

WILD AND SCENIC RIVER EVALUATION

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INTRODUCTION

The National Wild and Scenic Rivers Act of 1968 (P.L. 90-542:16 U.S.C. 1271-1287, as amended) is designed to preserve certain rivers and streams with outstanding natural, heritage or recreational features in a free-flowing condition for the enjoyment of present and future generations. There is one designated National Wild & Scenic river, the Cache la Poudre, on the Roosevelt National Forest

The term "river" as used in this appendix is based on language in the Act. "River" does not confer any meaning about water quantity or quality. The term "river" applies to rivers, creeks or intermittent streams, which are free-flowing (without impoundments).

Free-flowing rivers may be designated by Congress (usually following a study by a federal agency) or the Secretary of the Interior (following state designation as "wild and scenic," application by the governor, and when the Secretary determines that the stream has the necessary outstanding values and that the state will permanently protect them).

Each river is administered by either a federal or state agency. Designation may include all or part of a river and may include tributaries. A corridor approximately one-half-mile wide (one-quarter mile on each side of a stream) is usually included within the designation boundary to protect related natural, heritage and recreational values.

Rivers and streams are classified as wild, scenic or recreational. The Wild and Scenic Rivers Act defines these terms as follows:

- **Wild Rivers**—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.
- **Scenic Rivers**—Rivers or sections of rivers that are free of impoundments, with shorelines or watersheds largely undeveloped, but accessible in places by roads.
- **Recreational Rivers**—Rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shoreline, and that may have undergone some impoundment or diversion in the past.

Landownership within designated boundaries is often a combination of federal, state and private. If designated, federal agencies are not required to acquire any private land and indeed are not authorized to acquire more than 100 acres per mile of river of private land within a designated river corridor. Additionally, recreational, agricultural and residential uses may continue. Recreational users are cautioned to be aware of and respect private property rights. Existing water rights and existing jurisdiction of states and the United States over waters as determined by established principles of law are not affected by designation.

If designation of any rivers occurs and if private land lies within the corridors, the Forest Service

would consider acquisition of private lands only when the owner is willing to sell or exchange land for the appraised value. The Forest Service would not force anyone to sell their property.

The Federal Energy Regulatory Commission is prohibited from licensing projects that lie on or that directly affect designated rivers. Other federal agencies cannot assist by loan, grant, license or otherwise in the construction of any water resources projects (such as dams, water diversion, channelization and rip-rapping) that would have a direct and adverse effect on river values.

Regardless of classification, rivers in the National System are often referred to simply as "wild and scenic." It is important to remember that the specific legal classification of a particular river has a direct effect on how it is administered and whether certain activities on federally-owned land are permissible. Whatever the classification, each designated river is administered with the goal of nondegradation and enhancement of the values that led to its designation.

There is a two-step process required before a river can be included in the National System. The first is an evaluation of a river's "eligibility." This evaluation considers the area within one-quarter mile of the high water marks on both sides of a river, and other features outside this corridor if their inclusion is essential for the protection of the river's outstandingly remarkable values.

The second step is to evaluate eligible rivers for "suitability." This evaluation considers possible congressional inclusion of the river in the National Wild and Scenic Rivers System (NWSRS) in terms of social and economic values, effects on other resources, and effects on private lands and other uses of the area. The administration may recommend suitable rivers to Congress for inclusion in the National System. When Congress designates a river for inclusion, a final boundary for the corridor is established and a management plan is developed.

SUMMARY OF EVALUATION

Seven rivers were previously evaluated during and after the initial 1984 Forest Plan process in the Nationwide River Inventory (NRI). The Cache la Poudre River was studied for both the main stem and the South Fork and it was designated in part; the North St. Vrain and North Fork Cache la Poudre Rivers were found to be eligible, and four other NRI candidate rivers were evaluated and not recommended for eligibility; the Middle St. Vrain, Willow Creek, Williams Fork Upper and East (administered and evaluated by the Routt National Forest), and Boulder Creek North Fork.

The Big Thompson from its source within the Rocky Mountain National Park to the common boundary with the ARNF was also included in the NRI. The Park Service studied this segment and found it not suitable. The analysis of the segment below the Park was included in the revision.

Currently the Forest has one designated Wild and Scenic River, the Cache la Poudre River. The *Forest Plan* identified the Cache la Poudre as an eligible wild and scenic river. A suitability

study was completed and segments of the river were added to the Wild and Scenic Rivers System. While this suitability study was going on, two other rivers on the ARNF-PNG were also being studied to determine their eligibility. They were the North Fork Cache la Poudre River and the North St. Vrain Creek.

The results of these studies determined that the North St. Vrain and the North Fork Cache la Poudre were both eligible. The Plan was amended in late 1989 and early 1990 to allow for these rivers to be studied for suitability during the revision.

Beginning in 1992, virtually every river and stream within the boundaries of the Arapaho and Roosevelt National Forests and the Pawnee National Grassland was screened by the six Ranger Districts to determine which should be evaluated for possible eligibility for Wild and Scenic River designation. The list of streams to be evaluated was narrowed to thirty. This list included three NRI rivers administered by the Forest.

Eligibility evaluation reports were prepared in 1993. These stream evaluations determined which streams were potentially eligible for inclusion in the National Wild and Scenic River System (NWSRS). "Outstandingly remarkable values" were identified along and adjacent to these streams, and appropriate classification of each stream as "wild," "scenic," or "recreation" was made. The eligibility reports are part of the planning record. The following is a compilation of the results of the eligible stream evaluations.

Eligible Stream Evaluations

- 30 streams totaling 231.2 miles in length were evaluated to determine their eligibility for Wild and Scenic River designation
 - 28 streams or stream segments totaling 227 miles were found not eligible for inclusion in the NWSRS
 - 2 streams or stream segments totaling 4.2 miles were found eligible for inclusion in the NWSRS. (These are in addition to the North Fork of the Poudre and North St. Vrain which were previously found eligible.)

Suitability evaluation reports were prepared by the Redfeather and Boulder Districts on the ARNF in 1993. These evaluations determined whether eligible segments of the North Fork of the Cache la Poudre River and North St. Vrain, Rock, and Cabin Creeks are appropriate additions to the NWSRS. The suitability report compared alternative ways to manage each river. The suitability study included the alternatives considered and the environmental consequences associated with each alternative. The objective of the study was to determine how best to manage the outstanding resources. The suitability reports are included as Sections 2 and 3. The Forest Service recommendations for suitability based on the results of the study reports are displayed in Section 4. This recommendation is displayed in the *Forest Plan*.

SECTION 1 PURPOSE OF AND NEED FOR ACTION

The Wild and Scenic Rivers Act, at Section 5(d), states:

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.

The Forest Service Land and Resource Management Planning Handbook (FSH 1909 12) at Section 8.01 -- "Authority," states:

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 River 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.

FSH 1909.12 at Section 8.14 -- "Wild and Scenic River Studies Included in the Land Management Planning Process," states:

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 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.

The reevaluation of the NRI rivers is required by the Forest Service Rocky Mountain Regional Guide in Chapter 2, page 1, "Rivers," Item 1, which states, "Reevaluate the eligibility of all rivers in the Nationwide Rivers Inventory, using the National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification and Management of River Areas."

Potentially eligible streams and their immediate environments were evaluated to determine whether any outstanding remarkable scenic, recreational, geologic, fish and wildlife, historic, heritage, or other similar values were present. When such values were found, streams were further evaluated to determine whether they were free-flowing, or existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. Following these determinations, streams were evaluated to identify which classification—"wild," "scenic," or "recreational"—best described their existing condition.

Also required by the Forest Service Rocky Mountain Regional Guide for eligible rivers is to " .. complete suitability studies during the Forest Plan revision process or develop a schedule for completion of these studies and include the schedule in the revised Forest Plan." (Chapter 2; Page 1, "Rivers," Item No. 4) Suitability studies will be completed during the revision for North Fork Cache la Poudre River, North St. Vrain, Cabin, and Rock Creeks. As Cabin and Rock Creeks are major tributaries of the North St. Vrain and the designation of any or all of these streams or stream segments will affect the others, the North St. Vrain suitability assessment will include all three streams simultaneously.

The suitability evaluation determined whether eligible segments of the North Fork of the Cache la Poudre River and North St. Vrain, Rock, and Cabin Creeks are appropriate additions to the NWSRS. The suitability report compared alternative ways to manage each river. The suitability study included the alternatives considered and the environmental consequences associated with each alternative. The objective was to determine how best to manage the outstanding resources. Each suitable river study report is divided into the following sections:

Summary

1. Purpose and Need
2. Description of Area
3. Finding of Eligibility and Classification
4. Alternatives Including the Proposed Action
5. Environmental Consequences
6. Additional Information

SECTION 2 SUITABLE RIVER STUDY REPORT FOR THE NORTH SAINT VRAIN, CABIN AND ROCK CREEKS

SUMMARY

I PURPOSE AND NEED

The purpose of the Suitable River Study Report for the North Saint Vrain, Cabin and Rock Creeks is to determine whether eligible segments of these creeks are appropriate additions to the National Wild and Scenic Rivers System. This is done through a comparison of alternative ways to manage these rivers. The suitability study includes the alternatives considered and the environmental consequences associated with each alternative. The objective of the study is to determine how best to manage the outstanding resources.

FINDING OF ELIGIBILITY

The eligibility studies for the North St Vrain Creek and Cabin/Rock Creeks were completed in 1989 and 1993, respectively. The North Saint Vrain, Rock and Cabin Creeks all have several outstandingly remarkable values that make them eligible. These include fisheries, wildlife, botanical features, geologic and recreational. A major aspect of the "uniqueness" of the North Saint Vrain is the absence of development so near to areas of major urban growth along the northern Front Range of Colorado.

When a river or segment is found to be eligible, it is given a potential classification of wild, scenic, or recreation. The classification of a river is based on the conditions of the river and the adjacent lands. A "wild" classification is the most primitive and the least developed with "Recreation" being readily accessible by roads and in or near urban areas. Table D.1 describes the potential classification and the outstanding remarkable values that make the rivers eligible.

Table D.1 Potential Classification and Outstandingly Remarkable Values.

SEGMENT	CLASSIFICATION	OUTSTANDING VALUES
1	Recreation	Wildlife, Botanical
2	Wild	Fisheries, Wildlife, Botanical
3	Wild	Geologic, Scenic, Wildlife, Recreation
4	Wild	Geologic, Scenic, Wildlife

ALTERNATIVES

The following issues were identified through the public notification and scoping process.

- Reservation of the North Saint Vrain ecosystem and varying amounts of the lands that surround it
- Water uses, diversions, and impoundments that may be affected by a wild and scenic river designation or other designation.
- Private landowner concerns over how any designation would affect use of their land
- Impacts to wildlife migration, need for primitive recreation close to urban areas, and mineral withdrawals.

The issues served as the basis for alternative development and included the following:

Alternative 1A - (Proposed Action) Designate as a Wild and Scenic River Watershed: The proposed action was the starting point for developing alternatives to and general management of the area. Alternative 1A considers the entire watershed, including Rock and Cabin Creek drainages, so that the North Saint Vrain's special attributes are not just limited to the water itself.

Alternative 2A - Forest Service Preferred Alternative - Designate as a Research Natural Area (RNA): After analysis of all alternatives, Alternative 2A became the agency preferred alternative. This alternative creates an RNA that would become part of a network of ecological reserves designated for nonmanipulative research, observation, and study of ecosystems.

Alternative 3A - Manage with a Recreation Emphasis Alternative 3A manages a majority of the area as backcountry nonmotorized recreation to provide a variety of opportunities such as hiking, horseback riding, mountain biking, and cross-country skiing. A variety of challenge levels on a trail system and across the area would exist.

Alternative 4 - Designate as Wilderness Alternative 4 would be recommended for wilderness designation all areas except Johnnie Park Road and the trailheads. The area would be managed for the protection and perpetuation of essentially natural bio-physical conditions inside designated wilderness boundaries.

Alternative 5 - (No Action) Manage with a Wildlife Emphasis: Alternative 5 serves as a benchmark for alternative comparison. Alternative 5 emphasizes wildlife habitat for bighorn sheep, deer and elk. This is consistent with the present management scheme in the *Forest Plan*.

Comparison of Alternatives

The following table compares alternatives for key issues

Table D.2 Comparison of Alternatives

Key Issues	Alternatives				
	1A Wild and Scenic Watershed	2A Research Natural Area Complete	3A Nonmotorized Recreation	4 Wilderness	5 Wildlife
Preservation of whole ecosystems	Recreation use may increase Vegetation manipulation allowed	Recreation use may remain the same Vegetation manipulation not allowed Natural processes dominate	Recreation use may increase slightly Vegetation manipulation allowed	Recreation use will increase Natural processes dominate	Recreation use may rise slightly Vegetation manipulation allowed
Geology, minerals, visuals	Would limit mineral entry	Would limit mineral entry	Mineral entry allowed	Mineral entry allowed	Mineral entry allowed
Botanical	Increase in use may damage vegetation	Vegetation would remain the same	Vegetation may change	Vegetation may change	Vegetation may change
Wildlife	Habitat may increase	Habitat may remain the same or decrease	Habitat may increase	Habitat may decrease	Habitat may increase
Fishing	Fishing pressure may increase Habitat improvement allowed	Fishing pressure remains the same Habitat improvement not allowed	Fishing pressure increases slightly Habitat improvement encouraged	Fishing pressure increases Habitat improvement not encouraged	Fishing pressure may increase slightly Habitat improvement encouraged and highlighted
Recreation Motorized	Use may increase with National designation	Use may remain the same Motorized use allowed to research and educational purposes	Slight increase over time	Use may increase with National Designation	Slight increase over time
Recreation Nonmotorized	Use may increase with National designation	Use may remain the same	Slight increase over time	Use may increase with National designation	Slight increase over time
Water Uses and Development	Federal water rights reserved	May restrict water development in RNA	No special restriction	Federal water rights reserved	No special restriction
Water Quality	State standard could become outstanding	No change	No change	State standard could become outstanding	No change
Condemnation of Private land	Depends on legislation, probably no change	No change	No change	No change	No change

Key Issues	Alternatives				
	1A Wild and Scenic Watershed	2A Research Natural Area Complete	3A Nonmotorized Recreation	4 Wilderness	5 Wildlife
Fire	Fire hazard may increase, prescribed burning allowed	Fire hazard same, prescribed fire acceptable	Fire hazard remains same, prescribed burning allowed	Fire danger may increase, no prescribed burns/	Fire hazard remains same, prescribed burn allowed
Timber	Allows vegetation treatment	Does not allow vegetation treatment	Allows vegetation treatment	Does not allow vegetation treatment	Allows vegetation treatment
Range	Stays the same	No permits issued	Stays the same	Stays the same	Stays the same
Baseline Research	Would permit	Would highlight	Would permit	Would permit	Would permit
Management Costs	Would increase	Would increase	Remains the same	Would increase	Remains the same
Social-Economic	Increase in land values and tourist dollars, difficult to determine influence because of National Park and Scenic Byway	Stays the same	Stays the same	Increase in land value and tourist dollars; difficult to tell because of influence of National Park and Scenic Byway	Stays the same

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The North St Vrain rises in the Wild Basin area of Rocky Mountain National Park at the Lake of Many Winds near Boulder-Grand Pass on the Continental Divide. It flows east and enters private lands within the Roosevelt National Forest near Allenspark, Colorado, crosses under State Highway 7, and then flows east through the National Forest approximately 10.6 miles to the inlet of Ralph Price (Buttonrock) Reservoir. Cabin and Rock Creeks enter the North Saint Vrain on National Forest just east of Allenspark. Stream reaches in Rocky Mountain National Park and stream reaches east of the reservoir are not included in this report.

The evaluated area is divided into four segments defined by natural and human-made barriers:

Segment 1: North St. Vrain from the Rocky Mountain National Park to the NE corner, NW 1/4 of Section 24, T3N, R72W, 6th Principal Meridian. This segment includes developed private lands and several road and highway crossings.

Segment 2: North St. Vrain from the west section line of Section 24, T3N, R72W, to the high water mark at the inlet of Ralph Price Reservoir in section 18, T3N, R71W, 6th Principal Meridian.

Segment 3: Cabin Creek from the boundary between private and National Forest lands in Section 7, T3N, R73W to the confluence with the North St Vrain in Section 16, T3N, R72W, 6th Principal Meridian.

Segment 4: Rock Creek from the National Forest/private land boundary in Section 25, T3N, R73W to the confluence with the North St. Vrain in Section 19, T3N, R72W, 6th Principal Meridian.

Table D.3 River Mileage by Segment

SEGMENT	LENGTH IN MILES
1	8.4
2	1.8
3	2.3
4	1.9
Total	14.4

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Geology. All four segments flow through a steep, deeply incised canyon of granite rock approximately 1.4 billion years old. Effects to geologic features relate mainly to mining activities and are discussed in the section on Locatable and Leasable Minerals.

Streamflow and Water Resource Development. Stream flows are inadequate to sustain most boating uses. Winter flows are extremely low and fluctuations are extreme. The status of water

rights is uncertain and a bill to prohibit federally funded dams and diversions has been introduced to Congress. The Colorado Water Conservation Board (CWCB) holds an instream flow decree on segments 1, 2 and 3.

Concern exists over how the Forest Service will condition water diversion or storage project uses on NFS lands and/or projects that are regulated by other agencies that may have an effect on the National Forest. This concern relates primarily to direction in the Forest Plan standards and guidelines that require the establishment of channel maintenance flows and fisheries flows for special use permits for water development. How the Forest Service would exercise permitting authority could influence future water development projects. These conditions apply to all NFS lands regardless of the management area allocation or special designation and are more appropriately addressed in the overall Forest Plan revision. In the case of Alternative 1A, federal reserved water rights would be established which may affect future water development projects.

Water Quality No specific water quality information is available. There are no known sources of pollution. A Wild and Scenic River designation (Alternative 1A) has strict environmental quality standards and may require anti-degradation measures for water development projects not located on NFS land. No increase in water quality standards would be expected in Alternatives 2A, 3A, 4 and 5.

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

Vegetation. Lodgepole pine exists at higher elevations. Ponderosa pine and Douglas fir are found at lower elevations on north-facing slopes and ridges with some contiguous stands of old-growth ponderosa pine. South facing slopes are primarily shrubs and grass. Small meadows and willow/alder sites are along the stream. A plant association of bitterbrush and mountain muhley is found in numerous locations and would probably be the attribute most affected.

There could be some effect on vegetation in Alternatives 1A and 4 if use increases due to national recognition as a wild and scenic river or Wilderness. Alternative 2A (RNA) does not emphasize or actively encourage recreational use; therefore, this alternative probably has the least impact on the vegetation. Alternatives 3A and 5 encourages visitors to recreate in nonmotorized recreation areas so effects on vegetation are similar to Alternatives 1A and 4.

Wildlife and Fisheries Wildlife known to inhabit the drainage include golden eagles, ptarmigan, bighorn sheep, elk, deer, black bear, beaver, bobcat, cougar, and numerous species of small birds and animals. The meadows and south facing slopes are important winter range for deer, elk and bighorn sheep. A majority of Segment 2 is an important coldwater fishery for trout.

Alternatives 1A, 3A and 4 may have an effect on elk and deer summer range if recreation use increases. Since recreation use would remain the same under Alternative 2A, effects from recreation use would be limited; however, vegetation treatments to improve wildlife habitat are not allowed unless it is part of a management plan to provide for more natural conditions. Since there is some encroachment into meadows, there may be a net loss in elk and deer winter range.

Under Alternative 5, wildlife emphasis would allow projects specifically for improvement of habitat. Vegetation treatments such as prescribed burning could enhance important winter range

Fisheries management will not differ among alternatives since this drainage is classified as a wild trout stream by the state of Colorado. There may be an opportunity to improve fisheries habitat based on management direction and emphasis under Alternatives 3A and 5.

USE AND OCCUPATION OF THE FOREST

State Highway 7 provides access to this area between Lyons and Estes Park. Several low standard Forest roads leading from Highway 7 toward the river from the south provide access. There are trailheads at the end of these roads with access to the river. Access from the north is limited to a developed trail along Cabin Creek and along an undeveloped footpath from Johnny Park. There are five trails to the unroaded portion of the North Saint Vrain. There are many small bridges and private land developments in the Allenspark vicinity. Most of these are residences, cabins, and small businesses. Timber harvest activity has occurred on Deer Ridge within a mile of the river.

Recreation Public access to the river in Segment 1 is limited due to private land development and affords no significant recreation opportunity for the general public. Segment 2 receives low to moderate levels of use for fishing, dispersed camping and hiking in summer, and a moderate level of use during deer and elk hunting seasons. Segments 3 and 4 offer only primitive types of recreational opportunities due to the lack of trails, road access, or development of any kind.

In all alternatives, motorized recreation is limited to roads surrounding the canyon. There is no motorized use in the canyon due to the topography. The effects are similar among alternatives.

Use may increase under Alternatives 1A and 4 due to national recognition. Increases have occurred according to some managers of wild and scenic rivers and wilderness. In Alternative 2A, recreation use is not emphasized and efforts would be made to keep use as it exists today. The emphasis in Alternative 3A is recreation so use may increase, along with facilities to foster use. Nonmotorized recreation use could increase, but not to the same extent as it might under Alternatives 1A and 4. The wildlife emphasis in Alternative 5 means the area would be managed specifically for bighorn sheep and elk habitat. Even though human use of the area may increase slightly, management would be aimed at projects that improve habitat for these species.

Heritage Resources The North Saint Vrain has been used by humans for an estimated 9000 years. Some evidence of American Indian activity can be found on some flats along the river.

Fire Suppression There is little evidence that natural or man-caused fires have occurred in the study area within the last 15 years. In Alternatives 1A, 3A, 4 and 5, fire risk may increase due to the possible increase in recreational use. All alternatives, to some degree, allow for vegetation treatment such as prescribed burning, so there may be an opportunity to reduce fire hazard in high risk areas. Fire risk is the lowest in Alternative 2A since recreational use is not emphasized.

PRODUCTION OF NATURAL RESOURCES

Timber Production. Timber has been harvested within the study area. Owing to the limited timber value and the lack of current plans for vegetative treatment, annual sale quantity and volume were not calculated for this study. Timber management is allowed in Alternatives 1A, 3A and 5, however, timber sales are not likely to occur due to the terrain and the low value of the products. Timber management is not permitted in Alternatives 2A and 4 so there would be little benefit to wildlife or a reduction in fire risk or insect and disease damage.

Livestock Grazing. The Estes Poudre Ranger District manages a range allotment near Deer Ridge. The portion of the allotment within the study area has not been used in several years. Alternatives 1A, 3A, 4 and 5 have no effect on livestock grazing since all of these alternatives allow for grazing. Alternative 2A does not allow for livestock grazing.

Locatable and Leasable Minerals. Lands in the corridor have a low mineral potential, making entry unlikely. There are no known mining claims or leases in the study area and no known interest in mineral exploration on NFS lands. In Alternatives 1A and 2A, application for mineral entry and leasing withdrawals would be made which would eliminate the effects on any geologic features. In Alternatives 3A and 5, mining activities could affect the appearance of the geologic features. Since there are no active mining operations in this area, it is unlikely that any activities would occur. Depending on the provisions of the Wilderness legislation, mining activities could occur in Alternative 4. The effects would be similar to Alternatives 3A and 5.

SOCIAL AND ECONOMIC ENVIRONMENT

The North Saint Vrain crosses the Peak to Peak National Scenic Byway, a major tourism travelway. Allenspark and other adjacent small communities are primarily tourism oriented. Second home residents favor retention of the area's present rural characteristics. Local communities are concerned about water resource development and condemnation of private lands. There may be an effect from additional designation of a wilderness or wild and scenic river but it is difficult to measure and isolated because of other national designations in the area.

The Forest Service has condemnation authority for general forest purposes and multiple uses. Forest Service policy is to deal with willing sellers or land trades as a priority. Private landowners believe that there would be an increased interest in condemning private properties within a wild and scenic river corridor (Alternative 1A). Acquiring lands within the corridor would be a high priority, however, the risk of condemnation would not be high unless the enabling legislation directs the Forest Service to acquire lands from unwilling sellers. Land acquisition would not be a priority in Alternatives 2A, 3A, and 5 unless it helps to achieve management area direction. Acquiring lands within a wilderness (Alternative 4) is a high priority but the risk of condemnation not as high as in Alternative 1A.

NORTH SAINT VRAIN WILD AND SCENIC RIVER SUITABILITY STUDY

1 PURPOSE AND NEED FOR ACTION

The Wild and Scenic Rivers Act and the Secretary's guidelines (Federal Register/Vol 47 No 173/ September 7, 1982) specify the process used to study rivers for possible inclusion in the National Wild and Scenic Rivers System. This process has three major components. eligibility, classification and suitability.

The first step in the process was to complete an eligibility study to determine if the North Saint Vrain and its tributaries are eligible for designation as National Wild and Scenic Rivers. In order for a river to qualify for designation, it must be free-flowing and have at least one regionally or nationally outstanding or remarkable value.

An eligibility study was completed for the North Saint Vrain in 1989. The North St. Vrain Creek was included in the National Rivers Inventory (NRI) in 1987, subsequent to the completion of the Land and Resource Management Plan for the Arapaho and Roosevelt National Forests. At that time the Forest Supervisor and the Superintendent of Rocky Mountain National Park agreed that the area was likely to contain outstandingly remarkable values. The determination of eligibility was documented in *Forest Plan Amendment 13* which stated that the suitability study would be completed during the Forest Plan revision.

The eligibility study for Cabin and Rock Creeks was completed in April 1993 (see part 6 of this report, Additional Information). These rivers were studied in response to the need to evaluate the eligibility of potential wild and scenic rivers during the Forest Plan revision process.

The second step is classification of the river or segments as either wild, scenic, or recreation. Three segments of the river on National Forest System lands were classified as wild because of the lack of development and access along the river and the tributaries. One segment was classified as recreation due to development and access.

The third step and the purpose of this document is to determine whether eligible rivers are appropriate additions to the national system. This is done through a comparison of alternative ways to manage the area. The suitability study includes the alternatives considered and the environmental consequences associated with each alternative. The objective of the study is to determine how best to manage the outstanding resources.

2 DESCRIPTION OF AREA

The North St. Vrain rises in the Wild Basin area of Rocky Mountain National Park at the Lake of Many Winds near Boulder-Grand Pass on the Continental Divide. It flows east and enters private lands within the Roosevelt National Forest near Allenspark, Colorado, crosses under State Highway 7, and then flows east through the National Forest approximately 10.6 miles to

the inlet of Ralph Price (Buttonrock) Reservoir. Cabin and Rock Creeks enter the North Saint Vrain on National Forest just east of Allenspark (see Figure D.1) Stream reaches in Rocky Mountain National Park and stream reaches east of the reservoir are not included in this report. The legal description of segments in this suitability study are:

Segment 1 - North St. Vrain from the Rocky Mountain National Park to the NE corner, NW 1/4 of Section 24, T3N, R72W, 6th Principal Meridian. This segment includes developed private lands and several road and highway crossings.

Segment 2 - North St. Vrain from the west section line of Section 24, T3N, R72W, to the high water mark at the inlet of Ralph Price Reservoir in section 18, T3N, R71W, 6th Principal Meridian.

Segment 3 - Cabin Creek from the boundary between private and National Forest lands in Section 7, T3N, R73W to the confluence with the North St. Vrain in Section 16, T3N, R72W, 6th Principal Meridian.

Segment 4 - Rock Creek from the National Forest/private land boundary in Section 25, T3N, R73W to the confluence with the North St. Vrain in Section 19, T3N, R72W, 6th Principal Meridian.

Table D.4 River Mileage by Segment

SEGMENT	LENGTH IN MILES
1	8.4
2	1.8
3	2.3
4	1.9
Total	14.4

Current Management

The current Land and Resource Management Plan for the Arapaho and Roosevelt National Forests allocated management areas for specific areas of land. These management areas describe the natural resource emphasis, the activities that might occur there, and the standards and guidelines for a number of those management activities. The actual management areas along with a location map can be found in the 1984 *Forest Plan*.

The majority of the area has a management area prescription which provides an emphasis on special habitats for wildlife. In the North Saint Vrain this prescription was applied to emphasize management of bighorn sheep that were transplanted to this area by the Colorado Division of Wildlife. The eastern portion of Johnnie Park provides for management of deer and elk habitat. The western half of Johnnie Park is currently managed for wood fiber production, for products other than sawtimber, such as firewood. The area near the Bright Trailhead and the Dry Saint Vrain Trailhead provide for dispersed recreation in a roaded natural setting. A one-quarter mile

on either side of the North Saint Vrain throughout the canyon is managed to protect the existing characteristics and remarkable values that contribute to eligibility as a wild and scenic river.

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Geology

All four segments flow through a steep, deeply incised canyon of granite rock approximately 1.4 billion years old. The canyon in segments 3 and 4 has an approximate maximum depth of 900 and 800 feet respectively.

Streamflow and Water Resource Development

Stream flows are inadequate to sustain most boating uses. Winter flows are extremely low, limiting the growth and biomass of fish. Fluctuation is extreme, typically ranging from an average June flow of 360 cubic feet per second (cfs) to an average January flow of 10 cfs.

The status of water rights is uncertain since the St. Vrain-Lefthand Conservancy and the City of Longmont filed and then withdrew an application for storage rights at North Sheep Mountain. Congressman David Skaggs recently introduced a bill in Congress as suggested by the North Saint Vrain Advisory Committee, to prohibit federally funded dams and diversions. Forest Service records indicate there are a total of 53 diversion water rights with a total flow quantity of 62.2 cfs and 28 diversion water rights with a total of 1085 acre-feet, above Buttonrock Reservoir. Some of these rights are on Cabin Creek.

The Colorado Water Conservation Board (CWCB) holds an instream flow decree of 14 cfs for 10.6 miles of the North St. Vrain on segments 1 and 2. The Board holds a 5 cfs right on Cabin Creek from its confluence with Tahosa Creek to its confluence with the North Saint Vrain (Segment 3). These rights have a priority date of 1978.

Water Quality

No specific water quality information is available. There are no known sources of pollution.

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

Vegetation

Lodgepole pine exists at the highest elevations. Ponderosa pine and Douglas fir predominate at slightly lower elevations on north-facing slopes and ridges with some contiguous stands of old-growth ponderosa pine. Generally the steep terrain and site characteristics do not favor commercial vegetation treatment. South-facing slopes are primarily shrubs and grass. There are small meadows and willow/alder sites along the stream.

There are no known Federally listed threatened and endangered plants within the study area. A plant association of bitterbrush and mountain muhley, which the Colorado Natural Areas Program has identified as an endangered shrubland plant association, is found in the study area.

Wildlife and Fisheries

Wildlife known to inhabit the drainage include golden eagles, ptarmigan, bighorn sheep, elk, deer, black bear, beaver, bobcat, cougar, and numerous species of small birds and animals. The meadows and south facing slopes are important winter range for deer and elk and bighorn sheep. Vegetation encroachment in meadows and on slopes utilized by bighorn sheep is occurring as a result of fire suppression activities during the past century. The unroaded segments in the study area have been used as a control to compare nesting success of dippers in roaded areas. The main northern Front Range population of black swifts are also found in the study area.

Segment 2 from the confluence of Horse Creek to Buttonrock Reservoir is an important coldwater fishery managed as a "wild trout" water by the state of Colorado, meaning regulations are designed to enhance self-sustaining populations of trout. The primary species is brown trout, although rainbow and brook trout are also present. Historically, the entire drainage was occupied by greenback cutthroat trout. Segment 2 is not currently proposed for reintroduction of the greenback under the Greenback Trout Recovery Plan, although options for reintroductions exist.

USE AND OCCUPATION OF THE FOREST

State Highway 7 is a paved, two-lane road which provides access to this area between Lyons and Estes Park Colorado. In Segment 1 this highway provides access to the river near Allenspark and from several low standard Forest access roads leading from Highway 7 toward the river from the south. There are trailheads at the end of each of these roads with steep trails that require a three to four mile walk to reach the river.

Access from the north is limited to a developed trail along Cabin Creek (Segment 3) from Deer Ridge and along an undeveloped footpath from Johnny Park. A locked gate maintained by the City of Longmont controls access from the east. Private landowners above the reservoir use this route for access to their private property.

The five major trails to the unroaded portion of the North Saint Vrain (Segment 2) are the City of Longmont Old Access Road, Coulson Gulch Trail, Bright Extension Trail, Dry Saint Vrain, and Bright Trail. There are two old trails that were built by the Civilian Conservation Corps, South Sheep Mountain Ranch Trail and North Sheep Mountain Trail. These trails are difficult to find and currently not on the Forest inventoried trail system.

In Segment 1, there are many small bridges and private land developments in the Allenspark vicinity. Most of these are residences, cabins, and small businesses. Some timber harvest activity has occurred on Deer Ridge within a mile of the river. Although visible from the access points south of the river, harvested areas are not visible from the river shore at any point.

Recreation

The use that occurs in Segment 1 is by local residents and landowners, primarily fishing, wildlife observation, and scenic viewing. Public access is very limited due to private ownership and development and as presently managed, this section affords no significant recreation opportunity for the general public. Most local use of this area occurs during the summer.

Segment 2 receives low to moderate levels of use for fishing, dispersed camping and hiking in summer, and a moderate level of use during deer and elk hunting seasons. Evidence of camping use is significant where the Dry Saint Vrain intersects the North Saint Vrain. Private lands in this area are used mainly for hunting and fishing. Boating is unsafe due to flow regime and obstructions caused by fallen trees in the narrow channel.

Segments 3 and 4 offer only primitive types of recreational opportunities due to the lack of trails, road access, or development of any kind.

Table D.5 Estimated Recreation Visitor Days (RVDs)¹

ACTIVITY	RVDs
Whitewater Boating	0
Fishing	600
Camping	100
Hiking	2100
Picnicking	100
Hunting	100
TOTAL	3000

Heritage Resources

The North Saint Vrain has been used by humans for an estimated 9000 years. The area appears to have been used by American Indians primarily for hunting and fishing. Some evidence of prehistoric Indian activity can be found on some flats along the river.

Fire Suppression

All human-caused fires are suppressed in the Roosevelt National Forest. There is little evidence that any natural or human-caused fires have occurred in the study area within the last 15 years.

¹Recreation Visitor Day or RVD is one visitor recreating for 12 hours or any combination of visitors for a total of 12 hours (for instance 2 visitors recreating for 6 hours each would equal 1 RVD)

PRODUCTION OF NATURAL RESOURCES

Timber Production

Cutting timber on the Forest is of concern to many individuals. The objective of timber management is to enhance visual quality, to reduce fire hazards, and improve wildlife habitat. In the past there have been timber sales in the area of East Olive Ridge, Deer Ridge, Cave Creek, Johnnie Park, and Meeker Park. There are two small areas near Deer Ridge and Smithy Mountain where terrain and vegetation indicate suitability for commercial timber sales. No activity is currently planned. Owing to the limited timber value and the lack of current plans for vegetative treatment, annual sale quantity and volume were not calculated for this study.

Livestock Grazing

The Estes Poudre Ranger District manages a range allotment near Deer Ridge. The portion of the allotment within the study area has not been used in several years.

Locatable and Leasable Minerals

Lands within the corridor have a low mineral potential, making entry unlikely. There has been no known mining claims or leases within the study area. No interest has been expressed in mineral exploration on NFS lands. Application was made for a mineral withdrawal which concerned some citizens because of the water language in the notice prepared by the Bureau of Land Management.

SOCIAL AND ECONOMIC ENVIRONMENT

The North Saint Vrain crosses the Peak to Peak National Scenic Byway, a major tourism travelway. Allenspark and other adjacent small communities are primarily tourism oriented, though there are private homes in and around these small towns. Second home residents favor retention of the area's present rural characteristics. Local communities are concerned about water resource development. Municipalities, irrigation companies, and other water users are concerned about the effects Forest Service management will have on future water development projects.

3 FINDINGS OF ELIGIBILITY AND CLASSIFICATION

The eligibility studies for the North St. Vrain Creek and Cabin/Rock Creeks were completed in 1989 and 1993, respectively. The North Saint Vrain, Rock and Cabin Creeks all have several outstandingly remarkable values that make them eligible. These include fisheries, wildlife, botanical, geological and recreational features. A major aspect of the "uniqueness" of the North Saint Vrain is the absence of development so near to areas of major urban growth along the northern Front Range of Colorado.

When a river or segment is found to be eligible, it is given a potential classification of wild, scenic, or recreation. The classification of a river is based on the conditions of the river and the adjacent lands. A "wild" classification is the most primitive and the least developed with "recreation" being readily accessible by roads and in or near urban areas. Table D.6 describes the potential classification and the outstandingly remarkable values that make the rivers eligible.

Table D.6 Potential Classification and Outstandingly Remarkable Values.

SEGMENT	CLASSIFICATION	OUTSTANDING VALUES
1	Recreation	Wildlife, Botanical
2	Wild	Fisheries, Wildlife, Botanical
3	Wild	Geologic, Scenic, Wildlife, Recreation
4	Wild	Geologic, Scenic, Wildlife

OUTSTANDINGLY REMARKABLE VALUES

To qualify as an outstandingly remarkable value, a river-related value must be a unique, rare, or exemplary feature that is significant at a regional or national level. Specific criteria for individual resource values are used to evaluate each segment. The resource categories are scenic, recreation, geologic and hydrologic, fisheries and wildlife, historic and prehistoric, and, other values, including ecological.

The following section will focus only on the outstandingly remarkable values that characterize each creek. The resource categories listed above are not discussed if they are not outstandingly remarkable. The criteria used to evaluate each segment is displayed and discussed. All features are significant at a regional level.

Wildlife

Migration Routes - Migration routes of regional or national significance within the river corridor which are enhanced or maintained by the river influence.

Both Segments 3 and 4 serve as a critical migration corridor for both bighorn sheep and elk. A significant bighorn sheep lambing area is also located within the corridor of Segment 4.

Diversity of Species - Number of actual species within the corridor that are dependent on the river resource.

The undeveloped nature of Segments 2, 3 and 4 make the North St. Vrain drainage in general superb for a wide variety of species. The area has by far the most species in Boulder County and is easily one of the more unique along the Front Range of Colorado.

Breeding/Nesting Habitat - The amount, quality and existing carrying capacity of habitat presently available within the corridor for breeding/nesting habitat

Habitat in the drainage has been unaltered by human activities. The lack of trails and other developments makes Segments 2, 3 and 4 one of the best breeding and nesting habitats in the region, particularly for neotropical species.

Populations - Number of animals utilizing the area.

The North St. Vrain drainage has the widest variety of animal species and the largest populations of most of these species in Boulder County and is easily one of the more unique along the Front Range of Colorado.

Botanical

Communities - The river or area within the river corridor contains nationally or regionally important plant communities.

A plant association of bitterbrush and mountain muhley (*Prushia tridentata*/*Muhlenbergia montana*) is found in numerous locations in the study area. This plant association has been identified by the Colorado Natural Areas Program as an endangered shrubland plant community.

Fisheries

Habitat Quality - The river provides or has the potential to provide exceptionally high quality habitat for fish species.

The North St. Vrain from the confluence of Horse Creek downstream to Buttonrock Reservoir (approximately 8.5 miles) is an important coldwater fishery managed as a "wild trout" water by the State with the primary species in this area being brown trout. Rainbow and brook trout are also present.

Geologic

Depth of Canyon - Average depth of canyon from rim throughout its length.

The canyon that exists between the broad flat at the upper end of both Segments 3 and 4 and the confluence with the North St. Vrain has a maximum depth of approximately 800 - 900 feet. This occurs in the narrowest, most rugged part of the canyon.

Hydrologic Features - Number, size and extent of falls, rapids, turbulence, etc; number and size of springs and waterfalls associated with side streams at their confluence with the canyon.

The fall rate on Segment 3 is in excess of 350 feet per mile. Fall rate on Segment 4 is in excess of 240 feet per mile.

Naturalness - Pristine quality of area, amount of development.

There are no roads, trails, or other developments of any kind along Segments 3 and 4.

Scenic

Adjacent Landform - Severity of the relief of the land Degree to which a feeling of enclosure is experienced.

The canyon core in both Segments 3 and 4 is very narrow and steep sided with some almost vertical cliffs along the stream course

Cultural Modification - The degree to which the corridor is free from aesthetically undesirable sights and influences, human-made features or alterations that exist detract considerably from the visual appeal and setting.

There are no roads, trails, or cultural modifications of any kind on Segment 3

Recreation: Hiking and Camping

Quality of Opportunities - Comparative number or percent of similar experiences available. Areas which provide rare or unique opportunities are preferred.

Segment 3 offers the only primitive setting on the Boulder Ranger District. There are no trails, roads, nearby road access, nor developments of any kind. Although Segment 3 is short, it is among few of its kind along the Front Range of Colorado.

Character/Naturalness - Pristine quality; level of wildness or remoteness, extent of undeveloped area

Lack of access and lack of developments of any kind make Segment 3 one of a kind in Boulder County and one of but a few this unique along the Front Range The area receives relatively little recreational use considering it is less than two hours away from the Denver metropolitan area

4 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section presents (1) the proposed action (Alternative 1A) and alternatives which were analyzed in detail, (2) the Forest Service preferred alternative (Alternative 2A); and, (3) alternatives considered but eliminated from detailed study.

ISSUES IDENTIFIED TO DEVELOP ALTERNATIVES

Before alternatives were developed, issues were identified through the public notification and scoping process Part 6, Additional Information, contains a listing of the issues raised through scoping prior to publication of the DEIS for the Forest Plan revision.

In 1988 Congressman David Skaggs formed a committee to study the possibility of including the North Saint Vrain in the National Wild and Scenic River System In 1992 Skaggs' committee recommended a bill prohibiting impoundment on the main stem of the North Saint Vrain. The committee also recommended in their final report that the Forest Service recognize the rivers

listed as eligible and do the appropriate studies in a timely manner. During this time, the Boulder Ranger District collected public input from the following:

- North St Vrain Advisory Committee (Congressman David Skaggs' Citizen's Committee) meeting notes, final report, and meetings between the Forest Service and the committee concerning the District's study specifically.
- Public hearings held by Congressman Skaggs and his committee
- Comments received via the Forest Plan Revision scoping process generated by articles in the Plan Revision Newspaper printed in the Fall of 1992.

Comments received from the public and the interdisciplinary team were summarized into four major categories. They were used to develop and evaluate management alternatives. The four categories focused around the following

1. Preservation of the North Saint Vrain ecosystem and varying amounts of the lands that surround it. People who commented on this point wanted to keep the area as it is today. They want to protect the integrity of the unique habitats.
2. Water uses, diversions, and impoundments that may be affected by a wild and scenic river designation or other designation. Concerns centered on reserved water rights, water quality and quantity, channel maintenance and fisheries.
3. Private landowner concerns over how any designation would affect use of their land. People who commented did not want any condemnation of private lands for access and felt current land use and zoning regulations will protect river qualities on private lands.
4. Various concerns that should be addressed. Examples are impacts to wildlife migration, need for primitive recreation close to urban areas, and mineral withdrawals.

Alternatives were developed based on the issues. Council on Environmental Quality regulations (40 CFR 1502.14) and Forest Service Handbooks (FSH) 1909 12 and 1909 15 define the type and range of alternatives to be considered. The alternatives centered around the following

- National designation of all eligible segments of the river (Alternatives 1A, 1C)
- Protection of eligible segments by means other than national designation. (Alternatives 2A, 4)
- Nondesignation of all or portions of eligible segments. This allows uses that could change the values which make the segment eligible (Alternatives 1B, 1D, 2B, 3A, 3B)
- Designation of eligible segments with alternative classifications. This allows uses that alter the current preliminary classification but not the eligibility values (Alternative 2B)
- No action. Maintain current management. No specific protection would be provided for potential wild and scenic river corridors (Alternative 5)

Nine alternatives were developed by the IDT. Within these nine, four are variations of a wild and scenic river designation, two are variations of a research natural area designation, and two are variations of a recreation emphasis alternative. The desired future conditions for these variations are similar. Forest Plan management area allocations were slightly different for each variation.

To study a reasonable array of alternatives, the IDT analyzed each alternative by how it addressed the key issues related to that alternative. The IDT also looked for similarities between how alternatives addressed other key issues. If one alternative better addressed a closely related key issue than another and it addressed other key issues in a similar fashion, that alternative was retained and the other similar alternatives were eliminated. Presented first are alternatives considered in detail, followed by alternatives considered but eliminated from detailed study.

ALTERNATIVES CONSIDERED IN DETAIL

Alternative 1A - Proposed Action - Designate as a Wild and Scenic River Watershed

The proposed action was the starting point for developing alternatives to the proposed action and general management of the area. Alternative 1A uses the watershed boundary as the general boundary but excludes the Johnnie Park Road, and the trailheads which would be classified as undeveloped dispersed recreation. This alternative considers the entire watershed, including Rock and Cabin Creek drainages, so that the North Saint Vrain's special attributes are not limited to the river corridor itself. The key issues are the North Saint Vrain ecosystem, Federal reserved water rights, and consideration of other eligible rivers.

Alternative 2A - Forest Service Preferred Alternative - Designate a Research Natural Area (RNA)

After development and analysis of the alternatives to the proposed action, Alternative 2A became the agency's preferred alternative. Alternative 2A uses the watershed boundary as the general boundary but excludes the Johnnie Park Road, and the trailheads which would be classified as undeveloped dispersed recreation. The area around Coulson Gulch would be managed for wildlife habitats. This RNA would become part of a network of ecological reserves designated for nonmanipulative research, observation, and study of ecosystems. This alternative is similar to 1A in that it considers the whole system. Key issues are preservation of the North Saint Vrain ecosystem, private landowners' rights, and water development outside the RNA.

Alternative 3A - Manage with a Recreation Emphasis

Alternative 3A manages a majority of the area as backcountry nonmotorized recreation to provide a variety of opportunities such as hiking, horseback riding, mountain biking, and cross-country skiing. A variety of challenge levels on a trail system and across the area would exist. This alternative limits use to what commonly occurs now -- foot traffic. Key issues are keeping the recreation experience the same, private landowners' rights, and water development.

Alternative 4 - Designate as Wilderness

In Alternative 4, all of the area would be recommended for designation as wilderness except Johnnie Park Road and the trailheads. The road and trailheads would be undeveloped dispersed recreation areas. The area would be managed for the protection and perpetuation of essentially

natural bio-physical conditions inside designated wilderness boundaries.

Alternative 5 - No Action - Manage with a Wildlife Emphasis

Alternative 5 serves as a benchmark for alternative comparison. Alternative 5 emphasizes wildlife habitat for bighorn sheep, deer and elk. This is consistent with the present management scheme as illustrated in the current *Forest Plan*.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Alternative 1B - Wild and Scenic River North Saint Vrain Only - This alternative uses a one-quarter-mile boundary on either side of the North Saint Vrain as the boundary for the designated area. The remaining areas are classified as undeveloped ecosystems, backcountry nonmotorized recreation, and dispersed recreation areas.

This alternative was not considered in detail because it fragments the area into different management areas. It diminishes the ability to manage the area as a whole by placing different desired future conditions on many smaller pieces of land. It also does not address the eligibility of Cabin and Rock Creeks for study as wild and scenic rivers. Recreational use levels and private landowner rights are affected in the same way as in all of the wild and scenic river alternatives.

This alternative differs from the others in that it excludes Cabin and Rock Creeks from being considered for a federally reserved water right and possibility of bringing the level of water quality up to outstanding by state standards which exists in Alternatives 1A, 1C, and 1D. Other water issues related to channel maintenance flows and fisheries are the same.

Alternative 1C - Wild and Scenic River designation on North Saint Vrain, Rock and Cabin Creeks - This alternative is similar to Alternative 1B and was not considered in detail because it fragments the area by placing different desired future conditions on many small pieces of land. Water rights, recreational use levels, and private landowner rights would be affected in the same way as in all of the wild and scenic river designation alternatives.

Alternative 1D - Wild and Scenic River designation on Cabin and Rock Creeks - This alternative would designate Cabin and Rock Creeks as wild with a one-quarter-mile corridor on either side of each creek from the confluence of the North Saint Vrain to the affected area boundary.

Even though Cabin and Rock Creeks have unique attributes, they are extremely isolated and by fragmenting such small pieces with a national designation, it would be difficult to preserve the integrity of the area as an intact watershed. This alternative would mean that a federally reserved water right would be affected and an outstanding water quality designation could be applied by the state on these two small segments. All other water related issues are similar to the other wild and scenic river designation alternatives.

Alternative 2B - Partial Research Natural Area - This alternative excludes Rock and Cabin Creeks from designation as part of a research natural area but manages them as undeveloped dispersed recreation areas. The areas in and around Coulson Gulch and Coffin Top mountain would be managed as undeveloped ecosystems.

This alternative recognizes some of the ecological attributes of the North Saint Vrain, however, it does fragment a larger portion of the area. Like all other alternatives (besides wilderness and wild and scenic), it does not give the area national recognition. This alternative does not bring with it any special federally reserved water rights nor does it automatically raise the state water quality standard to outstanding.

Alternative 3B - Motorized Recreation - The majority of the area would be managed for undeveloped dispersed recreation, with one-quarter mile on each side of the North Saint Vrain being managed for nonmotorized recreation. The motorized area would be managed to provide motorized recreation featuring four-wheel driving, snowmobiling, and off-highway vehicle use on designated routes.

This alternative was not considered in detail because it would drastically change the character of the North Saint Vrain due to increased access and use. It is similar to Alternative 3A in the way it addresses water rights, water quality, and private landowner rights. The following table compares alternatives by key issues.

Table D.7 Comparison of Alternatives

Key Issues	Alternatives				
	1A Wild and Scenic Watershed	2A Research Natural Area Complete	3A Nonmotorized Recreation	4 Wilderness	5 Wildlife
Preservation of whole ecosystems	Recreation use may increase Vegetation manipulation allowed	Recreation use may remain the same Vegetation manipulation not allowed Natural processes dominate	Recreation use may increase slightly Vegetation manipulation allowed	Recreation use will increase Natural processes dominate	Recreation use may rise slightly Vegetation manipulation allowed
Geology, minerals, visuals	Would limit mineral entry	Would limit mineral entry	Mineral entry allowed	Mineral entry allowed	Mineral entry allowed
Botanical	Increase in use may damage vegetation	Vegetation would remain the same	Vegetation may change	Vegetation may change	Vegetation may change
Wildlife	Habitat may increase	Habitat may remain the same or decrease	Habitat may increase	Habitat may decrease	Habitat may increase
Fishing	Fishing pressure may increase Habitat improvement allowed	Fishing pressure remains the same Habitat improvement not allowed	Fishing pressure increases slightly Habitat improvement encouraged	Fishing pressure increases Habitat improvement not encouraged	Fishing pressure may increase slightly Habitat improvement encouraged and highlighted
Recreation Motorized	Use may increase with National designation	Use may remain the same Motorized use allowed to research and educational purposes	Slight increase over time	Use may increase with National Designation	Slight increase over time
Recreation Nonmotorized	Use may increase with National designation	Use may remain the same	Slight increase over time	Use may increase with National designation	Slight increase over time
Water Uses and Development	Federal water rights reserved	May restrict water development in RNA	No special restriction	Federal Water rights reserved	No special restriction
Water Quality	State standard could become outstanding	No change	No change	State standard could become outstanding	No change
Condemnation of Private land	Depends on legislation, probably no change	No change	No change	No change	No change

Key Issues	Alternatives				
	1A Wild and Scenic Watershed	2A Research Natural Area Complete	3A Nonmotorized Recreation	4 Wilderness	5 Wildlife
Fire	Fire hazard may increase, prescribed burning allowed	Fire hazard same, prescribed fire acceptable	Fire hazard remains same, prescribed burning allowed	Fire danger may increase, no prescribed burns/	Fire hazard remains same, prescribed burn allowed
Timber	Allows vegetation treatment	Does not allow vegetation treatment	Allows vegetation treatment	Does not allow vegetation treatment	Allows vegetation treatment
Range	Stays the same	No permits issued	Stays the same	Stays the same	Stays the same
Baseline Research	Would permit	Would highlight	Would permit	Would permit	Would permit
Management Costs	Would increase	Would increase	Remains the same	Would increase	Remains the same
Social-Economic	Increase in land values and tourist dollars, difficult to determine influence because of National Park and Scenic Byway	Stays the same	Stays the same	Increase in land value and tourist dollars, difficult to tell because of influence of National Park and Scenic Byway	Stays the same

5 ENVIRONMENTAL CONSEQUENCES

This section discloses the potential consequences or impacts that would occur if any of the five alternatives studied in detail were implemented. The intent of this section is to provide an analytical basis for comparison of alternatives. Chapters 2 and 4 provide the basis for comparisons presented in this chapter.

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Geology

Effects to geologic features relate mainly to mining activities and are discussed in the section on Locatable and Leasable Minerals

Streamflow and Water Resource Development

Effects Common To All Alternatives - Concern exists over how the Forest Service will condition water diversion or storage projects that occur on NFS lands or projects that are regulated by other agencies that may have an effect on the National Forest. This concern relates primarily to direction in the Forest Plan standards and guidelines that require the establishment of channel maintenance flows and fisheries flows for special use permits for water development. The manner in which the Forest Service exercises permitting authority could influence future water development projects. These conditions apply to all NFS lands regardless of the management area allocation or special designation and are more appropriately addressed in the overall Forest Plan revision.

Alternative 1A - In the case of a wild and scenic river designation, federal reserved water right would be established which may affect future water development projects

Water Quality

Alternative 1A - Wild and Scenic River designation has strict environmental quality standards and may require anti-degradation measures for water development projects not located on NFS land. Water quality standards could be moved to the "Outstanding" category based upon water quality and land use. Special designations like a wild and scenic river could make the move to the outstanding category possible; however, it is not automatic. There are seven areas with outstanding water quality in the state and none are wild and scenic rivers.

Alternatives 2A, 3A, 4 and 5 - No increase in water quality standards would be expected

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

Vegetation

The plant association of bitterbrush and mountain muhly would probably be the attribute most affected by the alternatives.

Alternatives 1A and 4 - There could be some effect on vegetation if use increases due to national recognition as a wild and scenic river or wilderness. It is difficult to hypothesize the impact without knowing what kind of legislation would be passed for these national designations or how urban growth would affect use.

Alternative 2A - A Research Natural Area emphasizes research on natural ecosystems within an area. Proponents of this management feel that this is an opportunity to study botanical features in an undisturbed state, especially the aquatic plant life and riparian areas. This alternative does allow for prescribed burning and some vegetation treatments when it is necessary to achieve management direction.

An RNA does not emphasize or actively encourage recreational use; therefore, this alternative probably has the least impact on vegetation from recreational use. This alternative keeps part of the land west of Buttonrock as an undeveloped ecosystem or special wildlife emphasis area. This area gets the majority of the recreation use and would be difficult to manage as an RNA.

Alternatives 3A and 5 - There could be some effect on vegetation from the increased use that may occur due to management area emphasis which encourages visitors to recreate in nonmotorized recreation areas. The growing urban areas nearby may also contribute to increased use. These alternatives allow for prescribed burning and other vegetation treatments that benefit fire driven ecosystems.

Wildlife

Winter range is the most limiting factor on the Boulder Ranger District and this area receives very little use in the winter.

Alternatives 1A, 3A and 4 - There may be some effect on elk and deer summer range if recreation use increases. Prescribed burning is permitted so there may be an opportunity to improve habitat. Other forms of vegetation treatment are not allowed in Alternative 4.

Alternative 2A - Since recreation use would remain the same under this alternative, effects from recreation use would be limited. This alternative does not allow for vegetation treatments to improve wildlife habitat, unless it is part of a management plan to provide for more natural conditions. Since there is some encroachment into meadows, there may be a net loss in elk and deer winter range.

Alternative 5 - Wildlife emphasis would allow projects specifically for improvement of habitat. Vegetation treatments such as prescribed burning could enhance important winter range. Effects to wildlife from recreation use will not change

Fisheries

Effects Common To All Alternatives - Fisheries management will not differ among alternatives since this drainage is classified as a wild trout stream

Alternatives 3A and 5 - There may be an opportunity to improve fisheries habitat based on management direction and emphasis.

Research and Collection of Baseline Data

The North Saint Vrain Canyon is one of the last undeveloped watersheds along the Front Range. It holds important scientific information on how natural ecosystems work

Alternatives 1A, 3A, 4 and 5 - These alternatives allow for research and collection of baseline data on natural systems. Data collection priorities would be based on management area emphasis.

Alternative 2A - A Research Natural Area emphasizes research on natural systems as a top priority

USE AND OCCUPATION OF THE FOREST

Recreation

The comments received indicated that people want to maintain the existing uses and do not favor expanding uses to areas that are currently nonmotorized.

Effects Common To All Alternatives - Motorized recreation is currently limited to roads surrounding the canyon. There is no motorized use in the canyon itself, mainly due to the topography, therefore, the effects would be similar among alternatives

Alternative 1A - National designation of a wild and scenic river may theoretically increase use. Increases have occurred according to some managers of wild and scenic rivers where the rivers offer boating opportunities. Boating use seems to increase on navigable rivers

Alternative 2A - Recreation use is not emphasized and efforts would be made to keep use as it exists today. Motorized access may be allowed in a Research Natural Area for research and educational purposes. Extractive or commercial uses within the RNA are not allowed

Alternative 3A - The emphasis in this alternative is recreation; therefore, use may increase. There may be an increase in facilities to foster use. Nonmotorized recreation use could increase, but not to the same extent as it might under Alternatives 1A and 4. Even though a nonmotorized management area prescription limits development, it does not exclude it and the area would not be managed specifically for ecological attributes.

Alternative 4 - Wilderness designation will bring national recognition and attract visitors. There are many studies that point to this phenomenon in designating wilderness. Use could be limited by regulation, but it would be expensive. Congress has traditionally asked that wildernesses near urban areas provide a backcountry experience for many Americans but have allowed land managers to limit use to protect resources in the wilderness. There could be a net increase in use, but the actual increase would depend on Congressional direction and funding.

Alternative 5 - Wildlife emphasis would mean the area would be managed specifically for bighorn sheep and elk habitat. Though human use of the area may increase slightly, management direction would be aimed at projects that improve habitat for these species. Some actions that may be taken to increase habitat would involve vegetation manipulation via prescribed fire, timber stand improvement projects, timber sales, or revegetation projects. This would mean that the area may change in appearance from today. It is unlikely that the changes would affect recreational use.

Fire

Alternative 1A - Fire risk may increase due to the possible increase in recreational use. Wild and scenic river designation does allow for vegetation treatment such as prescribed burning, so there may be an opportunity to reduce fire hazard in high risk areas.

Alternative 2A - This alternative allows the use of prescribed burning in support of research which may decrease fire hazards over time. This designation allows for prescribed natural fire which could reduce hazard and provide for improved habitat over the long term. The limited use of fire may reduce opportunities to improve wildlife habitat.

Alternatives 3A and 5 - A slight increase in recreational use may cause a slight increase in fire risk. This alternative allows for prescribed burning that may decrease fire hazard over time.

Alternative 4 - Fire risk may increase due to the possible increase in recreational use. Prescribed burning is allowed only when in compliance with management direction.

Production of Natural Resources

Timber Production

Alternatives 1A, 3A and 5 - Vegetation manipulation for wood products is allowed, however, timber sales are not likely to occur due to the terrain and the low value of the products. Timber

sales could be used to help mitigate fire risk, benefit wildlife, or reduce insect and disease damage.

Alternatives 2A and 4 - Vegetation manipulation for wood products is not permitted. There would be little benefit to wildlife, reduction in fire risk or insect and disease damage.

Livestock Grazing

There are no active range allotments in this area and it is highly unlikely that this use would occur in this area due to the terrain.

Alternatives 1A, 3A, 4 and 5 - There is no effect on livestock grazing since these alternatives allow for grazing.

Alternative 2A - Does not allow for livestock grazing

Locatable and Leasable Minerals

Alternatives 1A and 2A - Application would be made for mineral entry and leasing withdrawals with either one of these alternatives. These withdrawals will eliminate the effects this use would have on any geologic features.

Alternatives 3A and 5 - Mining activities could affect the appearance of the geologic features. Since there are no active mining operations, it is unlikely that any activities would occur.

Alternative 4 - Depending on the provisions of the wilderness legislation, mining activities could occur. The effects would be similar to Alternatives 3A and 5.

SOCIAL AND ECONOMIC ENVIRONMENT

Condemnation of Private Lands

The Forest Service has condemnation authority for general forest purposes and multiple uses. The Forest Service maintains a policy of dealing with willing sellers or land trades as a priority.

Alternative 1A - Private landowners believe that there would be an increased interest in condemning private properties within a wild and scenic river corridor if such a designation was made. There is special language in the Act that allows for condemnation for the purposes of the wild and scenic river designation. Acquiring lands within the corridor would be a high priority, however, the risk of condemnation would not be high unless the enabling legislation directs the Forest Service to acquire lands from unwilling sellers.

Alternatives 2A, 3A, and 5 - Land acquisition would not be a priority unless it helps to achieve management area direction. The risk of condemnation would be low.

Alternative 4 - Acquiring lands within a wilderness is a high priority. The risk of condemnation would not be as high as Alternative 1A and is considered low.

Management Costs

Effects Common To All Alternatives - Costs will increase slightly for inflation.

Alternatives 1A, 3A and 4 - Costs would increase when use reaches a point that requires more regulation and trail maintenance.

Social-Economic Effects

All Alternatives - Small communities of Allenspark and Fern Cliff are located just off the Peak to Peak National Scenic Byway and a few miles from the Rocky Mountain National Park. There may be an effect from additional designation of a wilderness or wild and scenic river but it is difficult to measure and isolate because of these other National designations.

6 ADDITIONAL INFORMATION - PUBLIC COMMENTS

NORTH SAINT VRAIN ADVISORY COMMITTEE COMMENTS AND RECOMMENDATIONS

The North Saint Vrain Advisory Committee (Advisory Committee) worked for five years to come to a consensus on the management of the North Saint Vrain. They represent different groups interested in the North Saint Vrain and include private and commercial landowners, conservation organizations, water engineers, local, regional and state water boards, affected cities and counties.

In addition a special water negotiating subcommittee focused on questions of water supplies, rights, and facilities. The committee requested and received assistance from the Colorado Department of Natural Resources, US Fish and Wildlife Service, University of Colorado School of Law, national environmental organizations, and Congressional Committee staff.

The Advisory Committee issued a final report on July 20, 1993. The committee recommended that Congressman Skaggs introduce legislation to prohibit federal approval of funding for dams, reservoirs, or impoundments on the main stem of the North Saint Vrain. The general theme of the report and recommendation is "preservation of the natural features of the creek and its surroundings, while assuring protection of private property and water use needs in the area." The committee offered the following comments to clarify the legislative language and outline attendant federal actions.

General

● Current levels of recreational uses on public lands should be maintained. No new public access or new trail construction is recommended. Future trail construction should only be considered as a method to focus public use in appropriate areas with the intent of minimizing resource damage and private property conflicts. Camping in the foothill canyon should be closely monitored for impacts and restricted or directed as needed.

Public Access

● Existing public access points to the North Saint Vrain [should] be retained and marked as Coulson Gulch from Highway 36, Bright Trail Extension from Johnnie Park Road, and Wild Basin entrance to Rocky Mountain National Park

● Public access should be retained but not marked or actively encouraged at Conifer Hill Road, Bright Trail, and Rock Creek from Colorado Highway 7. These routes should remain in a primitive and difficult condition.

● Condemnation of private lands for access is not recommended at any location

● New construction of creek side trails is not recommended in the foothill canyon above Rock Creek confluence or below Coulson Gulch confluence.

● Expanded motor vehicle access or capability is not recommended near the creek in Roosevelt National Forest.

Camping

● Formal campgrounds are not recommended in the foothill canyon

● Informal camp sites in the foothill canyon should be carefully monitored, restricted, or banned as appropriate to limit impacts to the natural and scenic features of the creek and surrounding lands.

● Campground facilities including non-plumbed toilets should be located no less than 100 feet from the creek or wetland areas.

Federal Management Reviews

● The U S Forest Service and National Park Service should note the listing of the North Saint Vrain on the Nationwide Rivers Inventory and conduct appropriate studies and actions in a timely fashion

PUBLIC HEARINGS DONE BY THE ADVISORY COMMITTEE

The Advisory committee's report evolved through five years of work including 103 meetings, 12 public hearings, and 1200 letters and cards commenting on stages of the work. The following are principal comments from several public hearings held by the Advisory Committee:

● Make sure private landowner protection and condemnation prohibitions are not removed or weakened by Congress,

● Include Coulson Gulch on the north side lower end of the corridor since it contains old growth ponderosa pine and flammulated owls which could be disturbed if Coulson Gulch is used as a borrow pit for construction at Button Rock Reservoir

- Widen the entire corridor east of Wild Basin to accommodate wildlife migration
- There is a need for primitive recreation close to urban areas.
- This area will see increased recreational use with or without wild and scenic designation; by designating the area will be better protected.
 - Wild and scenic designation will bring increased use of the area.
 - Nationwide Rivers Inventory (NRI) does not allow for protection of rivers; Army Corps of Engineers has issued 404 permits (dredge and fill) for NRI rivers
 - Private landowners' concerns are being addressed better through current wild and scenic process than without the process.
 - Boulder County land use and zoning regulations are sufficient to protect wild and scenic qualities on private lands.
 - Landowners will be allowed to improve their properties with wild and scenic design
 - Alternative A does not provide funding, patrolling, management and protection of the canyon
 - Dam building has potential to bring more recreational users than wild and scenic.
 - An EIS is not necessary since the current process is a local study not a federal study.
 - The North Saint Vrain is a unique resource. It is one of the only undeveloped riparian areas on the front range.
 - Use should not be discouraged, but we want to keep it at the current levels.
 - Limits of acceptable change should be instituted no matter what the management is

COMMENTS ON USFS DRAFT ALTERNATIVES BY THE ADVISORY COMMITTEE

Based upon the initial comments, the Forest Service put together draft alternatives and presented them to the Advisory Committee

Wild and Scenic River Alternatives

- Forest Service wild and scenic designation has much stricter environmental quality standards and may require anti-degradation measures for projects not even on the National Forest. There are 3 issues related to water with the Wild and Scenic Designation:

1. Reserved water rights,
2. Water quality standard would be moved to the "outstanding" category This is based upon water quality and land use. Special designations like wild and scenic make the move to the outstanding category required.
- 3 How the Forest Service would exercise permitting authority; especially with regard to channel maintenance and fisheries flows.

Research Natural Area (RNA) Alternatives

- RNA too small; add the areas mapped as 1 6 prescription to the RNA area
- What you put around Coulson Gulch would affect the management prescription for Coulson Gulch
- Does an adjacent RNA designation affect acquisition priority?

- Designation of a wilderness adjacent would affect acquisition priority. Need to check if an RNA would.
- Recreation emphasis is a bad idea.
- Need to identify what impact RNA would have on future water impoundments up stream.
- Forest Service needs to consider an RNA alternative that preserves terrestrial attributes alone rather than aquatic attributes
- Aquatic attributes were one of the reasons this designation is being considered High probability there are high quality aquatic communities that means it should be RNA
- Forest Service needs to let the public know if there will be increased channel maintenance and fisheries flow standards above and beyond the general Forest Plan standards
- You could use some of the numbers developed by the committee to see what the effect of water development would be and how you would handle input on these proposals
- Mineral withdrawal remains an issue (with some publics) since there may be a withdrawal for the wild and scenic or the RNA.

General Comments on All Alternatives

- For alternatives other than wild and scenic what level of federal designation would bump this up to the outstanding water quality standard?
- How does the Forest Service intend to use its permitting authority for all alternatives especially when it comes to water?

COMMENTS RECEIVED IN THE FOREST PLAN REVISION PROCESS

- The Forest must study not just the North Saint Vrain and the North Fork Cache la Poudre for possible inclusion into the national [Wild and Scenic Rivers] system but all potential additions. This is required by Section 5d of the Wild and Scenic Rivers Act
- I am in favor of Wild and Scenic River status for the North St Vrain Creek . that is the last unroaded canyon of a major front range drainage and an excellent reason to keep it and the backcountry area surrounding it a roadless area
- The North Saint Vrain should stay undeveloped ..The problem I have is expansion of this idea beyond the river particularly to the surrounding ridges Roads that exist in these areas should not be closed due to perceived threat.
- If public recreational interest appears to demand somewhat increased access then the Forest Service should only consider a trail on the south side of the stream away from and considerably above the stream channel and connecting the end of the Bright Trail with foot access to the former Sheep Mountain Ranch New trails on the north side of the creek should be strongly discouraged.
- Streams suitable for Wild and Scenic status should be adequately protected until such status is granted

SECTION 3 SUITABLE RIVER STUDY REPORT FOR THE NORTH FORK OF THE CACHE LA POUFRE RIVER

SUMMARY

PURPOSE AND NEED

The purpose of the Suitable River Study Report for the North Fork of the Cache la Poudre River is to determine whether eligible segments of the North Fork Poudre are appropriate additions to the National Wild and Scenic Rivers System. This is done through a comparison of alternative ways to manage the river. The suitability study included the alternatives considered and the environmental consequences associated with each alternative. The objective of the study is to determine how best to manage the outstanding resources.

FINDING OF ELIGIBILITY

The eligibility study of the North Fork Poudre was completed by the Forest in 1989 and subsequently became Amendment 12a to the *Forest Plan*. The North Fork Poudre has several outstandingly remarkable values that make it eligible. These include scenic, streamflow, wildlife, and botanical features.

When a river or segment is found to be eligible, it is given a potential classification of Wild, Scenic, or Recreation. The classification of a river is based on the conditions of the river and the adjacent lands. A "Wild" classification is the most primitive and the least developed with "Recreation" being readily accessible by roads and in or near urban areas. Table D.8 describes the potential classification of the river.

Table D.8 Potential Classification

SEGMENT	CLASSIFICATION	MILES
1	Recreation	2.9
2	Wild	2.8
3	Recreation	4.9
4	Wild	9.2
5	Recreation	4.2
6	Wild	6.0
TOTAL MILES		30.0

ALTERNATIVES

Before alternatives were developed, issues were identified through the public notification and scoping process. The following are the major issues identified through scoping which serve as the basis for alternative development.

- The diminishing quantity of unique free-flowing rivers and their surrounding environments
- Private landowners concerns over how a Wild and Scenic River designation would effect use of their land
- The river is not threatened with a dam and no change in management is needed
- Effects designation may have on water uses and diversions.
- Effects on the local economy.

The Forest Service developed a range of alternatives based on these issues. The alternative considered in detail include:

Alternative 1 - No Action Alternative - Manage area as directed in the *Forest Plan* prior to the eligibility determination - Alternative 1 serves as a benchmark for alternative comparison and would propose managing the area as originally allocated in the *Forest Plan*. Alternative 1 emphasizes dispersed recreation, big game wildlife winter range, and livestock grazing.

Alternative 2 - Proposed Action - Wild and Scenic River Designation With Classifications as Proposed in the Eligibility Study - The proposed action was the starting point for developing alternatives to the proposed action and general management of the area. The North Fork Poudre and its immediate environment (1/4 mile corridor on each side) would be recommended for designation into the National Wild and Scenic Rivers system

Alternative 3 - Wild and Scenic River Designation for Segments 1, 2, 4 and 6 with Classifications as Proposed in the Eligibility Study - This alternative eliminates the two segments, 3 and 5, which are dominated by private land. Of the remaining segments, 1 is proposed as "Recreational" and segments 2,4 and 6 are proposed as "Wild". These four segments and their immediate environment (1/4 mile corridor on each side) would be recommended for designation into the National Wild and Scenic Rivers system

Alternative 4 - Wild and Scenic River Designation For Segment 6 Only with the Classification as Proposed in the Eligibility Study - This alternative keys in only on the segment which has the greatest potential for an impoundment and which has high scenic quality and high streamflow values. This 6.0 mile segment is proposed as "Wild" in the Eligibility Study. This segment and its immediate environment (1/4 mile corridor on each side) would be recommended for designation into the National Wild and Scenic Rivers system

Comparison of Alternatives

The following table summarizes how each of the alternatives addresses each of the four key suitability issues developed during the public comment phase of this study.

Table D.9 Impacts of the Alternatives on Key Issues

Key Issues	Alternatives			
	1 Recreation, Wildlife, Range	2 All Wild and Scenic	3 Partial Wild and Scenic	4 Wild and Scenic 1 Segment Only
Protection of Instream resources	-	+	-	-
Protection of Upland Resources	-	+	0	0
Effects on Private Property	+	-	0	+
Effects of Local Economy	0	+	+	0

+ Beneficial effect

0 May have some beneficial and some detrimental effects

- Detrimental effect

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The North Fork Poudre is found in the northern section of the Roosevelt National Forest in Larimer County, Colorado. The eligible length runs from the source of the North Fork to the eastern Roosevelt National Forest boundary, a distance of 30 miles. The width of the study area extends one-quarter mile from the high water mark of each bank of the river, for a total area of 7985.8 acres.

The North Fork Poudre drains an area east of the Continental Divide. It is a tributary of the Cache la Poudre River, which in turn drains into the South Platte River. As with many of the streams on the east side of the divide, the waters of the North Fork Poudre are used for agricultural irrigation, municipal water supplies, and recreation.

The urban area closest to the North Fork Poudre is Fort Collins (population about 100,000). The large metropolitan center of Denver and adjacent cities of the Colorado Front Range and Laramie and Cheyenne, Wyoming (combined population nearing 2 million) is within a two to three hour drive from the North Fork Poudre area.

Two private developments occur within this study area: Beaver Meadows, a year-round recreation resort, and Crystal Lakes, a mountain subdivision. There are also numerous private homes and ranches within the river corridor.

The North Fork Poudre eligibility assessment partitioned the river into 6 segments based on each segment's classification characteristics. Descriptions of the segments are as follows:

Segment 1: The North Fork Poudre from its source in SE 1/4 of Section 25, T.10 N., R. 75 W, to the end of the four-wheel drive road east of the North Fork Poudre Campground in the NW 1/4 of Section 21, T 10 N., R 74W

Segment 2: The North Fork Poudre from the end of the four-wheel drive road east of the North Fork Poudre Campground to Pearl Creek in the SE 1/4 of Section T.10 N., R 74 W

Segment 3: The North Fork Poudre from Pearl Creek to the junction of the road west of Creedmore Lakes in the SW 1/4 of Section 5, T 10 N, R.73 W.

Segment 4: The North Fork Poudre from the road west of Creedmore Lakes to junction of intermittent stream in the SW 1/4 of Section 29, T.11 N., R.72 W.

Segment 5: The North Fork Poudre from the intermittent stream to the junction with the Colorado Division of Wildlife (DOW) angler access trail in SW 1/4 of Section 22, T.11 N, R.72 W.

Segment 6: The North Fork Poudre from the Colorado DOW angler access trail to the Forest Service boundary on the eastern boundary-line of Section 24, T.11N, R 72 W

Table D.10 River Length (in Miles) and Landownership in Corridor Acres *

SEGMENT	LENGTH	NFS ACRES	STATE ACRES	PRIVATE ACRES	CORRIDOR ACRES
1	2.9	910	0	0	910
2	2.8	842	0	35	877
3	4.9	248	0	1111	1359
4	9.2	1374	563	708	2646
5	4.2	117	82	955	1154
6	6.0	585	430	26	1041
TOTAL	30.0	4076	1075	2835	7987

* Corridor acres based on one-quarter (1/4) mile either side of high water mark. State acres are managed by the Colorado Division of Wildlife.

In 1926 the Forest Service proposed a land exchange with the Union Pacific Railroad Company which owns over 13,000 acres in the northern part (Cherokee Park area) of the Redfeather District. The area includes portions of the North Fork Poudre area, particularly in Segment 4. The checkerboard pattern of landownership complicated Forest Service administration of the area and increased administrative costs. In 1992, an agreement was reached on a land acquisition of the area. The Land and Water Conservation Fund subsequently did not fund the project in the 1992 legislature. Funding was forthcoming in 1993 and with acquisition of the Union Pacific lands, one and one-half miles of the North Fork were added to public ownership.

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Geology. Precambrian granite outcrops occur throughout the reaches of the river. These outcrops form the spectacular canyon areas along the North Fork Poudre, particularly in Segment 6.

Water Resource Development. The Divide Canal and Reservoir Company constructed Eaton Reservoir at the turn of the century near the headwaters of Sheep Creek, which is a major tributary of the North Fork Poudre (see Segment 4). There is a 1018 acre foot reservoir located ½ mile from the North Fork Poudre on Panhandle Creek (Segment 3). Though outside the study corridor, the Crystal Lakes Water and Sewer Association is currently exploring plans to physically transfer water from their Crystal Lake Reservoir to North Lone Pine Creek by removing water from the North Fork Poudre below the confluence of the North Fork Poudre and Panhandle Creek

Halligan Reservoir is located approximately one mile downstream from the end of the study area. The reservoir was constructed in 1909 by North Poudre Irrigation Company primarily for agricultural irrigation. Since that time, demands by Front Range communities have increased and now the main purpose of the reservoir is as a municipal water supply for the city of Fort Collins. The reservoir is located outside of the study area boundaries. The City of Fort Collins completed a feasibility study in February 1989 on the expansion of the reservoir. When Halligan Reservoir is expanded, its waters will not to the Forest boundary in Segment 6. The Suitability Study adjusted the boundary from the Eligibility Study, moving it from Dale Creek west to the Forest boundary in Section 24 to avoid a conflict with the expansion of Halligan Reservoir. There are no other existing impoundments nor potential water resource development sites within the study area.

Streamflow Generally, there are large streamflow fluctuations month to month. The minimum flow is in December or January and the maximum is in May or June, with a significant drop from September to October. Minimum instream flow appropriations regulated by the Colorado Water Conservation Board tend to be below normal base flow for the river. Two cubic feet per second (cfs) are maintained at the headwaters and the flow increases gradually to Dale Creek where the minimum flow is 20 cfs.

Crystal Lakes Water and Sewer Association will continue to augment water of the North Fork according to its Water Augmentation Plan as filed with the State of Colorado. The Association will also continue to fill its reservoir, Crystal Lake, on Panhandle Creek from February to May. The filling of this reservoir can prevent any Panhandle Creek water from entering the North Fork Poudre, thereby, reducing the flow of the North Fork Poudre by approximately one-half (at the Panhandle Creek/North Fork Poudre junction) for that four month duration.

Water Quality. No specific water quality information is available. The river is generally considered to be of high quality. During periods of heavy rainfall or releases from Eaton and Crystal Lake Reservoirs, sedimentation causes short-term discoloration. There are no known sources of pollution.

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

Vegetation. The upper portions of the river are surrounded by Engelmann spruce-subalpine fir and lodgepole pine forests. Beginning in Segment 3 there are numerous beaver ponds along the river. At lower elevations ponderosa pine and Douglas-fir are found. The eastern portion of Segment 6 is dominated by mixed grasses, with scattered patches of Ponderosa pine, juniper, and true mountain mahogany.

There is one federally listed Threatened and Endangered Species confirmed near the river. *Aletes humilis*, a rare member of the Parsley family, is found on Turkey Roost and in Phantom Canyon. This plant is found in only eight locations world-wide. All locations are in Larimer and Boulder counties in Colorado and Albany county in Wyoming.

Potentilla rupincola is on the Colorado State list of threatened and endangered species and is found on decomposed granite in the Virginia Dale and Diamond Peak areas. Turkey Roost has the same type of decomposing granite as these areas and may also support this plant species.

Wildlife and Fisheries Numerous species such as elk, deer, black bear, beaver, mountain lion, bobcat, bald and golden eagles, peregrine falcons and an assortment of other birds and small mammals inhabit the river corridor. Several species on the Endangered and Threatened Wildlife and Plants list have been spotted in and potentially inhabit the area along the North Fork Poudre. Bald eagles, an endangered species, are known to winter along Eaton Reservoir and Halligan Reservoir, and the lower reaches of the Cache la Poudre River. Bald eagles have also been seen in the summer down-river of the study area; therefore, it is very possible that bald eagles also inhabit upper areas of the North Fork Poudre. American peregrine falcons, an endangered species, have been sighted along the river corridor although there are no documented nesting sites in the area.

Greenback cutthroat trout, a threatened species, originally occurred in the North Fork Poudre from its headwaters to its foothill tributaries (Neely 1986). Greenbacks were transplanted into Cornelius and George Creeks, both of which flow into the North Fork Poudre. Even with fish barriers installed, the possibility exists that greenbacks have worked their way into the North Fork Poudre.

The North Fork Poudre drainage serves as one of the most important migration routes for elk in the area. The upper one-third contains summer range for elk and deer. The remaining two-thirds is important winter range for deer and elk and is also used by deer in the summer.

The North Fork Poudre is an important fishing resource in northeastern Colorado. The DOW manages all of the river segments as wild, self-sustaining trout fisheries. Segments 1 and 2 are dominated by brook and brown trout. The remaining segments contain primarily brown and rainbow trout.

Scenery. The course of the North Fork Poudre travels through highly diverse topography and vegetation types. There are densely forested expanses of Engelmann spruce/subalpine fir and lodgepole pine in the western reaches, lush valleys with numerous beaver ponds and drier hills where ponderosa pine are well-established in the central portions of the study area; and open range

land and steep granite-walled canyons in the eastern section to the Forest boundary. There is spectacular scenery through the canyons of the river with the river falling in places at 200 feet per mile, with numerous pools and one 15 foot waterfall. Areas along the corridor have not been developed and are examples of the rough and primitive country of the Front Range

USE AND OCCUPATION OF THE FOREST

The Deadman Road (FDR 162) is a two lane gravel road that parallels the river through most of Segment 1. Old logging roads in this area are used for dispersed camping during fishing and hunting seasons. The North Fork Poudre Campground is a small, developed campground near the eastern portion of this segment.

There are no roads, trails, or developments through Segment 2. Some unmaintained trails and tributary drainages are used for access to the river.

The area around Segment 3 encompasses two private developments, Beaver Meadows Resort and Crystal Lakes. Several roads access homes in these developments. Three road bridges cross this segment and four hiking trail bridges also cross the North Fork. There is a 4-wheel drive road that parallels the North Fork. The western 1/4 of this segment is unroaded.

Access to Segment 4 from the south is from two roads off the Creedmore Lakes Road (County Road 73C). Hiking access to the river from this point is possible by following the eastern shore of the first lake and following the drainage north to the North Fork Poudre. The other road forks just to the west of Creedmore Lakes and allows driving access to the North Fork Poudre in Section 5. FDR 182 travels through Colorado DOW land to within approximately 1/4 mile of the North Fork Poudre. The Colorado DOW has a primitive campground on FDR 182.

From the southern portion of Segment 5, FDR 334 passes through private land including ranches and mountain guest resorts. There is no guaranteed public access on this road at the present. The Cherokee Park Road and the DOW angler access trail allows access to the western portion of Segment 5.

Several private ranches are located in the western portion of Segment 6. Northern access to this segment is via the angler access trail mentioned in Segment 5. By Turkey Roost there are two Colorado DOW angler access trails to the river.

Recreational Activities The river provides a variety of developed and dispersed recreational opportunities. Two campgrounds along the North Fork are full every weekend and many weekdays during the summer months. Dispersed camping occurs during the summer and fall but is most prevalent during the hunting season. Hiking in the area near the river is mainly associated with either fishing or hunting. There is a minute amount of whitewater kayaking. The river itself is very narrow and extremely challenging offering a creek type of kayaking experience. Turkey Roost, a prominent hill in Segment 6, is popular with hikers and technical rock climbers. Fishing and hunting are popular and important along the river corridor.

Heritage Resources. The North Fork Poudre drainage has been used by humans for an estimated 11,000 years. The area appears to have been used seasonally by prehistoric people for hunting game and for gathering wild plants. The area was probably visited in the early 1800's by Euro-American explorers and fur traders. Later, from the 1870's to 1900, the North Fork Poudre drainage was the scene of numerous ranches and homesteads. Evidence of early irrigation projects includes the Halligan and the Seaman Reservoirs. There is also tourist activity as evidenced by several dude ranches such as the Cherokee Park Ranch and Trails End Ranch.

PRODUCTION OF NATURAL RESOURCES

Timber Production Timber has been harvested within the study area. Very little suitable lands are available for intensive timber management. Owing to the limited timber value and the lack of current plans for vegetative treatment, annual sale quantity and volume were not calculated for this report.

Livestock Grazing. Four grazing allotments are within the study area. Deadman Allotment covers all of Segment 1 and the western third of Segment 2. Prairie Divide Allotment is located in Segment 4 with the North Fork as its northern boundary. The North Fork Allotment covers the eastern half of Segment 4 and all of Segment 5 with the North Fork of the Poudre as its southern boundary. The Mill Creek Allotment encompasses a small northwest corner in Section 24, T.11 N, R. 72 W. in Segment 6. A total of 4,435 acres are under allotment within the study area.

These allotments have varying impacts on the river corridor. Deadman is an active allotment but the cattle do not travel through the dense vegetation to the river. Mill Creek Allotment is now vacant. Prairie Divide and North Fork Allotments are both active with cattle able to access the river.

Locatable and Leasable Minerals Two sections along the 30 mile stretch of the study area have active mining claims for locatable minerals. In Segment 6 Pine Creek Mining Company has 16 active claims (Section 24, T. 11 N, R. 72 W.). In Segment 5 (Section 28, T.11 N, R. 72 W.) this same company holds 11 active claims. In both segments existing mineral activity is allowed to continue, although it must be conducted in manner that minimizes surface disturbance, sedimentation, and visual impairment. Reasonable access is permitted.

In Segment 4 three mining companies, Cominco American, Inc., Resources International Partners, and Koenig King hold a total of 65 claims. According to the Bureau of Land Management records, these claims are all closed. There is no known mineral potential and no interest expressed in oil and gas leasing.

SOCIAL AND ECONOMIC ENVIRONMENT

Red Feather Lakes is a small mountain community with local businesses highly dependant on tourism. Red Feather Lakes is located along the main road that accesses the western portion of the

North Fork Poudre. Two mountain communities are located in Segment 3, Beaver Meadows Resort and Crystal Lakes. Beaver Meadows actively promotes recreation activities (e.g. fishing, hiking) on its lands. Crystal Lakes is a private mountain community which maintains its privacy and discourages any public activity.

NORTH FORK OF THE CACHE LA POUDE RIVER WILD AND SCENIC RIVER SUITABILITY STUDY

1 PURPOSE AND NEED FOR ACTION

Following passage of the Wild and Scenic Rivers Act of 1968, the National Park Service completed the National Rivers Inventory in 1982. The North Fork of the Cache la Poudre River (North Fork Poudre) was included on that list requiring the U.S. Forest Service to conduct an eligibility assessment. This assessment was completed by the Forest in 1989 and subsequently became Amendment 12a to the *Forest Plan*. The North Fork Poudre was found eligible for further study to determine if it is a suitable candidate for the National Wild and Scenic River System.

The purpose of this document is to present information about the suitability of the North Fork Poudre as a candidate for inclusion in the National Wild and Scenic River System. This is done through a comparison of alternative ways to manage the area. The suitability study includes the alternatives considered and the environmental consequences associated with each alternative. The objective of the study is to determine how best to manage the outstanding resources.

The suitability study follows the guidelines presented in the U.S. Department of Agriculture/U.S. Department of Interior Guidelines for Evaluating Wild, Scenic, and Recreational River Areas and as outlined in Forest Service Handbook 1909.12, Chapter 8 - Wild and Scenic River Evaluation.

2 DESCRIPTION OF THE AREA

The North Fork Poudre is found in the northern section of the Roosevelt National Forest. The study area lies entirely within Larimer County, Colorado. The eligible length runs from the source of the North Fork to the Roosevelt National boundary in Section 24, T.11N., R.72W, a distance of 30 miles. The National Rivers Inventory reported 31 miles for this same section. The width of the study area extends one-quarter mile from the high water mark of each bank of the river, for a total area of 7986 acres.

The North Fork Poudre drains an area east of the Continental Divide. It is a tributary of the Cache la Poudre River, which in turn drains into the South Platte River. As with many of the streams on the east side of the divide, the waters of the North Fork Poudre are used for agricultural irrigation and municipal water supplies.

The urban area closest to the North Fork Poudre is Fort Collins (population about 100,000). The large metropolitan center of Denver and adjacent cities of the Colorado Front Range and Laramie and Cheyenne, Wyoming (combined population nearing 2 million) is within a two to three hour drive from the North Fork Poudre area.

Two private developments occur within this study area: Beaver Meadows, a year-round recreation resort, and Crystal Lakes, a mountain subdivision. There are also numerous private homes and ranches within the river corridor.

The source of the North Fork Poudre is three springs which join to create the small stream. As it travels northeast, numerous streams add their waters, continually increasing its volume. It reaches Dale Creek one mile before the North Fork enters Halligan Reservoir

The North Fork Poudre eligibility assessment partitioned the river into 6 segments based on each segment's classification characteristics. Descriptions of the segments are as follows.

Segment 1 - The North Fork Poudre from its source in SE 1/4 of Section 25, T.10 N , R.75 W, to the end of the four-wheel drive road east of the North Fork Poudre Campground in the NW 1/4 of Section 21, T.10 N., R 74W.

Segment 2 - The North Fork Poudre from the end of the four-wheel drive road east of the North Fork Poudre Campground to Pearl Creek in the SE 1/4 of Section T.10 N., R 74 W.

Segment 3 - The North Fork Poudre from Pearl Creek to the junction of the road west of Creedmore Lakes in the SW 1/4 of Section 5, T 10 N, R.73 W.

Segment 4 - The North Fork Poudre from the road west of Creedmore Lakes to junction of intermittent stream in the SW 1/4 of Section 29, T.11 N , R 72 W.

Segment 5 - The North Fork Poudre from the intermittent stream to the junction with the Colorado Division of Wildlife (DOW) angler access trail in SW 1/4 of Section 22, T 11 N, R.72 W.

Segment 6 - The North Fork Poudre from the Colorado DOW angler access trail to the Forest Service boundary on the eastern boundary-line of Section 24, T.11N., R.24W.

Table D.11 River Length (in Miles) and Landownership in Corridor Acres *

SEGMENT	LENGTH	NFS ACRES	STATE ACRES	PRIVATE ACRES	CORRIDOR ACRES
1	2.9	910	0	0	910
2	2.8	842	0	35	877
3	4.9	248	0	1111	1359
4	9.2	1374	563	708	2646
5	4.2	117	82	955	1154
6	6.0	585	430	26	1041
TOTAL	30.0	4076	1075	2835	7987

* Corridor acres based on one-quarter (1/4) mile either side of high water mark. State acres are managed by the Colorado Division of Wildlife

In 1926 the Forest Service proposed a land exchange with the Union Pacific Railroad Company which owns over 13,000 acres in the northern part (Cherokee Park area) of the Redfeather District. The area includes portions of the North Fork Poudre area, particularly in Segment 4. The checkerboard pattern of landownership complicated Forest Service administration of the area and increased administrative costs. In 1992, an agreement was reached on a land acquisition of the area. The Land and Water Conservation Fund subsequently did not fund the project in the 1992

legislature. Funding was forthcoming in 1993 and with acquisition of the Union Pacific lands, one and one-half miles of the North Fork were added to public ownership

CURRENT MANAGEMENT

Forest lands in the North Fork Poudre Study Area are currently managed under the 10D Management Prescription. This prescription maintains the eligibility of the river segments until such time as a final decision on the North Fork Poudre is made. "Wild Rivers" are managed to be free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and water unpolluted. "Recreational Rivers" are managed to be readily accessible by road or railroad, and to maintain developments that may have occurred along the shoreline and impoundments or diversions that may have occurred in the past. The lands adjacent to the river corridor are managed for dispersed recreation (2B), vegetation manipulation (9B), big game wildlife winter range (5B), and livestock grazing (6B)²

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Geology

Precambrian granite outcrops occur throughout the reaches of the river. These outcrops form the spectacular canyon areas along the North Fork Poudre, particularly in Segment 6

Water Resource Development

The Divide Canal and Reservoir Company constructed Eaton Reservoir at the turn of the century near the headwaters of Sheep Creek, which is a major tributary of the North Fork Poudre (see Segment 4). There is a 1018 acre foot reservoir located ½ mile from the North Fork Poudre on Panhandle Creek (Segment 3). Though outside the study corridor, the Crystal Lakes Water and Sewer Association is currently exploring plans to physically transfer water from their Crystal Lake Reservoir to North Lone Pine Creek by removing water from the North Fork Poudre below the confluence of the North Fork Poudre and Panhandle Creek.

Halligan Reservoir is located approximately one mile downstream from the end of the study area. The reservoir was constructed in 1909 by North Poudre Irrigation Company primarily for agricultural irrigation. Since that time, demands by Front Range communities have increased and now the main purpose of the reservoir is as a municipal water supply for the city of Fort Collins. The reservoir is located outside of the study area boundaries. The City of Fort Collins completed a

²The Management Area Prescription numbering system has changed since the 1984 *Forest Plan* was published. Prescriptions 1.3, 3.3, and 4.3 replaced 2B, 3.5 replaced 5B, and 5.1 replaced 6B and 9B.

feasibility study in February 1989 on the expansion of the reservoir. When Halligan Reservoir is expanded, its waters will not extend to the Forest boundary in Segment 6. The Suitability Study adjusted the boundary from the Eligibility Study, moving it from Dale Creek west to the Forest Boundary in Section 24 to avoid a conflict with the expansion of Halligan Reservoir. There are no other existing impoundments nor potential water resource development sites within the study area.

Streamflow

Very little current hydrologic information exists for the North Fork. Generally, there are large fluctuations month to month. The minimum flow is in December or January and the maximum is in May or June, with a significant drop from September to October. The calculated fall of the river is 99 feet per mile with a maximum of approximately 200 feet per mile through the canyon area west of Dale Creek (Black et al., 1959).

Minimum instream flow appropriations regulated by the Colorado Water Conservation Board tend to be below normal base flow for the river. Two cubic feet per second (cfs) are maintained at the headwaters and the flow increases gradually to the eastern Forest boundary where the minimum flow is 20 cfs.

Crystal Lakes Water and Sewer Association will continue to augment water of the North Fork according to its Water Augmentation Plan which is filed with the State of Colorado. The Association will also fill its reservoir, Crystal Lake, on Panhandle Creek from February to May. The filling of this reservoir can prevent any Panhandle Creek water from entering the North Fork Poudre, thereby, reducing the flow of the North Fork Poudre by approximately one-half (at the Panhandle Creek/North Fork Poudre junction) for that four month duration.

Water Quality

No specific water quality information is available. The river is generally considered to be of high quality. During periods of heavy rainfall or releases from Eaton or Crystal Lake Reservoirs, sedimentation causes short-term discoloration. There are no known sources of pollution.

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

Vegetation

The upper portions of the river are surrounded by Engelmann spruce-subalpine fir and lodgepole pine forests. Segment 3 has numerous beaver ponds along the river. At lower elevations ponderosa pine and Douglas-fir are found. The eastern portion of Segment 6 is dominated by mixed grasses, with scattered patches of Ponderosa pine, juniper, and true mountain mahogany.

There is one federally listed Threatened and Endangered Species confirmed within the river corridor. *Aletes humilis*, a rare member of the parsley family, is found on Turkey Roost and in Phantom Canyon. This plant is found in only eight locations world-wide. All locations are in

Larimer and Boulder counties in Colorado and Albany county in Wyoming.

Potentilla rupincola is on the Colorado State list of threatened and endangered species and is found on decomposed granite in the Virginia Dale and Diamond Peak areas. Turkey Roost has the same type of decomposing granite as these areas and may also support this plant species.

Wildlife and Fisheries

Numerous species such as elk, deer, black bear, beaver, mountain lion, bobcat, bald and golden eagles, peregrine falcons and an assortment of other birds and small mammals inhabit the river corridor. Several species on the Endangered and Threatened Wildlife and Plants list have been spotted in and potentially inhabit the area along the North Fork Poudre. Bald eagles, an endangered species, are known to winter along Eaton Reservoir and Halligan Reservoir, and the lower reaches of the Cache la Poudre River. Bald eagles have also been seen in the summer downriver of the study area; therefore, it is very possible that bald eagles also inhabit upper areas of the North Fork Poudre. American peregrine falcons, an endangered species, have been sighted along the river corridor although there are no documented nesting sites in the area.

Greenback cutthroat trout, a threatened species, originally occurred in the North Fork Poudre from its headwaters to its foothill tributaries (Neely 1986). Greenbacks were transplanted into Cornelius and George Creeks, both of which flow into the North Fork Poudre. Even with fish barriers installed on the creeks, the possibility exists that greenbacks have worked their way into the North Fork Poudre.

The North Fork Poudre drainage serves as one of the most important migration routes for elk in the area. The upper one-third contains summer range for elk and deer. The remaining two-thirds is important winter range for deer and elk and is also used by deer in the summer. Mule deer, beaver, black bear, bobcat, and numerous non-game birds and mammals rely on the riparian habitat.

The North Fork Poudre is an important fishing resource in northeastern Colorado. The DOW manages all of the river segments as wild, self-sustaining trout fisheries. Segments 1 and 2 are dominated by brook and brown trout. The remaining segments contain primarily brown and rainbow trout.

Scenery

The course of the North Fork Poudre travels through highly diverse topography and vegetation types. There are densely forested expanses of Engelmann spruce/subalpine fir and lodgepole pine in the western reaches; lush valleys with numerous beaver ponds and drier hills where ponderosa pine are well-established in the central portions of the study area, and open range land and steep granite-walled canyons in the eastern section to the Forest boundary. There is spectacular scenery through the canyons of the river with the river falling in places at 200 feet per mile, with numerous pools and one 15 foot waterfall. Areas along the corridor that have not been touched by human development are examples of the rough and primitive country of the Front Range.

USE AND OCCUPATION OF THE FOREST

Transportation and Facilities

Segment 1 - The Deadman Road (Forest Development Road (FDR) 162) is a two lane gravel road that parallels the river through most of this segment (approximately 3 miles) An old logging road crosses the North Fork Poudre in the NE 1/4 of Section 30, T 10 N , R.74 W . It is used for dispersed camping during fishing and hunting seasons. The Deadman Road crosses the North Fork Poudre at the North Fork Poudre Campground Just east of the campground another logging road parallels the river (lodgepole pine provides visual screening) for 1/4 mile when it splits, one fork crossing the river over a primitive bridge and heading north and the other fork paralleling the river for 1/4 mile This area is also popular for dispersed camping and fishing. The North Fork Poudre Campground is a small, developed campground near the eastern portion of this segment.

Segment 2 - There are no roads, trails, or developments through this segment. Some unmentioned trails and tributary drainages are used for access to the river. Access is provided at the western end by the logging road just past the North Fork Poudre Campground. Access from the east is through privately owned Beaver Meadows Resort at the western end of a 4WD road in SW 1/4 of Section 10, T.10 N., R 74 W

Segment 3 - This area encompasses two private developments, Beaver Meadows Resort and Crystal Lakes. Several roads access homes in these developments; some of these homes are located in the flood plain and are visible from the river. Three road bridges cross this segment and four hiking trail bridges also cross the North Fork. There is a four-wheel drive road (mentioned above under Segment 2) that parallels the North Fork but is well-screened from the river. The western 1/4 of this segment is unroaded Private land developers have proposed to construct additional homes with corresponding roads within the river corridor.

Segment 4 - Access to this segment from the south is from two forks off the Creedmore Lakes Road (County Road 73C) One of these forks leads to Creedmore Lakes (FDR 181). Hiking access to the river from this point is possible by following the eastern shore of the first lake and following the drainage (no developed trail) north to the North Fork Poudre The other road forks just to the west of Creedmore Lakes and allows driving access to the North fork Poudre in Section 5, T 10 N , R 73 W

FDR 182 travels through Colorado DOW land to within approximately 1/4 mile of the North Fork Poudre (central portion of this segment) in Section 27, T 11 N , R.73 W. Anglers can access the river by hiking east through the meadow. The Colorado DOW has a primitive campground on FDR 182 in Section 27.

Segment 5 - From the southern portion of this segment FDR 334 passes through private land including ranches and mountain guest resorts This road crosses the North Fork Poudre in SW 1/4 of Section 29, T 11 N , R.72 W There is no guaranteed public access on this road at the present

The Cherokee Park Road crosses the North Fork Poudre in SE 1/4 of Section 21, T.11 N , R 72

W. The Colorado DOW angler access trail (SE 1/4 of Section 21, T.11 N., R 72 W.) allows access to the western portion of this segment. A power line twice crosses the North Fork Poudre in Sections 21 and 29, T 11 N., R.72 W.

Segment 6 - Several private ranches are located in the western portion of this segment. Southern access to this segment is via the angler access trail mentioned above under Segment 5. By Turkey Roost (SE 1/4 of Section 23, T 11 N., R.72 W) there are two DOW angler access trails, one leading west around Turkey Roost to the river and the other going east from Turkey Roost to the river

Recreational Activities

The river provides a variety of developed and dispersed recreational opportunities as displayed in Table D 12. Two campgrounds along the North Fork are full every weekend and many weekdays during the summer months. Dispersed camping occurs during the summer and fall but is most prevalent during the hunting season. Hiking in the area near the river is mainly associated with either fishing or hunting. There is a minute amount of whitewater kayaking. The river itself is very narrow and extremely challenging offering a creek type of kayaking experience. Turkey Roost, a prominent hill in Segment 6, is popular with hikers and technical rock climbers.

Fishing for brown trout is popular along the river. Rainbow and brook trout are also plentiful. As spring water flows decrease, anglers are able to wade the river in most places and, therefore, are able to access much of the more remote segments of the North Fork Poudre. Hunting is also important along the river corridor. Elk and deer are plentiful in the region. Some small game hunting also occurs.

Table D.12 Recreation Activities (Estimated Recreation Visitor Days - RVDS):

ACTIVITY		YEAR	
		1993	2000
HUNTING		2,500	3,000
FISHING		900	1,000
CAMPING	Developed	3,800	4,200
	Dispersed	2,300	3,000
HIKING		1,600	2,000
TOTAL		11,100	13,200

Heritage Resources

The North Fork Poudre drainage has been used by humans for an estimated 11,000 years. The area appears to have been used seasonally by prehistoric people for hunting game and for gathering

wild plants. Evidence of these activities can be found along the river terraces, around the shores of lakes, and on high ridges.

The area was probably visited in the early 1800's by Euro-American explorers and fur traders. Remains of one cabin, built by a trapper named "French Pete", is believed to date to the 1850's. Later, from the 1870's to 1900, the North Fork Poudre drainage was the scene of numerous ranches and homesteads. Evidence of early irrigation projects includes Halligan and Seaman Reservoirs. There was also tourist activity as evidenced by several dude ranches such as the Cherokee Park Ranch and Trails End Ranch. Some ranching continues today.

PRODUCTION OF NATURAL RESOURCES

Timber Production

Very little suitable lands are available for intensive timber management. Timber has been harvested in Segments 1 and 2 covering 374 acres. Owing to the limited timber value and the lack of current plans for vegetative treatment, annual sale quantity and volume were not calculated for this report.

Livestock Grazing

Four grazing allotments are within the study area. Deadman Allotment covers all of Segment 1 and the western third of Segment 2. Prairie Divide Allotment is located in Segment 4 with the North Fork as its northern boundary. The North Fork Allotment covers the eastern half of Segment 4 and all of Segment 5 with the North Fork of the Poudre as its southern boundary. The Mill Creek Allotment encompasses a small northwest corner in Section 24, T.11 N, R.72 W. in Segment 6. A total of 4,435 acres are under allotments within the study area.

Allotments have varying impacts on the river corridor. Deadman is an active allotment but the cattle do not travel through the dense vegetation to the river. Mill Creek Allotment is now vacant. Prairie Divide and North Fork Allotments are both active with cattle able to access the river.

Locatable and Leasable Minerals

Two sections along the 30 mile stretch have active mining claims for locatable minerals. In Segment 6 Pine Creek Mining Company has 16 active claims (Section 24, T.11 N., R.72 W). In Segment 5 (Section 28, T.11 N, R.72 W) this same company holds 11 active claims. In both segments existing mineral activity is allowed, although it must be conducted in manner that minimizes surface disturbance, sedimentation, and visual impairment. Access is permitted.

In Segment 4 three mining companies, Cominco American, Inc., Resources International Partners, and Koenig King hold a total of 65 claims. According to the Bureau of Land Management records, these claims are all closed. There is no known mineral potential and no interest expressed in oil and gas leasing.

SOCIAL AND ECONOMIC ENVIRONMENT

Red Feather Lakes is a small mountain community with local businesses highly dependant on tourism. Red Feather Lakes is located along the main road that accesses the western portion of the North Fork Poudre. Two mountain communities are located in Segment 3, Beaver Meadows Resort and Crystal Lakes. Beaver Meadows actively promotes recreation activities (e.g. fishing, hiking) on its lands. Crystal Lakes is a private mountain community which maintains its privacy and discourages any public activity. Designation may increase property values and be advantageous to the private landowners but may also increase public visits to the area and potential conflicts may arise.

3 FINDINGS OF ELIGIBILITY AND CLASSIFICATION

The eligibility study of the North Fork Poudre was completed by the Forest in 1989 and subsequently became Amendment 12a to the *Forest Plan*. The North Fork Poudre was found eligible for further study to determine whether it should be included in the National Wild and Scenic river system. This conclusion was reached using the eligibility criteria outlined in Section 2(b) of the Wild and Scenic Rivers Act of 1968. This states:

(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.

Values referred to in Section 1, subsection (b) are " ..outstandingly remarkable scenic, recreational, geologic, historic, cultural, fish and wildlife, or other similar values." To qualify as an outstandingly remarkable values, a river-related value must be a unique, rare, or exemplary feature that is significant at a regional or national level. Specific criteria for individual resource values are used to evaluate each segment.

Further clarification in determining river eligibility was found in "Guidelines for Evaluating Wild, Scenic, and Recreational River Areas", prepared jointly by U.S. Departments of Agriculture and Interior. Table D 13 describes the potential classification of the river

Table D.13 Potential Classification

SEGMENT	CLASSIFICATION	MILES
1	Recreation	2.9
2	Wild	2.8
3	Recreation	4.9
4	Wild	9.2
5	Recreation	4.2
6	Wild	6.0
TOTAL MILES		30.0

OUTSTANDINGLY REMARKABLE VALUES

The North Fork of the Cache la Poudre River has several outstandingly remarkable values including spectacular scenery, exceptional whitewater with a beautiful waterfall during early spring runoff, a riparian zone furnishing habitat for wildlife including bald eagles and peregrine falcons, and an important migration route for elk and mule deer.

The topography is highly diverse including: densely forested expanses of Engelmann spruce/subalpine fir and lodgepole pine in Segments 1 and 2; lush valleys with numerous beaver ponds and drier hills where ponderosa pine are well established in Segments 3, 4 and 5; and, open range land and spectacular, steep, granite-walled canyons in Segment 6. The river falls in Segment 6 at a rate of 200 feet per mile and has one spectacular 15 foot waterfall. Many areas along the corridor in Segments 4, 5 and 6 have not been touched by human development and are examples of the rough and primitive country of the front range

4 ALTERNATIVES INCLUDING THE PROPOSED ACTION

ISSUES IDENTIFIED TO DEVELOP ALTERNATIVES

Before alternatives were developed, issues were identified through the public notification and scoping process. The public involvement process for the suitability study began after the North Fork Poudre was found eligible for designation into the National Wild and Scenic Rivers system in April 1990.

In the fall of 1992, the Forest Plan Revision Newspaper highlighted the suitability study stating the issues and processes of this study. Comments were encouraged. A letter from the Forest Supervisor was mailed to concerned individuals, groups and public agencies. This letter discussed the eligibility study and explained the suitability study as well as inviting those receiving the letter to get involved with the study. On April 19, 1993, the Coloradoan, Fort Collins' newspaper, ran an

article on the North Fork Poudre study for possible Wild and Scenic designation. Additional letters were mailed to people calling to request more information. Those who requested information included representatives from North Poudre Irrigation Company, Union Pacific Resources-Minerals, and private landowners within the study area.

Comments were received by mail and by phone. In all 15 comments were received. Eight of these (4 from groups, 3 from individuals) favored designation of the North Fork Poudre. The Colorado DOW felt its management would not be impeded by designation. Four of the comments came from private landowners and one came from a private landowners association, all of which were not in favor of designation. Two additional comments, one from Union Pacific and one from a private landowner, expressed concerns but did not discuss their opinion for designation.

Comments received from the public and other agencies were summarized into four major categories. They were used to develop and evaluate management alternatives. The four categories focused around the following:

- Long-term protection or enhancement of instream and shoreline resources, including free-flowing character, water quality and quantity, geology, and fish habitat. There is a diminishing quantity of unique free-flowing rivers. The North Fork Poudre should be preserved for the future.
- Long-term protection or enhancement of important upland resources, including scenery, geology, wildlife habitat, and vegetation.
- Protection of private landowners rights. Private landowners are concerned how designation would effect their land. Concerns centered on their rights to develop their land or construct ponds, water diversions (and other water uses) or buildings, increasing recreation use will cause increasing trespass problems, and fears of condemnation.
- Effects of designation on the local economy as it effects ranchers, small communities such as Red Feather Lakes or private developments such as Beavers Meadows and Crystal Lakes. Land values may be effected due to designation.

A range of alternatives was developed based on these issues. The Secretaries' Guidelines to implement the Wild and Scenic Rivers Act (Federal Register/Vol. 47, No. 173/September 7, 1982) state that a range of alternatives must be evaluated. The reasons are to provide for both improved decision making and to satisfy the requirements of the National Environmental Policy Act. These regulations also state that the Forest Service will develop an array of alternatives encompassing all reasonable proposals including at least one alternative calling for national designation as a wild and scenic river and alternative protection measures other than national designation. A current direction or no action alternative is also required.

Five possible alternatives were developed by the Interdisciplinary Team (IDT). Presented first are alternatives considered in detail, followed by alternatives considered but eliminated from detailed study.

ALTERNATIVES CONSIDERED IN DETAIL

Alternative 1 - No Action Alternative - Manage area as directed in the *Forest Plan* prior to the eligibility determination

Alternative 1 serves as a benchmark for alternative comparison and would propose managing the area as originally allocated in the *Forest Plan*. The 10D management area would be removed and the study area would revert back to the following management area prescriptions³:

- 2B - Dispersed recreation emphasis south of the river in Segments 1 and 2, all of Segment 3.
- 9B - Vegetation manipulation emphasis north of the river in Segments 1 and 2
- 5B - Big game wildlife winter range emphasis in Segments 4 and 5.
- 6B - Livestock grazing emphasis in Segment 6.

No designation of any type would be accorded the North Fork Poudre River.

Alternative 2 - Proposed Action - Wild and Scenic River Designation With Classifications as Proposed in the Eligibility Study

The proposed action was the starting point for developing alternatives to the proposed action and general management of the area. The North Fork Poudre and its immediate environment (1/4 mile corridor on each side) would be recommended for designation into the National Wild and Scenic Rivers System. This alternative would classify segments 1, 3 and 5 with the "Recreation" designation and segments 2, 4, and 6 with the "Wild" designation. Recreational and Wild rivers are managed to be free of impoundments. Recreational rivers can have modification of the river environment such as buildings and roads. Wild rivers are generally inaccessible except by trail with few to no river environment modifications. A management plan designed to protect and enhance the values for which the North Fork Poudre was designated would also be developed.

Alternative 3 - Wild and Scenic River Designation for Segments 1, 2, 4 and 6 with Classifications as Proposed in the Eligibility Study

This alternative eliminates the two segments, 3 and 5, which are dominated by private land. The 10D management area would be removed from these two segments. Segment 3 would be managed to emphasize dispersed recreation and segment 5 management would emphasize big game wildlife winter range.

Of the remaining segments, 1 is proposed as "Recreational" and segments 2, 4 and 6 are proposed as "Wild". These four segments and their immediate environment (1/4 mile corridor on each side) would be recommended for designation into the National Wild and Scenic Rivers system. A

³The Management Area Prescription numbering system has changed since the 1984 Plan was published. Prescriptions 1 3, 3 3 and 4 3 replaced 2B, 3 5 replaced 5B, and, 5 1 replaced 6B and 9B

management plan designed to protect and enhance the values for which the North Fork Poudre sections were designated would be developed.

Alternative 4 - Wild and Scenic River Designation For Segment 6 Only with the Classification as Proposed in the Eligibility Study

This alternative keys in only on the segment which has the greatest potential for an impoundment and which has high scenic and streamflow qualities. This 6 mile segment is proposed as "Wild" in the Eligibility Study. This segment and its immediate environment (1/4 mile corridor on each side) would be recommended for designation into the National Wild and Scenic Rivers system. A management plan designed to protect and enhance the values for which this North Fork Poudre section was designated would be developed.

The remaining segments 1-5 which will not be designated will revert back to the prescriptions described under Alternative 1.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

Alternative 5 - Protect the scenic and water quality values of the corridor by means other than national designation.

This alternative would not recommend designating the North Fork Poudre as a Wild and Scenic River. A Forest Plan Management Prescription would be written to ensure maintenance of high scenic and water quality values within the river corridor (1/4 mile on either side of the river's high water mark).

Neither the public nor the IDT favored this alternative. The IDT judged that the State's water quality standards would protect the North Fork Poudre negating the need for a separate Management Prescription. The IDT also felt the Roosevelt National Forest's Visual Quality Objectives could protect the scenic quality of the river. No private individuals, groups or entities supported this alternative. They felt that an additional cumbersome bureaucratic layer would be placed on the North Fork Poudre River management that wasn't necessary.

COMPARISON OF ALTERNATIVES ON THE KEY ISSUES

The following table summarizes how each of the alternatives addresses each of the four key suitability issues listed above

Table D.14 Impacts of the Alternatives on Key Issues

Key Issues	Alternatives			
	1 Recreation, Wildlife, Range	2 All Wild and Scenic	3 Partial Wild and Scenic	4 Wild and Scenic 1 Segment Only
Protection of Instream resources				
Mining	-	+	0	-
Grazing	0	0	0	0
Geology	-	+	0	0
Free-flowing/Water Quality	-	+	-	-
Soil	-	0	0	-
Vegetation	-	0	0	-
Fisheries	-	+	-	-
Overall Effect	-	+	-	-
Protection of Upland Resources				
Geology	-	+	0	0
Wildlife	0	0	0	0
Heritage Resources	0	0	0	0
Timber Production	0	0	0	0
Mining	-	+	0	0
Overall Effect	-	+	0	0
Effects on Private Property				
Increasing Recreation Use	0	-	-	0
Trespass	0	0	0	0
Condemnation	0	0	0	0
Water Development	+	0	+	+
Overall Effect	+	-	0	+
Effects on Local Economy				
Local Business	0	+	+	0
Property Values	0	+	0	0
Overall Effect	0	+	+	0

+ Beneficial effect

0 May have some beneficial and some detrimental effects

- Detrimental effect

5 ENVIRONMENTAL CONSEQUENCES

This section discloses the potential consequences or impacts that would occur if any of the four alternatives to be studied in detail were implemented. The intent of this section is to provide an analytical basis for comparison of alternatives. Sections 2 and 4 provide the basis for comparison.

Environmental effects can be direct, indirect or cumulative. They can be quantitative or qualitative, short or long duration, adverse or beneficial, real or potential. These effects can be expressed in terms of changes that would occur in the **Physical** (land, water, air); **Biological** (plants and animals); and, **Social** (the way people live) and **Economic** (money passing through society) components of the human environment.

No measurable effects were found related to air quality and threatened and endangered plant or animal species; therefore, those components are not discussed in detail in this section. The bald eagle, American peregrine falcon, greenback cutthroat trout, and Aletes humilis are endangered species which inhabit the corridor and are all protected under the Endangered Species Act.

Ongoing regular uses of private lands, particularly those existing at the time that the river is designated, are not directly affected. Most private land use on homes and farms are compatible with any management area direction, including Wild and Scenic River management. Existing uses would continue. The ability to buy and sell property will not be affected by designation. Uses on private lands are regulated by county zoning.

PHYSICAL ELEMENTS OF THE ENVIRONMENT

Geology

Some of the effects to geologic features relate to mining activities and are discussed in the section on Locatable and Leasable Minerals. Unique precambrian granite outcrops occur throughout the North Fork Poudre system with the most spectacular example in Segment 6.

Alternative 1 - There would be no protection of the river and its surrounding lands from dam construction, therefore, the canyon of Segment 6 and the rock outcroppings in the other segments could be inundated by a reservoir.

Alternative 2 - As a designated Wild and Scenic River, the North Fork would have no additional impoundments, therefore, the geologic resources would be protected.

Alternative 3 - Some of the geologic features would be preserved, most notably the canyon in Segment 6. Any geologic features in segments 3 and 5 potentially could be lost.

Alternative 4 - The canyon in Segment 6 would be preserved, all other geologic features would not be protected.

Water Resource Development and Streamflow

Effects Common to All Alternatives - Concern exists over how the Forest Service will condition water diversion or storage projects that occur on National Forest and/or projects that are regulated by other agencies that may have an effect on the National Forest. This concern relates primarily to requirements in the Forest Plan Standards and Guidelines that require establishment of channel maintenance flows and fisheries flows for special use permits for water development. These conditions apply to all National Forest system lands regardless of the management prescription or special designation and are more appropriately addressed in the overall Forest Plan revision.

Crystal Lakes Water and Sewer Association will continue to augment water of the North Fork according to its Water Augmentation Plan (filed with the State of Colorado). The Association will also continue to fill its reservoir, Crystal Lake, on Panhandle Creek from February to May. The filling of this reservoir can prevent any Panhandle Creek water from entering the North Fork Poudre, thereby, reducing the flow of the North Fork Poudre by approximately one-half (at the Panhandle Creek/North Fork Poudre junction) for that four month duration.

Alternative 1 - Water resource development could occur depending on approval through the proper agencies. These new water developments could substantially alter existing river flows. Streamflow outstandingly remarkable values could be lost. Minimum instream flows as regulated by the State would continue, however, these tend to be below normal base flows.

Alternative 2 - Federal reserved water rights would be established which may effect future water development projects. No impoundments of the mainstem would be allowed within the entire designated portion. Stream flow values would be maintained.

Alternative 3 - For the segments designated under the Wild and Scenic River Act the effects would be the same as Alternative 2. For segments 3 and 5 the effects would be the same as Alternative 1. Filing for reserved water rights would be complicated due to the juxtaposition of designated and nondesignated segments. Therefore, though some segments may be protected, the unprotected segments may cause a loss of streamflow values throughout the river.

Alternative 4 - Segment 6 would have no impoundments along the mainstem. Federal reserved water rights could only be established for this segment. This may be difficult to do for a 6 mile segment. Segments 1-5 would have effects similar to Alternative 1. Because all upstream segments could have altered water flows, the protected segment could lose its outstandingly remarkable streamflow value.

Free Flowing Characteristics

Comments indicated that there was a diminishing quantity of unique, free-flowing rivers. The North Fork Poudre is one of a few rivers along the Front Range that meets these qualifications.

Alternative 1 - The free-flowing characteristic would not be legally protected. The North Fork Poudre could be dammed along its length. Dams can have negative effects on river environments.

and free flowing character as follows:

- 1 Dams can reduce river levels by diverting or holding back water for power. This effects the instream ecosystems.
2. Dams block rivers They prevent the flow of plant material and nutrients. They impede the migration of fish and other wildlife. They can also block recreational use of the river
3. Dams can slow rivers This is not beneficial to some fish species. The slowing water can alter water temperatures. Fish and other species are sensitive to temperature and native populations can be lost. By slowing flows, dams allow silt to collect on river bottoms and bury fish spawning habitat.
- 4 Dams alter timing of flows By withholding and then releasing water, dams cause downstream stretches to alternate between no water and surges that may erode soil and vegetation, and flood and strand fish.

Alternative 2 - The free-flowing characteristic of the North Fork Poudre would be preserved through Congressional designation. Actions on public or private lands that could effect the free-flowing characteristic would not be allowed.

Alternative 3 - The free-flowing nature of the river would be more difficult to ensure because two segments juxtaposed within the protected segments would not be subject to maintaining free-flow

Alternative 4 - The free-flowing nature of the entire study river would be mostly left unprotected with only a 6 mile segment which would legally be protected.

Water Quality

Effects Common to Alternatives 1, 3, and 4 - Water quality would remain at current levels but could decrease depending on future upstream activities such as mining, septic systems leaking from private dwellings, and/or management actions increasing sediment loading in the river (e g., timber harvest, road maintenance, grazing) Protected segments in Alternatives 3 and 4 could experience decreasing quality due to the upstream activities on unprotected segments No increase in water quality standards (above what is already mandated by the State) would be expected.

Alternative 2 - Wild and Scenic River designation has strict environmental quality standards and may require nondegradation measures for water development projects not located on NFS lands Water quality standards could be moved to the "Outstanding" category based upon water quality and land use The State can raise the level of water quality on Wild and Scenic Rivers or those with other special designations. Special designations like a wild and scenic river could make the move to the outstanding category possible, however, it is not mandatory nor automatic. There are seven outstanding water quality areas in the State and none of these are Wild and Scenic Rivers.

Soils

Effects Common to All Alternatives - The soils resource could be adversely effected in areas which receive heavy recreation use or grazing in the riparian Soil compaction causes a loss in vegetative cover which increases the potential for soil erosion These effects can be mitigated by

closing areas to overnight camping and revegetating the area and by fencing cattle out of riparian or using salting techniques to encourage grazing away from the riparian.

Alternative 1 - Impacts to the soil resource could increase depending on future activities such as mining and other actions increasing soil compaction (recreation, timber harvest, grazing)

Alternative 2 - The soils resource could benefit in the "Wild" segments by curtailing mining and other management activities and in the "Recreational" segments by better managing to lessen the impacts of activities such as recreation, timber harvest and grazing

Alternative 3 - Management actions on the protected segments could lessen impacts as stated under the effect of Alternative 2. Effects on the unprotected segments will depend on private landowners' individual management as well as management on public lands (mining requests).

Alternative 4 - On all but Segment 6, the impacts to the soil resource could increase. Segment 6 which has cattle grazing in parts may experience degradation unless nonobtrusive methods of keeping cattle outside of the riparian are implemented. But mining will not be allowed

BIOLOGICAL ELEMENTS OF THE ENVIRONMENT

Vegetation

Effects Common to All Alternatives - Vegetation could be affected if use increases, resulting in soil compaction in heavily used areas. Effects can be mitigated as discussed in the soils section.

Wildlife

Effects Common to All Alternatives - Recreation use is not expected to increase much in any of the alternatives. An increase could occur due to the general increase of use due to an increasing Front Range population (see Recreation discussion). No effects from recreation impacts on wildlife will occur.

Alternative 1 - Alternative 1 will allow implementation of projects specifically for wildlife habitat improvement, especially within Segments 4, 5, and 6. Vegetation treatments such as prescribed burning and timber harvesting (Segments 1 and 2) could increase habitat diversity and increase forage production. Productive riparian habitat could be lost if a dam/reservoir were constructed.

Alternative 2 - Management activities to improve wildlife habitat would be limited in the "Wild" segments (segments 2, 4, and 6) due to the lack of access and direction that emphasizes no environmental modifications. Improvements in the "Recreation" segments (segments 1, 3, and 5) are allowed and could be emphasized as part of a watchable wildlife program. Wildlife habitat improvement on the segments dominated by private land would have little or no improvement. Because no dam/reservoir would be built, there will be no loss of riparian habitat.

Alternative 3 - Effects are identical to Alternative 2.

Alternative 4 - Segment 6 as a "Wild" segment would neither improve nor degrade with respect to wildlife. Because all other segments would not be protected, the effects are the same for these segments as stated under the Effects of Alternative 1

Fisheries

All segments of the river are managed by the Colorado DOW as wild, self-sustaining trout fisheries. Segments 1 and 2 are dominated by brook and brown trout. The remaining segments contain primarily brown and rainbow trout

Alternative 1 - Water quality is not expected to decrease below state standards. Temporary decreases to water quality from mining, timber harvesting, and/or prescribed burning could have a short term effect on fisheries. If a dam were built, fish populations could be effected as discussed under the "Free-Flowing Characteristics" in this section

Alternative 2 - Water quality would remain the same or improve under river protection. There may be an opportunity to improve fisheries habitat in both the wild and recreation segments. Improvements in the wild segments (Segments 2, 4, and 6) would be limited to modifications that do not change the river environment. Improvements in the recreation segments (Segments 1, 3, and 5) are allowed as long as they are minimally intrusive.

Alternative 3 - Effects would mainly come from segments not protected under the Wild and Scenic Rivers Act. Since fish occur throughout the river, one segment of unprotected river can effect fish population in all segments. Therefore, the effects are the same as Alternative 1

Alternative 4 - Effects would mainly come from Segments 1 through 5 not protected under the Wild and Scenic Rivers Act. Therefore, the effects are the same as Alternative 1.

USE AND OCCUPATION OF THE FOREST

Recreational Activities

Recreation use of the Front Range forests of Colorado is increasing as the populations of the urban communities increase. Therefore, recreation use is expected to increase regardless of the alternative implemented. Current problems such as trespass, illegal camping, poaching, etc. will continue to increase whether the North Fork Poudre receives special designation or not.

The Forest Plan has standards by which the public land surrounding the North Fork Poudre will be managed. Monitoring of management and impacts due to multiple use is also prescribed in the Forest Plan. An advantage of Wild and Scenic designation is that Federal and State funds become available aside from what would normally be available to manage the National Forest. These funds can be used to improve management through better law enforcement, enhanced recreation

facilities, better range management and improved monitoring.

Alternative 1 - Use levels within the river corridor will increase in response to an increasing recreating public. No other increasing recreation use can be expected. Increased use could cause environmental damage and increasing conflicts between private landowners and individuals. Without special designation, no additional Wild and Scenic River funds will be available for improving facilities, law enforcement or monitoring of use.

The emphasis south of the river in Segments 1 and 2 and in all of Segment 3 would be dispersed recreation; therefore, use may increase. Motorized recreation opportunities would be featured in Segment 1 along the Deadman Road. Dispersed nonmotorized use would continue in Segment 2 and facilities to foster this use could be developed. National Forest lands around the private development at Beaver Meadows and Crystal Lakes in Segment 3 would provide dispersed nonmotorized opportunities and as in Segment 2, facilities to foster use could be developed. Facilities within the corridor of Segment 2 could change the "wild" characteristic of the river to "scenic" or "recreation" depending on level of development. The "recreation" characteristic along Segments 1 and 2 are not expected to change. A campground is planned near Creedmore Lakes (outside the 1/4 mile corridor). When this is built, this river section could have increased recreation use. Recreation would not be emphasized in Segments 4, 5, or 6.

Alternative 2 - Use levels within the river corridor will increase in response to an increasing recreating public. Use levels may increase slightly higher than under Alternative 1 due to Wild and Scenic designation. The concern for some, is that a special designation will draw more people to the area. National designation of a Wild and Scenic River may theoretically increase use, but no published studies exist to date documenting an increase.

To find out more about this issue, the Bridger-Teton National Forest staff (doing a study of seven eligible Wild and Scenic rivers) contacted river coordinators on other National Forests in Wyoming, Montana, Colorado and Idaho who manage designated Wild and Scenic rivers. In response to the question about whether there had been a change in the type or level of use due to designation, the coordinators responded that there had been increases in recreation use, but it was probably not due to designation. They said that when the river has navigable boating there seems to be an increase in use and again this may or may not be due to designation as a Wild and Scenic river. White water boating, nationwide, has become a very popular pastime.

Because the North Fork Poudre has limited boating opportunities and no commercial boating opportunities, it is not likely that recreation use will increase due to Wild and Scenic River designation. Fishing pressure is low to moderate. Several access points are available to anglers. Development of facilities (such as a short trail from the North Fork of the Poudre campground or a campground near Creedmore Lakes) will enhance these existing opportunities. Hunting is not expected to increase due to Wild and Scenic River designation.

Camping will be controlled by river access. Where there is no easy access, there is no camping. Improved facilities such as the North Fork of the Poudre Campground and a new campground located near Creedmore Lakes will draw campers and also help to draw would-be camping.

trespassers away from private lands.

A river management and monitoring plan will be written to guide management. With Wild and Scenic Rivers funding facilities can be built to attract people off private lands and onto public lands and additional law enforcement officers can deal with trespass and other regulated activities. A managed program on nonprivate lands can benefit the private landowners by highlighting the public lands and de-emphasizing private lands

Alternative 3 - Use levels within the river corridor will increase in response to an increasing recreating public. Use levels may increase slightly higher than under Alternative 1. Boating, fishing, hunting and camping impacts will be similar to Alternative 2. However, development of facilities may not be possible due to lack of funding (described in the next paragraph). These facilities will not be present to draw potential private land trespassers away from the private land

A river management and monitoring plan may be more difficult to establish because of the lack of a unified river system. Federal Wild and Scenic rivers funding may be more difficult to obtain due to the lack of a unified system. Competition for Federal funding between Wild and Scenic River systems is tight. The North Fork Poudre will not be able to compete effectively against rivers which are of a more continuous nature. Because of lessened river management/monitoring and funding, law enforcement will be less effective and more problems may occur on private lands

Alternative 4 - Use levels within the river corridor will increase in response to an increasing recreating public. Because Segment 6 is small, no additional increases in use are expected. Boating, fishing, hunting and camping impacts are similar to Alternative 2.

Funding will be more difficult to obtain with only a 6 mile segment of river to manage. Facilities will not be constructed. Additional law enforcement will not be possible. A river management and monitoring plan will be written but will be minimally effective due to only a small section of the North Fork Poudre being protected under Wild and Scenic designation

Heritage Resources

Effects Common to All Alternatives - Because there are no significant historic or prehistoric sites within the North Fork Poudre Corridor, there will be no effects

PRODUCTION OF NATURAL RESOURCES

Timber Production

Effects Common to All Alternatives - Timber production would not be emphasized in any segments due to inaccessible (rough terrain) and economic considerations.

Livestock Grazing

Effects Common to All Alternatives - The greatest impact from livestock grazing will occur to the riparian vegetation along the river. Of the four grazing allotments within the corridor, two (Prairie Divide and North Fork) enable cattle to get to the river. Cattle utilizing the river can have a detrimental effect on the riparian vegetation along the river. If properly managed, the detrimental effects can be lessened by using a mixture of season-long and rotation grazing systems, constructing fences and/or other barriers to keep livestock out of heavily impacted areas, and, range improvements that disperse livestock over a larger area.

Alternative 1 - Livestock grazing could be emphasized and would occur in all other segments. Investments in range improvements would be used to facilitate and improve grazing systems. Improved grazing systems can improve range conditions and lessen impact to riparian areas.

Alternative 2 - Grazing would continue in both the wild and recreation segments. Range improvements in the wild segments (Segments 2, 4, and 6) would be limited to projects that do not modify the environment. These segments will have reduced management options but can still utilize grazing schemes to not adversely impact the river and its corridor. Range improvements in the recreation segments (Segments 1, 3, and 5) are allowed and can be used to keep livestock out of impacted areas. Conflicts with recreationists could increase in these segments.

Alternative 3 - Effects are similar to Alternative 2. Public lands within segments 3 and 5 which will not be designated will still have range improvements to control livestock.

Alternative 4 - Grazing would continue in all segments but the one segment designated as Wild and Scenic will have range improvement that do not modify the environment. Though there may be reduced management option, grazing can still be managed to minimize impacts to the riparian and the river. All other segments of the river would be managed to lessen grazing impacts on the North Fork Poudre and its surrounding lands.

Locatable and Leasable Mineral

Alternative 1 - Mineral production is not emphasized. Existing uses will continue. New uses could occur and change the character of the river and the features that made it eligible.

Alternative 2 - A mineral withdrawal will be applied for on the "Wild" segments (public lands) of the river. In the "Recreation" sections mining activities will be monitored to ensure that the features that made the river eligible are maintained.

Alternative 3 - Effects are the same as described in Alternative 2 with the exception that the nondesignated segments could have mining which may impact the entire North Fork Poudre.

Alternative 4 - A mineral withdrawal will be applied for the one designated segment of the river. All other segments, because they will not be protected could have mining which may change the character of the river and the features that made it eligible as a Wild and Scenic River. Because all

undesigned segments are upstream of the one protected segment, there could be impacts on water quality in the designated segment.

SOCIAL AND ECONOMIC ENVIRONMENT

Condemnation of Private Lands

The Forest Service has condemnation authority for general forest purposes and multiple uses. The Forest Service maintains a policy of dealing with willing sellers or land trades as a priority.

Alternative 1 - Land acquisition would not be a priority unless it helps to achieve management area direction. The risk of condemnation would be low.

Alternative 2 - Private landowners believe that there would be an increased interest in condemning private properties within the Wild and Scenic River corridor if such a designation was made. There is special language in the bill that allows for condemnation for the purposes of the Wild and Scenic designation. Acquiring lands within the corridor would be a high priority; however, the risk of condemnation would be low because the Forest Service maintains a policy of dealing with willing sellers.

Alternative 3 - Effects would be the same as Alternative 1 for nondesignated segments and the same as Alternative 2 for designated segments.

Alternative 4 - Effects would be the same as Alternative 1 for nondesignated segments and the same as Alternative 2 for the designated segment.

Trespass on Private Property

Effects Common to All Alternatives - Any action taken on National Forest lands does not open private lands to public access. Trespass will continue and may increase with increasing general recreation use of the area. All alternatives allow the private landowner to post their property. Impacts to private lands from users of the National Forest can be mitigated by developing access points and recreation facilities to draw potential trespassers away from private lands.

Water Rights and Water Development

Effects Common to All Alternatives - Concern has been raised by the Crystal Lakes Association concerning their plans to possibly transfer water from Crystal Lake Reservoir to North Lone Pine Creek via a diversion on the North Fork Poudre. Existing water rights are not affected by any type of designation. Existing irrigation systems and other water development facilities are not disturbed. Alterations to existing systems and new water projects (not on the main stem of the North Fork Poudre) which require federal permits may be allowed as long as they do not have an adverse effect on the values of the river corridor.

Existing water rights will not be adversely affected. Additional projects will be examined individually and if determined to have no adverse effect, may be allowed.

Alternative 1 - New water developments could be built on the North Fork Poudre.

Alternative 2 - No impoundments will be allowed in designated portions.

Alternative 3 - Water developments could be built on segments 3 and 5, but will be analyzed on their effects on the designated segments.

Alternative 4 - Water developments could be built on segments 1, 2, 3, 4 and 5, but will be analyzed on their effects on the designated segment.

Local Economy

Alternative 1 - No significant enhancement for local business would occur and land values would not receive a beneficial effect.

Alternative 2 - Some enhancement for local business would occur and land values could increase

Alternative 3 - A small enhancement for local business would occur and land values would remain relatively unchanged.

Alternative 4 - Same as Alternative 1.

6 ADDITIONAL INFORMATION - REFERENCES

Black, Peter E , et al 1959 Watershed Analysis of the North Fork of the Cache La Poudre River Colorado State University. Fort Collins, CO 121pp

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Fausch, K D and students in FW 401 Fisheries Science, Colorado State University 1984. Brown and Rainbow Trout Populations in a Section of the North Fork Cache La Poudre River during September 1983. Prepared for. Carl and Jeanne Judson Cattle Company.

Hulbert, Jim USFS (retired) Presently a consultant for Wild and Scenic Rivers, 509-493-3863

Neely, Elizabeth E 1986 Phantom Canyon, Colorado Preserve Design Prepared for The Nature Conservancy 27 pp

SECTION 4 FINDINGS OF SUITABILITY AND CLASSIFICATION

Based on the results of the suitability study for the North St. Vrain, Rock, and Cabin Creeks, the Forest Service does not recommend designation as a Wild and Scenic River for any segment. The outstanding resources are best protected through designation as a Research Natural Area. The preferred alternative and proposed Revised *Forest Plan* shall reflect this recommendation.

Based on the results of the suitability study for the North Fork of the Cache la Poudre River, the Forest Service recommends designation as a Wild and Scenic River for all segments. The preferred alternative and proposed Revised *Forest Plan* shall reflect this recommendation.

The following table displays the Forest Service recommendations based on the results of the suitability reports.

Table D.15 Suitability Status and Classification of Forest Rivers

NORTH ST. VRAIN, ROCK AND CABIN CREEKS			
SEGMENT	POTENTIAL CLASSIFICATION	MILES	FINAL CLASSIFICATION
1	Recreation	8.4	Not Suitable
2	Wild	1.8	Not Suitable
3	Wild	2.3	Not Suitable
4	Wild	1.9	Not Suitable
NORTH FORK CACHE LA POUFRE RIVER			
SEGMENT	POTENTIAL CLASSIFICATION	MILES	FINAL CLASSIFICATION
1	Recreation	2.9	Suitable
2	Wild	2.8	Suitable
3	Recreation	4.9	Suitable
4	Wild	9.2	Suitable
5	Recreation	4.2	Suitable
6	Wild	6.0	Suitable