended; 33 U.S.C. 1251, et seq.). Commonly referred to as the Clean Water Act, it proscribes the discharge of pollutants into streams. Section 402 requires discharge permits. Section 208 prescribes best management practices for non-point sources of pollution. Section 313 requires Federal facilities to comply with all substantive and procedural requirements of the States pertaining to pollution abatement.

4. Fish and Wildlife Coordination Act (Ch. 55, 48 Stat. 401, as amended; 16 U.S.C. 661, 662(a), 662(h), 663(c), 663(f)). Departments or agencies proposing water resource projects must first consult with U.S. Department of Interior, Fish

and Wildlife Service to ensure wildlife conservation receives equal consideration and is coordinated with the water resource project.

5. Wilderness Act (78 Stat. 890; 16 U.S.C. 1121 (Note), 1131-1136). This Act establishes the National Wilderness Preservation System, defines what wilderness is, the purpose of wilderness and how to manage it, and prescribes the process for adding additional areas to the System.

6. National Historic Preservation Act (94 Stat. 2987; 16 U.S.C. 470, 470-1, 470a, 470h-z, 470v, 470w-3). This act declares a national policy on historic preservation and prescribes policy and procedures to reach that end.

The principal policies and regulations concerning river management are the Final Revised Guidelines for Eligibility, Classification, and Management of River Areas (47 FR 39454, Sept. 7, 1982), herein referred to as the guidelines, EO 11988, Floodplain Management, 36 CFR 261, Prohibitions; 291, Occupancy and Use of Developed Sites and Areas of Concentrated Public Use; 295, Use of Meter Vehicles Off Forest Development Roads; 297, Wild and Scenic Rivers; and 800, Protection of Historic and Cultural Properties.

2354.02 - Objective. Provide river and similar water recreation opportunities to meet the public needs in ways that are appropriate to the National Forest recreation role and are within the capabilities of the resource base. Protect the free-flowing condition of designated wild and scenic rivers and preserve and enhance the values for which they were established.

2354.03 - Policy.

1. Plan and manage river recreation in a context that considers the resource attributes, use patterns, and management practices of nearby rivers. Consider both designated and nondesignated rivers managed by the Forest Service and/or other Federal, State, and local management entities.

2. Emphasize activities that harmonize with the natural setting of the National Forest. Normally, limit river recreation opportunities to the primitive to rural portion of the recreation opportunity spectrum (ROS, FSM 2310).

3. Manage the use of rivers by establishing as few regulations as possible. Ensure that established regulations are enforceable.

4. Emphasize user education and information. Educate users before they enter a river area. When necessary, prescribe direct management techniques (FSM 2354.41a) that are sensitive to the values users seek. Impose only that level of direct management necessary to achieve management objectives.

5. Coordinate river management with other Federal, State, or local agencies having primary or concurrent jurisdiction. Where appropriate, enter into

memorandums of understanding or cooperative agreements. Encourage the participation of State and local governments in planning and administering river management.

6. Ensure that proposed and ongoing projects and activities conform with the purposes of the Act.

7. Establish use limits and other management procedures that best aid in achieving the prescribed objectives for a river and in providing sustained benefits to the public.

8. Acquire water rights needed to ensure sufficient water to achieve management objectives.

2354.04 - Responsibility.

2354.04a - Chief. The Chief reserves the authority to:

1. Transmit detailed boundary descriptions, river segment classifications, and management and development plans for wild and scenic rivers to the President of the Senate, to the Speaker of the House of Representatives, and to the Federal Register.

2. Submit study river recommendations to the Secretary of Agriculture.

2354.04b - Director of Recreation Management, Washington Office. The Director of Recreation Management (WO) shall:

1. Provide leadership for planning, development, and management of:

a. Designated National Wild, Scenic, and Recreation Rivers.

b. Study rivers being considered for formal designation.

c. Other rivers offering recreation opportunities.

d. Other similar water recreation opportunities, such as swamps.

2. Recommend program and budget direction for rivers as a component of the total recreation program.

3. Coordinate with National user groups, other agencies, and members of Congress. Prepare memorandums of understanding and cooperative agreements when necessary.

4. Maintain a river information system capable of providing river information to management and the public.

5. Prepare relevant regulations relating to development and operation of rivers and similar water recreation opportunities.

2354.04c - Director of Land Management Planning, Washington Office. The Director of Land Management Planning (WO) shall:

1. Provide leadership for the study of rivers to determine their eligibility, suitability, and potential classification under the Wild and Scenic River Act.

2. Prepare recommendations for submission of study results to the Secretary of Agriculture.

3. Prepare Federal Register notices lifting the protected status of study rivers after a recommendation not to designate has been reported to Congress.

4. With the Director of Recreation (WO), develop procedures for incorporating river management direction into the Forest land management planning process.

2354.04d - Director of Lands, Washington Office. The Director of Lands (WO) shall:

1. Coordinate and review prior to Regional Forester signature determination of impact for hydroelectric projects pursuant to section 7 of the Wild and Scenic Rivers Act.

2. Forward decisions of Regional Foresters regarding hydroelectric projects pursuant to section 7 of the Wild and Scenic Rivers Act to the Federal Energy Regulatory Commission.

2354.04e - Regional Foresters. Regional Foresters shall:

1. Approve detailed boundary descriptions, river classifications, and development and management plans for designated wild and scenic rivers.

2. Determine the direct and indirect effects of water resource projects upon designated or study wild and scenic rivers, and determine, pursuant to section 7 of the Wild and Scenic Rivers Act, whether the Department of Agriculture will consent to a proposed action (36 CFR 297). This authority shall not be redelegated. Send decisions regarding hydroelectric projects to the Washington Office Director of Lands for forwarding to the Federal Energy Regulatory Commission (follow the review and routing procedures of FSH 2709.15, section 54.72).

3. Approve memorandums of understanding or cooperative agreements between the Forest Service and other Federal agencies, States, and local governments involved in administration of components of the National Wild and Scenic River System. This approval may be delegated to Forest Supervisors.

4. Approve land acquisition actions taken pursuant to section 6 of the Act.

5. Approve interim measures for wild and scenic river management, pending completion and approval of the management plan.

6. Approve activities for gathering information about water resources.

7. Designate a lead Forest Supervisor when more than one forest is involved with study and management of a river.

2354.04f - Forest Supervisors. Forest Supervisors shall:

1. Develop detailed boundary descriptions, river classifications, and development and management plans for designated rivers. Integrate this direction into the Forest Plan.

2. Approve implementation plans developed as part of the Forest Plan.

3. Initiate cooperative agreements as permitted by section 10(a) of the Act.

4. Obtain public comments in the development of river management direction.

5. Approve requests for research into scientific values within a wild and scenic river area.

2354.05 - Definitions.

1. Act. The Wild and Scenic Rivers Act of October 2, 1968 (P.L. 90-542, 82 Stat. 906, as amended; 16 U.S.C. 1271 (Note), 1271-1287), and all subsequent amendments thereof.

2. Classification. The administrative process whereby designated rivers are segmented according to the criteria established in section 2(b) of the Act.

3. Designation. The process whereby additional components are added to the National Wild and Scenic Rivers System (sec. 2(a) of the Act). This can be by Act of Congress under section 2(a)(i), or by administrative action of the Secretary of the Interior with regard to state designated rivers under section 2(a)(ii).

4. National Rivers Inventory (NRI). A national inventory of potential Wild and Scenic Study Rivers developed pursuant to direction in the Wild and Scenic

Rivers Act. It provides baseline data on the condition and extent of significant free flowing river resources in the nation.

5. Nondesignated River. A river that has not been designated under the Wild and Scenic Rivers Act but that has sufficient recreation opportunities or use to warrant management activities.

6. River Area. For a river study, that portion of a river authorized by Congress for study and its immediate environment comprising an area extending at least onequarter mile from each river bank. For designated rivers, the river and adjacent land within the authorized boundaries.

7. Wild and Scenic Study River. Rivers identified in section 5 of the Act for study as potential additions to the National Wild and Scenic Rivers System. The rivers shall be studied under the provisions of section 4 of the Act.

2354.1 - Administration.

2354.11 - Coordination. Ensure that management is coordinated for rivers that are in more than one administrative unit.

2354.12 - Management Research. Continue research efforts to improve knowledge for the effective management of river recreation. Give particular attention to:

1. Cooperating with research efforts of the various Forest Service recreation research work units focusing on problems associated with river recreation and related dispersed recreation management.

2. Identifying significant river-related management problems that require research and assisting in conducting such studies.

3. Cooperating with other Federal, State, and local agencies involved in river recreation management and research in the planning, implementation, and dissemination of research. Maintain liaison with such Federal agencies as the Bureau of Land Management, Corps of Engineers, National Park Service, and the Tennessee Valley Authority.

4. Actively seeking and cooperating with universities and other research institutions interested in conducting river and related water-based research.

2354.13 - Technology Transfer. Give priority to disseminating and implementing proven and promising river management and research technology. Refer to FSM 1251 for direction on technology transfer.

2354.14 - Navigability of Rivers. Rivers are, as a matter of law, either navigable or nonnavigable. Navigability is a judicial finding and must be made by a Federal court in order to bind the United States. Most rivers in the country have not been adjudicated as navigable or nonnavigable. Consider them nonnavigable until adjudicated otherwise.

If navigable, then the State owns the bed of the river up to the high water mark, and the Coast Guard and the Corps of Engineers have certain additional regulatory powers.

The Forest Service retains authority to regulate the use of a river and the National Forest lands on the shorelines whether it is navigable or nonnavigable. This jurisdiction may be concurrent with other State and Federal agencies. In particular for navigable rivers, cooperate with State authorities to the extent that the State wishes to manage certain activities on rivers. In cases of a conflict between National Forest and State interests, consult with the U.S. Department of Agriculture, Office of the General Counsel.

2354.2 - Wild and Scenic Study Rivers. Wild and Scenic study rivers are established by Congress and are studied using existing planning and environmental analysis procedures. See FSM 1924, FSH 1909.12, 36 CFR 297, and the Revised Guidelines for Eligibility, Classification, and Management of River Areas (47 FR 39454, Sept. 7, 1982).

2354.21 - Management of Study Rivers. Manage wild and scenic river study areas to protect existing characteristics through the study period and until designated or released from consideration.

Resource management activities may be carried out provided they do not cause a negative or reduced classification recommendation.

Land management plans must identify the areas managed for the wild and scenic study river values.

The Act protects designated study rivers from Federal Power Act projects on or affecting the river (sec. 7(b)).

The protection periods prescribed by the Act are three complete fiscal years for the study and a period not to exceed 3 years for Presidential and Congressional action. In the event of any type of delays on reports with a designation recommendation, extend the protected period to ensure Congress has up to 3 years to consider the study report.

If the study recommendation is for no designation, the protected status expires after a notice to that effect is published in the Federal Register. Congressional

committees on Interior and Insular affairs shall receive written notice of this determination while in session and 180 days prior to publishing in the Federal Register.

Continue existing improvements or uses until there is a final designation decision. Permit temporary uses when these uses do not alter the wild and scenic river characteristics of land and physical resources or when there is a legitimate fire, insect, disease, or flood emergency.

Suppress wildfires and pest epidemics under the same directions established for designated Wild and Scenic Rivers.

Mineral prospecting and development shall conform with existing laws, regulations, and sec. 9 of the Act. Protect the wild and scenic river values subject to these laws and regulations (FSM 2810, 2820, and 2850).

Do not recommend leasing with surface occupancy in study areas if the applicant proposes surface disturbance that would adversely affect existing wild and scenic river values or if such disturbance is unavoidable.

2354.3 - Wild and Scenic River Plans.

2354.31 - River Management Plan Relationship to the Forest Management Plan. Place river management direction in the Forest Management Plan. If timing or other factors preclude this, include the direction as a Forest Management Plan appendix or an associated implementation plan.

2354.32 - River Management Plan. Prepare a management plan in accordance with section 3(b) of the Act within 1 year following designation or as otherwise provided by the designation language.

Management plans for designated rivers must:

1. Establish management objectives for each segment of the river. As a minimum, state the Recreation Opportunity Spectrum class featured (ROS, FSM 2310) and procedures for maintaining the ROS for each segment over time. To the extent possible, the management objectives should reflect the river's recreational relationship to nearby rivers.

2. Describe historical trends in use, demands, and needs of the river resources and likely future trends.

3. Include specific and detailed management direction necessary to meet the management objectives.

4. Establish detailed river area boundaries.

5. Determine wild, scenic, and recreation classifications that best fit the river or its segments, unless those classifications are prescribed in the designating legislation.

6. Establish appropriate levels of recreation use and developments to protect the values for which the river was designated. See section 3(b) and 10(a) of the Act and the guidelines.

7. Provide for public safety and refer to State boating laws, U.S. Coast Guard Regulations, and other applicable State and Federal Regulations.

8. Prescribe actions needed to manage development along the stream bank (sec. 6 of the Act).

9. Provide for monitoring and evaluating visitor use patterns, use impacts on the river, and visitor experiences.

2354.4 - Wild and Scenic River Management Activities.

2354.41 - Recreation Visitor Use. When necessary, develop prescriptions to manage the character and intensity of recreational use on the river.

Use specific management objectives for each segment. Consider the following factors in developing direction:

1. Capabilities of the physical environment to accommodate and sustain visitor use.

2. Desires of the present and potential recreation users and trends over time in the amounts, types, and distribution of recreational use and the characteristics of recreation users. These help identify what kinds of recreation opportunities to provide and how and where to manage and maintain such opportunities.

3. The diversity of river recreation opportunities available within the geographic region.

4. History of nonrecreation uses that are compatible or conflict with recreation use of the river.

5. Budgetary, personnel, and technical considerations.

Exhibit 01, showing the relationship of Recreation Opportunity Spectrum (ROS) categories to the river classifications and management activities, is an aid in determining if an adequate mix of recreation opportunities is feasible.

2354.41 - EXHIBIT 01 IS A SEPARATE DOCUMENT.

2354.41a - Distribution of Visitor Use. Develop visitor management techniques needed to achieve the river management objectives. Use management techniques including site management, indirect regulation of use, and direct regulation of use. Exhibit 01 summarizes management techniques and selected methods for each.

Recognize that use-management techniques may have a significant effect on the character of the river area and the kind of recreation opportunities available. Ensure that management techniques relate to specific river management objectives.

When regulatory measures are necessary to manage use, apply these measures as far in advance of the visitor's arrival as possible. Apply management techniques before the visitor enters the river area. Then to the extent possible, allow the user to move about freely without interference.

Apply indirect techniques for regulation of use before taking more direct action. However, do not ignore violations of laws and regulations.

When it becomes necessary to limit use, ensure that all potential users have a fair and equitable chance to obtain access to the river. Also ensure that the use-limiting system is within the administrative capabilities of the managing unit.

2354.41b - Water Safety. The manager's role in safety is advisory and informational. Provide opportunities for the river recreation user to become informed of current river flows, equipment and experience minimums and hazards. The user must make the final decision about whether or not to engage in the recreation activity.

The enforcement of State boating laws, U.S. Coast Guard regulations, and other applicable State and Federal regulations shall remain with the appropriate agency.

2354.41c - Sanitation. Provide sanitation facilities as necessary for the health of the user and the protection of the resource. Vary these facilities according to the individual river classification and management objectives. Appropriate facilities may range from various types of onsite toilets to requirements for complete removal of human wastes.

Provide for litter and garbage disposal in the river management direction.

2354.41a - Exhibit 01

Some Techniques to Manage the Character and Intensity of Recreational Use to Achieve Established Objectives.

Type of management techniques	Method	Specific actions
Site Management (Emphasis on site design, landscaping, and engineering)	Harden site	Install durable surfaces (native, nonnative, synthetic). Irrigate. Fertilize. Convert to more hardy species. Thin ground cover and overstory.
	Channel use	Erect barriers (rocks, logs, posts, fences, guardrails). Construct paths, roads, trails, walkways, bridges, and so forth. Landscape (vegetation patterns).
	Develop facilities	Provide access to underused and/or unused areas. Provide sanitation facilities. Provide overnight accommodations. Provide concessionaire facilities. Provide activity-oriented facilities (camping, picnicking, boating, docks, and other platforms). Provide interpretive facilities.
Indirect Regulation of use (Emphasis on influencing or modifying use; retains freedom to choose; control less complete, more variation in use possible)	Alter physical facilities	Improve (or not) access roads and trails. Improve (or not) campsites and other concentrated use areas. Improve (or not) fish or wildlife populations (stock, allow to die out.
	Inform users	Publicize specific attributes of the area. Identify the range of recreation opportunities in surrounding area. Educate users to basic concepts of ecology. Publicize underused areas and general patterns of use.

Type of management techniques	Method	Specific actions
		Describe special types of skills and/or equipment needed to enjoy the recreation opportunities.
Direct Regulation of Use (Emphasis on regulation of behavior; individual choice restricted; high degree of control)	Increase policy enforcement	Impose fines at a level that ensures compliance. Increase administration of area.
	Zone use	Zone incompatible uses spatially (Designate hiker-only zones, prohibit motor use, and so forth). Limit camping in some campsites to 1 night, or establish some other limit.
	Restrict use intensity	Rotate use (open or close roads,access points, trails, campsites). Require reservations. Assign campsites and/or travel routes to each camper group in backcountry. Limit usage via access point. Limit size of groups, number of horses, vehicles. Limit camping to designated campsites only. Limit length of stay in area (max./min.).
	Restrict activities	Restrict the building of campfires. Recommend restricted fishing or hunting to the State.

2354.41d - Outfitting and Guiding. The services of outfitters or guides may be necessary to assist the public in use of recreation rivers. Where appropriate, provide for a full range of outfitting and guide services. Issue permits in accordance with FSM 2720.

2354.42 - Wild and Scenic River Resource Protection and Management.

2354.42a - Range. Permit livestock grazing within the designated river area provided it does not substantially interfere with public use or detract from the values which caused the river to be included in the National Wild and Scenic River System. For Wilderness River Areas see FSM 2320.

Permit facilities and improvements within a wild river area, if they are necessary to support the range activities, provided the area retains a natural appearance and the structures harmonize with the environment. Such improvements must conform with established river management direction and FSM 2520, 2526, and 2527.

2354.42b - Wildlife and Fish. Manage wildlife and fish habitats in a manner consistent with the other recognized river attributes.

Recommendations to State agencies concerning the management of fisheries must be consistent and in harmony with established river objectives.

Stocking of fish is generally consistent with designated river status. Stocking levels and habitat manipulation must complement and be compatible with the recreation opportunity objectives set for the river segment and the law designating the river.

The construction of minor structures for such purposes as improvement of fish and game habitat are acceptable in wild river areas provided they do not affect the free-flowing characteristics of the river and harmonize with the surrounding environment.

2354.42c - Water. The objectives of water management as described in the Act require that "selected rivers or sections thereof be preserved in their free-flowing condition to protect the water quality . . . ."

1. Maintain or enhance existing water quality on all rivers managed for recreation. The river management plan shall prescribe a process for monitoring water quality on a continuing basis.

2. Advise users on safe drinking-water practices.

3. Undertake watershed improvements where deteriorated soil or hydrologic conditions create a threat to the values for which the river is managed; where these

conditions present a definite hazard to life or property; or where such conditions could cause serious depreciation of important environmental quality outside the river area.

Undertake no rehabilitation or stabilization projects unless they enable the area to retain its natural appearance, harmonize with the environment, and have no substantial adverse effect on the river and its environment.

When practical, use native species to restore watershed vegetation. All such watershed restoration measures shall follow the prescriptions established for the river and shall be consistent with the requirements of FSM 2526 and 2527.

4. Approve only those watershed projects that protect and enhance the values that caused the river to be designated and that do not substantially interfere with public use and enjoyment of these values. Normally, there is little opportunity for increasing water yield or for changing the timing of runoff within the confines of a river area.

5. For issuance of licenses, permits, or other authorizations concerning projects under the Federal Power Act or other construction, see 36 CFR 297.

6. Permit the construction of water bars, drainage ditches, flow measurement devices, and other minor structures or management practices when necessary for protection, conservation, rehabilitation, or enhancement of the river area resources. They must be compatible with the classification of the river area and harmonize with the surrounding environment. They must not pose a direct and adverse impact on the river values.

7. Address the need for retaining and maintaining existing water divisions, ditches, and water management devices. If retention is part of a valid existing right or in the interest of good river management, prescribe maintenance standards in the management plan.

When an existing structure is not retained, return the area to a more natural condition in a manner that does not have an adverse effect on the river and its immediate environment.

8. Approve gathering of water resources information if the permittee carries out these activities in a manner that protects the values for which the river was designated. Approvals should show the Forest Service is not committed to concur with any future development proposal that may result from such activity or studies.

Permit prospecting for water resources, that is, drilling or digging to locate underground water supplies, for minor developments for range, wildlife, recreation, or administrative facilities.

2354.42d - Vegetation and Forest Cover. Manage the forest cover to maintain or enhance those values for which a particular river segment is managed.

1. Ensure trees are not sold, cut, or otherwise harvested in a designated wild river area except under emergency conditions, such as for insect or disease control, fire, natural catastrophe, disaster, public safety, or under specified conditions on valid mining claims.

2. Harvest timber or manipulate vegetation in classified scenic or recreation river areas, in a manner that satisfies river management objectives.

3. Reestablish tree cover, preferably by natural revegetation. Reforestation plans are subject to the objectives of river management.

4. Trees may be cut for use in the construction and maintenance of authorized improvements located in the designated river area when it is not reasonably possible to obtain or bring in the necessary materials from outside the area. Design the harvest to avoid conflicts with the river management objectives.

Such cutting shall be away from trails, campsites, or other public-use developments to the degree practical.

5. Limit fuelwood cutting to dead or down material. Where necessary, prescribe restrictions on the use of wood for fuel.

2354.42e - Wilderness Rivers. Manage rivers that are entirely or partially within a component of the National Wilderness Preservation System to preserve the wilderness resources including solitude, natural environments, and opportunities for primitive, unconfined activities that offer challenge. Resolve any conflicts between provisions of the Wilderness Act and provisions of the Wild and Scenic Rivers Act in favor of the more restrictive of the provisions unless a specific exception is stated (FSM 2320).

2354.42f - Structures and Improvements. Prescribe structures and improvements needed for visitor use and administration in the river management direction. Examples of such structures and improvements are: boat launch and dock facilities, parking areas, bridges, portages, campground and toilet facilities, trails, information centers, and administrative sites.

1. Wild River. Where practical, locate administrative headquarters and interpretive centers outside the river area.

2. Scenic River. Administrative site developments and modest public information centers may be located in the river area provided they are not readily visible from the river.

3. Recreation River. Administrative site developments and public information centers may be located along the river shoreline providing they do not have adverse effects on the values for which the river was designated and classified.

2354.42g - Transportation System. Decide the type and location of transportation facilities in the river management direction.

1. Wild River. Generally, a wild river is accessible only by trail. Normally, do not permit motorized travel on the trail system in the river area. Airfields in existence at the time of designation may remain if needed. Do not develop new airfields. Normally do not permit the landing of aircraft except for emergencies and then only at facilities that existed prior to designation. Develop airfield management and maintenance direction as needed (FSM 7725).

2. Scenic River. A scenic river may be accessible in places by road. However, scenic rivers should not include long stretches of conspicuous and well-travelled roads closely paralleling the riverbank. Trails may be located and designed to accommodate motorized travel.

Establish transportation design criteria to protect the values for which the river is managed.

3. Recreation River. A recreation river is usually readily accessible by road. Roads are normally open to motorized travel but use may be regulated.

2354.42h - Minerals. (FSM 2810, 2820, and 2850).

2354.42i - Cultural Resources. (FSM 2360). Identify and evaluate cultural resource sites in a manner compatible with the management objectives of the river and in accordance with 36 CFR 800. Protect sites in accordance with relevant laws and regulations. Under certain conditions, site-specific information may be withheld from the public if disclosures could lead to damage. Consult with the Regional FOIA officer prior to withholding such information.

2354.42j - Research. The scientific value of wild and scenic rivers is implied in the Act and in the legislative history leading to development of the Act. Research into these scientific values is appropriate use and should generally follow the guidelines developed for wilderness (FSM 2320).

2354.42k - Air Quality. Comply with the appropriate air regulatory agency requirements and the objectives established in the Forest Plan.

2354.42l - Forest Pest Management. Control forests pests in a manner compatible with the intent of the Act and management objectives of contiguous National Forest System lands (FSM 3400).

2354.42m - Visual Resources. Establish visual management objectives for the river area that reflect the classification of the river. Coordinate the visual objectives for the river area with those of adjacent National Forest System lands (FSM 2380).

2354.42n - Fire. Manage fire within a designated river area in a manner compatible with contiguous National Forest System lands.

On wildfires, use suppression activities that cause the least lasting impact on the river and river area. Conduct presuppression and prevention activities to reflect the management objectives for the specific river segment.

Prescribed fire may be utilized to maintain environmental conditions or to meet objectives specified in the river management plan.

2354.42o - Motorized Use. Permit motorized use if such use is compatible with other management direction, public use of the resource, and resource attributes of the river. Prohibit motorized use if the use causes, or is likely to cause, considerable adverse effects on the resource. Normally, motorized use will be prohibited in a wild river area. Establish prescriptions for management of motorized use.

2354.42p - Signing. Establish standards and guidelines for posting informational, interpretive, safety, hazardous areas, and boundary location signs.

2354.5 - Non-National Forest Lands on Designated Rivers.

2354.51 - Private Lands. Many river areas within the National Forest contain a significant amount of private land. Certain management practices and use patterns on these private lands can greatly enhance the recreation opportunities on adjacent or intermingled National Forest land and the river system.

Cooperate with private owners, local, and State governments, and other Federal agencies to meet demonstrated public need for recreational opportunities within and adjacent to the river area.

Inventory existing uses of private land as part of river management planning.

Work with private landowners to minimize incompatible use and to prevent other potential problems. This action may include:

1. Working with local governments for suitable zoning in river areas.

2. Negotiating cooperative agreements and memorandums of understanding.

3. Encouraging appropriate private sector development and providing for complementary Forest Service development.

4. Acquiring key private land in fee title or partial interests. Acquire lands and interests in lands only to the extent necessary to protect, maintain, and/or enhance the river area and the established recreation objectives.

2354.51a - Fee Title Acquisition on Designated Rivers. Fee title acquisition along a designated river is limited by the Act to an average of no more than 100 acres per mile on both sides of the river.

Do not use condemnation to acquire fee title when 50 percent or more of the designated river area is in public ownership.

Condemnation may be used to clear title or acquire scenic easements or other such easements deemed reasonably necessary to provide public access to the river and to permit the public to traverse the length of the river or selected segments.

2354.51b - Partial Interest Acquisition. (FSM 5440).

2354.51c - Partial Interest Administration. Establish procedures to administer partial interests in private lands acquired within the river area. Include monitoring and annual review procedures necessary for enforcement actions.

2354.52 - Other Federal Lands. Negotiate cooperative agreements, memorandums of understanding, or other appropriate documents to provide for needed coordination.

2354.6 - Nondesignated Rivers. Some rivers that are not designated under the Act provide excellent river recreation opportunities and are addressed herein as nondesignated rivers. The management of these rivers should generally follow the direction provided for designated river but without some of the legislative protection or constraints of the Act.

2354.61 - Study of Rivers in the National Rivers Inventory. Rivers or river segments occurring within National Forest boundaries and listed in the National Rivers Inventory (NRI) should be studied to determine their eligibility and suitability for designation to the Wild and Scenic River System. Use the land management planning process to conduct the study.

2354.62 - Management of National Rivers Inventory Rivers. Rivers occurring within the National Forest and listed in the National Rivers Inventory must be protected to the extent initial studies indicate the river has outstanding values and therefore is eligible for designation by Congress. Determine the level of protection

as part of the study process. A river found to be eligible and suitable must be protected as far as possible to the same extent as a designated study river (FSM 2354.21).

Submit eligible and suitable rivers to Congress for consideration and designation.

2354.63 - Nondesignated River Management Direction. Develop river management direction for nondesignated rivers when the amount of use, resource issues, or other conditions warrant the expenditure for planning. River Management Direction for nondesignated rivers should include:

1. Clear management objectives for each segment of the river. As a minimum, these objectives shall establish the Recreation Opportunity Spectrum (ROS, FSM 2310) class featured and procedures for maintaining the established ROS for each segment. To the extent possible, the management objectives should be developed in a context that considers nearby rivers.

2. Historical trends in use, demands, and needs of the river resources and likely future trends.

3. Specific and detailed direction necessary to meet the objectives of river administration.

4. Provisions for public safety and shall refer to State boating laws, U.S. Coast Guard Regulations, and other applicable State and Federal Regulations.

5. Provisions for monitoring and evaluating visitor use patterns, use impacts on the river, and visitor experiences.

2354.64 - Relationship of Nondesignated River Management Direction to the Forest Plan. See FSM 2354.31.

2354.7 - Procedure for Evaluation of Water Resources Projects.

2354.71 - Authority. Evaluation of water resources projects within the National Forest System is addressed in the Wild and Scenic Rivers Act (82 Stat. 906, as amended; 16 U.S.C. 1271 (Note), 1271-1287). Section 7 of the Act provides authority to the Secretary of Agriculture to evaluate and make a determination on water resource projects that affect wild and scenic rivers. Implementing rules to guide evaluation of proposed water resource projects are at Title 36, Code of Federal Regulations Part 297 (36 CFR 297). Additionally, the Forest Service must comply with the Interagency Guidelines for Eligibility, Classification, and Management of River Areas, published in the Federal Register on September 7, 1982 (47 FR 39454).

In addition to these authorities, Office of the General Counsel and the most recent Congressional interpretations of the intent of the Act relative to water resources projects are set out in FSM 2354.71, exhibit 01.

Key provisions of the Act are as follows:

1. Section 1(b) declares as policy of the United States that:

> *. . . certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.*

2. Section 7(a) prohibits departments and agencies of the United States from assisting in the construction of any water resources project that ". . . would have a direct and adverse effect on the values for which such a river was established . . ."

Section 7 also places limitations on Federal licensing of or Federal assistance on developments below or above designated or proposed wild and scenic rivers that ". . . invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation . . ."

3. Section 10(a) provides general management direction as follows:

> *Each component of the national Wild and Scenic Rivers System shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public uses and enjoyment of these values. In such administration primary emphasis shall be given to protecting its aesthetic, scenic, historic, archeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on special attributes of the area.*

4. Section 16(b) provides the relevant definition of "free-flow" and "water resource projects" (see FSM 2354.75 for definitions).

Section III of the interagency final guidelines establishes a non-degradation and enhancement policy for designated river areas. Manage each component of the Wild and Scenic River system to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact or degrade those outstanding river values.

2354.71 - Exhibit 01

Office of General Counsel and Congressional Interpretations of the Wild and Scenic Rivers Act Relative to Water Resources Projects

Office of General Counsel

A May 1969 memorandum to the Chief from Clarence W. Brizee (Deputy Director, Forestry Natural Resources Division; USDA, OGC) provides the following interpretation:

> *With regard to water resources projects, the Wild and Scenic Rivers Act is not a blanket ban or absolute prohibition . . . The only activity absolutely prohibited by Section 7 is the licensing of dams and other project works by the Federal Energy Regulatory commission under the Federal Power Act within the boundaries of a designated or study river. Other federally assisted water resources projects may be permitted. Thus, rather than being characterized by absolute prohibitions, the Act embodies a flexible approach. Section 7 establishes a procedure for making a specific determination with respect to each proposed water resources project.*
>
> *The evolution of Section 7 demonstrates that Congress did not intend that the Act automatically ban all developments and uses on or near a (study or designated) river. To the contrary, the legislation was specifically amended in order to provide a procedure via Section 7 for review of proposed water resources projects on a case-by-case basis.*

This memorandum also provides an interpretation of the "direct and adverse effect standard":

> *With regard to projects inside the designated boundary, there is no definition provided by the Act or legislative history as to what constitutes such a "direct and adverse" effect. We do not construe this section as a ban on all projects which might be built on a river proposed or designated as a component of the System. Rather, the Act contemplates that each proposed project be considered on its own merits. In making this determination, we consider the values of the river as they now exist; a "direct and adverse" effect is one which will result in marked dimunitions of the values enumerated in Section 1(b) of the Act.*
>
> Also relevant to the consideration of the project's impacts is the degree to which it blends in or is otherwise compatible with the natural qualities of the river, whether there may be a dimunition in the air and water quality, and the effects on animals and vegetation. The duration of the impact is another important consideration; long lasting or permanent impacts must be viewed more strictly than temporary or short term impacts.

Congressional Direction

Recent Congressional direction is provided in the Senate Committee on Energy and Natural Resources report on the Michigan Scenic Rivers Act of 1991 (H.R. 476), dated November 23, 1991, which states:

> *The Committee is aware of the concern expressed by some parties of the potential effect that designation of certain rivers as components of the Wild and Scenic Rivers System may have ongoing stream restoration and improvement projects in the State of Michigan. The committee notes the importance of these projects in restoring damaged riparian areas and improving water quality and aquatic habitat. In the Committee's view, such projects are not inconsistent with Wild an Scenic River designation, and in fact similar projects have been successfully completed on Wild and Scenic River segments throughout the nation. The Committee directs the Forest Service to develop a consistent and coordinated policy permitting the implementation of such projects within Wild and Scenic River segments in order to avoid unnecessary concern and confusion.*

Similarly the House Committee on Interior and Insular Affairs report on the Michigan Scenic Rivers Act of 1991 states:

> *The committee has provided flexibility with regards to sea lamprey control in order that appropriate management actions can be taken consistent with the requirements of law. In keeping with sound management practices for wild and scenic rivers, the Committee believes there is appropriate flexibility in law to provide for fish and wildlife habitat and water quality improvement in a manner that will protect the values for which a river segment was designated. Some of the finest fisheries in the country are found on rivers designated as part of the National Wild and Scenic Rivers System. The committee recognizes the importance of the fisheries on the Michigan rivers designated by this Act and is supportive of efforts to correct significant water quality, aquatic habitat, or other ecological degradation caused by past human activity. The Wild and Scenic Rivers Act permits structural and non-structural techniques of fish restoration to be used as long as such activities do not have an adverse impact on the values for which such rivers are designated. Such activities consistent with this standard are occurring on wild and scenic rivers across the country. As provided for by law, the Secretary will cooperate with the state on these matters.*

2354.72 - Objectives.

1. To maintain or enhance the free-flowing characteristics of select rivers, to the extent practicable.

2. To protect or enhance the values of rivers within the National Wild and Scenic River System.

3. To protect features of aesthetic, scenic, historic, archaeological, or scientific importance on these rivers.

4. To continue public uses and enjoyment of National Wild and Scenic Rivers consistent with protection and enhancement of river values.

2354.73 - Policy.

1. Manage wild and scenic river ecosystems to achieve management goals and objectives set forth in the comprehensive management plan for each river through natural processes and use of techniques that mimic those processes.

2. Use an interdisciplinary process to evaluate the effects of proposed water resources projects on free-flowing characteristics and the outstanding values for which the river was designated, or for which it is being studied.

3. Follow procedures set out in FSM 2354.76 for evaluating proposed water resource projects that may have an effect on free-flowing characteristics or that may have an effect on the scenic, recreational, geologic, fish and wildlife, historic, cultural, or other outstandingly remarkable values of the river or its corridor lands.

4. Coordinate evaluation of water resource projects with state agencies responsible for fish and wildlife, water quality, and other related resources.

5. Permit water resources projects if the net effect protects or enhances values for which the river was designated, or for which it is being studied.

6. Do not permit a water resources project under any of the following conditions:

a. The project would have a direct and adverse effect on, or unreasonably diminish designated river values; or

b. In the case of a study river, if the project would result in a recommendation for a reduced classification status; or

c. If the project is inconsistent with relevant forest plan standards and guidelines.

7. Permit water resources projects even though they may affect free-flowing characteristics if all of the following conditions exist:

a. The specific purpose of the project is to protect or enhance the values for which the river was designated or is being studied, restores the natural characteristics of the river, and/or improves the water quality of the river.

b. Associated impacts on free-flowing characteristics of the river are minimized to the extent practicable; and,

c. The proponent and manager of the project is a Federal, State, or local governmental entity.

2354.74 - Responsibility. The responsible official for evaluating a water resource project varies with the status of the river and whether another Federal agency is involved.

2354.74a - Regional Foresters. It is the responsibility of the Regional Forester to make determinations for proposed water resources projects on designated wild and scenic rivers (listed under Section 3(a) of the Act) and congressionally authorized study rivers (listed under Section 5(a) of the Act), where other Federal agency assistance is involved. This responsibility may not be delegated. It is also the responsibility of the Regional Forester to:

1. Ensure that the agency does not assist in the construction of any water resource projects that would have a direct and adverse effect on the values for which wild and scenic rivers were established, as provided for in Section 7 of the Act.

2. Provide for interdisciplinary review of water resource project analysis completed within the Region to ensure a consistent approach to the evaluation of proposed water resources projects.

2354.74b - Forest Supervisors. It is the responsibility of the Forest Supervisor to make determinations for proposed water resources projects on designated wild and scenic rivers (listed under Section 3(a) of the Act) and congressionally authorized study rivers (listed under Section 5(a) of the Act), where there is no other Federal agency assistance; and on rivers identified for study by the Forest Service (Section 5(d) of the Act). This responsibility may be delegated to the District Ranger.

2354.75 - Definitions.

Free-flowing. As applied to any river or section of a river, this means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway (16 U.S.C. 1287).

Section 7 determination. The standards and procedures established in Regulation at 36 CFR 297, whereby the Forest Service will consider consenting to construction of water resources projects on components of the Wild and Scenic Rivers System administered by the Secretary of Agriculture.

Water resources projects. Any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, or other construction or development which would affect the free-flowing characteristics of a Wild and Scenic River or study river (36 CFR 297).

2354.76 - Evaluation Procedures. Evaluate proposed water resources projects using the following ten steps. Consider all activities which meet the definition of water resources projects found at 36 CFR Part 297 to be water resources projects for the purposes of the evaluation as outlined in this section. Also, use the procedure of applicable parts of it, to evaluate activities proposed outside a designated or study river corridor to determine if the actions result in indirect effects that invade the area, or unreasonably diminish the scenic, recreation, or fish and wildlife values present in the area.

1. Establish Need. Define the need for the proposed activity and make a preliminary determination whether the proposed activity is consistent with the management goals and objectives for the river. If management goals and objectives have not been formalized through a river planning process, utilize Forest Plan standards and guidelines and any applicable state fish and wildlife, water quality, or other state agency management plans or policies consistent with identified values to develop objectives for each of the outstanding river values.

If the activity does not evidence a compelling need or is inconsistent with the management goals and objective or other applicable laws, the project need not be considered further. If there is a need for the activity and it appears consistent with management goals and objectives, proceed with Steps 2-10. In conducting and documenting the analysis, the scope of the evaluation is to be consistent with the magnitude and complexity of the proposed activity.

2. Define the Proposed Activity. Objectively describe the proposed activity in terms of the:

a. Project proponent(s);

b. Purpose/need for the project(document results of Step 1);

c. Geographic location of the project;

d. Duration of the proposed activities;

e. Magnitude/extent of the proposed activities; and,

f. Relationship to past and future management activities.

3. Describe How the Proposed Activity Will Directly Alter Within-Channel Conditions. Address the magnitude and spatial extent of the effects the proposed activity will have on in-channel attributes. Give special attention to changes in features that would affect the oustandingly remarkable and other significant resource values. Describe:

a. The position of the proposed activity relative ot the stream bed and stream banks.

b. Any likely resulting changes in:

(1) Active channel location;

(2) Channel geometry (cross-sectional shape, width/depth characteristics);

(3) Channel slope (rate or nature of vertical drop);

(4) Channel form (straight, meandering, or braided); and,

(5) Relevant water quality parameters (turbidity, temperature, nutrient availability).

4. Describe How the Proposed Activity Will Directly Alter Riparian and/or Floodplain Conditions. Address the magnitude and spatial extent of the effects the proposed activity will have on riparian/floodplain attributes. Give special attention to changes in features that would affect the outstandingly remarkable and other significant resource values. Describe:

a. The position of the proposed activity relative to the riparian area and floodplain.

b. Any likely resulting changes in:

(1) Vegetation composition, age structure, quantity, or vigor.

(2) Relevant soil properties such as compaction or percent bare ground.

(3) Relevant floodplain properties such as width, roughness, bank stability, or susceptibility to erosion.

5. Describe How the Proposed Activity Will Directly Alter Upland Conditions. Address the magnitude and spatial extent of the effects the proposed activity will have on upland attributes. Give special attention to changes in features that would affect the outstandingly remarkable and other significant resource values. Describe:

a. The position of the proposed activity relative to the uplands.

b. Any likely resulting changes in:

(1) Vegetation composition, age structure, quantity, or vigor.

(2) Relevant soil properties such as compaction or percent bare ground.

(3) Relevant hydrologic properties such as drainage patterns or the character of surface and subsurface flows.

c. Potential changes in upland conditions that would influence archeological, cultural, or other identified significant resource values.

6. Evaluate and Describe How Changes in On-Site Conditions Can/Will Alter Existing Hydrologic or Biologic Processes. Evaluate potential changes in hydrologic and biological processes by quantifying, qualifying, and/or modeling the likely effects of the proposed activity on:

a. The ability of the channel to change course, re-occupy former segments, or inundate its floodplain;

b. Streambank erosion potential, sediment routing and deposition, or debris loading;

c. The amount or timing of flow in the channel;

d. Existing flow patterns;

e. Surface and subsurface flow characteristics;

f. Flood storage (detention storage);

g. Aggradation/degradation of the channel; and,

h. Biological processes such as:

(1) Reproduction, vigor, growth and/or succession of streamside vegetation;

(2) Nutrient cycling;

(3) Fish spawning and/or rearing success;

(4) Riparian dependent avian species needs; and,

(5) Amphibian/mollusk needs.

7. Estimate the Magnitude and Spatial extent of Potential Off-Site Changes. Address potential off-site, or indirect effects of the proposed activity, acknowledging any uncertainties.

a. Consider and document:

(1) Changes that influence other parts of the river system;

(2) The range of circumstances under which off-site changes might occur (for example, as may be related to flow frequency); and,

(3) The probability or likelihood that predicted changes will be realized.

b. Specify processes involved, such as water and sediment, and the movement of nutrients.

8. Define the Time Scale Over Which Steps 3-7 are Likely to Occur. Review steps 3-7 looking independently at the element of time. Define and document the time scale over which the effects will occur.

9. Compare Project Analyses to Management Goals. Based on the analysis of steps 3-8, identify and document project effects on achievement, or timing of achievement, of management goals and objectives relative to free-flow, water quality, riparian area and floodplain conditions, and the outstandingly remarkable and other significant resource values.

10. Make Section 7 Determination. Make the Section 7 determination consistent with the policy outlined in FSM 2354.73. Based on the analysis of steps 3-9, document:

a. The effects of the proposed activity on conditions of free-flow, including identification of any proposed measures to minimize those effects;

b. Any direct and adverse effects on the outstandingly remarkable and other significant resource values for which the river was designated or is being studied; and,

c. Any unreasonable diminishing of scenic, recreational, fish and wildlife values associated with project activities above or below the area.

2354.77 - National Environmental Policy Act Compliance. Use the Section 7 procedure outlined in FSM 2354.76 to determine the effects of a proposed water resources project in compliance with the National Environmental Policy Act (NEPA). The procedure must be completed as a separate analysis by an interdisciplinary team, but included as part of the broader environmental analysis.

2354.78 - Environmental Analysis Documentation. For designated rivers and congressionally authorized study rivers, the Section 7 procedure must be documented in, or appended to, the environmental analysis document with appropriate reference in the environmental analysis. For rivers identified for study via the land management planning process, an analysis as to the potential effect of a proposed project on free-flow and the outstandingly remarkable values must be incorporated, appended, or available in the analysis file.

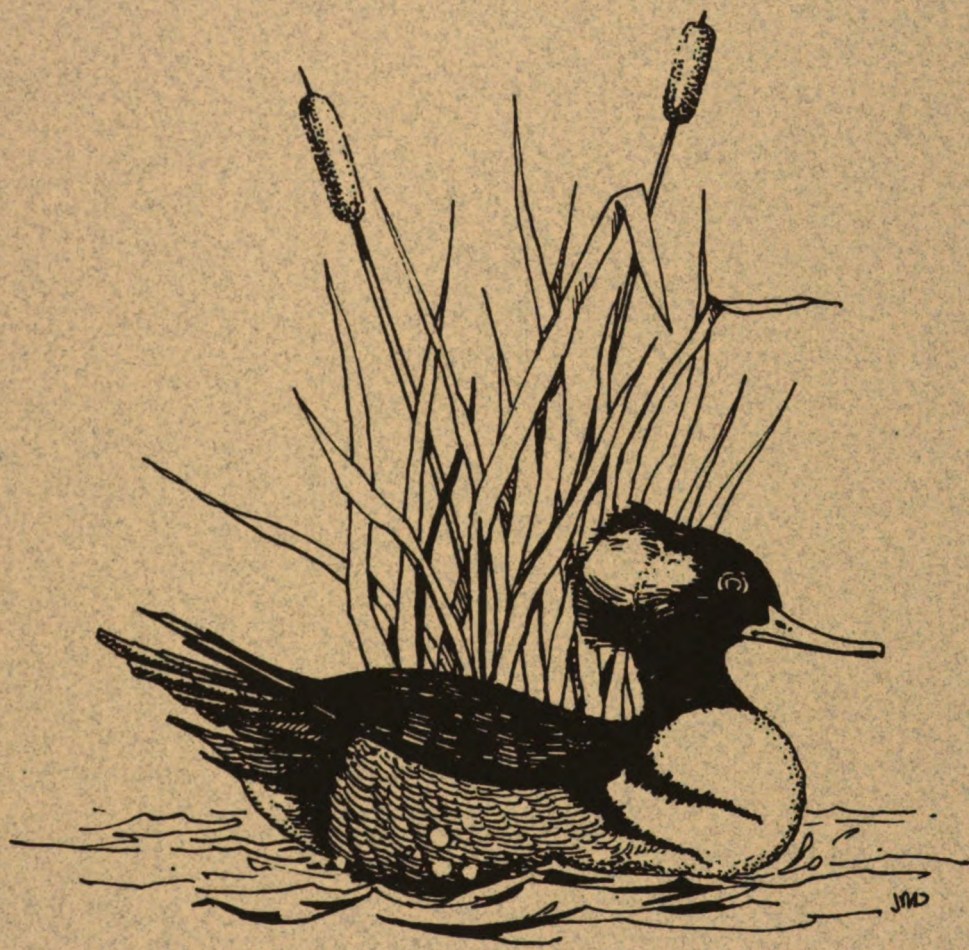
Use the decision document to describe the Section 7 determination for the preferred alternative. The determination should state if the proposed project will:

1. Affect free-flow characteristics, and the extent to which those effects will be minimized; and,

2. Have a direct and adverse effect on, or unreasonably diminish the values for which the river was designated (or might be added to the system), or have a net effect of protecting or enhancing those values, contributing to attainment of river management goals and objectives.

Appendix H

Water Resource Development Analysis



Appendix H – Water Resource Development Analysis Table of Contents

Attachment H

Water Resource Development Analysis

United States Department of Agriculture	Forest Service	Washington Office	14th & Independence SW P.O. Box 96090 Washington, DC 20090-6090

Reply to: 2350 Date: October 20, 1992

Subject: Wild and Scenic Rivers: Evaluation of Proposed Activities

To: Regional Foresters

Enclosed for your information are two documents that provide the basis for an interim directive (ID) that will be issued to FSM 2354.7 within the next few weeks. The ID will clarify the agency's policy relative to requirements of the Wild and Scenic Rivers Act and implementing regulations (36 CFR Part 297) and provide a procedure to be used by all Regions in evaluating proposed activities which may affect wild and scenic rivers. We are providing the base documents now to give you advance opportunity to acquaint yourselves with the new procedures.

The enclosed documents include:

"Procedure to Evaluate Water Resources Projects." This document is based on a procedure developed and currently being tested in Region 6.

"Abstract of Relevant Legislation, Regulations, Manual and Handbook Direction, Legal Opinion, and Congressional Direction Related to Water Resources Projects." Included in this abstract are comments to guide consistent interpretation and application of agency policy.

The Wild and Scenic Rivers Act directs the Forest Service to protect and enhance the "outstandingly remarkable" scenic, recreational, geologic, fish and wildlife, historic, cultural, and other values for which each river was added to the National Wild and Scenic Rivers System. To help achieve this goal, the Act prohibits, or imposes restrictions on developments and activities which would directly and adversely affect those values.

In administration of existing or potential wild and scenic rivers, the use of instream structures for fish habitat or water quality improvement, recreation facilities, road and trail bridges, and other uses are an important management consideration. Questions and conflicting opinions as to legal limitations have arisen, primarily due to varying interpretations of the Act and related agency direction. The ID will serve to clarify the direction and provide a process for consistent application throughout the Forest Service.

The evaluation of project proposals must consider the purpose and effects of a project relative to the free-flowing nature of the river, the resource values of the river and river corridor, and the management objectives for the river. The basic standard of review is whether the project will affect conditions of free-flow and have a direct and adverse effect on the values for which the river was designated. This standard is documented in both the Act and the implementing regulations for Section 7 of the Act (36 CFR Part 297).

Because of the specific responsibility spelled out in the Act for State fisheries agencies, and the heightened concern regarding the relationship between water resource projects, such as those designed to protect or improve fish habitat or watershed conditions, and the Wild and Scenic Rivers Act, it is particularly important that you coordinate your evaluations closely with these agencies. Coordination should also be carried out with other tribal, Federal, State, and local governmental agencies and private organizations that have a direct responsibility for, or interest in, management of the river and river corridor resources.

We are currently working closely with our Office of General Counsel to review our Section 7 implementing regulations (36 CFR Part 297) to determine what revisions are needed to improve the consistency with which the provisions of the Act are being implemented. If the regulations are eventually revised, our procedures will be changed as appropriate.

Deen Lundeen of our Recreation, Cultural Resources and Wilderness Management Staff and Harv Forsgren of our Wildlife and Fisheries Staff are available to assist you and answer questions regarding these procedures.

/s/George M. Leonard

GEORGE M. LEONARD
Associate Chief

Enclosures (2)

United States Forest Washington 14th & Independence SW
Department of Service Office P.O. Box 96090
Agriculture Washington, DC 20090-6090

Reply to: 2350 Date: October 20, 1992

Subject: Wild and Scenic Rivers: Evaluation of Proposed Activities

To: Regional Foresters

Enclosed for your information are two documents that provide the basis for an interim directive (ID) that will be issued to FSM 2354.7 within the next few weeks. The ID will clarify the agency's policy relative to requirements of the Wild and Scenic Rivers Act and implementing regulations (36 CFR Part 297) and provide a procedure to be used by all Regions in evaluating proposed activities which may affect wild and scenic rivers. We are providing the base documents now to give you advance opportunity to acquaint yourselves with the new procedures.

The enclosed documents include:

> "Procedure to Evaluate Water Resources Projects." This document is based on a procedure developed and currently being tested in Region 6.
>
> "Abstract of Relevant Legislation, Regulations, Manual and Handbook Direction, Legal Opinion, and Congressional Direction Related to Water Resources Projects." Included in this abstract are comments to guide consistent interpretation and application of agency policy.

The Wild and Scenic Rivers Act directs the Forest Service to protect and enhance the "outstandingly remarkable" scenic, recreational, geologic, fish and wildlife, historic, cultural, and other values for which each river was added to the National Wild and Scenic Rivers System. To help achieve this goal, the Act prohibits, or imposes restrictions on developments and activities which would directly and adversely affect those values.

In administration of existing or potential wild and scenic rivers, the use of instream structures for fish habitat or water quality improvement, recreation facilities, road and trail bridges, and other uses are an important management consideration. Questions and conflicting opinions as to legal limitations have arisen, primarily due to varying interpretations of the Act and related agency direction. The ID will serve to clarify the direction and provide a process for consistent application throughout the Forest Service.

The evaluation of project proposals must consider the purpose and effects of a project relative to the free-flowing nature of the river, the resource values of the river and river corridor, and the management objectives for the river. The basic standard of review is whether the project will affect conditions of free-flow and have a direct and adverse effect on the values for which the river was designated. This standard is documented in both the Act and the implementing regulations for Section 7 of the Act (36 CFR Part 297).

Because of the specific responsibility spelled out in the Act for State fisheries agencies, and the heightened concern regarding the relationship between water resource projects, such as those designed to protect or improve fish habitat or watershed conditions, and the Wild and Scenic Rivers Act, it is particularly important that you coordinate your evaluations closely with these agencies. Coordination should also be carried out with other tribal, Federal, State, and local governmental agencies and private organizations that have a direct responsibility for, or interest in, management of the river and river corridor resources.

We are currently working closely with our Office of General Counsel to review our Section 7 implementing regulations (36 CFR Part 297) to determine what revisions are needed to improve the consistency with which the provisions of the Act are being implemented. If the regulations are eventually revised, our procedures will be changed as appropriate.

Deen Lundeen of our Recreation, Cultural Resources and Wilderness Management Staff and Harv Forsgren of our Wildlife and Fisheries Staff are available to assist you and answer questions regarding these procedures.

/s/George M. Leonard

GEORGE M. LEONARD
Associate Chief

Enclosures (2)

PROCEDURE TO EVALUATE WATER RESOURCES PROJECTS

INTRODUCTION

This paper documents a procedure which can be uniformly and consistently applied by the Forest Service to determine whether proposed water resources projects present a direct and adverse affect to designated wild and scenic river values, and thus would be prohibited under Section 7 of the Wild and Scenic Rivers Act (the "Act"), or whether the projects should be allowed to proceed because they do not meet that threshold.

The procedure also applies to congressionally identified study rivers (Section "5a" rivers), which are afforded interim protection from projects which would affect "free-flow" characteristics in Section 7(b) of the Act. Although not protected from such projects in the Act, rivers identified for study through the land management planning process (Section "5d" rivers) are also afforded protection via agency policy (Forest Service Planning Handbook (1909.12, Chapter 8.12).

The procedure may also be applied to evaluate activities proposed outside a designated or study river corridor to determine if they result in indirect effects that "invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation," as referenced in Section 7 (a).

This procedure paper presumes a strict interpretation of what activities would qualify as water resources projects. Water resources projects have been defined in 36 CFR Part 297 as:

> "...any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, or other construction of developments which would affect the free-flowing characteristics of a Wild and Scenic River or study river."

Section 16 (b) of the Act provides a definition of "free-flow" that assists in identification of water resources projects. It states:

> "Free-flowing, as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway."

Therefore, if a proposed activity would affect a river's free-flow, or meet other criteria outlined in 36 CFR 297, it qualifies as a water resources project and the Section 7 procedure defined in this paper can be applied.

ISSUE

The key issue, assuming that the proposed activity is identified as a water resources project, is whether the project presents a direct and adverse affect on the values for which the river was designated or is being studied (or if a proposed activity is above or below the area, does it unreasonably diminish the scenic, recreational, or fish and wildlife values)?

Lack of a standardized procedure to analyze effects has contributed to the difficulty of making an adequate analysis of water resource projects as required by Section 7, manual direction (FSM 2354), and the Forest Service Handbook (FSH 1909.12, Chapter 8). The balance of this paper describes a standardized analysis procedure that incorporates the following principles:

a. Effects will be judged in the context of the legislation designating the affected wild and scenic river and the management objectives for the river as defined in the comprehensive river management plan. (In the case of study rivers, effects are judged in the context of relevant Forest Plan standards and guidelines and the potential affect of the activity on the river's eligibility.)

b. Water resource projects are permissible if the net effect protects or enhances values for which the river was designated or is being studied. Water resource projects are not permitted if they have a direct and adverse effect on such river values. (In the case of study rivers management activities may be carried out provided they would not result in a reduced classification recommendation, and are consistent with other relevant Forest Plan standards and guidelines.)

c. Permissible water resources projects will, to the extent practicable, maintain or enhance the free flowing characteristics of the river.

d. Water resources projects may be permitted even though they may have an effect on free flowing characteristics if:

   (1) the specific purpose of the project is to protect or enhance the values for which the river was designated, restore the natural characteristics of the river, and/or improve the water quality of the river;

   (2) associated impacts on free flowing characteristics of the river are minimized to the extent practicable; and,

   (3) the proponent and manager of the project is a federal, state, or local governmental entity.

PROCEDURE

Background: In developing this procedure we recognize that:

- It is necessary to provide a temporal and spatial context for evaluating river related proposals. The wild and scenic river management planning process should result in a clear statement of long term management goals and objectives for free-flow, water quality, riparian areas and floodplains, and the outstandingly remarkable and other significant resource values designated by statute.

- Section 7 and promulgating rules (36 CFR 297) require an analysis of effects associated with a proposed water resources project. The analysis of activities deemed acceptable must clearly demonstrate consistency with management goals and objectives.

- Management of river ecosystems should be designed to achieve management goals and objectives through natural processes and use of techniques that mimic those processes. To insure that long term goals and objectives are met, careful analysis and evaluation of these processes, time scales, and public perceptions is necessary.

- State fish and wildlife agencies share responsibility with the Forest Service for fish and wildlife resources on wild and scenic river's. Identification and evaluation of water resource projects should be coordinated with the States, recognizing and supporting attainment of state fish and wildlife management objectives to the extent they are consistent with the outstanding values for which the river was designated or is being studied.

Step-by-Step Procedure: The following procedure is designed to evaluate proposed activities within a wild and scenic river ecosystem. This procedure is not simply one of disclosure. Rather, it is a framework to identify changes in free-flow conditions and evaluate the effects associated with project proposals.

1) Establish Need and Evaluate Consistency with Management Goals and Objectives. The first step is to define the need for the proposed activity and make a *preliminary* determination whether the proposed activity is consistent with the management goals and objectives for the river. Management goals provide the standard for evaluation of effects 1/. If the activity does not evidence a compelling need or is inconsistent with the management goals and objectives or other applicable laws (e.g. Wilderness Act, Endangered Species Act, etc.), the project may not be considered further.

1/ If management goals and objectives have not been formalized through a river planning process, utilize Forest Plan standards and guidelines and any applicable state fish and wildlife, water quality, or other state agency management plans or policies consistent with identified values, to develop objectives for each of the outstanding river values.

For projects that appear needed to help attain the management goals and objectives, proceed with the following steps. The scope of analysis should be commensurate with the magnitude and complexity of the project proposal. The procedure should be accomplished via an interdisciplinary team with adequate skills for the analysis. Note that each step requires some professional judgement.

2) Define the Proposed Activity. Provide an objective description of the proposed activity. The level of detail should be proportional to the scope of the proposed project and should indicate whether the project is isolated or part of a more complex or comprehensive proposal.

a. project proponent(s)
b. purpose (clearly describe the need for the project)
c. location
d. duration of proposed activities
e. magnitude/extent of proposed activities
f. relationship to past and future management

3) Describe How the Proposed Activity Will Directly Alter Within-Channel Conditions. Address the magnitude and spatial extent of the effects the proposed activity will have on in-channel attributes. Special attention should be given to changes in features which would affect the outstandingly remarkable and other significant resource values.

a. What is the position of the proposed activity relative to the stream bed and banks?
b. Does the proposed activity result in changes in:
    1. active channel location?
    2. channel geometry (i.e. cross-sectional shape or width/depth characteristics)?
    3. channel slope (rate or nature of vertical drop)?
    4. channel form (e.g. straight, meandering, or braided)?
    5. relevant water quality parameters (e.g. turbidity, temperature, nutrient availability)?

4) Describe How the Proposed Activity Will Directly Alter Riparian and/or Floodplain Conditions. Address the magnitude and spatial extent of the effects the proposed activity will have on riparian/floodplain attributes. Special attention should be given to changes in features that would affect the outstandingly remarkable and other significant resource values.

a. What is the position of the proposed activity relative to the riparian area and floodplain?

b. Does the proposed activity result in changes in:
    1. vegetation composition, age structure, quantity, vigor, etc.?
    2. relevant soil properties such as compaction, percent bare ground, etc.?
    3. relevant floodplain properties such as width, roughness, bank stability or susceptibility to erosion, etc.?

5) Describe How the Proposed Activity Will Directly Alter Upland Conditions. Address the magnitude and spatial extent of the effects the proposed activity will have on associated upland attributes. Special attention should be given to changes in features that would affect the outstandingly remarkable and other significant resource values.

a. What is the position of the proposed activity relative to the uplands?
b. Does the proposed activity result in changes in:
    1. vegetation composition, age structure, quantity, vigor, etc.?
    2. relevant soil properties such as compaction, percent bare ground, etc.?
    3. relevant hydrologic properties such as drainage patterns, the character of surface and subsurface flows, etc.?
c. Will changes in upland conditions influence archeological, cultural, or other identified significant resource values.

6) Evaluate and Describe How Changes in On-Site Conditions Can/Will Alter Existing Hydrologic or Biologic Processes. Evaluate potential changes in river and biological processes by quantifying, qualifying and modeling as appropriate.

a. Does the proposed activity affect:
    1. ability of the channel to change course, re-occupy former segments, or inundate its floodplain?
    2. streambank erosion potential, sediment routing and deposition, or debris loading?
    3. the amount or timing of flow in the channel?
    4. existing flow patterns?
    5. surface and subsurface flows?
    6. flood storage (detention storage)?
    7. aggradation/degradation of the channel?
b. Does the proposed activity affect biological processes such as:
    1. reproduction, vigor, growth and/or succession of streamside vegetation?

2. nutrient cycling?
3. fish spawning and/or rearing success?
4. riparian dependent avian species needs?
5. amphibian/mollusk needs?

7) Estimate the Magnitude and Spatial Extent of Potential Off-Site Changes. Address potential off-site, or indirect effects of the proposed activity, acknowledging any uncertainties (i.e., a risk analysis).

a. Consider and document:
1. changes that influence other parts of the river system.
2. the range of circumstances under which off-site changes might occur (e.g., as may be related to flow frequency).
3. the probability or likelihood that predicted changes will be realized.
b. Specify processes involved, such as water, sediment, movement of nutrients, etc.

8) Define the Time Scale Over Which Steps 3 - 7 are Likely to Occur.

a. Review steps 3 - 7 looking independently at the element of time.
b. Consider whether conditions, processes and effects are temporary or persistent. That is, attempt to define and document the time scale over which effects will occur.

9) Compare Project Analyses to Management Goals and Objectives. Based on the analysis of steps 3-8, identify project effects on achievement, or timing of achievement, of management goals and objectives relative to free-flow, water quality, riparian area and floodplain conditions, and the outstandingly remarkable and other significant resource values.

10) Section 7 Determination. Based on the analysis of steps 3-9 document:

a. effects of the proposed activity on conditions of free-flow, including identification of the measures taken to minimize those effects.
b. any direct and adverse effects on the outstandingly remarkable and other significant resource values for which the river was designated or is being studied.
c. any unreasonable diminishing of scenic, recreational, or fish and wildlife values associated with projects above or below the area.

The determination should permit those water resource projects that are consistent with the legislation designating the affected wild and scenic river and the management objectives for the river as defined in the comprehensive river management plan, *or* in the case of study rivers, the proposed activities would not result in a reduced classification recommendation and is consistent with Forest Plan standards and guidelines. Permissible water resources projects will, to the extent practicable, maintain or en-

hance the free flowing characteristics of the river. Water resource projects that have a direct and adverse effect on designated river values or management objectives are not to be permitted.

It is important to note that water resources projects may be permitted even though they may have an effect on free flowing characteristics if:

a. the specific purpose of the project is to protect or enhance the values for which the river was designated, restore the natural characteristics of the river, and/or improve the water quality of the river;

b. the associated impacts on free flowing characteristics of the river are minimized to the extent practicable; and,

c. the proponent and manager of the project is a federal, state, or local governmental entity.

Include the Section 7 determination as part of the broader NEPA analysis of the proposed activity. See the following section for additional information on the relationship of Section 7 determinations and the NEPA process.

INCORPORATION OF SECTION 7 DETERMINATIONS IN THE NEPA PROCESS

The Code of Federal Regulations states:

"The determination of the effects of a proposed water resources project shall be made in compliance with NEPA."

The following discussion offers more specific information regarding incorporation of the Section 7 procedure into the NEPA process. It also includes information relating to the decision document and the responsible official.

A proposed water resources project may be an independent project such as watershed or fish habitat restoration or construction of a boat ramp or fishing pier, or part of a larger program that serves a variety of purposes. In either situation, the Section 7 procedure is to be completed as a separate analysis by an interdisciplinary team. For designated rivers (Section 3a) and congressionally identified study rivers (Section 5a), the Section 7 procedure would be explicitly documented in, or appended to the NEPA document with appropriate reference in the NEPA analysis. Similarly, for rivers identified for study via the land management planning process (Section 5d), an analysis as to the potential effect of a proposed project on free-flow and the outstandingly remarkable values should be incorporated, appended, or available in the analysis file.

The decision document will describe the Section 7 determination for the preferred alternative for a designated or congressionally identified study river. This determination should state whether the proposed project will affect free-flow characteristics, whether it will or will not have a "direct and adverse effect on the values for which the river was designated" (or might be added to the System), or whether proposed projects above or below the area will "unreasonably diminish" those resource values. The Section 7 evaluation may result in identification of water-resources projects which protect, restore or enhance the values for which the river was designated or identified for study. In approval of such projects, the decision notice should clearly indicate that determination.

For study rivers identified via the land management planning process (i.e. Section 5d rivers), utilize the Section 7 procedure with the decision document referencing that an analysis was conducted to evaluate the potential effect of the proposed project on free-flow and the outstandingly remarkable values. Note, that Section 7 is not required for 5d rivers, but agency policy (FSH 1909.12 8.12) provides direction to protect the free-flowing condition and outstandingly remarkable values.

The responsible official differs with the status of the river and whether or not another federal agency is involved. For proposed water resources projects on a 3a or 5a river, in which there is another federal agency "assisting by loan, grant, license or otherwise...," the Regional Forester is the responsible official (reference FSM 2354.04e). If there is no other federal agency "assistance" for a project on a 3a or 5a river, the appropriate line officer signs the decision document. Decision documents for water resources projects on a 5d river are signed by the appropriate line officer.

REGIONAL OVERSIGHT

The Regional Offices are to provide for review of the Section 7 analysis completed for proposed water resources projects. This review process should be coordinated by the Recreation staff group and involve other appropriate staff areas such as fisheries, watershed, engineering, etc. The intent of this oversight is to ensure a consistent approach to the evaluation of proposed water resources projects in wild and scenic rivers. The review is not intended to make the final decision.

SUMMARY

These procedures were developed to analyze projects that have the potential to affect the free-flowing condition and/or outstandingly remarkable values of designated and study wild and scenic river's and determine which projects are consistent with the Act by protecting, restoring, and enhancing those river values. The scope of the analysis will vary with the magnitude and complexity of the proposed activity. The procedure requires interdisciplinary analysis and application of professional judgement within the requirements of the Act.

Examples of projects that would likely be subject to Section 7 analysis include, but are limited to:

1. Log removal for recreation user safety;
2. Fisheries habitat and watershed restoration and enhancement projects;
3. Bridge and other roadway construction/reconstruction projects;
4. Bank stabilization projects;
5. Recreation facilities such as boat ramps and fishing piers;
6. Activities that require 404 permits from the Corps of Engineers.

ABSTRACT OF RELEVANT LEGISLATION, REGULATIONS, MANUAL AND HANDBOOK DIRECTION, LEGAL OPINION AND CONGRESSIONAL DIRECTION RELATED TO WATER RESOURCES PROJECTS

WILD AND SCENIC RIVERS ACT

P.L. 90-542, Section 1(b):

"It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes."

P.L. 90-542, Section 7(a):

Section 7 provides specific protection of designated and congressionally identified study rivers by prohibiting the licensing "...of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act." Additionally this section states:

"...no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration."

The section also addresses federal agency limitations on licensing or assisting in developments below or above designated or proposed W&SR's that "invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area..."

P.L. 90-542, Section 10(a):

Section 10(a) states Congressional intent for management to protect and enhance those values for which a river was designated (or is being studied). The section calls

for development of management plans with specific objectives that are based on the special values of the particular river. Specifically:

"Each component of the national Wild and Scenic Rivers System shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public uses and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on special attributes of the area."

P.L. 90-542, Section 12(a):

Section 12 sets forth broad authority for management policies on federal lands "which include, border upon, or are adjacent to, any river included in the National Wild and Scenic Rivers System or under consideration for such inclusion, in accordance with section 2(a)(ii), 3(a), or 5(a)..." directing them to "take such action respecting management policies, regulations, contracts, plans...as may be necessary to protect such rivers in accordance with the purposes of this Act."

P.L. 90-542, Section 16(b):

"Free-flowing, as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion shall not automatically bar its consideration for such inclusion: *Provided*, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national Wild and Scenic Rivers System."

CODE OF FEDERAL REGULATIONS

36 CFR 297 - Regulations for Implementing Section 7 of the Wild and Scenic Rivers Act:

"Water resources projects" have been defined in 36 CFR 297 as:

"...any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, or other construction of developments which would affect the free-flowing characteristics of a Wild and Scenic River or study river."

"These regulations require that a determination of the direct and adverse effects of a proposed project be completed through the NEPA process."

INTERAGENCY GUIDELINES FOR ELIGIBILITY, CLASSIFICATION AND MANAGEMENT OF RIVER AREAS - September 7, 1982

Section III - Management:

"Other Resource Management Practices. Resource management practices will be limited to those which are necessary for protection, conservation, rehabilitation or enhancement of the river area resources. Such features as trail bridges, fences, water bars and drainage ditches, flow measurement devices and other minor structures or management practices are permitted when compatible with the classification of the river area and provided that the area remains natural in appearance and the practices or structures harmonize with the surrounding environment."

This section establishes a nondegradation and enhancement policy for all designated river areas. Each component of the W&SR's system is to be managed to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact or degrade those values. This guideline specifically identifies three criteria for evaluation of proposed activities that are consistent with the analysis called for in Section 7 of the Act, namely: 1) compatibility with the values for which the river was designated; 2) no impact on natural appearance; and, 3) harmonize with the surrounding environment.

FOREST SERVICE MANUAL

FSM 2354.04e

"Regional Foresters shall: Determine the direct and adverse effects of water resource projects upon designated or study wild and scenic rivers, and determine, pursuant to section 7 of the Wild and Scenic Rivers Act, whether the Department of Agriculture will consent to a proposed action (36 CFR 297). This authority shall not be redelegated..."

FSM 2354.42b

"Manage wildlife and fish habitats in a manner consistent with the other recognized river attributes."

"Recommendations to State agencies concerning the management of fisheries must be consistent and in harmony with established river objectives.

"The construction of minor structures for such purposes as improvement of fish and game habitat are acceptable in wild river areas provided they do not affect the free-flowing characteristics of the river and harmonize with the surrounding environment."

The last portion of this manual direction suggests that any fish and wildlife habitat improvement project which would affect conditions of free-flow are not acceptable in wild rivers. However, the primary factor in determining the acceptability of proposed fish and wildlife habitat management projects within Wild and Scenic River corridors is whether or not they have a direct and adverse affect on the values for which the river was designated (or is being studied). Water resources projects which do not directly and adversely affect the values for which the river was designated, or is being studied, are acceptable. Those projects that are incompatible with the outstanding values of the river corridor are not acceptable.

FOREST SERVICE HANDBOOK

FSH 1909.12, Chapter 8.12

"1. To the extent the Forest Service is authorized under law to control stream impoundments and diversions, the free-flowing characteristics of the identified river cannot be modified."

"3. Management and development of the identified river and its corridor cannot be modified to the degree that eligibility or classification would be affected..."

FSH 1909.12, Chapter 8.2

"1. Standards for Wild Rivers...

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 areas must be maintained...

i. Structures: ...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.)"

"2. Standards for Scenic Rivers...

i. Structures: ...New structures that would have a direct and adverse effect on river values would not be allowed."

"3. Standards for Recreational Rivers...

i. Structures: ...New structures are allowed for both habitation and for intensive recreation use."

LEGAL OPINION

A May 1979 memorandum to the Chief from Clarence W. Brizee (Deputy Director, Forestry Natural Resources Division; USDA, OGC) provides the following interpretation, which is consistent with our current understanding:

> "With regard to water resources projects, the Wild and Scenic Rivers Act is not a blanket ban or absolute prohibition... The only activity absolutely prohibited by Section 7 is the licensing of dams and other project works by the Federal Energy Regulatory Commission under the Federal Power Act within the boundaries of a designated or study river. Other federally assisted water resources projects may be permitted. Thus, rather than being characterized by absolute prohibitions, the Act embodies a flexible approach. Section 7 establishes a procedure for making a specific determination with respect to each proposed water resources project."
>
> Mr. Brizee continues: "The evolution of Section 7 demonstrates that Congress did not intend that the Act automatically ban all developments and uses on or near a (study or designated) river. To the contrary, the legislation was specifically amended in order to provide a procedure via Section 7 for review of proposed water resources projects on a case-by-case basis."
>
> Deputy Director Brizee further states, "even though water resources projects will be reviewed on a case-by-case basis, the Act is strict as to what is allowable. This Department and the Department of the Interior have defined "water resources project" in a broad context. That is, a water resources project is any type of construction which would result in any change in the free-flowing characteristics of a particular river... This concept of water resources projects has been applied to dredge and fill permits under Section 404 of the Clean Water Act, construction of levees, removal of navigational hazards, construction of nuclear power plants, and other such diverse projects."

This memorandum also offers an interpretation of the "direct and adverse effect standard":

> "The Department of Agriculture interpreted the "direct and adverse effect" standard, and the "unreasonably diminish" standard in the context of a Section 7 determination for a nuclear power project on the banks of the Skagit W&SR. The discussion in that determination indicates that a flexible approach is possible.
>
> With regard to projects inside the designated boundary, there is no definition provided by the Act or legislative history as to what constitutes such a "direct and adverse" effect. We do not construe this section as a ban on all projects which might be built on a river proposed or designated as a component of the System. Rather, the Act contemplates that each proposed project be considered on its own merits. In making this determination, we consider the values of the river as they now exist; a "direct and adverse" effect is one which will result in marked dimunitions of the values enumerated in Section 1(b) of the Act. Also relevant to the consideration of the project's impacts is the degree to

which it blends in or is otherwise compatible with the natural qualities of the river, whether there may be a dimunition in the air and water quality, and the effects on animals and vegetation. The duration of the impact is another important consideration; long lasting or permanent impacts must be viewed more strictly than temporary or short term impacts."

CONGRESSIONAL DIRECTION

The most recent Congressional direction on management of wild and scenic rivers is associated with the Michigan Scenic Rivers Act of 1991 (H.R. 476) dated November 23, 1991. The Senate Committee on Energy and Natural Resources report on the Michigan Scenic Rivers Act states:

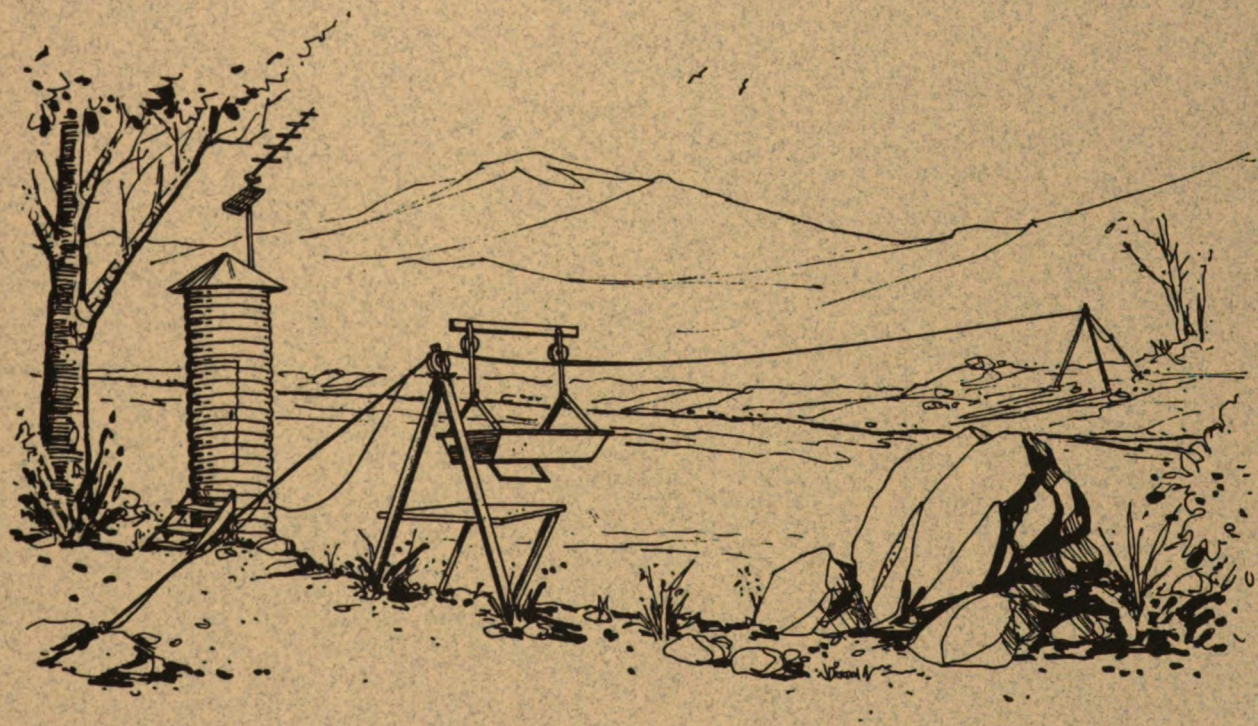
> "The Committee is aware of the concern expressed by some parties of the potential effect that designation of certain rivers as components of the Wild and Scenic Rivers System may have on ongoing stream restoration and improvement projects in the State of Michigan. The Committee notes the importance of these projects in restoring damaged riparian areas and improving water quality and aquatic habitat. In the Committee's view, such projects are not inconsistent with Wild and Scenic River designation, and in fact similar projects have been successfully completed on Wild and Scenic River segments throughout the nation. The Committee directs the Forest Service to develop a consistent and coordinated policy permitting the implementation of such projects within Wild and Scenic River segments in order to avoid unnecessary concern and confusion."

In similar fashion, the House Committee on Interior and Insular Affairs report on the Michigan Scenic Rivers Act states:

> "The committee has provided flexibility with regards to sea lamprey control in order that appropriate management actions can be taken consistent with the requirements of law. In keeping with sound management practices for wild and scenic rivers, the Committee believes there is appropriate flexibility in law to provide for fish and wildlife habitat and water quality improvement in a manner that will protect the values for which a river segment was designated. Some of the finest fisheries in the country are found on rivers designated as part of the National Wild and Scenic Rivers System. The Committee recognizes the importance of the fisheries on the Michigan rivers designated by this Act and is supportive of efforts to correct significant water quality, aquatic habitat or other ecological degradation caused by past human activity. The Wild and Scenic Rivers Act permits structural and non-structural techniques of fish restoration to be used as long as such activities do not have an adverse impact on the values for which such rivers are designated. Such activities consistent with this standard are occurring on wild and scenic rivers across the country. As provided for by law, the Secretary will cooperate with the state on these matters."

Appendix I

Water Quality Status and Classification



Appendix I – Water Quality Status and Classification Explanation Table of Contents

APPENDIX I

Water Quality Status and Classification Explanation

Status

Partial support and not supporting are terms used in the 305b report to describe status of water quality as it meets standards and toxic pollutant levels.

Partial support-some interference with designated uses, but use is not precluded. An acute water quality standard is exceeded in two or more samples in past three years, but the mean measured value is less than the chronic standard. The designated uses of the waterbody are present, but it is uncertain that these are at attainable levels, or at least some impact on the uses has been noted. The use exists in the waterbody based on observation, but professional judgment, which may be based on limited data, indicates that the use is not fully supported.

Not Supporting-designated uses measurably impaired because of water pollution. Use may be present but at significantly reduced levels from full support in all or some portion of the waterbody. An acute water quality standard is exceeded in two or more samples in the previous three years and the mean measured value is above the chronic standard. There is some certainty that the waterbody can not be fully used as designated because the survival propagation, production, dispersion community structure, or species diversity of aquatic life is impaired. No evidence exists that the entire waterbody can be used as designated; or known or suspected water quality impacts prevent anything but minimal use of all or a major portion of the waterbody.

Slight is a reference to the status of the water quality as it refers to a narrative explanation of the impacts of the named nonpoint source pollutant. Sediment in this case is a nonpoint pollutant which has no numerical standard to rate against, however, with application of Best Management Practices this pollutant could be remediated and impairment eliminated.

Classifications

Recreation

Class 1 - Primary Contact

These surface waters are suitable or intended to become suitable for recreational activities in or on the water when the ingestion of small quantities of water is likely to occur. Such waters include but are not limited to those used for swimming, rafting, kayaking and water-skiing.

Class 2 - Secondary Contact

These surface waters are suitable or intended to become suitable for recreational uses on or about the water which are not included in the primary contact subcategory, including but not limited to fishing and other streamside or lakeside recreation.

Agriculture

These surface waters are suitable or intended to become suitable for irrigation of crops usually grown in Colorado and which are not hazardous as drinking water for livestock.

Aquatic Life

These surface waters presently support aquatic life uses as described below, or such uses may reasonably be expected in the future due to the suitability of present conditions, or the waters are intended to become suitable for such uses as a goal:

Class 1 – Cold Water Aquatic Life

These are waters that (1) currently are capable of sustaining a wide variety of cold water biota, including sensitive species, or (2) could sustain such biota but for correctable water quality conditions. Waters shall be considered capable of sustaining such biota where physical habitat, water flows or levels, and water quality conditions result in no substantial impairment of the abundance and diversity of species.

Class 1 - Warm Water Aquatic Life

These are waters that (1) currently are capable of sustaining a wide variety of warm water biota, including sensitive species, or (2) could sustain such biota but for correctable water quality conditions. Waters shall be considered capable of sustaining such biota where physical habitat, water flows or levels, and water quality conditions result in no substantial impairment of the abundance and diversity of species.

Class 2-Cold and Warm Water Aquatic Life

These are waters that are not capable of sustaining a wide variety of cold or warm water biota, including sensitive species, due to physical habitat, water flows or levels, or uncorrectable water quality conditions that result in substantial impairment of the abundance and diversity of species.

Domestic Water Supply

These surface waters are suitable or intended to become suitable for potable water supplies. After receiving standard treatment (defined as coagulation, flocculation, sedimentation, filtration, and disinfection with chlorine or its equivalent), these waters will meet Colorado drinking water regulations and any revisions, amendments, or supplements thereto.

Wetlands

The provisions of this section do not apply to constructed wetlands.

Compensatory wetlands shall have, as a minimum, the classifications of the segment in which they are located.

Created wetlands shall be considered to be initially unclassified, and shall be subject only to the narrative standards until the Colorado Water Quality Control Commission (Commission) adopts a "wetlands" classification.

Tributary wetlands shall be considered tributaries of the surface water segment to which they are most directly connected and shall be subject to interim classifications as follows: such wetlands shall be considered to have the same classifications, except for drinking water supply classifications, as the segment of which they are a part, unless the "wetlands" classification and appropriate site-specific standards have been adopted to protect the water quality dependent functions of the wetlands.

The Commission may adopt a "wetlands" classification based on the functions of the wetlands in question. Wetland functions that may warrant site-specific protection include ground water recharge or discharge, flood flow alteration, sediment stabilization, sediment or other pollutant retention, nutrient removal or transformation, biological diversity or uniqueness, wildlife diversity or abundance, aquatic life diversity or abundance, and recreation. Because some wetland functions may be mutually exclusive (e.g., wildlife abundance, recreation), the functions to be protected or restored will be determined on a wetland-by-wetland basis, considering natural wetland characteristics and overall benefits to the watershed. The initial adoption of a site specific wetlands classification and related standards to replace the interim classifications and standards described above shall not be considered a downgrading.

Appendix J

Summary and Analysis of Comments

Appendix J – Summary and Analysis of Comments Received on the Draft Legislative Environmental Impact Statement and the Supplemental Draft Legislative Environmental Impact Statement

Appendix J. Summary of Public Comment

This appendix summarizes and responds to comments received on
(1) the Wild and Scenic River Study Report and Draft Legislative Environmental Impact Statement for the North Fork of the South Platte and the South Platte Rivers (DLEIS), and
(2) the Supplemental Wild and Scenic River Study Report and Draft Legislative Environmental Impact Statement for the North Fork of the South Platte and the South Platte Rivers (SDLEIS).

The sections below summarize the number and type of comments received, describe how those comments were incorporated into the Final EIS, and respond to substantive issues raised in the comments.

The Interdisciplinary Team reviewed and responded to all substantive comments. Because many comments were duplicative, the substantive comments were summarized by issue. This allows the reader interested in a particular topic to review the substance of the issue and the agency's response. The comments have been grouped into categories as appropriate. Comments were formulated and responses for those comments are presented below. Substantive comments are defined as those that do one or more of the following:

- Question, with reasonable basis, the accuracy of the information in the EIS or the adequacy of the environmental analysis;
- Present reasonable alternatives other than those presented in the EIS; or
- Cause changes or revisions in the proposal. In other words, they raise, debate or question a point of fact or policy.

Comments in favor of or against the preferred alternative or other alternatives, or those that only agree or disagree with Agency policy are not considered substantive.

J.1 Comments on the DLEIS

The 90-day public comment period for the DLEIS began with a Notice of Availability published in the Federal Register in April, 1997 (Vol. 62, No. 70, p. 17810). The Forest Service received 324 public comments on the document.

List of Comments

Comments made on the DLEIS are summarized in Table J-1 below: Following the table are responses to the comments, after which is a list of the commenters and their associated comments. Comments to which a response is not necessary are identified with an asterisk (*).

Table J-1.–List of Comments Received on the DLEIS

Comment #	Comment by Category
Preference for Alternative A1	
1	* - Prefers Alternative A1
Preference for Alternative A2	
2	* - Prefers Alternative A2

Table J-1.--List of Comments Received on the DLEIS

Comment #	Comment by Category
3	* - Outline of process for development of a viable A2 alternative
4	* - Resolution attached supporting A2 alternative
5	* - Supports Control of river management by local entities
6	* - Note that the majority of local governments oppose Alternative J and support Alternative A2.
7	Water supply and river values are better protected through the A2 Alternative than through designation
8	Funding from local entities may be available only under a designation alternative.
9	* - Appreciates openness of Forest Service to the A2 alternative
10	Help is needed from the Forest Service to complete the A2 alternative
Problems with Alternative A2	
11	Supplemental DLEIS needed to better define the A2 Alternative
12	It is premature to identify Alternative A2 as a "Proposed Action."
13	A timeframe for formulation of a viable A2 alternative is needed.
14	Degree of protection and environmental effects under the A2 alternative unknown.
15	Long-term protection not guaranteed under intergovernmental agreements and similar mechanisms.
16	* - The A2 alternative should protect ORVs at a level greater than or equal to designation.
17	* - The need for adequate supplies of water does not trump all other interests.
18	* - It is more important to focus on conservation of water than on more water supply projects.
19	* - The A2 alternative is not a protection strategy from a major dam.
20	All interested parties should be given opportunities to be included in on all discussions regarding the A2 alternative.
21	Work out an agreement with Metropolitan Water Suppliers on flows
Preference for Alternative B	
22	* - Prefers Alternative B – Supports highest level of protection
23	* - Include segments G and H
24	* - J is a compromise with developers to allow continued growth
25	* - Do not include Segment H1
26	* - Segment H3 should be included at the very least on the North Fork.
Preference for Alternative D	
27	* - Prefers Alternative D
Preference for Alternative I	
28	* - Prefers Alternative I
Preference for Alternative J	
29	* - Prefers Alternative J
30	* - Alternative J preferred as a minimum level of protection
Preference for Alternative A2 with Modifications	
31	Classify all of Segment C as "wild" in Alternative J except maintain the "scenic" classification for ¼ mile on either side of Corral Creek.
32	All roads within ¼ mile either side of the river should be closed between Beaver Creek and the high water mark of Cheesman Reservoir.
33	* - Include as much of the North Fork as possible.
34	* - Include all of Segment H in Alternative J
35	* - Include Segments H2 and H3 in Alternative J
36	* - Include the confluence of the two rivers downstream to the high water mark of Strontia Springs Reservoir in Alternative J.
Problems with Alternative J	
37	* - Disagree with analysis that the North Fork values are not as significant as those on the mainstem. The river was determined to be eligible based on the criterion of "highest quality rivers" and this cannot be dismissed in the suitability finding.
38	Effect on future water supply development should not be a factor in determining whether to recommend a river for designation.
39	Alternative J would impact Denver Water operations and responsibility for providing water.

Table J-1.–List of Comments Received on the DLEIS

Comment #	Comment by Category
Designation of North Fork	
40	What is the relevancy of comparing designation of the North Fork to that of the Cache la Poudre River?
41	The North Fork ORVs are compatible with Cache la Poudre ORVS
42	* - The North Fork is suitable for designation.
43	* - Geologic and scenic values make the North Fork suitable for designation
44	* - Segment H2 (Bailey Canyon) should be "wild"
45	* - Segment H2 should be given "special status" if not designated
46	* - The North Fork is not suitable for designation.
47	* - Segment H2 and side creeks should be classified as "scenic"
Classification of Wildcat Canyon (Segment C)	
48	Wildcat Canyon should be classified "scenic" to allow for motorized recreational use
49	* - Wildcat Canyon should be classified "recreational" to allow for motorized recreational use
50	Leave Wildcat Canyon "as is" to allow for current recreational motorized use.
51	Off road vehicle user groups have cooperated to protect habitat in Wildcat Canyon.
52	Off road vehicles have impacted river by causing an increase in sedimentation.
53	Do not allow motorized traffic in Wildcat Canyon
54	Wildcat Canyon should be "wild" throughout (no exceptions)
55	Alternatives B and J confusing re: classification of Wildcat Canyon.
Support Designation in General	
56	* - Designation of eligible segments is appropriate (No preferred alternative specified)
57	Alternatives finding segments of the river non-suitable should include provisions for some level of protection for river values, perhaps in forest management plans or through interagency agreements.
58	* - Conservation is clear first choice of Denver Water customers in providing needed additional water supply.
59	* - Against anything that might allow future construction of a Two Forks dam
60	* - Two Forks Right-of-Way can be exchanged *(Comment in its entirety can be found in text of responses to comments)*
61	Designation would not affect Denver Water's Right-of-Way
62	Support designation in Waterton Canyon down to Kassler
Against Designation in General	
63	* - Against designation in general - No preferred alternative specified
64	Development provides recreational opportunities
65	Denver Water operations have no effect on Pawnee Montane skipper and other species of concern. Further protected through no development policies on DW properties.
66	The WSRA was not intended to protect Threatened and Endangered species
67	Denver Water operations benefit fisheries below Cheesman Reservoir by providing adequate habitat through flow regulation and by trapping sediment in the reservoir.
68	City of Aurora operations benefit fisheries below Spinney Mountain Reservoir
69	Interim protection should not be as if the river were already designated as this would be problematic for Denver Water's operational flexibility
70	* - The intent of the Act is not to override existing policy for water development but to protect uncommitted and available resources.
71	Designation is a "taking" of the Two Forks Right-of-Way and currently held water rights.
72	The Forest Service should not have any control over management of the river
73	The Forest Service cannot regulate timing or flow of river waters.
74	* - Designation provides too much government oversight and intrusion
75	Designation would impact current compacts
77	Because of regulated flows, South Platte River cannot be considered free-flowing.
78	* - Designation/Preservation is elitist
79	Two Forks Right-of-Way cannot be condemned
80	Existing authorities and permitting process provides adequate protections to river values.
81	Reserved water rights would be difficult to obtain since the river is already over appropriated
82	Designation would have a detrimental effect on proposed water development projects being studied

Table J-1.–List of Comments Received on the DLEIS

Comment #	Comment by Category
83	* - Abandonment of Two Forks proposal essentially prohibited deep high capacity dams on the S. Platte giving rise to S. Park Conjunctive Use proposal
Alternative Protection Strategies to Wild and Scenic river Designation	
84	Values can be protected even if found not-suitable, perhaps in forest management plans or through interagency agreements.
85	* - Colorado should enact their own Scenic River Act.
86	Alternative A2 could be developed and effectively satisfy the Forest Service that the river does not need wild and scenic designation. This could be accomplished by having the actual stakeholders sign agreements and propose legislation to protect the river's interests.
Eligibility Study	
87	How much authority does the Forest Service have to regulate a study river?
88	Eligibility analysis inaccurate
89	Segments D and E possess scenic and geologic ORVs
Recreational Uses	
90	* - Forest Service cooperating with user groups at the expense of the public.
91	* - Encourage partnerships with off-road vehicle user groups.
92	* - Kayaking quality of both the mainstem and the North Fork is outstanding
Socioeconomic Analysis	
93	Socioeconomic analysis is inadequate
94	Cost estimates are not available and thus the rationale for not including the North Fork to save on administrative costs should be dropped.
Wildlife and Other Natural Resource Issues	
95	Not all species that occur in the corridor are listed in Chart 2-3.
96	Referring to Chart 2-3, it is recommended that the Forest Service contact The Nature Conservancy and the Colorado Natural Heritage Program to determine if any additional information on the occurrence of rare plants and/or animals in the study area exists.
97	The Forest Service needs to consider the entire ecosystem and not confine itself to the study corridor.
98	*Concerned about the impacts of a possible siltation basin being installed below the Buffalo creek burn area and impact upon possible Wild and Scenic river designation.*
Cranes	
99	No logical connection between designation and benefits to sandhill and whopping cranes in Nebraska.
100	Government is responsible for providing adequate flows downstream for sandhill cranes and other migratory birds.
Corrections	
101	Corrections addressed in errata sheet which follows Responses to Comments.
No Specific Preference	
102	* - No specific preference

Note: an asterisk (*) indicates that a response is not necessary

RESPONSES TO COMMENTS

Below are responses to the substantive comments listed above. Comments that did not require a response are noted in the Comment Table with an asterisk (*) and have not been included below.

Preference for Alternative A2

Comment #7 – Water supply and river values are better protected through the A2 alternative than through designation.

At the time of this comment, Alternative A2 nor Alternative A3 had not been developed and there was little basis for comparing the relative merits of A2 versus the action alternatives. The release of the Supplemental DLEIS allowed such comparisons to be made with a much better base of information.

Comment #8 – Under Environmental Consequences, Fisheries, Alternative A1, it is stated that ", there is less potential in this alternative for funding activities to enhance fish habitat or reduce sedimentation as compared to the other alternatives." This is not accurate.

Alternative A1 is the No Action alternative. Analysis of this alternative is based on current conditions and predicted conditions for the future if none of the Action alternatives are chosen. The Forest Service agrees that funding under the Wild and Scenic Rivers Act is not guaranteed and that under the A2 or A3 alternatives (analyzed in the Supplemental DLEIS), potential for funding activities is high. However, based on funding available at this time for habitat restoration projects, the Forest Service stands by the statement that there is less potential for funding activities as compared to all other alternatives.

Note that if the river were to be designated, Section 11(b)(1) of the Act does provide for federal assistance to non-federal and private entities to protect and manage river resources, including technical and financial assistance, within and outside federally administered area. Implementation of the management plan under a designation scenario would be dependent on congressional appropriations related to authorizations put forth in the enabling legislation. Designation does not guarantee funding for implementation to the agency administering the river, but there are opportunities for appropriations to non-Federal entities, which would enhance the ability of cooperating agencies and stakeholders to cooperatively manage the river corridor.

Comment #10 – Help is needed from the Forest Service to complete the A2 alternative.

The Forest Service responded to requests from the Wild and Scenic Task Force to answer questions as needed. To comply with regulations promulgated under the Federal Advisory Committee Act, the Forest Service did not participate as a member of the Task Force.

Problems with Alternative A2

Comment #11 – A supplemental DLEIS is needed to better define the A2 alternative.

A Supplemental DLEIS was issued in March of 2000 which defined and analyzed the A2 alternative as well as a new alternative, Alternative A3, which included Forest Service regulations and authorities.

Comment #12 – It is premature to identify Alternative A2 as a "Proposed Action."

The DLEIS noted that this alternative had not been developed in detail and that its potential viability was speculative. However, a basic tenet of the Wild and Scenic rivers Act is to work with local government agencies and stakeholders to develop cooperative river management processes. Alternative A2 provided the best chance at the time the DLEIS was released of

addressing and developing a cooperative river management planning process given the sensitive nature of water issues in the Denver metropolitan area.

Comment #13 – A timeframe for formulation of a viable A2 alternative is needed.

A memo from Charlie Jordan dated July 2, 1997 to the Wild and Scenic River Task Force and subsequently faxed as a copy to the Forest Service provided this information (Commenter number 637).

Comment #14 – Degree of protection and environmental effects under the A2 alternative are unknown.

The degree of protection and environmental effects of Alternative A2 were addressed in the SDLEIS released in March of 2000.

Comment #15 – Long-term protection is not guaranteed under intergovernmental agreements and similar mechanisms.

For the Forest Service, this is explained under 'Permanence of Protection', p. 5-55.

Comment #20 – All interested parties should be given opportunities to be included in on all discussion regarding the A2 alternative.

All meetings regarding development of the A2 alternative were open to all interested parties.

Comment #21 – Work out an agreement with Metropolitan water suppliers on flows.

The Streamflow Management Plan was included in the fully developed A2 alternative to address provision of adequate flows to meet the needs of fishery resources in the river and the needs of water users downstream. See Appendix A, Attachment B.

Preference for Alternative J with Modifications

Comment #31 – Classify all of Segment C as "wild" in Alternative J except maintain the "scenic" classification for ¼ mile on either side of Corral Creek.

Classification of Segment C discussed in the FEIS on p. 3-17. None of the alternatives show all of Segment C as "wild" because of the traditional motorized use that has occurred in that area and the belief during this study that some manner of motorized access in the area was appropriate. See also response to Comment #89 which further discusses classification of Segment C, and Comment #92 which recognizes future review of motorized access in light of the Hayman fire.

Comment #32 – All roads within ¼ mile either side of the river should be closed between Beaver Creek and the high water mark of Cheesman Reservoir.

See response to Comment #31.

Problems with Alternative J

Comment #38 – Effect on future water supply development should not be a factor in determining whether to recommend a river (North Fork) for designation.

This is true when eligibility is being analyzed. But when suitability is being evaluated, other social values become valid considerations.

Comment #39 – Alternative J would impact Denver Water operations and responsibility for providing water.

The discussion in Chapter 5, Environmental Consequences, concludes that under this alternative

the operation of existing water development projects on the South Platte River would not be affected by designation unless there were a direct and adverse effect on the values for which the river was designated. See pp. 5-22 and 5-23 (although this discussion falls under Alternative B, it also applies by reference to Alternative J).

Designation of North Fork

Comment #40 – What is the relevancy of comparing designation of the North Fork to that of the Cache la Poudre River?

Comment #41 – North Fork ORVs are compatible with Cache la Poudre ORVs.

Response to Comments # 40 and #41: All references to justification for not finding the North Fork suitable due to the Cache la Poudre being in the same physiographic region have been removed.

Classification of Wildcat Canyon (Segment C)

Comment #48 – Wildcat Canyon should be classified "scenic" to allow for motorized recreational use.

Segment C2, Hackett Gulch downstream to Corral Creek, as been reclassified as "scenic" in recognition of traditional recreational motorized use along this section of the river corridor. The roads into Wildcat Canyon are closed currently pending a roads analysis resulting from the Hayman Fire of June 2002.

Comment #50 – Leave Wildcat Canyon "as is" to allow for current recreational motorized use.

See Comment #48.

Comment #51 – Off road vehicle user groups have cooperated to protect habitat in Wildcat Canyon.

The Forest Service recognizes and applauds the efforts put forth by many of the user groups to protect habitat in Wildcat Canyon. The reclassification of Segment C2 as "scenic" further recognizes traditional motorized uses as addressed in the response to comment #48.

Comment #52 – Off road vehicles have impacted river by causing an increase in sedimentation.

The Forest Service recognizes and shares the concerns about sedimentation in Wildcat Canyon. A Total Maximum Daily Load Analysis was completed just prior to the Hayman fire and is available at http://www.cdphe.state.co.us/wq/Assessment/TMDL/pdf/tmdl/COSPUS01a-sedi.pdf. The roads analysis referenced in Comment #48 will address the issue of sedimentation particularly as it relates to the increased sedimentation resulting from the Hayman Fire.

Comment #53 – Do not allow motorized traffic in Wildcat Canyon.

See responses to comments #48 and #52.

Comment #54 – Wildcat Canyon should be "wild" throughout (no exceptions).

See responses to comments #48 and #52.

Comment #55 – Alternatives B and J are confusing re: classification of Wildcat Canyon.

The confusion over classification of the section of Wildcat Canyon between Hackett Gulch and Corral Creek has been clarified to recognize traditional recreational motorized use. This section of the Canyon is now classified as "scenic" under both alternatives.

Support Designation in General

Comment #57 – Alternatives finding segments of the river non-suitable should include provisions for some level of protection for river values, perhaps in forest management plans or through interagency agreements.

Under the action alternatives (Alternatives B–J) the non-suitable segments would be managed in the manner described for Alternative A1 (No Action). Management of protection for river values under a non-suitable scenario occurs under Alternative A3 – not suitable.

Comment #61 – Designation would not affect Denver Water's Right-of-Way.

See Comment #60.

Comment#62 – Support designation in Waterton Canyon down to Kassler.

The eligibility study did not include the river below Strontia Springs Reservoir because that segment was obviously too impacted by existing water developments to be considered free-flowing.

Against Designation in General

Comment #64 – Development provides recreational opportunities.

The comment does not recognize the recreation opportunities that would be lost if a large water development project were put into place. The recreational ORV is "based on the free flowing river as currently exist." This would mean the loss of river based water sports such as fishing, rafting, kayaking and the like if new water development were to occur. It is true that different types of recreation opportunities would be created if reservoirs where developed such as boating, lake fishing etc. We disagree that these recreation opportunities and users are interchangeable. Potential future activities were not considered in determining the outstandingly remarkable value of recreation.

Comment #65 - Denver Water operations have no effect on Pawnee Montane skipper and other species of concern. The species is protected further through no development policies on Denver Water properties.

The Pawnee montane skipper (population and habitat) is the outstanding remarkable wildlife value identified along four sections of the river. Its entire population occurs in a few subwatersheds of the South Platte River. The A2 proposal would protect this value primarily through its use of the Endangered Species Act and protection clauses on leased land. This commitment is subject to future critical habitat mapping, delisting of the species, or changes to the Endangered Species Act. The Recovery Plan for the skipper outlines an ambitious set of actions which must be completed in order for delisting to occur. Funding will probably limit many of these actions from taking place and the species will likely remain listed in the near future. To this extent, the skipper is protected under the A2 alternative. However, should the species be delisted or any other stated change take place, it is not clear how the A2 alternative will protect the ORV. The skipper was identified as an ORV based on its rarity, not on its status as a listed species. If the species is delisted, its unique occurrence in the South Platte River watershed warrants protection as an ORV well into the future. As such, the A2 proposal falls short of providing this long-term protection.

Comment #66 – The WSRA was not intended to protect Threatened and Endangered Species.

See response to Comment #65.

Comment #67 - Denver Water operations benefit fisheries below Cheesman Reservoir by providing adequate habitat through flow regulation and by trapping sediment in the reservoir.

Lower spring flows are not necessarily a benefit to spawning rainbow trout in the canyon below. If the river below were a smooth, trapezoidal channel, then this might be the case. However, due to the natural variability of the channel, optimal spawning habitat would also be found along the edges of the stream, even during unregulated spring flows. Additionally, rainbow trout evolved in high spring run-off systems of the west coast, and have adapted to spawn in gravel redds exhibiting greater velocities.

Although not addressed in the DLEIS, whirling disease has made this argument somewhat moot. The assemblage of fish species in the stream below Cheesman Dam have been dramatically altered by the introduction of WD infected fish. Rainbow trout are no longer the dominant trout species found in these waters, and rainbow trout recruitment has almost completely collapsed due to the parasite. The only successful recruitment occurring along this reach of the river is among the fall-spawning brown trout populations. Protection of critical spawning, juvenile and young-of-the-year habitat during the fall and winter months is probably more important for maintaining the viability of trout populations along this reach.

The benefit of sediment trapping is not necessarily that great. While trapping of large sediment pulses due to fires and floods is a benefit to the fishery downstream, some sediment may be necessary in order to maintain spawning and other critical trout habitat downstream.

Comment #68 – City of Aurora operations benefit fisheries below Spinney Mountain Reservoir.

See response to Comment #67.

Comment #69 – Interim protection should not be as if the river were already designated as this would be problematic for Denver Water's operational flexibility.

The Forest Service does not have the authority to regulate a study river as if it were designated, and none of the alternatives provide for it. However, the agency does have the ability to manage, at its discretion and under its existing authorities, a study river to protect free flow, ORVs, and tentative classification until such time as a suitability determination is made.

Comment #71 – Designation is a "taking" of the Two Forks Right-of-Way and currently held water rights.

See the discussion on p. 5-24, 1st column, last paragraph. A finding of suitability and subsequent designation do not as actions prohibit rights afforded under private ownership. Designation is ordinarily made subject to valid existing rights. If the river were designated Wild and Scenic, the issue of a "taking" would not occur until an actual water development project was proposed. If an analysis under Section 7 of the Act were to determine that the project not be approved because of detrimental affects to ORVS, free-flow and water quality, any "taking" of private property would entitle the owner to just compensation. Section 13(b) of the Act specifically provides for just compensation for a taking of a water right by the United States which is vested under State or federal law at the time such river is included in the national wild and scenic rivers system.

Comment #72 – The Forest Service should not have any control over management of the river.

The Forest Service does not own water to which it does not have water rights, but it has responsibility for management of National Forest System lands through which flow waters owned by others.

Comment #73 – The Forest Service cannot regulate timing or flow of river waters.

The Forest Service agrees that the statement made in the DLEIS was highly speculative. If the river were designated, the Forest Service would not have the authority to regulate current water delivery operations under the authorities of the Act. However, under Section 10 (e) of the Act, "The Federal Agency charged with the administration of any component of the national wild and scenic rivers system may enter into written cooperative agreements with the Governor of a State, the head of any State agency, or the appropriate official of a political subdivision of a State for State or local governmental participation in the administration of the component. The States and their political subdivisions shall be encouraged to cooperate in the planning and administration of components of the system which include or adjoin State- or County-owned lands." In addition, under Section 11 (b) the Secretary of Agriculture or the chief of the Forest Service "shall assist, advise, and cooperate with States or their political subdivision, landowners, private organizations, or individuals to plan, protect, and manage river resources. Such assistance, advice, and cooperation may be through written agreements or otherwise." Under a designation alternative and pursuant to these authorities under the Act, the Forest Service would seek cooperative agreements to manage flows for the protection of those values for which the river was found suitable for designation.

Comment #75 – Designation would impact current compacts.

Designation does not supercede current authorities. Section 12(a) of the Act gives the Secretary of Agriculture the authority to take actions necessary to protect a designated river "as may be necessary to protect such rivers in accordance with the purposes of the Act." However, under Section 12(b) of the Act states, "Nothing in this section shall be construed to abrogate any existing rights, privileges, or contracts affecting Federal lands held by any private party without the consent of said party."

Comment #77 – Because of regulated flows, the South Platte River cannot be considered free-flowing.

Section 16(b) of the Wild and Scenic Rivers Act defines free-flowing as "existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway." The Interagency Wild and Scenic Rivers Coordinating Council interprets this as follows: The existence of small dams, diversion works, or other minor structures shall not automatically disqualify a river as a potential addition to the National system. Congress did not intend all rivers to be "naturally flowing," i.e., flowing without any man-made up- or downstream manipulation. The presence of impoundments above and/or below the segment (including those which may regulate flow regimes within the segment), and existing minor dams or diversion structures within the study area, do not necessarily render a river segment non-eligible. There are segments in the National System that are downstream from major dams or are located between dams. Therefore, any section of river with flowing water meets the technical definition of free-flowing, even if impounded upstream. (Source: *Technical Report of the Interagency Wild and Scenic Rivers Coordinating Council, May 1997, revised: January 1999. A Compendium of Questions and Answers Related to Wild and Scenic Rivers. P. 15.)*

Comment #79 – Two Forks Right-of-Way cannot be condemned.

See Comment #60.

Comment #80 – Existing authorities and permitting process provides adequate protections to river values.

The document recognizes existing authorities in general although they are not spelled out as they are in the comment letter. However, none of these authorities specifically protect the free flow and outstandingly remarkable values for which the rivers were found eligible.

Comment #81 – Reserved water rights would be difficult to obtain since the river is already over appropriated.

As noted under Water Development and Flow Regime for Alternative B "It is highly unlikely, but possible under the WSRA, that the Forest Service would condemn and purchase existing water rights. This right is limited because the WSRA specifies that designation shall not be construed as a reservation of the waters of such streams for purposes other than those specified in the WSRA or in quantities greater than necessary to accomplish these purposes. Water rights have status as a property right and cannot be taken without just compensation." A correction has been made to this statement as Section 6(b) of the Act states that "if 50 per centum or more of the entire acreage outside the ordinary high water mark on both sides of the river within a federally administered wild, scenic or recreational river area is owned in fee title by the United States, by the State or States within which it lies, or by political subdivisions of those States, neither Secretary shall acquire fee title to any lands by condemnation under authority of this Act." Because more than 50 percent of the lands in the corridor are publicly owned, there would be no possibility for condemnation of private lands for fee-title, including water rights, or for scenic easements under the designation alternatives. Under a designation alternative, the Forest Service would work with landowners willing to negotiate scenic easements or sell their land.

If the Forest Service were to recommend designation of the study rivers for inclusion in the National Wild and Scenic Rivers System, a full analysis would be made at that time to determine if additional water were needed to meet the purposes of the WSRA. Based on that analysis any action on the part of the agency to pursue Federal reserved water rights would become part of the designation legislative language.

Comment #82 – Designation would have a detrimental effect on proposed water development projects being studied.

Designation would not end ***all*** possibilities of new storage facilities being built. Designation would only prohibit construction of facilities in the designated corridor if the project had "...a direct and adverse effect on the values for which such river was established..." (Section 7(a) of the WSRA). In addition, designation would not necessarily preclude water development projects outside the corridor. Section 7 (a) also states that nothing would "...preclude licensing of, or assistance to, developments below or above a potential wild, scenic, or recreational river area or on any stream tributary thereto which will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation of a river as a component of the National Wild and Scenic Rivers System."

Alternative Protection Strategies to Wild and Scenic Designation

Comment #84 – Values can be protected even if found not-suitable, perhaps in forest management plans or through interagency agreements.

See comment #57.

Comment # 86 - Alternative A2 could be developed and effectively satisfy the Forest Service that the river does not need wild and scenic designation. This could be accomplished by having the actual stakeholders sign agreements and propose legislation to protect the river's interests.

Alternative A2 was developed by a group of broad-based interests representing water providers, environmental organizations and local governments. In Chapter 4 see Section 4.3 for descriptions of Alternatives A2, A3, and the Preferred Alternative. The concept of legislation specially-tailored to the river's situation was identified in the Preferred Alternative for the Supplemental DLEIS. The concept was not favorably received and no further attention. In Section 4.4 see (1) "Designation with Legislative Language to Allow for Flexibility for Limited Water Development", and (2) "Special Legislation to Prevent Federally Approved or Assisted Dams".

Eligibility Study

Comment #87 – How much authority does the Forest Service have to regulate a study river?

See response to Comment #69.

Comment #88 – The eligibility analysis is inaccurate.

The interpretation that the eligibility analysis is inaccurate focuses primarily on the issue of free flow. This issue is addressed in comment #77.

Comment #89 – Segments D and E possess scenic and geologic ORVs.

The Forest Service stands by its justification that these are not ORVs as determined by the eligibility study analysis.

Socioeconomic Analysis

Comment #93 – Socioeconomic analysis is inadequate.

The socioeconomic analysis was updated and revised for the Final EIS. The difficulty in doing a complete analysis is that not enough detailed information is available to do an accurate analysis of future costs of delivering water to the Denver metropolitan area. No specific water development proposals are available with associated estimated costs. Recent analysis by the Bureau of Reclamation estimated costs of building the Two Forks project adjusted for inflation and current prices. Details can be found in the text of the Final EIS (Sections 2.18 and 5.13).

Comment #94 – Cost estimates are not available and thus the rationale for not including the North Fork to save on administrative costs should be dropped.

Cost estimates are given at the end of the Chapter on Environmental Consequences.

Wildlife and Other Natural Resource Issues

Comment # 95 - Not all species that occur in the corridor are listed in Chart 2-3.

Not all wildlife species that occur in the river corridor are addressed in the document. Chart II-3 in the DLEIS presents some of the more common species found in the corridor, as well as some federally listed and sensitive species. The Forest Service is required to present the effects of the project on federally endangered, threatened, and proposed species, Forest Service sensitive species, and Management Indicator Species listed in the Forest Plan. The Forest Service uses Management Indicator Species to address the effects of the project on the various

habitats that occur in the project area instead of discussing each species in the project area. As the respondent indicates, not all of the species addressed occur in each segment.

Comment # 96 - Referring to Chart 2-3, it is recommended that the Forest Service contact The Nature Conservancy and the Colorado Natural Heritage Program to determine if any additional information on the occurrence of rare plants and/or animals in the study area exists.

The Forest Service refers regularly to the Colorado Natural Heritage Program database for species occurrence data. Additional information has been added to Chart 2-3 in the FEIS to indicate reference to the Colorado Natural Heritage Program.

Comment #97 – The Forest Service needs to consider the entire ecosystem and not confine itself to the study corridor.

The descriptions presented in Chapter 2 consider broader ecosystem issues, but only to the extent appropriate for this study, which focuses on the study corridor. See, for example, Sections 2.10 (Forest Ecology), 2.12 ('Watershed Characteristics' in Hydrology and Water Resources), and 2.12 (Wildlife).

Comment # 98 - Concerned about the impacts of a possible siltation basin being installed below the Buffalo creek burn area and impact upon possible Wild and Scenic river designation.

The Forest Service has been in discussions with the Denver Water Department about the idea of installation of a siltation basin below the Buffalo Creek burn area. It was considered after the Buffalo Creek fire but was not built. Any future installation would require further analysis under NEPA.

Cranes

Comment #99 - No logical connection between designation and benefits to sandhill and whopping cranes in Nebraska.

This has been addressed in the Final EIS (pp. 5-30 and 5-31). During scoping, the public raised the issue of the effects of designation on downstream threatened and endangered species such as the whooping crane, piping lover, and least tern and on associated habitat of the sandhill crane. If the study area or segments of the study area were designated, the construction of a dam and reservoir on those segments would be precluded. Currently, the study segments are free-flowing. With designation, they would continue to be free-flowing. Wild and scenic designation would not alter existing downstream water allocations or determine the quantity of water that eventually reaches habitats of downstream threatened and endangered species. Without wild and scenic designation, future dam and reservoir proposals could be considered. If one is proposed that would "cause a new depletion or facilitate the continued depletion" of the South Platte River, consultation with the U.S. Fish and Wildlife Service would be required under Section 7 of the Endangered Species Act. The Fish and Wildlife Service would determine the effects of the proposed project on downstream species at that time.

Comment #100 - Government is responsible for providing adequate flows downstream for sandhill cranes and other migratory birds.

See response to Comment #99.

NOTE: No commenter expressed a preference for Alternatives C, F or G

Corrections

Comment #101 – Miscellaneous corrections identified below.

Correction #1 – In Chapter 2 under the summary for Recreation, the following revision is suggested: "The study area includes over ~~27~~ 50 miles of water suitable for white-water boating, tubing, and water play. This includes approximately ~~7~~ 11 miles of the North Fork ~~above~~ between Bailey and Pine; 5 miles near Foxton; 15 ~~14~~ miles on the South Platte from Deckers to the ~~North Fork confluence~~ backwaters of Strontia Springs reservoir; 13 miles between Lake George and Cheesman Reservoir, and 6 miles on the S. Platte from Reservoir to Riverside Campgrounds in 11-mile Canyon." (Comment letter #655)

Revision has been made.

Correction #2 – In Chapter 3, History, please revise the section on the NRI to read "The entire South Platte River was examined during the late 1970's by the Heritage Conservation and Recreation Service (HCRS), the agency of the U.S. Department of Interior responsible for developing the National-wide ~~Recreation~~ Rivers Inventory (NRI). The NRI is a ~~national~~ list of rivers ~~which are recommended for study for possible~~ potentially eligible for Wild and Scenic River designation." (Comment letter #655)

Revision has been made.

Correction #3 – In Chapter 3, History, please revise the eligibility statement to read "Since the study found that segments D, E, F, and H were eligible..." (Comment letter #655)

The sentence has been revised to read "Since the study found that segments D, E, and H were eligible..." Segment F was not found to be eligible.

Correction #4 – In Chapter 3, Eligibility determination for Segments A, B, and C, the following revision is suggested: "River elevations range from 8,450 below 11-mile dam ~~Cheesman dam~~ to 6,860 feet..." (Comment letter #655)

Revision has been made.

Correction #5 – In Chapter 3, eligibility determination for Segment C there is a typographical error in the third sentence "The area lies... "Also, under Geology, the last sentence should read "... granite cliffs that tower over last sentence should read "... granite cliffs that tower over the river." (Comment letter #655)

Corrections have been made.

Correction #6 – In Chapter 3, eligibility determination for Segment G, please revise the statement on Segment G to read: "Segment G extends from Kenosha Gulch near Webster to Insmont." (It does not include Estabrook). (Comment letter #655)

Correction has been made.

Correction #7 – In Chapter 3, the values for Segments D and E in Chart III-1 may be mismarked. Should all X's be moved one space left? (Comment letter #655)

The values for Segments D and E were mismarked. The chart has been corrected to reflect the correct ORVs for each segment.

Correction #8 – In Chapter 3, Chart III-4, Segment C should be classified as "wild," which would change the total lengths in miles for all three classification categories. (Comment letter #655)

The classification for Segment C has been revised to recognize road crossing between Hackett gulch and Corral Creek. Segment C1 from Beaver Creek to Hackett Gulch is classified as "wild", Segment C2 from Hackett Gulch to Corral creek is classified as "scenic",

and Segment C3 from corral creek to the high water line of Cheesman reservoir is classified as "wild". Table 3-4 has been revised to reflect these changes.

Correction #9 – Add boating to Key Study Issues, Recreation, Types of Use. (Comment letter #655)

Addition has been made.

Correction #10 – Under Public Review in Chapter 5: "The President then submits the document to Congress for approval." Although the Wild and Scenic Rivers Act requires Presidential transmittal of Congressionally authorized wild and scenic river studies [§5(a) studies], studies conducted pursuant to §5 (d) (1) of the Act (as is being done here) are transmitted by the Secretary of Agriculture on National Forest lands. Congress neither approves nor disapproves the studies. Any Congressional action would be in the form of legislation designating some or all of the river under study. (Comment letter #655)

The correction has been made under "The Study Process" in Chapter 1.

Correction #11 – Under Section 2.12, Flow Characteristics, it states "...release patterns are highly dependent upon downstream water rights which sometimes 'call' water through these reservoirs." The word "sometimes" should be replaced with the word "commonly." The call is placed on the river much more frequently than "sometimes." (Comment letter #705)

Correction has been made.

Correction #12 – Section 2.12, Flow Characteristics, "Kassler Lake" should be replaced with "Chatfield Reservoir." (Comment letter #705)

Correction has been made.

Correction #13 – Section 2.12, Water Development and Uses, for Cheesman Reservoir, the date "1929" should be added to the parenthetical list of priority dates for decreed water rights. (Comment letter #705)

Correction has been made.

Correction # 14 – Section 2.12, Water Development and Uses, for Dillon Reservoir, "...the current supply is approximately 345,000 acre-feet/year," the word "supply" should be replaced with the word "yield." The words have different meanings in terms of water supply. (Comment letter #705)

Correction has been made.

Correction # 15 – The Forest Service should make a detailed assessment of the effects of all alternatives on sedimentation, water temperature and other water quality problems, especially relative to off-road vehicle use. (Comment letter #747)

The Final EIS addresses these issues in much more detail than the DLEIS.

Correction # 16 - The Pawnee Montane Skipper should be referenced in Chart 2-3. (Comment letter #794)

Chart 2-3 has been revised and updated. The Skipper is now included with its current status as listed under the Endangered Species Act.

Correction # 17 – Section 2.12, Water Development and Uses, it should be noted that in addition to the Recommended Determination, EPA issued a Final Determination under 404(c) and that action has been upheld in a June 5, 1996 U.S. District Court Decision. (Comment letter #794)

This has been noted both in Chapter 2 page 70 and Chapter 3 page 6.

Correction # 18 - It should be noted that the Colorado Division of Wildlife (CDOW) had a role in designating various segments of the South Platte as Gold Medal and Wild Trout fisheries. (Comment letter #794)

This fact was noted in the 1996 eligibility study for the river segments below Cheesman Dam which is included as Appendix A. It has been added to the paragraph on the role of CDOW in management of river fisheries.

Correction # 19 – Section 2.18, Projecting Future Population Growth for the Area of Influence, what are the specific "legal and institutional barriers" not in place to permit and encourage sharing of water supplies? (Comment letter #794)

This statement referred to the water laws currently in place in the State of Colorado making it difficult to share water rights and subsequently water supplies. However, upon further investigation into this issue, sharing is possible through agreements and contracts. This statement has been eliminated from the Final EIS.

Correction # 20 - Please include 1984 eligibility study analysis for Segments A-C since not everyone has access to the FLEIS for the PSICC Forest Plan. (Comment letter #795)

The 1984 eligibility study for the segments above Cheesman Reservoir has been included as an appendix in this final EIS.

Correction # 21 - Please complete incomplete references in reference section. (Comment letter #812)

All references have been checked, completed, revised or added.

Correction # 22 - Ensure that the lengths of all segments are consistent throughout the document. (Comment letter #812)

The document has been checked to ensure all references to length measurements are consistent.

Correction # 23 – Section 2.3, the South Fork of the South Platte River flows through Antero Reservoir, not the Middle Fork. (Comment letter #812)

Correction has been made.

Correction # 24 - Section 2.12, Water Development and Uses, the second to last paragraph on page II-55 does not make sense "A recervoir (sic) on this ROW inundate private and National Forest system lands..." (Comment letter #812)

Correction has been made.

Correction # 25 – Section 2.13, last paragraph in stream habitat for Segments A and B is worded almost exactly the same as last paragraph for Segment C. Check to make sure this is correct. (Comment letter #812)

The paragraph on the abundance of trout in segment C on page II-26 was incorrect and has been removed in the FEIS.

Correction # 26 - Section 2.13, Fishery Management for Segment C, it states "However, the CDOW has planted fingerling brown trout and steelhead rainbow fry in this segment since 1990 (CDOW unpublished stocking information)." Actually Steelhead trout were planted from1990 through 1994 in the Happy Meadows and Wildcat Canyon river areas. It has since been learned that these fish were not a true steelhead trout strain, but were an undetermined rainbow trout strain. The likelihood that these fish will exhibit migration behavior akin to a true steelhead strain (migrating from Cheesman Reservoir upstream to spawn annually) is low. (Comment letter #812)

Correction has been made.

Correction # 27 - The Western (or Striped) Chorus Frog (Pseudacris triseriata) may inhabit some of the study area below Cheesman Reservoir to Strontia Springs Reservoir. This is not verified by our records, but there have been unverified reports based on hearing breeding calls. You may want to list as a possible occurrence. (Comment letter #812)

Table II-3 has been revised to address only those species noted under the Endangered Species Act, state protection authorities, and Forest Service protection authorities. *Pseudacris triseriata* does not fall into any of these categories and therefore is not listed in the table.

Correction # 28 – Section 2.8, Colorado Division of Fish and Wildlife should be Colorado Division of Wildlife under Land Use Controls. (Comment letter #812)

Correction has been made.

Correction # 29 – Section 2.13, concerned with statement about 70% of boating on the Pike National Forest occurring on the river. Would like this put into the context that .02% of total whitewater recreation in Colorado occurs on the river. (Comment letter #814)

The Forest Service is comfortable with the assessment that 70% of river boating on the Pike National Forest occurs in this area. The Pike National Forest is a fairly large land base with which most people are familiar. We are not sure of the statistics to compare this statewide or nationally. If it is thought that this statistic over emphasizes the importance of the river in this area, the Statewide statistic of .02% de-emphasizes the importance of the river in this area. Both numbers have been stated in the Final EIS.

Correction # 30 – Section 5.8, Statement in Social and Economic Considerations for Alternative A1 2nd paragraph should read "most regulated rivers in the country..." not county. (Comment letter #814)

Correction has been made.

SUMMARY OF COMMENTERS AND ASSOCIATED COMMENTS

Table J-2 below lists commenters to the DLEIS and their Associated comments.

Table J-2.-Summary of Commenters on the DLEIS and Associated Comments

Letter #	Type	Commenter	Preferred Alternative (if any)	Comment #
589	Letter	Individual	J	29
590	Letter	Individual	I	28, 64, 90, 95, 101
591	Letter	Individual	J	29
592	Letter	Individual	A2	2
593	Letter	Denver Board of Water Commissioners	Requests FS assistance on development of A2 alternative	9
594	Letter	Individual	A2	2
595	Letter	Colorado Farm Bureau	A2	2, 7, 71, 74, 75, 86
596	Letter	Individual	B	22
597	Letter	Sportsman's Paradise (Private Landowners)	J	29
598	Letter	Individual	B	22, 24, 23, 53, 100
599	Letter	Individual	J	29
600	Letter	Individual		48, 102
601	Letter	Individual		48, 50, 102
602	Letter	Individual		48, 102

Table J-2.-Summary of Commenters on the DLEIS and Associated Comments

Letter #	Type	Commenter	Preferred Alternative (if any)	Comment #
603	Letter	Individual		48, 102
604	Letter	Individual		48, 102
605	Letter	Individual		49, 102
606	Letter	Individual		49, 102
607	Letter	Individual		29
608	Letter	Individual		48, 102
609	Letter	Individual		48, 102
610	Letter	Midwest 4-Wheel Drive Association		50, 102
611	Letter	Individual		48, 102
612	Letter	Individual		48, 102
613	Letter	Individual		48, 102
614	Letter	Individual		48, 49, 102
615	Letter	Individual		48, 102
616	Letter	Individual		50, 102
617	Letter	Individual		55, 102
618	Letter	Crestview Water and Sanitation District	A2	2, 4
619	Letter	Individual	J	29
620	Letter	Individual	J	29
621	Letter	Southgate Water and Sanitation Districts	A2	2
622	Letter	Individual	B	22
623	Letter	Individual	D	14, 27
624	Letter	Colorado Association of 4-Wheel Drive Clubs, Inc.	A2	2, 51
625	Letter	Private Landowner	J	29, 59, 15
626	Letters	Individuals (42 identical letters)	A2	2, 51
627	Letter	Sierra Club - Mount Evans Group	B	14, 22, 34
628	Letter	Individual	J	30
629	Letter	Wildlife Management Institute	B	22, 97
630	Letter	Cherry Creek Water and Sanitation District	Requests FS assistance on development of A2 alternative	9, 10
631	Letter	Individual	A2	2, 48
632	Letter	Individual	A2	2
633	Letter	Individual	J	14, 29, 101
634	Letter	Individual	A2	2
635	Letter	Ken-Karyl Water and Sanitation District	A2	2, 4
636	Letter	Sierra Club, Rocky Mountain Chapter	J	13, 16, 17, 20, 31, 35, 36, 37
637	Copy of a Memo	Charlie Jordan, Denver Water (Memo addressed to Wild and Scenic Task force of which USFS was not a member)	Outlines schedule for development of A2 alternative	3
638	Letter	Individual	A2	2, 50
639	Letter	Individual	J	29, 34, 31
640	Letter	Individual	J	29
641	Letter	Individual	A2	2
642	Letter	Individual	Supports designation in general – No Specific Preference	56
643	Letter	Individual	Supports designation in general – No Specific Preference	56
644	Letter	Individual	Supports designation in general – No Specific Preference	56
645	Letter	Lakehurst Water and Sanitation District	A2	2, 4, 39, 71

Table J-2.-Summary of Commenters on the DLEIS and Associated Comments

Letter #	Type	Commenter	Preferred Alternative (if any)	Comment #
646	Letter	Individual	Supports designation in general – No Specific Preference	56
647	Letter	Individual	B	22
648	Letter	Individual	Supports designation in general – No Specific Preference	18, 56
649	Letter	Individual	B	22
650	Letter	El Paso County Office of the County Attorney (on behalf of El Paso County Water Authority and the El Paso County Board of Commissioners)	A2	2, 7, 9, 39, 71
651	Letter	Green Mountain Water and Sanitation District (Same as 787)	A2	2, 4, 39
652	Letter	North Table Mountain Water District	A2	2, 4, 39, 71
653	Letter	Individual	Supports designation in general – No Specific Preference	56
654	Letter	Individual	J	16, 29, 31, 34, 92
655	Letter	Department of the Interior	Supports designation in general – No Specific Preference	12, 15, 19, 24, 37, 38, 40, 42, 56, 57, 59, 84, 94,101
656	Letter	Individual	J	30, 31, 34, 36
657	Letter	Individual	A2	2,50
658	Letter	Individual	J	30, 31, 34, 36
659	Letter	Individual	A2	2, 50
660	Letter	Individual	J	30, 31, 34, 36
661	Letter	Individual	J	29
662	Letter	Individual	J	30, 31, 34
663	Letter	Rocky Mountain Canoe Club	B	18, 22
664	Letter	Sierra Club, South Platte Regional Group	J	30, 31, 34, 36
665	Letter	Individual	J	30, 31, 34, 36
666	Letter	Individual	B	22
667	Same as 645			
668	Resolution	Willows Water District	A2	2, 4, 20, 39, 71
669	Letter	Individual	A2	2, 50
670	Memo	South Platte Forum	Confirmation to USFS - WSR Coordinator to speak to Forum	------
671	Letter	Berkeley Water and Sanitation District	A2	2, 4, 21
672	Letter	Jefferson County Republican Men's Club	A2	2, 72
673	Resolution	North Pecos Water District	A2	2,4, 20, 71
674	Letter	Consolidated Mutual Water	A2	2, 4, 20, 39, 71
675	Letter	City of Broomfield (Same as 762)	A2	2, 4
676	Letter	Individual (Survey missing)	B	22, 42, 54, 58
677	Letter	Individual	J	29
678	Letter	Individual	J	29, 36
679	Letter	Individual	B	22, 32, 35, 36
680	Letter	Individual	No specific preference but against designation	63, 71
681	Letter	Individual	J	29, 31, 34, 36, 47
682	Letter	Norma Anderson, Colorado House of Representatives	A2	2, 7, 39
683	Letter	Individual	B	22
684	Letter	Individual	J	29

Table J-2.-Summary of Commenters on the DLEIS and Associated Comments

Letter #	Type	Commenter	Preferred Alternative (if any)	Comment #
685	Letter	Individual	J	29
686	Letter	Individual	Supports designation in general – No Specific Preference	54, 56
687	Letter	Individual	J	29
688	Letter	Individual	Supports designation in general – No Specific Preference	56
689	Letter	Individual	J	29, 31, 33, 34
690	Letter	Individual	Supports designation in general – No Specific Preference	18, 56
691	Letter	Individual	Supports designation in general – No Specific Preference	42, 54, 56
692	Letter	Individual	J	29, 31
693	Letter	Individual	A1	1
694	Letter	Individual	A1	1
695	Letter	Individual	B	22
696	Letter	Individual	A2	2, 50
697	Letter	Individual	J	29, 32, 54
698	Letter	Individual	J	29, 31, 35, 36
699	Letter	Individual	B	14, 22
700	Form Letter	Individual (Sierra Club)	J	30, 31, 34, 36
701	Letter	Individual	B	22
702	Letter	Trout Unlimited	See 795	
703	Letters	Individuals (15 identical letters)	A2	2
704	Letter	City of Colorado Springs (Attorneys for)	A2	2, 6, 39, 71, 80
705	Letter	Denver Board of Water Commissioners	A2	2, 4, 8, 39, 65, 66, 67, 69, 70, 71, 73, 77, 79, 81, 93, 101
706	Attachment to 705	Sept. 1993 and Nov. 1993 – Denver Water comments on eligibility		
707	Attachment to 705	April, 1994 - Denver Water further comments on eligibility		
708	Attachment to 705	March, 1996 – Denver Water comments on pending suitability study		
709	Attachment to 705	May, 1996 – Denver Water justification for why cranes should not be included in Study		
710	Attachment to 705	May, 1996 - Denver Water comments on pending suitability study		
711	Attachment to 705	July, 1996 - Denver Water further comments on pending suitability study		
712	Attachment to 705	October, 1996 - Denver Water legal clarification on 1931 ROW		
713	Letters	Individuals (23 identical letters)	A2	2, 50
714 and 715	Letter and Resolution	S. Adams County Water and Sanitation District	A2	2, 4, 9, 39
716	Letter	Individual	Supports designation in general – No Specific Preference	56
717	Letter	Individual	J	29
718	Letter	Individual	J	30, 35, 36
719	Letter	City of Englewood	A2	2, 39, 82
720	Letter	Individual	A2	2, 50
721	Letter	Individual	J	29

Table J-2.-Summary of Commenters on the DLEIS and Associated Comments

Letter #	Type	Commenter	Preferred Alternative (if any)	Comment #
722	Letter	Individual	J	30, 31, 34
723	Letter	Individual	B	22, 31, 36, 42
724	Letter	Individual	J	30, 35, 36
725	Letter	Individual	J	30, 31, 34, 36
726	Letter	Individual	J	30, 35
727	Letter	Individual	J	30, 31, 34, 36
728	Letter	Individual	J	31, 34, 36, 54
729	Letter	Individual	Stated A2 but comments support J	2, 29, 31, 34, 36
730	Letters	Individuals (3 identical letters)	A1	1
731	Letter	Individual	A2	2, 78
732	Letter	Individual	Supports designation in general – No Specific Preference	54, 56
733	Letter	Individual	B	15, 22
734	Letter	Individual	Supports designation in general – No Specific Preference	31, 56
735	Letter	Individual	J	30 ,31, 32, 34, 36
736	Letter	Individual	B	22
737	Letter	Individual	Does not support designation – No specific preference	63
738	Letter	National Audubon Society, Rowe Sanctuary	J	30, 97, 100
739	Letter	Individual	Supports designation in general – No specific preference	34, 36, 54, 56
740	Letter	Individual	J	29
741	Letter	Individual	J	30, 31, 35
742	Letter	Individual	Supports designation in general – No Specific Preference	56
743	Letter	Individual	Supports designation in general – No Specific Preference	56
744	Letter	Individual	Supports designation in general – No specific preference	56
745	Letter	Individual	A1	1
746	Letter	Colorado Division of Wildlife	No specific preference	101, 102
747	Letter	Upper Arkansas and South Platte Project	J	13, 16, 17, 20, 30, 35, 36, 37, 40, 52, 54, 58, 97, 101
748	Letter	Northern Colorado Water Conservancy District	A2	2, 5, 39
749	Letter	Environmental Defense (Fund)	J	60, 61
750	Letter	Individual	J	30, 31
751	Letter	Individual	J	30, 31, 32, 35, 36
752	Letter	Individual	Does not support designation – No specific preference	62, 63
753	Letter	Individual	A2	2
754	Letter	Individual	J	29
755	Letter	Private Landowner	Supports designation in general – No Specific Preference	56
756	Letter	Individual	J	30, 35, 36, 54
757	Letters	Individuals (4 Identical letters)	A2	2, 50
758	Letter	Private Landowner	J	30
759	Letter	Private Landowner	J	30
760	Letter	City of Arvada	A2	2
761	Letter	Individual	J	30
762	Letter	City of Broomfield (Same as 675)	See 675	
763	Letter	Individual	Supports designation in general – No Specific Preference	56

Table J-2.-Summary of Commenters on the DLEIS and Associated Comments

Letter #	Type	Commenter	Preferred Alternative (if any)	Comment #
764	Letter	Blue Ribbon Coalition, Inc.	No specific preference	49, 102
765	Letter	Individual	Supports designation in general – No Specific Preference	31, 34, 56
766	Letter	Individual	J	30, 32, 34, 54
767	Letter	Individual	J	30, 34, 36, 54
768	Letter	Denver Audubon Society	J	20, 30, 31, 34, 36, 52
769	Letter	Sierra Club – Enos Mills Group	J	20, 30, 31, 34, 36, 58
770	Letter	Individual	Supports designation in general – No Specific Preference	56
771	Letter	Individual	J	30, 32, 54
772	Letter	Individual	J	31, 31
773	Letter	Individual	Supports designation in general – No Specific Preference	56
774	Letter	Individual	J	30, 31, 36
775	Letter	Denver Water	Correction to 705	101
776	Letter	Colorado Wildlife Federation	Asked to be put on mailing list	_____
777	Letter	Park County Water Preservation Coalition	Does not support designation – No specific preference	63, 64, 78, 82, 83
778	Letter	South Platte Partners (Private Landowners)	J	15, 30
779	Letter	Colorado Environmental Coalition	B	13, 16, 17, 20, 22, 31, 32, 35, 36, 37, 52, 101
780	Letter	Private Landowner	A2 and J	2, 20, 29
781	Letters	Individuals (2 identical letters)	A2	2, 50
782	Petition	146 signatures	Supports designation in general – No Specific Preference	14, 56
783	Letter	Individual	B	22
784	Letter	Individual	J	30, 31, 32, 35, 36
785	Letter	Individual	J	30, 31, 32, 34
786	Letter	Public Service Company of Colorado	No Specific preference	101, 102
787	Letter	Green Mountain Water and Sanitation (Same as 651)	See 651	
788	Letter	Individual	J	30, 31, 35
789	Letter	Denver Water	See 775	
790	Letter	Colorado Mountain Club	J	30, 31, 35
791	Letter	Individual	J	30, 31, 35, 36
792	Letter	Private Landowner	B	22
793	Letter	Individual	J	30, 31, 32, 34, 36
794	Letter	Environmental Protection Agency	Supports designation in general – No Specific Preference	14, 16, 34, 41, 43, 56, 96, 97, 101
795	Letter	Trout Unlimited	J	11, 15, 30, 44, 73, 89, 101
796	Letter	Individual	Supports designation in general – No Specific Preference	56
797	Letter	Cherry Creek Village Water District	A2	2, 4
798	Letter	Individual	J	29
799	Letter	Individual	Supports designation in general – No Specific Preference	56, 85
800	Letter	Colorado Whitewater Association	Supports designation in general – No Specific Preference	31, 44, 56, 62
801	Letter	Individual	A2	2, 5, 39
802	Letter	Individual	B	14, 22, 31, 35
803	Letter	Evergreen Audubon Society	B (except H1)	22, 25, 35, 45, 54

Table J-2.-Summary of Commenters on the DLEIS and Associated Comments

Letter #	Type	Commenter	Preferred Alternative (if any)	Comment #
804	Letter	Individual	Supports designation in general – No Specific Preference	56
805	Letter	Individual	J	29
806	Letter	Individual	J	30, 31, 32, 35, 98
807	Letter	Individual	Supports designation in general – No Specific Preference	56
808	Letters	Individuals (4 Identical letters)	A2	2, 50
809	Letter	Individual	J	30, 34, 54
810	Letter	Individual	Supports designation in general – No Specific Preference	56, 100
811	Letter	Individual	J	14, 29
812	Letter	Colorado Division of Wildlife	No specific preference	52, 91, 101, 102
813	Letter	Individual	J	29
814	Letter	Suburban Water Suppliers Wild and Scenic Task Force	A2	2, 8, 39, 46, 52, 64, 65, 67, 68, 71, 73, 75,76, 80, 81, 82, 87, 88, 93, 99, 101
815	Letter	Individual	B	22, 26
816	Letters	Individuals (5 Identical letters)	A2	2, 48
817	Letter	Individual	J	30, 31, 32, 35, 36
818	Letter	Colorado Department of Natural Resources	A2	2, 5, 7, 9, 20
819	Resolutions	City of Aurora, Douglas County Water Resource Authority	A2	2, 4, 7, 20, 39, 71
820	Resolution	Adams County	A2	2, 4, 7, 20, 39, 71
821	Letter	Perry Park Water and Sanitation District	Does not support designation – No specific preference	63, 71
822	Letters	Individuals (57 Identical letters)	J	29, 100
823	Letter	Individual	Supports designation in general – No Specific Preference	42, 56
824	Letter	Individual	J	30, 31, 36, 42
825	Letter	Individual	J	30, 31
826	Letter	Individual	A2	2
827	Letters	Individuals (30 Identical letters)	J	29, 100
NOTE: The following letters are out of sequence as they were received after non-comment material was added to the administrative record				
880	Letter	Galleria Metropolitan District	A2	2, 7, 20, 39, 71
882	Letter	Individual	J	30, 31, 32, 42
883	E-mail	American Whitewater	J	35, 36, 56

J.2 Comments on the SDLEIS

The 90-day public comment period for the SDLEIS began with a Notice of Availability published in the Federal Register in March, 2000 (Vo. 65, No. 63, P. 17265). The Forest Service received 231 public comment letters plus a petition bearing 147 signatures. Comments made on the document are summarized in Table J-3 below: Following the table are responses to the comments, after which is a list of the commenters and their associated comments. Comments to which a response is not necessary are identified with an asterisk (*).

List of Comments

Table J-3.-List of Comments Received on the SDLEIS	
Comment #	**Comment by Category**
ALTERNATIVE ISSUES	
1	Confusion between Alternative A3 and Preferred Alternative
2	Need to discuss how alternatives relate to the broader watershed, ecosystem management, and biodiversity goals of the Agency
3	Since under a finding of "not suitable" maintaining eligibility is not a requirement, it seems to be impossible to describe the environmental consequences of an alternative based on "not suitable."
4	As noted previously, the Forest Service should consider how future activities (in addition to potential designation) may require integration into the NEPA process.
AGAINST DESIGNATION	
5	Water providers making major concessions under A2 and getting nothing in return.
6	Federal designation would rely on narrow set of criteria rather than cooperative agreements to make decisions on protection of river values.
7	River not remote or pristine enough to be considered wild and scenic
8	Cost/Benefit ratio not addressed.
9	Triggers are unreasonable and unacceptable
10	Support cooperative agreement with the Forest Service but not third party enforcement.
11	* - Cannot support concept of protection of free-flow as would preclude consideration of water development from the South Platte River.
12	Allow the SPPP working group time to address Forest Service concerns
13	The North Fork should not be designated as Wild and Scenic
MOTORIZED RECREATION CONCERNS	
14	Continue to allow of road vehicles and other recreational motorized activities without restriction.
ALTERNATIVE LEGISLATION TO WILD AND SCENIC DESIGNATION	
15	Alternative Legislation - If community consensus includes continued use as a water supply conduit, then wild and scenic designation is not the best tool to address resource protection concerns. Suggest partnerships and agreements to limit water resource development coupled with alternative legislation like the N. St. Vrain "no-dams bill".
SUPPORT FOR WILD AND SCENIC DESIGNATION	
16	Wild and Scenic would give continuous access on the river through private and public land.
17	No precedent for a river being found suitable and being designated after a finding of not-suitable.
18	Need a finding of suitability to truly protect the ORVs of the river.
CONCERNS WITH ALTERNATIVE A2 (SOUTH PLATTE PROTECTION PLAN)	
19	Not enough detail on how A3 would be implemented.
20	How will the ORVs be protected under the SPPP

Table J-3.-List of Comments Received on the SDLEIS	
Comment #	**Comment by Category**
21	Enforcement of SPPP
22	What protections are in place after the 20-year moratorium?
23	Available avenue for third party enforcement
24	Forest Service would have to clearly define trigger points for reopening suitability study if accept SPPP.
25	Delay finding on suitability to allow time for evaluation of efficacy of SPPP
26	Prefer comprehensive river management plan to recreational management plan
27	How would river be jointly managed?
28	Would Forest Service allow another agency to manage this area?
29	Will the public really pay entrance fees?
30	Concerned about high volume recreation under an agreement with Colorado State Parks
31	* - Don't want high volume in areas like Wildcat Canyon—would threaten values such as wildlife and vegetation/ecological.
32	Permanency of protection
33	How long would an MOA with another agency be viable?
34	How imported flows might be evaluated and controlled for impact on aquatic habitat.
35	Public involvement in river management. The EPA agrees with the theory of this discussion, but also believes that the Forest Service has an independent responsibility to recommend actions to fully protect the identified ORVs on public lands.
36	Physical Habitat Protection
37	Public lands withdrawal
38	Funding should be provided for monitoring by locally based staff
39	The North Fork should be protected.
40	Keep classification of all of wildcat canyon "wild"
CONCERNS ABOUT STREAMFLOWS	
41	Need to ensure water available for cranes downstream in the Platte near Kearney, NE.
42	Would like to see streamflows below Elevenmile Dam managed between 50-150 cfs. Need to minimize wide fluctuations in streamflow to reduce harmful effects to the trout fishery. Notes that spills from the top of the dam raise temperatures and further harm the fishery.
PRIVATE AND PUBLIC ACCESS	
43	Parking is a problem and we would like to work with the Forest Service to improve public access to avoid parking on private land and encroachment on right-of-ways.
CORRECTIONS	
44	Concerns on non-address of specific requirements for indigenous and hatchery fish related to flow releases.
45	Noxious weeds not addressed sufficiently
46	Whirling disease not addressed sufficiently
47	Inconsistencies in Appendix B Table
48	Monitoring should be required for any recommended alternative to insure that the identified Outstanding Remarkable Values are being protected.
49	* - Options for meeting metropolitan water supply needs
50	The Forest Service should describe the environmental consequences on the ORVs identified in Segment H (North Fork) under Alternative J.
Note: an asterisk (*) indicates that a response is not necessary	

RESPONSES TO COMMENTS

Below are responses to the substantive comments listed above. Comments that did not require a response are noted in the Comment Table with an asterisk (*) and have not been included below.

Alternatives

Comment #1 – Confusion between Alternative A3 and Preferred Alternative

There appeared to be confusion as to what the Preferred Alternative was in the SDLEIS. The Preferred Alternative was not A3, which was a non-designation alternative. Rather it clearly envisioned designation. However, designation would only have been recommended once local publics had worked together to define mutually-agreeable language identifying where strict protections would apply and where a measure of flexibility would be provided for limited development to meet water supply needs. In other words, the SDLEIS's Preferred Alternative expressed the Forest Service's opinion that the best outcome was a legislative one because of

(1) the certainty it would provide, and

(2) the local agreement that would provided its foundation.

Because the Forest Service does not have the power to create either the certainty of legislation or the substance of local agreement, it seemed that the best solution to this complex dilemma lay in the hands of the local publics having the greatest interest in the river's fate. The alternative was not given a specific letter name or title, which may have led to much of the confusion surrounding its intent. It was also not analyzed in detail, although the impacts associated with it were essentially the same as Alternative A3's variations.

After the SDLEIS was released, consultation with the Wild and Scenic Interagency Council revealed that Section 7 of the Act prohibits **any** direct and adverse impact to designated rivers from Federal water resources projects and does not allow for even a small amount of flexibility. Further, the alternative was not favorably received. The alternative has been noted in the FEIS as only an "Alternative Not Considered in Detail and Eliminated from Further Study".

Comment #2 - Need to discuss how alternatives relate to the broader watershed, ecosystem management, and biodiversity goals of the Agency.

The Forest Plan is the primary document used to address the broader watershed, ecosystem management and biodiversity goals of the Agency. The analysis of alternatives discloses consistency of the alternatives with the Forest Plan. See Section 5.19.

Comment #3 - Since under a finding of "not suitable" maintaining eligibility is not a requirement, it seems to be impossible to describe the environmental consequences of an alternative based on "not suitable."

The difficulty arises from not having any development proposals to consider, and from not being able to predict the future in detail. This does not make it completely impossible to describe consequences, but it does force the discussion to be generic rather than detailed. See "Background on Assumptions" in Section 5.7.

Comment #4 – p. 58 "Future Recommendations for Designation" As noted previously, the Forest Service should consider how future activities (in addition to potential designation) may require integration into the NEPA process.

The process to revisit designation if A2 agreement is unsuccessful will be outlined in the ROD. The most likely "trigger" would be a proposed water development project which appears to have an adverse on the ORVs and free flow. By not making a finding on suitability at this time, presumably the current document would be considered valid for at least another five years. After that time, if the issue of suitability were to be revisited, a new NEPA document may need to be developed.

Against Designation

Comment #5 - Water providers making major concessions under A2 and getting nothing in return.

The South Platte Protection Plan (SPPP) outlined in Alternative A2 was developed with broad consensus by many interests including water providers, local governmental agencies, environmental groups, landowners, and recreational user groups. It strives to protect river values while allowing flexibility for future water development recognizing the needs of a growing metropolitan population. The process to develop the plan has been based on cooperation rather than competition. It also recognizes common ground such as water quality which is important for drinking water as well as for natural resource protection. Implementation of the SPPP gives the water providers certainty that some water development might be possible in the future versus a designation alternative which may preclude any future development that might threaten free flow, the identified Outstandingly Remarkable Values (ORVs) or water quality.

Comment #6 - Federal designation would rely on narrow set of criteria rather than cooperative agreements to make decisions on protection of river values.

Federal designation has historically been based on criteria established by the Act for the purpose. However, there have been exceptions such as the SuAsCo River complex in Massachusetts which was designated following a significant cooperative effort. See the discussion under 'Likelihood..." in Section 5.14. Something similar was contemplated in the Preferred Alternative for the *SDLEIS*, but the concept was not favorably received overall.

Comment #7 - River not remote or pristine enough to be considered wild and scenic.

Designation of a river as wild and scenic does not necessarily imply that an area is pristine or remote. Many designated rivers flow through developed landscapes. A river is determined to be eligible for designation if it is in a free-flowing condition and possesses one or more outstandingly remarkable scenic, recreational, fish and wildlife, geologic, historical, cultural or similar values. The suitability determination addressed by this EIS analyzes other factors, including economic, to determine if a recommendation to designate the river as part of the National Wild and Scenic Rivers System should be sent first to the Secretary of Agriculture (if a Forest Service study) and then to Congress.

Comment #8 - Cost/Benefit ratio not addressed.

It is very difficult to do a quantitative analysis for this study given the uncertainties discussed under "Fisheries, Water Resources, and Water Development" in the Chapter on Environmental Consequences. The section titled "Socioeconomics" under the same chapter has been rewritten to focus on a more appropriate qualitative analysis. For example, to calculate the costs and other impacts of precluding water developments under the various action alternatives would require speculation on the details of projects being precluded. Since no applications have been submitted, such details are not available. During development of the South Platte Protection Plan, the participating water provider representatives were asked if they would identify the types and locations of water developments that they might wish to construct one day. Due to the uncertainties of the future, they were unable to provide such information. Because the Forest Service is not required to speculate on the kind of water development that might be proposed—particularly to a degree of detail that would lend itself to a quantitative analysis of costs, revenues, and associated economic and social impacts—the socioeconomic analysis is appropriately qualitative in nature.

In qualitative terms, the economic efficiencies of the alternatives are presumed to follow an inverse relationship with costs. That is, an alternative with relatively low costs would have a relatively high economic efficiency, and vice versa. As this is a programmatic undertaking rather than a discrete project, known Forest Service and other federal costs are limited largely to document preparation and general analysis, planning and cooperation, with no resultant revenues that can be clearly identified.

Comment #9 - Triggers are unreasonable and unacceptable.

See Comment 24.

Comment #10 - Support cooperative agreement with the Forest Service but not third party enforcement.

Although not many alternatives exist, a cooperative agreement with a Federal Agency does not provide long-term protection, a concern expressed by those seeking long-term protection of the ORVs. Cooperative agreements typically need to be rewritten every five years. Third party access to ensure protection of the values is available through enforcement of the *Forest Land and Resource Management Plan.*

Comment #12 – Allow the stakeholder group that created the SPPP to modify the Plan in response to Forest Service concerns.

The Forest Service has received supplemental material from the stakeholders who developed the SPPP that addresses Agency concerns. That material has been analyzed and included in Appendix A. An appendix was developed to the Streamflow Management Plan which imposes penalties on Denver Water and Aurora if streamflows fall below the required minimum. A draft Forest Plan Amendment was developed which will provide the mechanism for 3rd party enforcement of protection of values. A draft Memorandum of agreement was developed which outlines what cooperators will do to protect river values. A document on Principles of water development was added to address possible future water development projects. An outline for a monitoring program was developed as part of the draft Forest Plan Amendment to establish baselines and determine if values are threatened with degradation. The Agency received 9 letters expressing support for the Plan.

Comment #13 – The North Fork should not be designated as Wild and Scenic

While it is true that most of the North Fork is privately owned, there are several access points open to the public. These include road crossings near Bailey and Buffalo Creek, plus public land at Pine Valley Open Space, and land owned by Denver Water. There are still questions concerning the controversial rulings on floating access on Colorado rivers, but the Forest Service lacks the authority to resolve those issues.

None of the alternatives affect the ability of a landowner to prevent trespass or reduce impacts from recreationists, and none of them alter a landowner's liability in the event a recreationist is hurt while on private land. Private landowners would not be required to allow members of the public to use their lands under any of the alternatives. Recreational use of National Forest System lands and, hence, potential trespassing on adjacent private lands are expected to increase with or without designation. It is possible that the increase could be slightly greater under designation, since rivers receive more publicity through designation. The Forest Service would monitor any increases in use and would take appropriate measures to mitigate any impacts to private lands and ORVs as determined by the management plan. If necessary, these effects

could be mitigated by increasing partnerships, signage, and Federal funding in the designated area or by limiting dispersed camping sites, access, parking, or user numbers.

Motorized Recreation Concerns

Comment #14 - Continue to allow of road vehicles and other recreational motorized activities without restriction.

The classification for Wildcat Canyon has been revised so that the section ¼ upstream from Hackett Gulch to ¼ mile downstream of Corral Creek is now *scenic* rather than *wild.* This error from the original eligibility and classification study recognizes traditional recreational motorized activities in that area of the river corridor. (See 'Segment C2' on p. 3—17.) This classification does not have an affect on or is affected by the Hayman closure of roads into this area. That closure is in affect to protect the safety of the public pending completion of a roads analysis to determine the effects of the fire on the resource as well as road safety and stability.

The designation alternatives do include the OHV crossings. However, these segments have been reclassified as *scenic,* in recognition of traditional motorized recreational uses. As a result, none of the designation alternatives restrict OHV use on existing legal trails. Such restrictions are essentially an alternative considered but not analyzed in detail.

Alternative Legislation to Wild and Scenic Designation

Comment #15 - Alternative Legislation - If community consensus includes continued use as a water supply conduit, then wild and scenic designation is not the best tool to address resource protection concerns. Suggest partnerships and agreements to limit water resource development coupled with alternative legislation like the N. St. Vrain "no-dams bill".

The Forest Service has investigated other alternatives to Wild and Scenic designation to protect the resource values. The concept of alternative legislation similar to the North St. Vrain River Protection Act has merit but is not being pursued at this time. See 'Special Legislation to Prevent Federally Approved or Assisted Dams' on p. 4-36. In the meantime, the Forest Service sees the South Platte Protection Plan as a reasonable alternative in the absence of legislation. There does not appear to be opposition to investigating the concept of alternative legislation later on if it would increase enforceability and meet all needs.

Support for Wild and Scenic Designation

Comment #16 – Wild and Scenic would give continuous access on the river through private and public land.

Designation of the river as wild and scenic would not preclude state law which allows the current barriers on the river constructed by private land owners. The river has been determined to be non-navigable and state law gives private landowners jurisdiction over trespassing where it flows past their land.

Comment #17 - No precedent for a river being found suitable and being designated after a finding of not-suitable.

In 1996, sections of the Lamprey River in New Hampshire were officially designated into the National Wild and Scenic Rivers System (P.L. 104-333). Not all eligible sections were recommended for designation when some local townships voted against designation. However, it was qualified in the original recommendation that the non-suitable segments could be reevaluated if communities offered support in the future. After observing that designation and the comprehensive cooperative river management plan were successful in the townships where

the river was designated, the townships in the non-suitable sections requested a new determination of suitability based on the initial study. These additional sections were formally designated in May of 2000 (P.L. 106-192).

Comment #18 - Need a finding of suitability to truly protect the ORVs of the river.

The most protection would be afforded through designation as a Wild and Scenic River. The requirement that the Forest Service protect eligibility under a finding of suitability is true. However, by not making a decision on suitability at this time, the Forest Service is still required to protect the finding of eligibility as a matter of agency policy. See Section 1.2, Item 2 for a description of this policy.

Concerns with the South Platte Protection Plan

Comment #19 - Not enough detail on how A3 would be implemented.

See response to Comment #1

Comment #20 - How will the ORVs be protected under the SPPP

The finding of eligibility will be maintained through the Forest Plan. Any action that would threaten the finding of eligibility on Forest Lands would be subject to the standards and guidelines of the Forest Plan. Protection of ORVs on non-Forest lands would have to be worked out through cooperative agreements.

Comment #21 – What is the Enforcement mechanism for the SPPP?

For National Forest System lands, enforcement is through the Forest Plan. For other lands, the Forest Service does not have the ability to enforce an agreement with non-Federal agencies. The threat would be that the Forest Service would not renew the agreement unless corrective actions were taken; if those did not occur, then the agency could reopen the suitability study to determine if a finding of suitable were warranted. Presumably this (reopening) would be the strongest enforcement mechanism. Since the SDLEIS was released, the parties to the South Platte Protection Plan agreed to an enforcement plan for the Streamflow Management Plan (Appendix A, Attachment B1) which would require payment for not meeting minimum streamflow requirements. It would also require notice to the Forest Service and Colorado Division of Wildlife within one week of the occurrence. See also response to comment #47.

Comment #22 – Concerned that the 20-year moratorium on development of the Two Forks ROW is just a way to delay the problem for the next generation.

Attachment D under the SPPP, "Principles Regarding Water Development", states that Denver Water will pursue alternative storage or utilization of the Two Forks Water that would allow it to achieve its yield without the use of the Right-of-Way. As a demonstration of good faith in pursuing those options, Denver Water would voluntarily impose a moratorium on applications for development of the Two Forks Right-of-Way for a period of twenty years from the date of a Memorandum of Agreement (MOA). Denver Water may extend this moratorium on permit applications if it determines, in the discretion of its Board, that viable alternative projects are still available that would keep its reliable supply comfortably ahead of demand projections, including a safety factor commensurate with responsible utility planning. This does not preclude other water providers from submitting applications to permit water development projects.

Comment #23 - Available avenue for third party enforcement

The Forest Service is not able to develop an agreement which would allow for third party enforcement. However, citizens would be able to sue the Forest Service if it were to violate the standards and guidelines of the Forest Plan to protect free-flow, the ORVs or water quality or if discussions and decisions pertinent to management of the river were not made public.

Comment #24 - Forest Service would have to clearly define trigger points for reopening suitability study if accept SPPP.

The Preferred Alternative identifies criteria that, if not met and maintained, could trigger a reopening of the suitability process. See 'Preferred Alternative', p. 4-30. In addition, the monitoring concept identified at the end of Chapter 1 will provide for continuous review of proposed and ongoing activites. The most likely "trigger" would be a proposed water development project which appears to have an adverse effect on either free-flow, the ORVs, or water quality.

Comment #25 - Delay finding on suitability to allow time for evaluation of efficacy of SPPP

The Forest Service studied this issue carefully and determined that delaying a decision on suitability would be in the best course of action at this time. It would allow time for the cooperative management process with a broad base of support to coalesce. Current management indicators will be used to evaluate the efficacy of the SPPP. Significant changes in these indicators will warrant reopening the suitability determination process.

Comment #26 – Prefer "comprehensive river management plan" to "recreation management plan."

The comprehensive plan was based on a finding of suitability and with that the development of a plan to parallel what would be required for a river designated under the WSRA. The cooperative management planning process identified as part of the SPPP should consider all values including wildlife, fisheries, scenery, geology and cultural as well as recreational.

Comment #27 - How would river be jointly managed?

The Forest Service currently issues permits for concessionaire operations that last 10 years. It is not envisioned that any potential contract or agreement with another party for management of the area would be of longer duration.

The Forest Service will continue to review the proposal to enter an agreement with Colorado State Parks to cooperatively manage the rover corridor. The decision is not necessary at this time with respect to making a decision on whether the river is suitable for inclusion in the National Wild and Scenic Rivers System.

Comment #28 - Would Forest Service allow another agency to manage this area?

See #27 above.

Comment #29 – Entrance fees would be difficult to collect under a management agreement with Colorado State Parks.

Fees are a relatively new concept for National Forest. Urban users in the Denver area expect to pay for access to many area parks. Generally reasonable fees in return for some services are accepted by the public. Charging a fee for people driving for pleasure or general road use will complicate any possible fee structure.

Comment #30 - Concerned about high volume recreation under an agreement with Colorado State Parks

Any agency that manages the recreation will be concerned with economics of costs and fees. There are indeed sections of low use. While it is true that Colorado State Parks is intended, largely, to be financially self-sufficient it should not be assumed that the agency or concessionaire would be allowed to increase use as a way to recover costs. There are other ways to balance economics, capacity and resources. The Forest Service agrees that high volume recreation would be difficult to manage so that it did not affect the river values. Of course there will be general disagreement to the definition of high volume recreation.

Comment #32 - Permanency of protection

Protection of eligible river segments on National Forest System lands is governed by Forest Service policy which seeks to protect eligibility. In Appendix G, see Forest Service Manual section 1924.8, and Forest Service Handbook 1909.12 section 8.12. Because this policy is not codified in law, it can be modified by agency action. But there is no basis for predicting whether the policy will continue over a long period of time. In the meantime, the Forest Plan will reflect the policy. See "Permanence of Protection" in section 5.14.

Comment #33 - How long would an MOA with another agency be viable?

In the Forest Service, MOA's are subject to review and renewal every 5 years, and reissuance every 10 years. See "Permanence of Protection" in section 5.14.

Comment #34 - How imported flows might be evaluated and controlled for impact on aquatic habitat.

The effect of imported flows on the aquatic environment would have to be monitored as part of an agreement and cooperative management process. The Forest Service lacks the resources to fully monitor this and other activities, and historically water importers have not routinely sought permission to send new water down existing channels. Recognizing this problem, the South Platte Protection Plan assigns responsibility to project proponents for addressing the matter. See Appendix A, Attachment B (Streamflow Management Plan), page B-10. Further, the Streamflow Management Plan's flow limitations will help address the issue of future importations by limiting the range within which flows are to be kept.

Comment #35 - p. 61 - Needs for Public Involvement in River Management. The EPA agrees with the theory of this discussion, but also believes that the Forest Service has an independent responsibility to recommend actions to fully protect the identified ORVs on public lands.

The Forest Service would continue to protect the identified ORVs and free flow on the eligible segments on public land under all the alternatives except A1 through the Forest Plan. The degree and vigor of protection efforts vary according to alternative. For many of the alternatives, eligibility must be maintained and therefore a firm standard exists. For Alternative *A3 – Not Suitable*, however, protection of eligibility is less stringent. Local management of non-federal lands with extensive public involvement builds off this protection and addresses management on these non-federal lands to protect the same values while creating a forum to discuss delivery of water to a large metropolitan population in close proximity to the study corridor. In addition to the inevitable discussions of future water development projects, this provides an opportunity to discuss alternative methods to deliver water and conservation methods to reduce the need for additional water resources.

Comment #36 - Physical Habitat Protection

Since the SDLEIS was released, two events have occurred. First, The TMDL Analysis for the

South Platte was completed and report released June 14, 2002. However, the results of this analysis were confounded by the Hayman Fire which began June 8, 2002. Subsequent rain events increased sedimentation to levels way above what had been studied during the TMDL analysis. Restoration efforts will continue to monitor the effects of sedimentation and work on reducing the impacts on the river ecosystem.

Comment #37 – Public lands withdrawal

The Forest Service renewed a mineral withdrawal in 2001 for the river corridor from Elevenmile Dam to the high water line of Cheesman for 10 years. A request will be made for a similar withdrawal for the rest of the eligible corridor. Withdrawal should continue until the river segments are: a) found to be ineligible; b) not recommended for inclusion in the National system; or c) added to the system by Act of Congress.

Comment #38– Should mandate funding for a "locally based" staff to ensure proper monitoring occurs.

Available resources make it difficult to mandate funding for monitoring. This would have to be considered through the congressional appropriations process. The Forest Service will rely on monitoring programs already in place utilizing current indicators to the fullest extent possible to ensure protection of free-flow, ORVs and water quality.

Comment #39 – North Fork should receive same protections as the South Platte.

Protection of eligibility under the Forest Plan applies to all eligible segments, including those on the North Fork.

Comment #40 - Keep classification of all of wildcat canyon "wild"

The classification for Wildcat Canyon has been revised so that the section ¼ upstream from Hackett Gulch to ¼ mile downstream of Corral Creek is now *scenic* rather than *wild.* This error from the original eligibility and classification study recognizes traditional recreational motorized activities in that area of the river corridor. This classification does not have an affect on or is affected by the Hayman closure of roads into this area. That closure is in affect to protect the safety of the public and to conduct a roads analysis to determine the effects of the fire on the resource as well as road safety and stability.

The designation alternatives do include the OHV crossings. However, these segments have been reclassified as *scenic*, in recognition of traditional motorized recreational uses. As a result, none of the designation alternatives restrict OHV use on existing legal trails. A scenario involving such restrictions is essentially an alternative considered but not analyzed in detail.

Concerns about Streamflows

Comment #41 - Need to ensure water available for cranes downstream in the Platte near Kearney, NE.

Page 5-30 and 5-31 of the Final EIS states that designation would not determine the quantity of water that eventually reaches these downstream habitats and that any future dam and reservoir projects would be subject to review under the ESA to determine the effects on downstream species.

Comment #42 - Would like to see streamflows below Elevenmile Dam managed between 50-150 cfs. Need to minimize wide fluctuations in streamflow to reduce harmful effects to the trout fishery. Notes that spills from the top of the dam raise temperatures and further harm the fishery.

The Streamflow Management Plan recognizes the optimum range for trout below Elevenmile Dam to be 50-100 cfs, and below Cheesman Dam 50-150 cfs in winter and 100-225 cfs in the summer based on recommendations made by the Colorado Division of Wildlife (SPPP, 1998). Denver Water will strive to meet the minimum end of these ranges as long as resources are available and water is not lost downstream. Water facility operations will be reviewed and coordinated at the annual operating meeting as described in Section II-F of the Streamflow Management Plan. These will be open to the public and Aurora, Denver Water, the Colorado Division of Wildlife, the U.S. Forest Service, Trout Unlimited, the Wigwam Club and American Whitewater are expected to participate.

The temperature issue is recognized in the Streamflow Management Plan, which commits to installing bottom-release capability. See commitment #8 in Table 1, page B-iii, and "Tasks" on page. B-12.

The flow and temperature ranges identified in the Streamflow Management Plan are the proponents' choice. The Forest Service recognizes there may be issues associated with these ranges, and believes that the best way to identify and address them is during the regularly-scheduled meetings provided under the Streamflow Management Plan.

Private and Public Access

Comment #43 - Parking is a problem and we would like to work with the Forest Service to improve public access to avoid parking on private land and encroachment on right-of-ways.

Work continues on the Gill Trail and the Wigwam parking area. Once these are completed and the Wigwam parking area reopened, the small parking areas on County Road 126 will be closed which should improve public access and eliminate encroachment on private land and right-of ways.

Corrections

Comment #44 - Concerns on non-address of specific requirements for indigenous and hatchery fish related to flow releases.

Hatchery fish have not been stocked in recent years due to the presence of whirling disease. The presence of the disease as well as increased sedimentation as a result of the Hayman and Schoonover fires will require further analysis as to the long-term impacts to the fishery resources. This will be addressed through the restoration processes and continued monitoring of the burn area. This is a valid issue, but full analysis and resolution go beyond the scope of this study.

Comment #45 - Noxious weeds not addressed sufficiently

This was an omission in both the DLEIS and the SDLEIS. It has been added to the Affected Environment under the section on vegetation. See p. 2-25.

Comment #46 - Whirling disease not addressed sufficiently

This was an omission in both the DLEIS and the SDLEIS. It has been added to the Affected Environment under the section on Fisheries. See p. 2-45.

Comment #47 - Inconsistencies in Appendix B Table. Problems with SDLEIS Preferred Alternative – it would allow for some water development whereas A3 states in Appendix B: Alternatives Comparison Chart, "no impoundments." (Page B-11) This implies any impoundment, no matter what the size would not be allowed. This is also contradicted by Page B3 which states that eligibility is a goal and would allow projects with limited or reasonable effects to ORVs or free-flow.

These inconsistencies have been noted and changed in Appendix B in the Final EIS.

Comment #48 - Monitoring should be required for any recommended alternative to insure that the identified Outstanding Remarkable Values are being protected.

Monitoring is discussed in section 1.5 of the final EIS. See also the discussion under the Preferred Alternative, p. 4-30.

Comment #50 - The Forest Service should describe the environmental consequences on the ORVs identified in Segment H (North Fork) under Alternative J.

The environmental consequences of Alternative J on Segment H were described in the DLEIS released in 1997. The additional sections from the SDLEIS have been modified to include the environmental consequences on water development, flow regime, channel integrity, aquatic habitat and water quality for Segment H under Alternative J.

SUMMARY OF COMMENTERS AND ASSOCIATED COMMENTS

Table J-4 below lists commenters to the SDLEIS and their associated comments.

Table J-4.-Commenters to the SDLEIS and Associated Comments

Commenter #	TYPE	FROM	Preferred Alternative (if any)	Comment #
1000	*Letter*	Individual		14
1001	Letter	Individual	Non-designation	51
1002	Letter	Individual	Designation (no alternative preference)	51
1003	Letter	Individual	Designation (no alternative preference)	51
1004	Letter	Army Corps of Engineers	No preference—Would like to work together on river mgmt. plan if designated.	-------
1005	Letter	Individual	Preferred Alternative	51
1006	Letter	Private Cabin Permit Holder	A3	51
1007	Letter	Wigwam Club	Concerned with minimum flows. Wants to work with USFS on a mgmt. agreement	42, 43
1008	Letter	Lake George Company	Designation (no alternative preference)	42
1009	e-mail	Individual	A1	51
1010	Letter	Individual	Not enough information from public meetings	51
1011	Letter	Individual	Designation (no alternative preference)	51
1012	Letter	Individual	Designation (no alternative preference)	51
1013	Letter	Individual	J	41
1014	Letter	Individual	J	41
1015	Letter	Individual	J	51

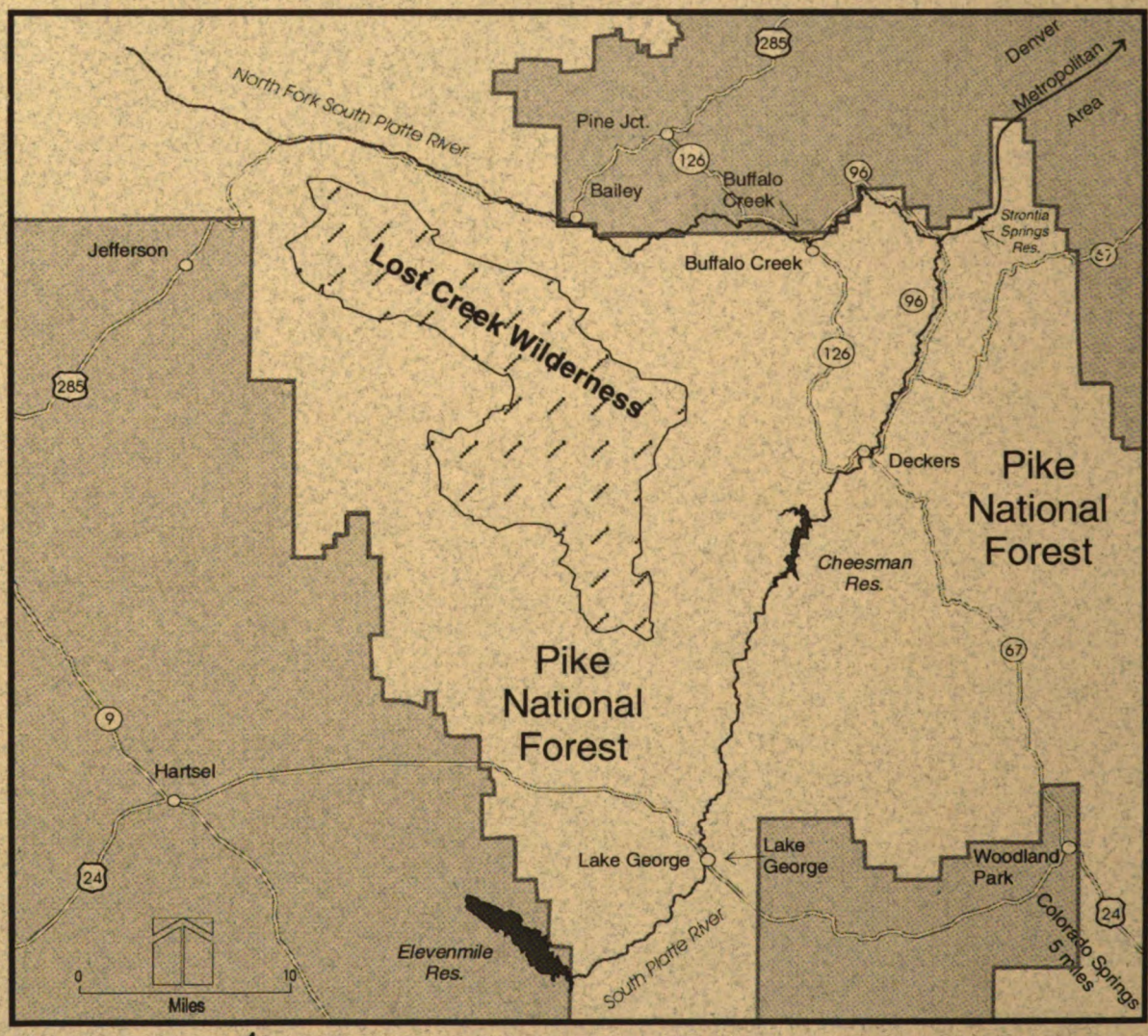
1016	Letter	Individual	Preferred Alternative	51
1017	Letter	Landowners	Designation (no alternative preference)	51
1018	Letter	Individual	Preferred Alternative	51
1019	Letter	Individual	J	51
1020	Letter	Individual	Designation for North Fork (no alternative preference)	51
1021	Letter	Individual	Find Suitable	51
1022	Letter	Individual	Designation (2nd choice A3-*not-suitable*)	51
1023– 1138	Letters	Individuals	Find Suitable	40
1139	e-mail	Individual	Non-designation	5, 7, 8
1140	Letter	American Whitewater	Preferred Alternative	51
1141-1156	Letters	Individuals	Find Suitable	40
1157	Letter	Rocky Mountain Ecosystem Defense	Find Suitable	51
1158	Letter	Arkansas Valley Audubon Society and Colorado Field Ornithologists	Find Suitable	51
1159	Letter	Landowner	No North Fork designation	13
1160	Letter	Individual	Designation (no alternative preference)	51
1161	Letter	Landowner	No North Fork designation	13
1162	Letter	Individual	Find Suitable	51
1163	Letter	Individual	Find Suitable	51
1164-1167	Letters	Individuals	Find Suitable	40
1168	Letter	Colorado Rivers Alliance	Find Suitable	51
1169	Letter	Individual	Designation (no alternative preference)	51
1170-1183	Letters	Individuals	Find Suitable	40
1184	Letter	Individual	Find Suitable	12, 22
1185	Letter	Individual	J	51
1186	Letter	Colorado Wild	Prefer suitability but delay decision	12, 17, 18, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30,31, 39, 47
1187	Letter	Individual	Non-designation	51
1188	Letter	Sierra Club, Rocky Mtn. Chapter, Water Resources Committee	Find Suitable	21, 27, 30, 31, 28, 32, 22, 29
1189-1192	Letters	Individuals	Find Suitable	40
1193	e-mail	Individual	A3-*not-suitable*	11, 29
1194- 1198	Letters	Individuals	Find Suitable	40
1199	Letter	Individual	Preferred Alternative	51
1200	Letter	Audubon Society of Greater Denver	Preferred Alternative	12, 21, 27, 28, 29, 30, 31, 32, 39, 50
1201	Letter	City of Aurora	A2	6, 12, 51
1202	Letter	Denver Board of Water Commissioners	A2	6, 15, 25
1203	Letter	Individual (Tom Krol)	Prefer suitability but delay decision	12, 21, 24, 25, 27, 28,29, 30, 31, 34,
1204	Letter	Environmental Protection Agency	Need to make a recommendation to protect values and fully disclose impacts	1, 2, 3, 4, 24, 35, 39, 48, 49
1205	Letter	Upper Arkansas and S. Platte Project	Find Suitable	17, 26, 29
1206	Letter	Sierra Club – Mount Evans Group	A3 *suitable*	12,17,18, 21, 22, 26
1207	Letter	Dept. of the Interior	Protect values through non-Wild and Scenic legislation	1, 15, 44, 46, 47
1208	Letter	Evergreen Naturalists Audubon Society, Inc.	A3 *suitable*	12, 17, 18, 21, 22, 26, 27, 28, 29, 30, 31, 32

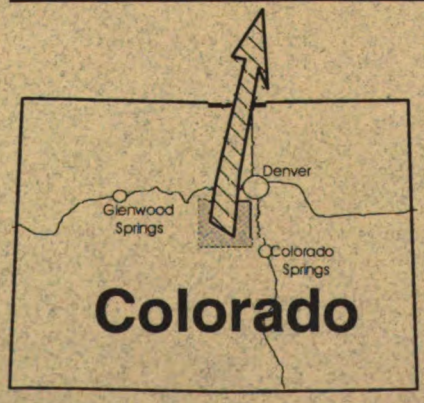
1209	Letter	Individual	Find Suitable	51
1210	Letter	Individual	Preferred Alternative	51
1211	Letter	Individual	A3 *suitable*	51
1212	Letter	Individual	J	51
1213	Letter	Individual	A3 *suitable*	12, 21, 22, 32, 51
1214	Letter	Individual	Designation (no alternative preference)	51
1215	Letter	Individual	Find Suitable	40
1216	Letter	Individual	Find Suitable	32
1217	Letter	Individual	J	51
1218	Letter	Individual	Designation (no alternative preference)	51
1219	Letter	Landowner	Preferred Alternative	51
1220	Letter	Colorado Trout Unlimited	Prefer suitability but delay decision	1, 12, 17, 18, 19, 21, 22, 24, 25, 27, 28, 29, 30, 31, 32, 36, 37
1221	Letter	Colorado Dept. of Natural resources	A2	12, 21, 22, 27, 28, 30, 31, 51
1222	Letter	Douglas County Water Resource Authority	A2	1, 6, 9, 10, 11, 12, 25
1223	Letter	Environmental Defense	Find Suitable	12, 21, 22, 23, 27, 32, 51
1224	Letter	Douglas County Commissioners	A2	1, 6, 9, 10, 11, 12, 25
1225	Letter	Colorado Mountain Club	Prefer suitability but delay decision	12, 25, 51
1226	Letter	Centennial Water and Sanitation District	A2	11, 12
1227	Letter	Individual	A3 *suitable*	51
1228	Letter	Individual	A3	38
1229	Letter	Individual	Alternative B	51
1230	Letter	Park County Republican Women's Club	Designation (no alternative preference)	51
1231	Letter	Rocky Mountain Outdoor Center	Preferred Alternative	16

☆ U.S. GOVERNMENT PRINTING OFFICE: 2004 — 671-906 / 05002 REGION NO. 8

South Platte River and North Fork of the South Platte River
Wild and Scenic River Study

Vicinity Map





Land Ownership
- Within National Forest Boundary
- Outside National Forest Boundary

Roads and Highways
- 9 State Highways
- 24 U. S. Highways