Appendix

D

Appendix D – Wild and Scenic Rivers

Table of Contents

List of Tables

Appendix D

Introduction

The Wild and Scenic Rivers Act of 1968 established a policy for preserving selected rivers in a free-flowing condition, to protect water quality of such rivers and to fulfill other vital national conservation measures that would balance the development of water, power and other resources on rivers of the United States. The purpose of this appendix is to present a detailed description of each eligible river and a discussion on the suitability of individual rivers for inclusion in the National Wild and Scenic Rivers System (National System).

Basis in Wild and Scenic Rivers Act

With the passage of Public Law 90-542 (the Wild and Scenic Rivers Act of 1968), Congress called for the identification of potential wild, scenic, and recreational river areas within the nation:

> *"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 potential. 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."*
>
> - Wild and Scenic Rivers Act, Section 5(d)(1), 1968

Assessment Process

Given the existing Forest Plan did not include a forestwide assessment of potential wild and scenic rivers (WSR) other than recommendation of the Tongue and Little Bighorn Rivers, a forestwide eligibility and suitability analysis was undertaken preparatory to plan revision.

In 2001, the Forest developed and conducted a screening process from which to identify eligible rivers on the Forest. This process began with consideration of rivers listed on the Nationwide Rivers Inventory (NRI). The 1988 American Rivers list and a December 2000 letter from the Wyoming Chapter of the Sierra Club were also used to identify potential

eligible rivers. No additional rivers were identified through public scoping. Based on this input, the Forest hydrologist and the recreation planner on the revision team compiled the following initial list for further consideration:

1. Little Bighorn
2. Tongue
3. Piney
4. South Rock*
5. Tensleep
6. Crazy Woman
7. Cedar
8. Lodge Grass
9. Porcupine
10. Shell
11. Paintrock
12. Medicine Lodge

*District input resulted in the addition of South Rock Creek to the list.

Using this list, they made a preliminary assessment of the river's free-flowing condition and divided into homogeneous segments for additional analysis by District and Forest staff.

Eligibility

After potential candidates were identified, the next step was to determine whether or not the candidate rivers were eligible for inclusion in the National System.

To be eligible, two criteria need to be met – the river must be generally free-flowing (without major dams, diversions or channel modifications), and it must have one or more outstandingly remarkable values within the river area:

1. Scenery – landscape elements of landform, vegetation, water, color and related factors result in notable or exemplary visual features and/or attractions.
2. Recreational – recreational opportunities are, or have the potential to be, popular enough to attract visitors from throughout or beyond the region of comparison or are unique or rare within the region. Visitors are willing to travel long distances to use the river resources for recreational purposes.
3. Geological – the river, or the area within the corridor, contains one or more example of a geologic feature, process or phenomenon that is unique or rare within the region of comparison.
4. Fish – fish values may be judged on the relative merits of either fish populations, habitat or a combination of the river-related conditions.
5. Wildlife – values may be judged on the relative merits of either terrestrial or aquatic wildlife populations or habitat or a combination of these conditions.
6. Prehistory – the river, or area within the river corridor, contains a site(s) where there is evidence of occupation or use by Native Americans.
7. History – the river or area within the river corridor contains a site(s) or feature(s)

associated with a significant event, an important person or a cultural activity of the past that was a rare or one-or-a-kind in the region.

8. Other values – while no specific national evaluation guidelines have been developed for the "other similar values" category, assessments of values may be developed including, but not limited to, hydrology, paleontology and botany resources.

These values should be a unique or exceptional representation for the area studied and must be related to the river or its immediate environment. For study purposes, the Act requires the evaluation of a river's eligibility consider, as a minimum, the area within one-fourth mile of either side of the high water mark of the river.

As a result of consideration by District and Forest staff of each river's free-flowing condition and application of previously described eligibility criteria, four of the 12 rivers were determined ineligible as shown below:

1. Piney Creek: Typical of most rivers on the Forest, no outstandingly remarkable values (January 22, 2001 meeting with Tongue Ranger District staff).
2. Lodge Grass Creek: No outstandingly remarkable values (March 12, 2002 meeting with Medicine Wheel/Paintrock District staff).
3. Shell Creek: Not free-flowing (March 12, 2002 meeting with the Medicine Wheel / Paintrock District staff)
4. Medicine Lodge: No outstandingly remarkable values (March 12, 2002 meeting with the Medicine Wheel / Paintrock District staff)

Classification

The eight eligible rivers were classified as wild, scenic or recreational based on the level of instream and shoreline development and access.

The act provides the following direction for establishing classifications for eligible rivers:

Wild rivers: those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.

Scenic rivers: those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

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

Suitability

The final step in the process is the consideration of a river's suitability for recommendation to the National System. Suitability analysis addresses the factors identified in Section 4(a) and 5(c) of the Wild and Scenic Rivers Act. The ID Team considered the following criteria as part of the suitability process:

1. Characteristics that do or do not make the area a worthy addition to the National system.
2. Public input
3. Current status of land ownership and use in the area
4. Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System
5. Public, state and local governmental interests in designation.
6. Estimated cost of acquiring lands and management as a Wild and Scenic River

The analysis as documented above resulted in the table of river recommendations as shown on the following table.

Table D-1. River eligibility/suitability determination

River	Segment Description	Miles	Free Flowing	ORVs	Eligible Miles	Class	Suitable miles
Little Bighorn	A: Dry Fork Trail Bridge to Wagon Box Creek	9.7	Yes	Scenery	9.7	Scenic	9.7
	B: Wagon Box Creek to Fools Gold (FDR 480) crossing	4.11	Yes	Scenery	4.11	Scenic	4.11
	C: Fools Gold Crossing to headwaters	2.5[1]	Yes	No	0	n/a	0
	D: Dry Fork from Littlehorn to Lake Creek	6.2	Yes	Scenery	6.2	Scenic	6.2
	E: Lake Creek to source of Dry Fork	6.0[1]	Yes	No	0	n/a	0
Tongue	A: Bridge at Tongue River Canyon to T56N, R88W, sec 21	8.1	Yes	Scenery, fisheries	8.1	Wild	8.1
	B: North Fork of the Tongue from T56N, R88W, sec 21 to Pole Creek	21.75	Yes	Scenery, fisheries, recreation	21.75	Recreational	21.75
	C: South Fork of the Tongue to Johnson Creek	3	Yes	Scenery	3	Scenic	3

River	Segment Description	Miles	Free Flowing	ORVs	Eligible Miles	Class	Suitable miles
Crazy Woman	Forest boundary upstream to the confluence of Caribou and Crazy Woman creeks in sec. 36, T49N, R84W	4.47	Yes	Scenery, vegetation	4.47	Scenic	4.47
Tensleep	Forest boundary to USH 16 crossing in R86, T48, sec. 7	6.82	Yes	Scenery, geology	6.82	Scenic	6.82
South Rock	Forest boundary to headwaters in sec 33-34 in Wilderness	16.28	Yes	Scenery, recreation , geology	16.28	Wild (13.04 mi) & Scenic (3.24 mi)	16.28
Porcupine	Forest boundary to Porcupine falls	6.25	Yes	Scenery, historical	6.25	Wild	6.25
Paintrock	Headwaters in Wilderness to Forest boundary	14.85	Yes	Scenery, geology	14.85	Wild (9.05 mi), Scenic (5.8 mi)	14.85
Cedar	From just west of Granite Pass (T51 N, R89W, sec. 22) to confluence with Shell Creek	8.5	Yes	Scenery, fisheries	8.5	Wild	8.5
Total		118.55			110.03		110.03

[1] Mileage taken from 1985 Forest Plan FEIS Appendix F

Alternatives

Recommendations for designation may vary by alternative based on the intent of the Forest Plan alternative. If a segment of river is recommended, the river corridor will be in one of the following management areas based on classification:

- 1.5 - Wild River
- 3.4 - Scenic River
- 4.4 - Recreation Rivers

The alternatives were drafted by the Forest Plan Revision Interdisciplinary Team. The process was to first develop alternatives A, B and C and then submit them for review to the Forest Leadership Team and then the Forest Plan Revision Steering Committee. Those discussions led to the development of Alternatives D and E.

As discussed in the "Alternatives Considered But Not Analyzed in Detail" section, the current array of alternatives analyzed in detail includes some combination of all but three eligible rivers (Crazy Woman Creek, Tensleep Creek, and Cedar Creek), which were left out because the ID team determined that:

1. While these rivers meet the minimum eligibility criteria, there are traits of each of the three rivers that make them low priority candidates:
    - Crazy Woman Creek: An ecological evaluation was conducted for the Crazy

Woman Creek area which found that due to the presence of a high-risk road with a frequent wash-out history in the waterway as well as an infestation of weed species, this creek was not suitable under any alternative.

- Tensleep Creek: The ID Team's conclusion with regard to Tensleep was that it was not suitable under any alternative, because of the topographical location and proximity of highways on both sides of the river. In addition to the fact that a portion of the Creek upstream of the segment under consideration is impounded, a massive infestation of Hounds Tongue is found throughout the corridor.
- Cedar Creek: The ecological characteristics of this river are already represented in the alternatives analyzed in detail by other, higher quality, rivers – Porcupine Creek, Tongue River, and Little Bighorn River.

2. There were other future, potential uses of the land and water that could be foreclosed or curtailed if the areas were included in the National System.
3. Finally, because Congress has not yet acted upon the Forest Service's 1989 Little Bighorn River Wild and Scenic recommendation, the ID Team felt that it would be prudent to feature the five highest quality representative waterways on the Forest in the alternatives analyzed in detail.

Little Bighorn River

Description

The portion of the river evaluated begins at the Dry Fork Trail footbridge located in the NE 1/4 Section 30, T58N, R89W and extends about 14 miles upstream to the headwater tributaries within Section 26, T56N, R90W. It also includes about 6 miles of the Dry Fork from its mouth upstream to its confluence with Lake Creek.

Segment A is bounded by sheer canyon walls several hundred feet high. Extremely steep talus slopes extend from the canyon walls to the banks of the river. In Segment B, the terrain becomes more gentle and the lower cliffs are interspersed with small river gorges. The Dry Fork Canyon is broader and is rimmed by wide, flat benches.

Eligibility

The river was studied in five segments, with three segments found eligible with scenery as the outstandingly remarkable characteristic.

Segment A – 9.7 miles, Dry Fork Trail Bridge to confluence with Wagon Box Creek
Segment B – 4.11 miles, Wagon Box Creek – crossing with FDR 480
Segment D – 6.2 miles, Dry Fork from its mouth upstream to confluence with Lake Creek

Classification

Preliminary classification is 15.9 miles as wild river, segments A and D where the shorelines are essentially primitive and 4.11 miles as scenic river, segment B where a four wheel drive road parallels the river.

Suitability:

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

The Little Bighorn River area is one of the most primitive areas outside of the Cloud Peak Wilderness on the Bighorn National Forest. It remains relatively undeveloped and provides spectacular scenery with sheer canyon walls approximately 1,000 feet high and unique moss rock communities along a portion of the river. Extremely steep talus slopes extend from the canyon walls to the riverbanks. The terrain within the corridor becomes gentler and the lower cliffs are interspersed with small river gorges upstream of the confluence of Wagon Box Creek and the Little Bighorn River.

The topography of the Dry Fork portion of the corridor is similar to that of Little Bighorn Canyon but is broader and is rimmed by wide, flat benches below steep canyon walls to the east and steep timbered slopes to the west. The Dry Fork cuts a northwest-southeast canyon. On the northeast, the river is flanked by broad, flat benches below steep canyon walls that rise 2,000 feet above the river. These steep canyon walls are marked with horizontal layers of white limestone outcroppings.

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of the Little Bighorn watershed. Downstream from the study area, the river flows 1.8 miles through private land in Wyoming and approximately 65 miles through the Crow Indian reservation in Montana to its confluence with the Bighorn River near Hardin, Montana.

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System

Water Resources: On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and scenic river. Water resources projects of smaller size and with limited adverse effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources

projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

Water quality is generally very good. No change in water quality is likely to occur with designation.

During the 1980s and 1990s, there was interest in developing a portion of the Dry Fork for hydropower. In September 1998, FERC initiated a scoping process for the proposed pumped back hydropower project on the Dry Fork. After the additional information request was submitted and subsequent non-response from the proponent, FERC formally dismissed the project January 2000. At this time, there are no active proposals for hydropower on this portion of the river.

Fisheries and Wildlife: The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Land birds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species.

The Little Bighorn is an important big game migration route. Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs in addition to using them as migratory corridors from winter range to summer range. Other sensitive species, such as the water vole, three amphibians, and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

The Little Bighorn River supports enough wild game fish to sustain a fishery without supplemental stocking. Rainbow trout is the most common game fish throughout the area, with smaller populations of whitefish, brown trout, cutthroat trout and brook trout in the Little Bighorn River and smaller populations of brook trout, cutthroat trout and brown trout in the Dry Fork.

In the Revised Plan, this area would be managed to provide a wide variety of habitats for fish and wildlife species. Designation of the Little Bighorn River would not affect fish and wildlife habitat values and may enhance protection.

Mineral Resources and Geology: Mineral potential in the area is low for locatable minerals (gold, silver, etc) and very low for leasable minerals (oil and gas) within and around the Little Bighorn and Dry Fork area. There are no current permits or operating plans for minerals exploration within the corridor. Salable

minerals such as limestone and dolomite are present within the study area and could potentially be used for construction purposes. However because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If the Little Bighorn River were to be ultimately designated by Congress, the Wild and Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated *wild* river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as mitigation measures would be included in project level plans.

Transportation: Several system roads and trails are within or adjacent to the study area and provide access to the area. No motorized vehicles are allowed on trails within the study area. The Little Bighorn Trail (FDT 50) runs parallel to the Little Bighorn River to its junction with Wagon Box Creek. Within the corridor, four-wheel drive roads exist along the river south of Wagon Box Creek and along Dayton Gulch.

Access to the Dry Fork is limited. A trail bridge marks the beginning the Dry Fork Trail (FDT 4) in the northernmost portion of the corridor. The Dry Fork Trail follows the Little Bighorn River until it branches along the Dry Fork and eventually ascends to the top of Dry Fork Canyon.

Access to the southern portions of the corridor can be gained through roads from U.S. Highway 14. The northern portion of the corridor is accessible by a four-wheel drive road that passes, in part, through Crow Indian lands in Montana and

private land in Wyoming.

Recreation, Scenery: The Little Bighorn River canyon is a very scenic, undeveloped area. There are no current plans to develop additional recreation sites within the corridor. The Little Bighorn River is rarely floatable because of the low flows and boulder-sized rocks. Portions of the Little Bighorn drainage are in pristine condition. Some areas are accessible only by hiking or horseback.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in the area as a result of designation since the existing trail system is already in place.

Timber: There are 342 acres of land that are tentatively suitable for timber harvest on the southwest corner of the Little Bighorn River and none on the Dry Fork section. This acreage will become unsuitable as a result of interim management as well as designation. recommending river and managing in interim and if designated, right?

Livestock Grazing: There are 0 acres of range allotments in the wild portion of the river and 6,162 acres in the scenic portion of the Little Bighorn River. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation: Outstandingly remarkable values for scenery could be adversely affected if the river were not designated as a wild river on 15.9 miles and a scenic river on four miles because of the potential for water resources development or mining. Potential major diversions, mining activity, or future proposed water developments would alter the character of the corridor.

Suitability Factor #4: Public, state and local governmental interests in designation of the river.

During the 1980s and 1990s, there was interest in developing a portion of the Dry Fork for hydropower. In September 1998, FERC initiated a scoping process for the proposed pumped back hydropower project on the Dry Fork. After the additional information request was submitted and subsequent non-response from the proponent, FERC formally dismissed the project January 2000. At this time, there are no active proposals for hydropower on this portion of the river.

Suitability Factor #5: Estimated cost of land acquisition and management as a wild and scenic river.

No land acquisition would be necessary.

Table D-2. Little Bighorn designation and management costs.

Cost of Implementation	$10,000
Management Plan Development	$17,500
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$30,000**

Alternatives

Alternative A, B, C, D, and E recommend 15.9 miles as wild river classification and 4.11 as scenic river classification.

Rationale for Treatment by Alternative

The river is suitable for designation in all Alternatives.

In 1986, the Bighorn National Forest received a request for a special use permit to construct a water development in the corridor of the Dry Fork of the Little Bighorn River. The 1985 Land and Resource Management Plan had identified the Little Bighorn River as eligible for potential inclusion into the National Wild and Scenic Rivers System. There are 19.2 miles of river that were found suitable in the 1989 Wild and Scenic River Study Report and Final Environmental Impact Statement on the Little Bighorn River. The area was recommended for Congressional designation, however Congress has not acted on this river. It should be noted that even though the current total recommended mileage of 20 miles varies from the original 19.2, the same stretches of river are included. However the mileage source for the current total mileage has been derived from the use of GIS information.

The finding of suitability provides for increased protection of water flows, cultural values, wildlife, scenic and other natural values of the area from potential effects of developments. These include effects on elk migration route, localized effects on wildlife habitat and grazing areas, changes in water quality, effects on scenery, and potential impacts to cultural uses by Native Americans.

Recommending the eligible segments of the Little Bighorn river is based on the uniqueness of the resource and its significance to the region, resulting in a worthy addition to the National System, limited land ownership conflicts and the absence of potential use conflicts.

Tongue River

Description

The river flows just north of U.S. Highway 14 in T56N, R87W. The portion evaluated in this study begins at the footbridge, NE ¼, Section 9, T 56N, R87W at the mouth of the

Tongue River Canyon. The area is characterized by outstanding scenery. The area contains fairly rugged topography with a mixture of forest cover and grasslands. The topography of the upper drainage is mountainous, with deeply incised canyons, coniferous forest, and open, alpine meadows. Sheer canyon walls approximately 1,000 feet high are present throughout much of the corridor. At lower elevations along the north face of the Bighorns, the topography is rolling hills and valleys.

There are approximately 14,373 acres of 10D management area prescription identified in the 1985 Forest Plan, Wild and Scenic River Management. The majority of the wild and scenic study area is within a grazing allotment.

The Tongue River is free flowing. The river flows in an equal combination of rapids and riffles and still pools. Elevation of the project area varies from approximately 5,800 to 9,900 feet. The majority of the slopes range from 2 to 60 percent with areas of cirques and rock outcrops with steeper slopes. Annual precipitation of the area generally ranges from 16-20 inches at the lower elevations to near 30 inches near Hunt Mountain.

In the 1985 Forest Plan, three segments of the Tongue River were found eligible for wild and scenic river study.

Segment A is fourteen miles, from the bridge at Tongue River Canyon to Burgess Picnic Ground. There are no developments along this segment of river. The lower portion of Segment A is accessible to hikers, horseback riders, mountain bikes by the Tongue River Trail (FDT 2). The upper portion of Segment A can be reached by Horse Creek Trail (FDT 159) and Rockwood and Nickel Loop four wheel drive roads, (FSR 7 77 and 442) The area is increasingly popular with rock climbers. The Wolf Creek Trail is easily accessed from Eaton's Guest Ranch and visitors frequently ride horses to the Bear Creek Camp.

Segment B is fourteen miles from the North Fork fo the Tongue River from Burgess Picnic Ground to Pole Creek. Within Segment B, there are two recreation facilities – Burgess Picnic Ground and North Tongue Campground. U.S. Highway 14A runs parallel to the North Fork for about nine miles. In Segment B the canyon widens and is characterized by open, scenic vistas. Segment B has heavy dispersed recreation use from easy access.

Segment C is 2.5 miles on the South Fork of the Tongue River to Johnson Creek. With the exception of limited access to the four summer homes in the area, there is no developed access to Segment C.

In 1922, the lower portion of the Tongue River Canyon was set aside as a wildlife winter range for deer and elk.

Eligibility

There are three segments considered and found eligible:

> **Segment A** – 8.1 miles, from the bridge at Tongue River Canyon to T56N, R88W, Section21

Segment B – 21.75 miles, North Fork of the Tongue from T56N, R88W, Section 21 to Pole Creek
Segment C – 3 miles, South Fork of the Tongue to Johnson Creek

Segment A has outstandingly remarkable characteristics for scenery and fisheries; Segment B scenery, fisheries and recreation; and Segment C scenery.

Classification

Preliminary classification is wild for Segment A, scenic for Segment C and recreational for Segment B because of the road access. US Highway 14A runs parallel to most of the North Fork of the Tongue River making the area easily accessible to highway travelers.

Suitability

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

Segment A flows through the Tongue River Canyon, an area characterized by high, steep canyon walls of sandstone and limestone. The Box Canyon has eroded through the granite parent material to leave sheer canyon walls up to 1,000 feet high. The scenery of the area is considered outstandingly remarkable and is characterized by towering, colorful cliffs, river gorges and many series of rapids.

Access to the Tongue River in Wyoming is easily accessible from US Highway 14. The upper North Tongue River is a fourteen mile long stretch of stream that is a very popular fishery in the northern part of the Bighorn National Forest. The Wyoming Department of Game and Fish has rated the Tongue River within the canyon as a Blue Ribbon Stream – a fishery of national importance. Although the upper North Tongue remains an important regional fishery for resident anglers and, with a location adjacent to a heavily used route to Yellowstone National Park, is used by many tourist anglers, much of the use is by anglers that choose this stream as a destination for their fishing trip.

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of the Tongue River corridor. The State of Wyoming owns 200 acres within the Forest boundary at the mouth of the Tongue River Canyon in Section 10, T 56N, R87W administered by Wyoming Game and Fish Department.

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System.

Water Resources*:* On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and

scenic river. Water resources projects of smaller size and with limited adverse effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

In the particular case of the Tongue River, designation as a wild or scenic river would be unlikely to affect the future availability of water supplies or electric power based upon a review of Forest Service land status records. Impacts to the riparian area along this reach have occurred in the past due to livestock grazing. Some banks are eroding and there is sedimentation in reaches. However, water quality is generally very good. No change in water quality is likely with designation.

Fisheries and Wildlife: The Tongue River drainage has a diverse fish assemblage and offers some unique angling opportunities. Streams in the headwaters contain Snake River cutthroat, rainbow, brown and brook trout.

The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Landbirds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species. The Tongue corridor is one of the most likely areas to provide habitat for peregrine falcons.

Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs in addition to using them as migratory corridors from winter range to summer range. The Tongue is the only corridor mapped with known water vole. Other sensitive species such as three amphibians and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

In the Revised Plan, this area would be managed to provide a wide variety of habitats for fish and wildlife species. Designation of the Tongue would not adversely affect fish and wildlife habitat values and would protect fishing opportunities.

Mineral Resources and Geology: Mineral potential in the area is low for locatable minerals (gold, silver, etc) and very low for leasable minerals (oil and gas) within and around the North and South Tongue areas. There are no current permits or operating plans for minerals exploration within the corridor. Salable minerals such as limestone and dolomite are present within the study area and could potentially be used for construction purposes. However because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If the Tongue River were to be ultimately designated by Congress, the Wild and Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated *wild* river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as mitigation measures would be included in project level plans.

Transportation: There are several motorized and nonmotorized trails within the area proposed for designation as scenic and the area proposed for designation as recreational. The recreation section is easily accessed from U.S. Highway 14 and 14A. The eastern section of the river at the bottom of Tongue River Canyon is accessed from Dayton, Wyoming through state land administered by Wyoming Game and Fish Department. There is no motorized accessed into the canyon on Forest land.

There are no known transportation corridor plans which would be curtailed by designation.

Recreation, Scenery: There is a wide variety of recreation opportunities available from primitive camping and horseback riding to developed campgrounds and lodges within the analysis area. The terrain and vegetation vary widely and are characterized by timbered slopes and draws giving way to broad, open sage and grassland ridges. Portions of two scenic byways are within this study area – US Highway 14 and 14A.

In the Revised Plan, this area would be managed to provide year-round recreational opportunities in both developed and dispersed recreation settings.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in the area as a result of designation since the existing trail system is already in place.

Timber: Both the North and South Tongue drainages were heavily influenced by tie-hacking in the 1890s to about 1910. The ties were sent down the tie flume through Tongue River Canyon to Dayton for processing, an excellent reference is *History of the Tongue River Tie Flume* (Granum, 1990). The legacy of the tie-hacking in this area upon lodgepole pine genetics is documented in a report on file at the Bighorn NF offices in Sheridan (Howe, 1997). Basically, tie hacking has clearly a high-grade operation that "took the best and left the rest" as regeneration sources for the lodgepole that has regenerated since the tie hacking occurred.

There are 1,399 acres of land that are tentatively suitable for timber harvest located on the North Tongue River near Burgess Junction and on the South Tongue River. In the wild section, there are 26 acres, 459 in the scenic section and 914 in the recreation section. Designation would preclude this from being part of the suitable timber base, however vegetation treatments are allowed that do not degrade the character of the corridor.

Livestock Grazing: There are 1,192 acres of range allotments in the wild portion of the river, 931 acres in the scenic portion and 6,216 in the recreation portion of the Tongue River. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation: The outstandingly remarkable scenery and fisheries features would not likely be adversely affected if the river were not designated as a wild or scenic river. The corridor will likely remain relatively undeveloped due to rugged physical characteristics of the canyon as well as its popularity as a fishing destination.

Suitability Factor #4: Public, state and local governmental interests in designation of the river.

This river corridor has a very high level of interest with Wyoming Game and Fish who manage the fisheries and wildlife for the State of Wyoming. The lower portion of the wild river section borders land administered by Wyoming Game and Fish.

Suitability Factor #5: Estimated cost of land acquisition and management as a Wild and Scenic River.

No private lands would be acquired, no significant recreation or other developments would occur. The following are expected additional funding needs for a five-year period of the river were designated:

Table D-3. Tongue River designation and management costs.

Cost of Implementation	$10,000
Management Plan Development	$17,500
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$30,000**

Alternatives

Alternative A in the Forest plan revision recommends 33 miles as scenic river classification. Alternatives B and C recommends 8.1 miles as wild river classification and 21.75 miles as recreational river classification. Alternatives D and E do not recommend designation.

Rationale for Treatment by Alternative

The Tongue River was found suitable for designation as a wild and scenic river in alternative A since that alternative maintains the 1985 management area boundaries. It was also found suitable for designation in alternative B and C because of their respective emphases on biological diversity and protection of wild places. However, three miles of scenic river classified as such in Alternative A was not carried forward in B and C due to existing management activities and timber suitability acres. Regarding alternative D, a review of past monitoring reports and past implementation by the ID team found that no impetus has ever been made to designate this river as wild and scenic. The conclusion was that if there has been no effort, thought, or consideration put towards this end in the last 15 years, and there is no clear impetus at the current time, the ID team decided that it was not suited in an alternative designed to reflect adaptive management and lessons learned since 1985. It is not included in alternative E because designation of the Tongue as a wild and scenic river does not meet the objective of this alternative, which is to maximize wood fiber production.

Classification of the upper portion of the Tongue River as *recreational* is consistent with current and future expected use patterns in the area. A *recreational* classification would allow some development of recreation facilities and new trails to accommodate river users. Designation of this river is consistent with the objectives of the Wyoming Game and Fish who manage the fisheries and wildlife in the area.

Crazy Woman Creek

Description

The upper reach of this river meanders, east of the highway plunges into a canyon with a continuous cascade through rocks where it cuts through limestone. The portion of the river evaluated is from the Forest boundary upstream to the confluence of Caribou and Crazy Woman creeks in Section 36, T49N, R84W.

The North fork of Crazy Woman Creek and some tributaries originate in alpine or sub-alpine areas of the Bighorn Mountains. This stream passes through coniferous forests punctuated with numerous grassy parks, and then drops steeply off the BHNF through a deep canyon, eventually flowing gently through the Powder River basin's rolling hills.

The North Fork of Crazy Woman Creek originates on the Forest near Powder River Pass at an elevation of 9,400 feet and the headwater reach flows through coniferous forest. Trout habitat is good through this section and spawning gravels are present. Downstream, the stream meanders through a mile long open meadow where there is little cover other than short willows. Below the meadow section, the stream drops into a steep, bouldered canyon, where high velocities dominate. Between the mouth of the canyon and the confluence with the Middle Fork, gradient is more moderate and the stream flows through fairly erosive formations.

Eligibility

There are 4.47 miles of river eligible as a result of outstandingly remarkable characteristics of scenery and vegetative features. There are large cliffs at the lower end of the canyon. It is visible where the stream cuts into the banks as a result of the water- power. There is a great amount of vegetative diversity – cottonwoods, berry bushes, mountain maple, ponderosa pine, lodgepole pine, Douglas-fir, Englemann spruce are found in the area. Visitors travel to this canyon as a destination site.

Classification

Preliminary classification for this river is scenic.

Suitability

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

Vegetation diversity in the canyon makes this area a worthy addition to the National system. There are massive blocks of rock formations.

The main road parallels the creek at the bottom of the canyon. The easy access and road development do not make the area a worthy addition to the National system

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of North Fork of Crazy Woman corridor.

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System.

Water Resources: On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and scenic river. Water resources projects of smaller size and with limited adverse effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

In the particular case of Crazy Woman Creek, designation as a scenic river would be unlikely to affect the future availability of water supplies or electric power based upon a review of Forest Service land status records. There is a road that runs along much of the riparian corridor. There have been sedimentation concerns with the road during spring runoff. The road has been reconstructed once to reduce the risk of future failure. However, water quality is generally very good. No change in water quality is likely with designation.

Fisheries and Wildlife: The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Landbirds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species.

Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs in addition to using them as migratory corridors from winter range to summer range. Other sensitive species, such as the water vole, three amphibians, and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats

forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

The Wyoming Game and Fish Department considers aquatic habitat conditions in the Crazy Woman drainage as good. Trout are found in the stream from its headwaters to just upstream of Highway 87. Brook trout are found in the headwaters while brown trout and rainbow trout are present downstream near the North Fork campground, through the canyon, to about highway 87.

Stocking records show that brook trout and rainbow trout were introduced to the North Fork in 1935, but they may actually have been stocked as early as 1933. Between 1935 and 1953, stocking consisted of mostly small, 1-4 inch rainbow trout and some brook and brown trout. Stocking from about 1954 to 1996 has emphasized larger trout.

Mineral Resources and Geology: Mineral potential in the area is low for locatable minerals (gold, silver, etc) and very low for leasable minerals (oil and gas) within and around the Crazy Woman Creek area. There are no current permits or operating plans for minerals exploration within the corridor. There has been some recreational placer mining in the watershed for gold. Salable minerals such as limestone and dolomite are present within the area and could potentially be used for construction purposes. However, because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If Crazy Woman Creek were to be designated by Congress, the Wild and Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated *wild* river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the

extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as mitigation measures would be included in project level plans

Transportation: The area is easily accessed from US Highway 16 that connects to FSR 33 that parallels the creek through the canyon.

Access to the North Fork is good for most of its length from the mouth of the canyon to the upper reaches above the canyon. A good road follows the stream through the canyon and Forest Service roads access the stream through the canyon near the North Fork campground.

Recreation, Scenery: The area is one of the day trip loops the city of Buffalo has emphasized in their tourism marketing efforts as a scenic tour. Persons travel to this canyon as a destination. The area is popular for dispersed camping.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in the area as a result of designation since the existing trail system is already in place.

Timber: There are 201 acres of land that are tentatively suitable for timber harvest on approximately one mile of the west section of Crazy Woman Creek. Evidence of past or ongoing timber harvest along scenic rivers is acceptable provided that the forest appears natural from the riverbank.

Livestock Grazing: There are 1,449 acres of range allotments in the scenic portion of Crazy Woman Creek. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation: In Alternatives B, C, and D the outstandingly remarkable scenic and vegetative features would not likely be adversely affected if the river were not designated as a scenic river since the river corridor would fall within Management Area 4.2 – Scenery. In Alternative A (3.31 and 5.12), E (3.31 and 5.13), and G (3.31 and 5.13), the management areas associated with the river corridor would be different and the priority placed on management for scenic values would not be as high and there is greater potential for alteration of scenic qualities of the river corridor.

Suitability Factor #4: Public, state and local governmental interests in designation of the river.

Local Chamber of Commerce and tourism industry related businesses have an interest in the Crazy Woman canyon for marketing loop tours.

The Johnson County Tourism Association has developed brochures that advertise this area as a loop tour. It is in the public interest to make sure the road stays open.

Suitability Factor #5: Estimated cost of land acquisition and management as a Wild and Scenic River.

No private lands would be acquired, no significant recreation or other developments would occur. The following are expected additional funding needs for a five-year period of the river were designated:

Table D-4. Crazy Woman Creek designation and management costs.

Cost of Implementation	$7,500
Management Plan Development	$15,000
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$25,000**

Alternatives

None of the alternatives recommend Crazy Woman Creek for designation as a wild and scenic river.

Rationale for Treatment by Alternative

Crazy Woman is not recommended for designation in any alternative. An ecological evaluation was conducted for the Crazy Woman Creek area which found that due to the presence of a high-risk road with a frequent wash-out history in the waterway as well as an infestation of weed species, this creek was not suitable under any alternative.

In Alternatives B, C and D, its outstandingly remarkable values of scenery and vegetation would be protected with applying Management Area 4.2 - Scenery Management Area. The overriding philosophies of Alterantives A and E would allow more active management and usage and as such designation of Crazy Woman Creek was not recognized to be as high a priority.

Tensleep Creek

Description

Location of Tensleep Creek is from the Forest boundary to R86, T48, Section 7, where US Highway 16 crosses the creek.

The Tensleep Creek drainage includes coldwater trout streams originating on the southern end of the Big Horn Mountains. Ten Sleep Creek is formed by the confluence of East and West Ten Sleep creeks at elevation 7,743 feet. East Ten Sleep creek begins at elevation 9,908 feet while west Ten Sleep Creek originates at elevation 10,236 feet. The majority of the drainage lies on USFS and Bureau of Land Management (BLM) lands.

Eligibility

There are 6.82 miles of river considered eligible with outstandingly remarkable characteristics for scenery and geology.

Classification

Preliminary classification for this river is scenic because of the impoundment and percent of road in the area.

Suitability

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

Tensleep Creek flows through a scenic canyon. Flows are generally unregulated during most years, however during low runoff years, water is released from Meadowlark Lake to support downstream water rights. The spillway controls the flows that fluctuate from year to year.

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of Tensleep Creek.

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System.

Water Resources: On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and scenic river. Water resources projects of smaller size and with limited adverse effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

In the particular case of Tensleep Creek, there are no water resource developments proposed. During the late 1980's, a proposal was submitted to FERC for hydropower development to divert Tensleep Creek and run through turbines. The proposed project was dismissed by FERC. Designation as a wild or scenic river

would be unlikely to affect the future availability of water supplies or electric power based upon a review of Forest Service land status records. A spillway controls the flow below Meadowlark Lake in the East Tensleep watershed. Flows are generally unregulated during most years, however during low runoff years, water is released from the reservoir to support downstream water rights. Water quality in the basin is generally very good, this would not change with designation.

Fisheries and Wildlife: The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Landbirds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species. The Tensleep corridor is one of the most likely areas to provide habitat for peregrine falcons.

Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs in addition to using them as migratory corridors from winter range to summer range. The area provides habitat for winter range.

Other sensitive species, such as the water vole, three amphibians, and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

The Wyoming Game and Fish Department considers aquatic habitat conditions in the Ten Sleep Creek drainage as good (WGFD 1995). Spawning habitat is excellent, leading to high trout densities; however, harsh environmental conditions limit growth rates and result in small average size. The majority of streams in the watershed are high altitude and could be characterized as high gradient and low productivity with short growing seasons. These habitat conditions appear to be the major limiting factor for trout production. Some streambank damage is present in isolated sections of the drainage. Stream channels are relatively narrow, and lacking in pool (overwintering) habitat in upper sections.

Although portions of the Big Horn Mountains fall within the historic range of YCT (Gresswell 1988), the current distribution in the Tensleep drainage is limited to North Lake and Lake creeks. Yellowstone cutthroat trout were planted throughout the drainage from the early 1930's to the late 1940's. These fish may have been progeny of the Yellowstone Lake stock, which were planted extensively during the early 1900's. Records also indicate that brook, rainbow, and brown trout were stocked within the drainage during this time period. If "native" Yellowstone cutthroat were present in the drainage, competition from introduced exotic species may have led to their demise. At present no stocking occurs within the drainage.

Recent sampling has documented strong populations of brook and brown trout in East Tensleep Creek while west and Middle Forks Tensleep Creeks are dominated by rainbow and brook trout. Brook trout likely predominate at higher elevations, but give way to rainbow near the confluence with east Tensleep creek. The mainstem of Tensleep creek is dominated by rainbow and brown trout. Tensleep Creek was first stocked with rainbow trout in 1938 and brown trout in 1934. Fish population is characterized by moderate to high trout density (1500-2000/ mile), but small to average size. The small size can be attributed to the harsh environmental conditions (i.e. high gradient, coldwater, short growing season, and low productivity).

The WGFD has rated the Tensleep creek canyon as a Class II trout stream. (Very good trout waters – fisheries of statewide importance).

Mineral Resources and Geology: Mineral potential in the area is low for locatable minerals (gold, silver, etc) and low for leasable minerals (oil and gas) within and around the Tensleep Creek area. There are no current permits or operating plans for minerals exploration within the corridor. Salable minerals such as limestone and dolomite are present within the study area and could potentially be used for construction purposes. However because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If Tensleep Creek were to be ultimately designated by Congress, the Wild and Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated *wild* river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as

mitigation measures would be included in project level plans

Transportation: FDR 18 is open seasonally from June 15 – November 15 and closed the remainder of the year for wildlife protection. There are no plans for further developments to the transportation system in this corridor.

Recreation, Scenery: There are two recreation residences on the upper end of the river corridor. Dispersed camping is a popular activity as well as scenery and wildlife viewing. Rock climbing is popular during the summer and fall and there is an ice-climbing route off the old highway used during the winter.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in the area as a result of designation since the existing trail system is already in place.

Timber: There are no tentatively suitable acres for timber harvest in the Tensleep corridor.

Livestock Grazing: There are 2,194 acres of range allotments in the scenic portion of Tensleep Creek. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation*:* The outstandingly remarkable scenery and geology features would not likely be adversely affected if the river were not designated as a scenic river. The corridor will remain relatively undeveloped due to physical characteristics of the canyon.

Suitability Factor #4: Public, state and local governmental interests in designation of the river.

The canyon has become a popular area for rock climbing. There are no state or private lands within the river corridor.

Suitability Factor #5: Estimated cost of land acquisition and management as a Wild and Scenic River.

No private lands would be acquired, no significant recreation or other developments would occur. The following are expected additional funding needs for a five-year period of the river were designated:

Table D-5. Tensleep designation and management costs.

Cost of Implementation	$7,500
Management Plan Development	$15,000
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$25,000**

Alternatives

None of the alternatives recommend Tensleep Creek for designation as a wild and scenic river.

Rationale for Treatment by Alternative

The ID Team's conclusion with regard to Tensleep was that it was not suitable under any alternative, because of the topographical location and proximity of highways on both sides of the river. In addition to the fact that a portion of the Creek upstream of the segment under consideration is impounded, a massive infestation of Hounds Tongue is found throughout the corridor.

South Rock Creek

Description

The upper reach of this creek is typical high alpine channel and flows through meadows, willow marsh and spruce habitat. The portion of the river evaluated is from the Forest boundary to the headwaters in section 33-34 in the Cloud Peak Wilderness. Three miles of the proposed river is within the Wilderness.

The South Rock Creek basin drains approximately 117 square miles of the east slope of the south-central Bighorn Mountains. Approximately fifty-two percent of the upper basin is within the Bighorn National Forest with the rest primarily on private land. South Rock Creek originates on the Forest near Deer Lake at an elevation of 10,760 feet. The basin includes South Rock Creek and its major tributaries, Middle Rock Creek, Spring creek, Balm of Gilead creek and Keno creek. South Rock Creek and some tributaries originate in alpine or sub-alpine areas. This stream passes through coniferous forests (lodgepole pine and spruce/fir) punctuated with alpine meadows, and then drops steeply off the Forest through a deeply incised canyon, eventually flowing more gently through the rolling hills of the Clear Creek basin.

Eligibility

There are 16.28 miles considered eligible for designation with outstandingly remarkable characteristics for scenery, recreation and geology. Sections of the area show an uplifted section on the east side of the Forest. Recreational opportunities are exciting hiking and challenging horseback on portions of the area.

Classification

Preliminary classification for this river is wild with the exception of 3.24 miles as scenic where there are three motorized access points to the corridor.

Suitability

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

The river flows through Triangle Park and then enters a steep canyon. The corridor borders the north side of Firebox Park. This river is one of the last three totally free-flowing rivers on the east side of the Bighorns.

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of South Rock Creek.

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System.

Water Resources: On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and scenic river. Water resources projects of smaller size and with limited adverse effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

In the particular case of South Rock Creek, designation as a wild or scenic river would be unlikely to affect the future availability of water supplies or electric power based upon a review of Forest Service land status records. Water quality is generally very good. No change in water quality is likely with designation.

Streams within the drainage are tributaries to the Powder River and are contributors to downstream watershed conditions and provide important aquatic habitats throughout. IRI and topographic map data for this drainage suggests that streams in the watershed are relatively steep, high gradient A, Aa+ and B type channels, comprised of coarse alluvium. These types of channels are generally resistant to management impacts due to their inaccessibility, channel materials and confined valleys.

Fisheries and Wildlife: The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered

species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Landbirds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species.

Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs in addition to using them as migratory corridors from winter range to summer range. Other sensitive species, such as the water vole, three amphibians, and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

The Wyoming Game and Fish Department considers aquatic habitat conditions in the Rock Creek drainage as good. Trout are found in the stream from its headwaters to just upstream of Highway 87. Brook trout are found in the headwaters while brown trout and rainbow trout are present downstream, through the canyon.

Stocking records show that brook trout and rainbow trout were introduced to the North Fork in 1935, but they may actually have been stocked as early as 1933. Between 1935 and 1953, stocking consisted of mostly small, 1-4 inch rainbow trout and some brook and brown trout. Stocking from about 1954 to 1996 has emphasized larger trout.

The WGFD has rated South Rock Creek as a Class III trout stream (important trout waters and fisheries of regional importance).

Mineral Resources and Geology: Mineral potential in the area is low for locatable minerals (gold, silver, etc) and very low for leasable minerals (oil and gas) within and around the South Rock Creek area. There has been some exploration of gas reserves near this area in the past. There has been no development of the gas reserves up to this point due to poor access. There are no current permits or operating plans for minerals exploration within the corridor. Salable minerals such as limestone and dolomite are present within the study area and could potentially be used for construction purposes. However because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If South Rock Creek were to be ultimately designated by Congress, the Wild and Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated wild river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as mitigation measures would be included in project level plans.

Transportation: There are three motorized access points that stop at the river. There are seven trails in the area for horse and foot travel.

There are no plans for further developments to the transportation system in this corridor.

Recreation, Scenery: There are no developed recreation sites within the South Rock Creek area. There are no current plans to develop recreation sites within the Piney / Rock Creek watershed. The relatively remote location provides backcountry and solitude recreation opportunities.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in the area as a result of designation since the existing trail system is already in place.

Timber: The middle part of the river flows through timbered forest. The south slope aspect has ponderosa pine and the north slope aspect contains dense lodgepole pine. Spruce and Douglas-fir are found in the lower section of the river.

There are 834 tentatively suitable acres for timber harvest in the scenic portion and 393 acres in the wild portion of the South Rock Creek corridor.

Livestock Grazing: There are 3,804 acres of range allotments in the wild portion of the river and 998 acres in the scenic portion of South Rock Creek. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation: The potential exists for alteration of scenic qualities through active timber management of the more than 1200 acres of suited timber. Otherwise, little change in the outstanding values of the area are expected due to

limited access.

Suitability Factor #4: Public, state and local governmental interests in designation.

There are no known state or local government interests or lands in the corridor.

Suitability Factor #5: Estimated cost of land acquisition and management as a Wild and Scenic River.

No private lands would be acquired, no significant recreation or other developments would occur. The following are expected additional funding needs for a five-year period of the river were designated:

Table D-6. South Rock Creek designation and management costs.

Cost of Implementation	$7,500
Management Plan Development	$15,000
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$25,000**

Alternatives

Alternative C recommends 16.28 miles as wild river classification. Alternative B recommends 13.04 miles as wild river classification and 3.24 as scenic river classification. Alternatives A, D, and E do not recommend designation.

Rationale for Treatment by Alternative

South Rock Creek was not found suitable for designation as a wild and scenic river in alternative A since the 1985 management area boundaries are being retained. It was found suitable for designation in alternative B and C because of their respective emphases on biological diversity and protection of wild places. It was not included in Alternative D because the ID team decided to focus exclusively on the Little Bighorn based on the fact that Congress has over the past 15 years not acted upon the Forest's recommendation for inclusion of the only river which had been nominated in the past plan (the Little Bighorn) - and there was an agreement to focus priority for alternative D exclusively on the Little Bighorn. It was not included in alternative E because designation of this river does not meet the objective of this alternative, which is to maximize wood fiber production.

Porcupine Creek

Description

This fast-flowing mountain stream originates high on the Forest. The upper end is open and the drops quickly into a steep narrow gorge, where it is rugged and not accessible. The section of river considered for study is from the Forest boundary to Porcupine Falls.

The Porcupine Creek drainage includes coldwater trout streams originating on the northern end of the Big Horn Mountains. The headwaters of Porcupine Creek begin on the Forest at an elevation of 10,042 feet above sea level, at Bald Mountain, and flow northwest through Devil's Canyon to its confluence with Yellowtail Reservoir in Montana. The drainage is almost entirely located on USFS and Bureau of Land Management (BLM) lands. Primary tributaries to Porcupine include Trout, Deer, Bucking Mule and Big Tepee Creek.

Eligibility

There are 6.25 miles of river on the Forest considered eligible for designation with outstandingly remarkable characteristics for scenery and historical values. There is a national recreation trail that loops the area. The river flows through the highly scenic Devil's Canyon where massive rock walls rise vertically several hundred feet.

Classification

Preliminary classification for this river is wild. There are no roads. The only development is the bridge on Buckingmule Falls trail where it crosses Porcupine Creek.

Suitability

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

The remoteness of the river contributes to its worthiness as an addition to the National system. Porcupine Creek is distinctive to the area, however it is not rare within the region.

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of Porcupine Creek. The Bureau of Land Management manages land adjacent to the Forest. An August 15, 1993 suitability review determined, "The preliminary suitable determination for the BLM administered lands along Porcupine Creek and its associated tributaries is based on the uniqueness of the resource and its significance to the region, resulting in a worthy addition to the Wild and Scenic system; limited land ownership conflicts; and the absence of potential use conflicts." The Cody Resource Area of the BLM will revisit this determination in their planning process for the Resource and Land Management Plan in 2004.

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System

Water Resources: On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and scenic river. Water resources projects of smaller size and with limited adverse

effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

In the particular case of Porcupine Creek, designation as a wild or scenic river would be unlikely to affect the future availability of water supplies or electric power based upon a review of Forest Service land status records. Water quality is generally very good. No change in water quality is likely with designation.

Fisheries and Wildlife: The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Landbirds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species.

Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs in addition to using them as migratory corridors from winter range to summer range. Other sensitive species, such as the water vole, three amphibians, and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

This area contains crucial winter range habitat for bighorn sheep and numerous raptor nests. The stream has dense stands of riparian vegetation. The cliff habitat throughout the Porcupine Creek drainage offers excellent opportunity for birds of prey.

The Wyoming Game and Fish Department considers aquatic habitat conditions in the Porcupine Creek drainage as fair to good (WGFD 1995). Stream channels are relatively narrow, and lacking in pool habitat in upper sections. These factors combined with harsh winter conditions and competition from brook trout are likely responsible for the absence of viable rainbow and cutthroat trout populations. Past mining, livestock use, and recreational activity have impacted critical reaches and subsequent downstream reaches through channel instability and increased sediment deposition. Recent, improved livestock management has increased fish habitat

quality and availability to some degree. Porcupine Falls is a major barrier to upstream fish movement. Within Devil's Canyon, pool habitat increases and stream gradient and stream velocity decrease.

Aquatic habitat conditions in headwaters of Bucking Mule Creek and Big Tepee Creek are in poor shape. Downstream portions are in fair to good shape depending on the geomorphic setting of the stream. Both streams have moderate to steep gradients and relatively narrow channels. Channel substrates are mainly cobble/gravel with little sedimentation impacts. Barriers in these streams inhibit upstream fish movement. These streams mostly flow through dense conifer stands, prior to reaching Porcupine Creek in Devil's Canyon.

Brown trout are present and likely moved upstream from the Bighorn River in Montana, prior to the impoundment of Yellowtail Reservoir in 1965.

Wyoming Game and Fish currently manages the drainage as a wild fishery and there are no fish stocked in the drainage. Recent sampling has documented strong populations of brook trout in upper sections of Porcupine Creek above "the Jaws", Big Tepee Creek, and Bucking Mule Creek. At lower elevations in Porcupine Creek, brook trout populations give way to rainbow trout in Devil's Canyon and brown trout near the Wyoming/Montana border.

The Wyoming Game and Fish Department has rated Porcupine Creek, Bucking Mule Creek, Big Tepee Creek, Bald Mountain Creek, Trout Creek, and Deer Creek as Class 3 trout streams (important trout waters and fisheries of regional importance).

Mineral Resources and Geology: Lands within the canyon are characterized by massive rock walls dropping vertically several hundred feet from the canyon rim to the creek. Downstream of "the Jaws" (a dissected granitic outcrop), the channel widens and enters Devil's Canyon at Porcupine Falls. Mineral potential in the area is low for locatable minerals (gold, silver, etc) and very low for leasable minerals (oil and gas) within and around the Porcupine Creek area. There are no current permits or operating plans for minerals exploration within the corridor. Salable minerals such as limestone and dolomite are present within the study area and could potentially be used for construction purposes. However because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If Porcupine Creek were to be ultimately designated by Congress, the Wild and

Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated wild river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as mitigation measures would be included in project level plans

Transportation: There is no motorized access directly to Porcupine Creek. Forest Trail 53 is nonmotorized and crosses Porcupine Creek.

There are no plans at this time for further developments to the transportation system in this corridor.

Recreation, Scenery: A wide variety of recreation environments and types of mountainous terrain occur in the analysis area. These environments include: alpine meadows, coniferous forest, sagebrush parks, canyons, and streams. The predominant environment is a mosaic of large parks interspersed with islands of thick timber. Idaho fescue and low growing forbs dominate open ridges at the highest elevations and sagebrush shrubland are typical at low elevations.

Both developed and dispersed recreation opportunities are available outside the river corridor. The Medicine Wheel National Historic landmark is located off U.S. Highway 14A. Developed recreation sites include Porcupine Campground, Bucking Mule Falls National Recreation Trailhead, the Little Horn Trailhead, and Wyoming High Country Resort. Dispersed recreation activities wildlife viewing, dispersed camping, fishing, hunting big and small game, hiking, horseback riding. The Bucking Mule Falls National Recreation Trail, part of the Little Horn Trail, and Porcupine Falls are located near the corridor. Winter recreation activities include snowmobiling, cross-country skiing, snow shoeing, and sledding.

Upper portions of the Porcupine Creek drainage receive moderate fishing pressure due to vehicle access and the developed recreation site, Porcupine Campground. Porcupine Creek, from the headwaters to "the Jaws", is accessible by vehicle for most of its length.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in

the area as a result of designation since the existing trail system is already in place.

Timber: There are 394 tentatively suitable acres for timber harvest in the South Rock Creek corridor.

Livestock Grazing: Livestock grazing is the principle land use within the upper portion of the watershed. There are 1,982 acres of range allotments in the wild portion of Porcupine Creek. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation: Little change in the outstanding values of the area is expected since the cultural values will be protected by law regardless of designation.

Suitability Factor #4: Public, state and local governmental interests in designation.

There are no known state or local government interests or lands in the corridor.

Suitability Factor #5: Estimated cost of land acquisition and management as a Wild and Scenic River.

No private lands would be acquired, no significant recreation or other developments would occur. The following are expected additional funding needs for a five-year period of the river were designated:

Table D-7. Porcupine Creek designation and management costs.

Cost of Implementation	$7,500
Management Plan Development	$15,000
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$25,000**

Alternatives

Alternatives B and C recommend Porcupine Creek for designation as a wild and scenic river in the wild river classification. Alternatives A, D, and E do not recommend designation.

Rationale for Treatment by Alternative

Porcupine Creek was not found suitable for designation as a wild and scenic river in alternative A since the 1985 management area boundaries are being retained. It was found suitable for designation in alternative B and C because of their respective emphases on biological diversity and protection of wild places. It was not included in Alternative D because the ID team decided to focus exclusively on the Little Bighorn based on the fact that Congress has over the past 15 years not acted upon the Forest's recommendation for inclusion of the only river which had been nominated in the past plan (the Little Bighorn) - and there was an agreement to focus priority for alternative D exclusively on the Little

Bighorn. It was not included in alternative E because designation of this river does not meet the objective of this alternative, which is to maximize wood fiber production.

Regardless of alternative, the cultural values associated with this river corridor will be protected by law.

Paintrock Creek

Description

The north fork of Paintrock Creek runs into the main fork two miles above the Forest boundary. The main fork on the Forest has a series of waterfalls out of Lake Solitude in the Cloud Peak Wilderness, goes into the basin and then drops into another canyon.

The Paint Rock Creek drainage includes coldwater trout streams originating on the western end of the Big Horn Mountains. Headwaters of Paint Rock Creek begin on the Forest at an elevation of 10,840 feet above sea level, just upstream from Lake Solitude, and flow west to its confluence with North Paintrock creek just above the Forest boundary. The drainage is almost entirely located on USFS and Bureau of Land Management (BLM) lands.

Eligibility

There are 14.85 miles of river eligible for consideration of wild and scenic river designation based on scenic and geologic outstandingly remarkable values. The geologic transition from the valley to the Wilderness represents a cross-section of the Bighorns.

Preliminary classification is wild for the 9.05 miles in the Cloud Peak Wilderness. Potential classification for the 5.8 miles below the Wilderness boundary is scenic because of grazing management and developments.

Suitability

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

The scenery and geology of Paintrock Creek area make the river a worthy addition to the National system. In addition, the portion outside of the Forest boundary bordering the BLM lands was found suitable in a draft report in 2002.

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of Paintrock Creek. The Bureau of Land Management manages land adjacent to the Forest. A May 29, 2002 draft report for the Worland BLM field office reviewed potential

wild and scenic rivers in the Washakie Resource Management Plan planning area and reported,

> *"It was determined two public land parcels along Paint Rock Creek, the two public land parcels along the South Fork of Paint Rock Creek, and the one downstream-most public land parcel along Laddie Creek meet the WSR suitability factors and should be managed to maintain or enhance their outstandingly remarkable values for any possible future consideration for inclusion in the NWSRS. The suitable determination is based on the uniqueness of the diverse public land resources and their regional and national significance, making them worthy of future consideration for addition to the NWSRS."*

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System

Water Resources: On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and scenic river. Water resources projects of smaller size and with limited adverse effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

In the particular case of Paintrock Creek, designation as a wild or scenic river would be unlikely to affect the future availability of water supplies or electric power based upon a review of Forest Service land status records. Water quality is generally very good. No change in water quality is likely with designation.

Fisheries and Wildlife*:* The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Land birds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species.

The Paintrock watershed is a major route of elk migration. Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs

in addition to using them as migratory corridors from winter range to summer range. Other sensitive species, such as the water vole, three amphibians, and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

The Wyoming Game and Fish Department considers aquatic habitat conditions in the Paint Rock Creek drainage as fair to good (WGFD 1995). However, streambank damage is present in isolated sections of the drainage. Stream channels are relatively narrow, and lacking in pool habitat in upper sections. Records indicate that brook trout were stocked in Paintrock Creek from the Hyattville Hatchery in 1916, while rainbow trout were first introduced in the 1930's. In addition, 10,000 "black spotted" trout were planted into Upper and Lower Paintrock lakes in 1916. Recent sampling has documented strong populations of brook trout in the upper reaches of all the branches and most of the tributaries of Paint Rock creek. At lower elevations, brook trout give way to rainbow trout and Yellowstone cutthroat. Wild populations of genetically pure Yellowstone cutthroat are found in South Fork Paint Rock creek. This population can be traced to hatchery plants in 1942 and 1947. Past mining, livestock use, and recreational activity have impacted critical reaches and subsequent downstream reaches through channel instability and increased sediment deposition. Recent, improved livestock management has increased fish habitat quality and availability to some degree.

The WGFD has rated the four-mile reach of Paint Rock Creek through the canyon as a class 2 trout stream (Very good trout waters – fisheries of statewide importance). Upper Paint Rock creek, South, Middle and North Fork Paint Rock and Trout creeks are all classified as Class 3 trout streams (important trout waters and fisheries of regional importance).

Mineral Resources and Geology: Mineral potential in the area is low for locatable minerals (gold, silver, etc) and very low for leasable minerals (oil and gas) within and around the Paintrock Creek area. There are no current permits or operating plans for minerals exploration within the corridor. Salable minerals such as limestone and dolomite are present within the study area and could potentially be used for construction purposes. However because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If Paintrock Creek were to be ultimately designated by Congress, the Wild and

Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated *wild* river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as mitigation measures would be included in project level plans

Transportation: There is motorized access to the scenic portion of the river from FDT 548 and FSR 349. FDT 62 and 38 both parallel the river for several miles in the Wilderness.

Recreation, Scenery: The Paintrock area is relatively undeveloped. Most of the recreation use is by locals for fishing and dispersed camping. Lake Solitude is a popular destination in the Wilderness. The area is also used for hunting in the fall. Designation as a wild and scenic river would have no effect on the outstandingly remarkable resource values.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in the area as a result of designation since the existing trail system is already in place.

Timber: There are 296 acres of tentatively suitable timber in the scenic portion of Paintrock Creek.

Livestock Grazing: There are 2,702 acres of range allotments in the wild portion of the river and 1,930 acres in the scenic portion of the Paintrock Creek. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation: There should be no change in the outstanding values of the area. However, hunting is popular with the parks and meadows, so it is important to keep the patchy timbered areas for wildlife cover.

Suitability Factor #4: Public, state and local governmental interests in designation.

There are no known state or local government interests or lands in the corridor.

Suitability Factor #5: Estimated cost of acquiring land acquisition and management as a Wild and Scenic River

No private lands would be acquired, no significant recreation or other developments would occur. The following are expected additional funding needs for a five-year period of the river were designated:

Table D-8. Paintrock Creek designation and management costs.

Cost of Implementation	$7,500
Management Plan Development	$15,000
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$25,000**

Alternatives

Alternatives B and C recommend Paintrock Creek for designation as a wild and scenic river in the scenic river classification. Alternatives A, D, and E do not recommend designation.

Rationale for Treatment by Alternative

Paintrock Creek was not found suitable for designation as a wild and scenic river in alternative A since the 1985 management area boundaries are being retained. It was also found suitable for designation in alternative B and C because of their respective emphases on biological diversity and protection of wild places. It was not included in Alternative D because the ID team decided to focus exclusively on the Little Bighorn based on the fact that Congress has over the past 15 years not acted upon the Forest's recommendation for inclusion of the only river which had been nominated in the past plan (the Little Bighorn) - and there was an agreement to focus priority for alternative D exclusively on the Little Bighorn. It was not included in alternative E because designation of this river does not meet the objective of this alternative, which is to maximize wood fiber production.

Cedar Creek

Description

Cedar Creek flows through a deep valley leading into a canyon environment, before joining Shell Creek. Cedar Creek has one mile of sheer rock wall canyon and six miles of heavy timber and aspen. The stream channels have relatively steep gradients with scattered small plunge pools and dense riparian vegetation consisting primarily of conifers.

The Cedar Creek drainage is a coldwater trout stream that flows into Shell Creek on the west central end of the Bighorn Mountains. Cedar Creek begins in T 51 N, R89W, Section 22 (elevation 9,200 feet) just west of Granite Pass and flows through a remote canyon in a westerly and then southerly direction prior to entering the main stem of Shell Creek, which

empties into the Bighorn River near Greybull Wyoming.

Eligibility

There are 8.5 miles of Cedar Creek from Shell Creek to Section 20 eligible for outstandingly remarkable characteristics of scenic and fisheries values. Cedar Creek has a genetically pure strain of Yellowstone Cutthroat Trout. There are scenic vistas on the upper end.

Classification

Preliminary classification for this river is wild.

Suitability

Suitability Factor #1: Characteristics that do or do not make the area a worthy addition to the National system.

Cedar Creek has outstanding fisheries as one of the only streams on the Forest with genetically pure strain of Yellowstone Cutthroat Trout.

Suitability Factor #2: Current status of land ownership and use in the area.

There are no state or private lands within the National Forest portion of Cedar Creek.

Suitability Factor #3: Foreseeable potential uses of the land and water that would be enhanced, foreclosed or curtailed if the area were included in the National System.

Water Resources: On agency-identified study rivers, construction of a major water resources project (e.g. dam, diversion structure) is likely to affect a river's free-flowing condition and therefore its eligibility for consideration as a wild and scenic river. Water resources projects of smaller size and with limited adverse effects to free-flowing character and or outstanding values might not eliminate the river from future consideration but may affect its classification.

If designated as a Wild and Scenic River by Congress, FERC-licensed facilities are prohibited within a designated corridor. Other federally assisted water resources projects within a designated river corridor are evaluated as to their potential "direct and adverse effect" on the values for which the river was designated. Proposed water resource projects above, below, or on a stream tributary to a designated river are evaluated as to their potential to invade the designated river area or unreasonably diminish the scenic, recreational, fish or wildlife values of the designated river.

In the particular case of Cedar Creek, based on present knowledge, riparian areas and wetlands in the upper drainage are subject to disturbance by management activities. Headwaters of Cedar Creek contain numerous springs that are receiving

heavy impacts from livestock grazing. Riparian areas in the headwaters are in marginal condition lacking in willow species. There is evidence that the potential for healthy riparian vegetation is possible in that area. Designation as a wild or scenic river would be unlikely to affect the future availability of water supplies or electric power based upon a review of Forest Service land status records.

Fisheries and Wildlife: The river corridor provides important habitat for many terrestrial and aquatic wildlife species. There are no threatened or endangered species on the Forest that are known to inhabit only these corridors. Lynx historically used the corridors for foraging and as dispersal routes. Land birds, including neotropical migrants, use streamside vegetation for nesting habitat, and riparian areas provide important feeding sites due to insect abundance. Canyon walls can provide potential habitat for nesting peregrine falcons, a sensitive species.

Big game species, including elk, deer, and moose frequent the area for water, forage, and cover needs in addition to using them as migratory corridors from winter range to summer range. Cedar Creek is in a Bighorn Sheep area. Other sensitive species, such as the water vole, three amphibians, and some sensitive plant species are dependent on riparian habitat structure within the corridors, while other sensitive species such as bats forage in the corridors or roost in canyon wall structures. Beaver were an important component of the corridors historically, and are being reintroduced throughout the Forest into suitable habitat.

Important aquatic habitats are found in lower reaches of the drainage. Cedar Creek harbors a population of genetically pure Yellowstone cutthroat trout of unknown origin. A natural waterfall upstream of the Cedar, Shell Creek confluence has blocked upstream movement of non-native fish and appears to have isolated that population of YCT above it. A series of barrier waterfalls, 2.5 miles further upstream, has also limited the upstream distribution of those Yellowstone cutthroat trout. Stocking records indicate brook trout and an unspecified subspecies of cutthroat trout have historically been planted in the drainage.

The current Yellowstone cutthroat trout population in Cedar Creek occupies 2.5 miles of stream. The population of genetically pure in Cedar Creek was estimated at 521 on the Bighorn. Comparisons to previous estimates done in the early 1990's suggest that the population is stable. Current threats to this population include barrier failure or human translocation of rainbow trout across the barrier to upstream reaches and habitat degradation from grazing impacts.

Livestock trailing and grazing is impacting the headwaters area of Cedar Creek. This impact could have influence, through increased sediment loading, in lower reaches that contain Yellowstone cutthroat trout. Most of the reaches in the watershed are high gradient B type channels characterized by step/pool morphology and coarse alluvium that are not easily influenced by management activities. In general, most of those stream channels within the lower portions of the drainage are in good condition.

Mineral Resources and Geology: Mineral potential in the area is low for locatable minerals (gold, silver, etc) and very low for leasable minerals (oil and gas) within and around the Cedar Creek area. There are no current permits or operating plans for minerals exploration within the corridor. Salable minerals such as limestone and dolomite are present within the study area and could potentially be used for construction purposes. However because of the inaccessibility of these reserves, they have not been utilized to any extent in the past.

An agency-identified study river is not withdrawn from either locatable or leasable mineral entry. The applicability of the 1872 Mining Act, as amended, is unaffected absent the area being withdrawn from mineral entry under some other statutory authority (e.g. Wilderness) or the Forest Service recommending to the Bureau of Land Management that an area be withdrawn from mineral entry, which requires a detailed analysis of mineral potential/area's values and an environmental assessment as well as concurrence by the Department of the Interior.

If the Cedar Creek were to be ultimately designated by Congress, the Wild and Scenic Rivers Act affects minerals management/development in several ways. First, subject to valid existing rights (i.e. subject to existing mining claims and mineral leases), the minerals located on federal lands within the bed or banks or ¼ mile of the banks of any designated *wild* river are withdrawn from all forms of appropriation under the mining lawns and from the operation of the mineral leasing laws. Second, subject to valid existing rights (i.e. subject to mining claims where the claimant has filed a proper patent application and paid the required fees prior to the river's designation), mining claimants may only obtain title to the mineral deposits and such rights to the use of the surface and surface resources as are reasonably required for prospecting or mining. Third, the Act requires regulations be developed to govern mining and mineral leasing activities within Wild and Scenic River corridors. While the Secretary of Agriculture has not issued these regulations, the USFS uses its existing regulations (36 CFR 228) to meet, to the extent possible, the nondegradation standard of Section 10(a).

There would be no anticipated adverse effects from mineral material removal as mitigation measures would be included in project level plans

Transportation: There is little access to the river with the exception of FDT 55 and 56.

Recreation, Scenery: The Cedar Creek area provides a primitive recreation experience. Designation as a wild river would have no effect on the outstandingly remarkable resource values.

Heritage Resources: While the designation itself may serve to attract additional visitors to the area, there is low potential for adverse effects to heritage resources in the area as a result of designation since the existing trail system is already in place.

Timber: Cedar Creek has 71 acres of tentatively suitable timber available for timber harvest.

Livestock Grazing: There are 2,726 acres of range allotments in the wild portion of Cedar Creek. Designation of the river should not change existing numbers of permitted livestock if the permittee is meeting standards in their existing allotment.

Effects of non-designation: There should be no effects if the river is not designated as a wild and scenic river because the Yellowstone cutthroat trout must be protected under the Endangered Species Act.

Suitability Factor #4: Public, state and local governmental interests.

There are no known state or local government interests or lands in the corridor.

Suitability Factor #5: Estimated cost of acquiring land acquisition and management as a Wild and Scenic River.

No private lands would be acquired, no significant recreation or other developments would occur. The following are expected additional funding needs for a five-year period of the river were designated:

Table D-9. Cedar Creek designation and management costs.

Cost of Implementation	$7,500
Management Plan Development	$15,000
Development costs	$0
Operation and Maintenance	$2,500 annual
Total - First Five years	**$25,000**

Alternatives

None of the alternatives recommend Cedar Creek for designation as a wild and scenic river.

Rationale for Treatment by Alternative

The ecological characteristics of this river are already represented in the alternatives analyzed in detail by other, higher quality, rivers – Porcupine Creek, Tongue River, and Little Bighorn River.

"This recommendation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, Secretary of Agriculture, and the President of the United States. The Congress has reserved the authority to make final decisions on designation of rivers as part of the National Wild and Scenic Rivers System". FSH 1909.12

Presidential Directive and Council on Environmental Quality Regulations

Recognizing the need to strengthen the Wild and Scenic Rivers System, President Carter, in his August 2, 1979 Message on the Environment, issued a Presidential directive calling for Federal agencies to take particular care not to harm rivers which may qualify for future inclusion in the Wild and Scenic Rivers System. Any Federal agency contemplating an action that could adversely affect the value for which a river had been listed on the NRI was to consult HCRS prior to initiating such action. Carter also directed Federal agencies to study NRI segments on Federal lands for wild and scenic river eligibility, to provide interim protection for those rivers, and to prepare designation legislation for:

> *"Each Federal agency…[shall]…make an assessment of whether the rivers identified in the Nationwide Rivers Inventory and which are on their lands are suitable for inclusion in the Wild and Scenic Rivers System. If an agency determines that a river would be suitable for inclusion in the System, the agency shall, to the extent of the agency's authority, promptly take such steps as are needed to protect and manage the river and the surrounding area in a fashion comparable to rivers already included in the Wild and Scenic Rivers System. In addition, the agency is encouraged…to prepare legislation to designate the river…if appropriate."*

In partial fulfillment of Section 5(d), NPS maintains the NRI as a national listing of potentially eligible river segments. A river segment may be listed on the NRI if it is free-flowing and has one or more "outstandingly remarkable values". The kinds of values that can qualify a river for listing include: exceptional scenery, fishing or boating, unusual geological formations, rare plant and animal life, and cultural or historical artifacts that are judged to be of more than local or regional significance.