



United States Department of Agriculture
Forest Service

Black Hills National Forest

DRAFT Wild and Scenic River Eligibility Evaluation

June 2022



Fly angler fishing one of the many stream segments within the
Black Hills National Forest

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov (link sends e-mail). USDA is an equal opportunity provider, employer, and lender.

Contents

Wild and Scenic River Summary	
Introduction	1
Past Eligibility Evaluations	2
Current Eligibility Evaluation	2
Free-Flowing Determination	3
Outstandingly Remarkable Value Determination	4
<i>Categories for Outstandingly Remarkable Values</i>	4
Classification of Eligible Rivers	7
Eligibility Evaluation Results	7
References Cited	17
Appendix A – Wild and Scenic River Evaluation	
Chapter I - Introduction	1
Eligibility Evaluation Process	2
Chapter II – Summary of Eligibility and Classification	5
Chapter III – Stream Evaluation Reports	9
Segment Descriptions	9
<i>Beaver Creek (Segment 2)</i>	9
<i>Sand Creek (Segments 1 and 2)</i>	12
<i>Rapid Creek</i>	14
<i>Battle Creek</i>	17
<i>Castle Creek (Segments 1, 2, 3, 4)</i>	19
<i>Willow, Nelson, and Lost Cabin Creeks (Black Elk Wilderness Portion)</i>	24
<i>Rhoads Fork Creek</i>	27
<i>Slate Creek</i>	29
<i>Little Elk Creek (Segment 2)</i>	30
<i>Little Spearfish Creek</i>	32
<i>Spearfish Creek</i>	35
<i>Iron Creek</i>	37
<i>Grizzly Bear Creek</i>	40
Appendix B. Maps	43

List of Figures

Figure 1. Eligible wild and scenic river segment for Beaver Creek segment 2.10
Figure 2. Eligible wild and scenic river segments of Sand Creek.13
Figure 3. Eligible wild and scenic river segments of Rapid Creek.15
Figure 4. Eligible wild and scenic river segment of Battle Creek.18
Figure 5. Eligible wild and scenic river segments for Castle Creek.20
Figure 6. Eligible wild and scenic river segments for Willow, Nelson, and Cabin Creeks.25
Figure 7. Eligible wild and scenic river segments for Rhoads Fork Creek27
Figure 8. Eligible wild and scenic river segments for Slate Creek.29
Figure 9. Eligible wild and scenic river segments for Little Elk Creek31
Figure 10. Eligible wild and scenic river segments for Little Spearfish Creek.....33
Figure 11. Eligible wild and scenic river segments for Spearfish Creek.35
Figure 12. Eligible wild and scenic river segments for Iron Creek.....38
Figure 13. Eligible wild and scenic river segments for Grizzly Bear Creek.41

List of Tables

Table 1. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Bearlodge District9
Table 2. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Mystic District.10
Table 3. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Northern Hills District13
Table 4. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Hell Canyon District15
Table 5. Black Hills National Forest WSR Interdisciplinary Team.....3
Table 6. Bearlodge District Eligibility and Classification Results5
Table 7. Mystic District Eligibility and Classification Results.....5
Table 8. Northern Hills District Eligibility and Classification Results.....7
Table 9. Hell Canyon District Eligibility and Classification Results.....8

Introduction

The National Wild and Scenic Rivers Act of 1968 (PL 90-542:16USC 1271-1287, as amended) is designed to preserve certain rivers and streams with outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values in a free-flowing condition for the enjoyment of present and future generations. To be designated under the National Wild and Scenic Rivers Act (the Act), a river segment must meet two fundamental requirements: the river segment must be “free-flowing” as defined by Section 16(b) of the Act, and the river segment must have one or more outstandingly remarkable values (Section 1(b)).

The National Wild and Scenic Rivers Act Section 5(d)(1) requires that, “consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas” during land management planning. To meet this requirement, Forest Service units conduct a systematic evaluation of river segments to determine if they are eligible for designation under the National Wild and Scenic Rivers Act. A wild and scenic river study process is composed of three main phases: eligibility, classification, and suitability. Only eligibility and preliminary classification is addressed in this report. If a river is found eligible, it will be managed under the appropriate wild, scenic, or recreational river management area direction to protect those values that made it eligible and the characteristics that established its preliminary classification. A final classification will be assigned during the comprehensive river management planning process required by the Act if the river is designated by Congress.

Prior to being recommended to Congress as potential additions to the National Wild and Scenic River System (NWSR), eligible rivers must also be found to be suitable for designation. A suitability study is not required as part of the 2012 Planning Rule and would only be undertaken in certain circumstances. The Black Hills National Forest (NF) will initiate a suitability evaluation when:

- Strong local interest or support is demonstrated for wild and scenic river designation,
- Congress expresses interest in a specific river for wild and scenic river designation, and/or
- A proposed project would alter the free-flowing character of a stream, such as by impoundment, or would affect the resources that made the stream eligible.

Any future suitability evaluation will follow procedures outlined in FSH 1909.12-15-1 – Land Management Planning Handbook Chapter 80 – Wild and Scenic Rivers. This process will consider possible alternatives to inclusion of the river in the National Wild and Scenic River System in terms of social and economic values, effects on other resources, and effects on private lands and other uses of the area. If a river segment is found suitable, the agency recommends it to the administration, which may recommend suitable rivers to Congress for inclusion in the system. If a river is determined to not be suitable, then it is no longer considered eligible for inclusion in the National Wild and Scenic River System (NWSRS).

The Forest Service cannot administratively designate a river via a planning decision or other agency decision into the NWSRS, and no segment studied is or will be automatically designated as part of the NWSRS. Only Congress can designate a wild and scenic river.

Both eligible and suitable segments are managed to maintain their free-flowing nature and

outstanding remarkable values until such time as they are designated under the National Wild and Scenic Rivers Act or released from consideration.

Past Eligibility Evaluations

The Black Hills NF conducted eligibility evaluations for two rivers as part of the initial 1983 Forest Planning process. French Creek and Little Spearfish Creek were evaluated but were found not to be eligible.

The 1997 Forest Plan conducted the eligibility evaluations of 25 streams (including the two streams evaluated in the 1983 Forest Plan because evaluation criteria had changed with the new National Wild and Scenic Rivers Revised Guidelines published in 1982). Beginning in 1991, 25 streams (195.3 miles) were evaluated to determine their eligibility for Wild and Scenic River designation (USDA Forest Service, 1997). Twelve streams/stream segments, totaling 74.7 miles, were found to be not eligible for inclusion in the NWSRS. Sixteen streams/stream segments, totaling 120.6 miles, were found to be eligible for inclusion in the NWSRS, and were classified accordingly. The eligible water bodies included 8.5 miles of “Wild” rivers (all located in the Black Elk Wilderness), 15 miles of “Scenic” rivers, and 97.1 miles of “Recreational” Rivers.

Current Eligibility Evaluation

Wild and scenic river eligibility evaluation for the BHNF is again being conducted as part of the current forest plan revision efforts, consistent with the final directives of the 2012 Planning Rule (FSH 1909.12-2015-1, Chapter 80). It has been 25 years since the previous eligibility evaluation, and some changed circumstances exist that warrant review of all 16 potentially eligible stream segments. Changed circumstances include:

1. State assigned beneficial uses.
2. Forest conditions due to the mountain pine beetle and large fires that have occurred since the 1997 assessment.
3. Land ownership parcel changes.
4. Changes in special status species listings within stream corridors.
5. Improved and new data are now available for use in determining whether stream segments meet eligibility criteria.
6. Changes and adjustments in land management, namely 1) the expansion of the Black Elk Wilderness from 9,873 acres to 13,543 acres in 2002; 2) the 2006 Agreement to Initiate a land-to-land exchange signed between the USDA Forest Service, the Black Hills NF, and Capstone Properties LLC to exchange 97 acres of federal land for 120 acres of non-federal land known as Greyhound Gulch within Pennington County, SD; 3) the 2014 land exchange to protect underground karst resources at Jewel Cave and to reduce wildlife habitat fragmentation; and 4) the Land and Water Conservation Fund private inholding purchases since 2007 (2,700 acres), including a 2,400-acre purchase of Lady C Ranch from 2007-2011. Most recent purchases include a Trust for Public

Land purchase of Spring Creek Watershed in 2019 and a Nature Conservancy Purchase of Slate Creek in 2012, which was considered a critical inholding.

The directives (FSH 1909.12-2015-1, Sec. 82.2) specify that “rivers to be studied for eligibility include all rivers named on a standard U.S. Geological Survey (USGS) 7.5-minute quadrangle map.” For this evaluation, all named perennial and intermittent river and stream segments and unnamed stream segments identified as perennial streams within the USGS National Hydrography Dataset have been reviewed. Advancements in GIS mapping and monitoring, such as new hydrological and flow regime data, further enables a determination of whether streams/stream segments meet eligibility criteria.

The evaluation of potentially eligible river segments was conducted by Black Hills NF resource managers. The process applied to each river segment included:

1. Determination of the free-flowing condition for each river segment (FSH 1909.12-2015-1, Sec. 82.71).
2. Evaluation of outstandingly remarkable values (ORVs) (FSH 1909.12-2015-1, Sec. 82.73).
3. Preliminary classification of eligible river segments as wild, scenic, or recreational (FSH 1909.12-2015-1, Section 82.8).

Free-Flowing Determination

The National Wild and Scenic Rivers Act Section 16(b) defines free flowing as:

“‘Free flowing’ as applied to any river or section of a river means existing or flowing in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The existence, however, of low dams, diversion works, or other minor structure at the time any river is proposed for inclusion in the [National System] shall not automatically bar its consideration for such inclusion.”

To be considered free flowing for this evaluation, a river needed to maintain its natural stream functions, including a natural flood regime, natural sinuosity and channel shifting, natural bank erosion, and natural bed load and debris movement. There is no requirement for a minimum flow or temporal or spatial continuity of flow (Section 16(b)). Flow must only be sufficient to sustain or compliment the ORVs for which the river would be recommended (FSH 1909.12-2015-1, Section 82.72).

Further, the USDA-USDI Guidelines state: “[t]he fact that a river segment may flow between large impoundments will not necessarily preclude its designation. Such segments may qualify if conditions within the segment meet the eligibility criteria” (FSH 1909.12-2015-1, Section 82.71).

Data reviewed included the 1997 evaluation (USDA Forest Service, 1997), the National Hydrology dataset (National Hydrology Dataset, 2021), USGS data for ditches and reservoirs, and Forest Service resource knowledge.

Outstandingly Remarkable Value Determination

Outstandingly remarkable values (ORVs) are defined as unique, rare, or exemplary features that are significant within the associated regions of comparison. They are conspicuous examples of these values and among the best representatives of these features. Only one such value is needed for eligibility.

To be assessed as outstandingly remarkable, a river-related value must be a unique, rare, or exemplary feature that is significant within a defined region of comparison. The Black Hills Coniferous Forest Province, Black Hills Section M334A which encompasses the entirety of the Black Hills NF served as the region of comparison (see Map 1, McNab et al., 2017). This Province and Section stands in stark contrast to the surrounding Great Plains and is characterized by a central highland core area surrounded by foothills and hogbacks. Rock formations include granitic peaks, due to its higher elevation, the unit is wetter, cooler, and more timbered with evergreen species than the surrounding plains (McNab et al., 2017).

All ORVs should be directly river-related and meet at least one of the following criteria (FSH 1909.12- 2015-1, Section 82.73):

1. Be located in the river or its corridor (generally within 1/4 mile on either side of the river)
2. Contribute substantially to the functioning of the river ecosystem
3. Be river-dependent and owe their location or existence to the presence of the river

The determination that a river corridor does or does not contain one or more ORVs is a professional judgement on the part of the responsible official, as informed by the interdisciplinary team, best available scientific information, and public participation (FSH 1909.12-2015-1, Section 82.73).

Categories for Outstandingly Remarkable Values

Categories for ORVs, the region of comparison they were evaluated within for the Black Hills NF, and any other specific criteria used to determine eligibility for inclusion in the National Wild and Scenic River System are described below:

- 1. Scenery:** The landscape elements of landform, vegetation, water, color, and related factors result in notable or exemplary visual features and/or attractions as compared to similar scenic values within the appropriate ecological section (see Map 2). When analyzing scenic values, additional factors—such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed—may be considered. Scenery and visual attractions may be highly diverse over most of the river or river segment.

Additionally, the Black Hills NF considered professional judgement and areas identified as having distinctive scenic attractiveness in the scenery management system developed as part of the plan revision effort in this category.

- 2. Recreation:** Recreational opportunities are, or have the potential to be, popular enough to

attract visitors from throughout or beyond the States of Wyoming and South Dakota or are unique or rare within the region. Visitors are willing to travel long distances to use the river resources for recreational purposes.

River-related opportunities could include, but are not limited to, sightseeing, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Interpretive opportunities may be exceptional and attract, or have the potential to attract, visitors from outside the region of comparison. The river may provide, or have the potential to provide, settings for national or regional usage or competitive events.

Additionally, the Black Hills NF considered information about permitted recreation activities, recreation manager knowledge, Recreation Opportunity Spectrum (ROS), and public recreation information received during the plan revision process from stakeholders.

3. **Geology:** The river, or the area within the river corridor, contains one or more examples of a geologic feature, process, or phenomenon that is unique or rare within the appropriate ecological section (see Map 2). The feature(s) may be in an unusually active stage of development, represent a “textbook” example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, or other geologic structures).

Additionally, the Black Hills NF considered professional judgement and areas identified as having distinctive scenic attractiveness in the scenery management system.

4. **Fish:** Fish values will be evaluated within the appropriate ecological section (see Map 2). Fish values may be judged on the relative merits of fish populations, habitat, or a combination of these river-related conditions.

Additionally, the Black Hills NF considered professional judgement and information from USDA Forest Service Wildlife Assessments, Black Hills Species of Conservation Concern (SCC) 2021, and threatened and endangered species (TES).

Populations: The river is nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state listed (or candidate) threatened, endangered, or species of conservation concern. Consideration should be given to the number of listed or sensitive species present (diversity) and/or the uniqueness of the populations (e.g., genetic purity, presence of rare life history stages—adfluvial forms that migrate from streams to lakes or reservoirs for part of their life cycle, etc.) when determining “outstanding remarkable.”

- a. **Habitat:** The river provides exceptionally high-quality habitat for fish species indigenous to the region of comparison. Of particular significance is exemplary habitat for wild stocks and/or federal or state listed (or candidate) threatened, endangered, or species of conservation concern. Consideration is given to aquatic ecosystems that are largely “intact” with minimal anthropogenic influences or rare/unique habitats within the region. Diversity of habitats is an important consideration and could lead to a determination of “outstandingly remarkable.”

5. **Wildlife:** Wildlife values will be evaluated within the appropriate ecological section (see Map 2). Wildlife values will be judged on the relative merits of either terrestrial or aquatic wildlife populations or habitat or a combination of these conditions.

Additionally, the Black Hills NF considered professional judgement and information from USDA Forest Service Wildlife Assessments, Black Hills Species of Conservation Concern (SCC) 2021, and TES data.

- a. **Populations:** The river, or area within the river corridor, contains nationally or regionally important (economically or rare) populations of indigenous wildlife species. Of particular significance are species considered to be unique, and/or populations of federal or state listed or proposed threatened and endangered species and may include species of conservation concern whose population may be essential for the viability of that species (e.g., boreal toad). Diversity of species is an important consideration and could lead to a determination of “outstandingly remarkable.”
 - b. **Habitat:** The river, or area within the river corridor, provides exceptionally high-quality habitat for wildlife of national or regional significance, and/or may provide unique habitat or a critical link in habitat conditions (such as an essential migration route) for federal or state listed or proposed threatened and endangered species. Consideration should be given to those species whose habitat is essential for the eventual recovery of the species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitats is an important consideration and could lead to a determination of “outstandingly remarkable.”
6. **Historic and Cultural Values:** The Black Hills NF utilized professional judgment and data found in the National Register of Historic Places to identify historical and prehistorical values.
 - a. **Prehistory:** The river, or area within the river corridor, contains a site(s) where there is evidence of occupation or use by Native Americans. Sites must have unique or rare characteristics or exceptional human-interest value(s). Sites may have importance for interpreting prehistory within the region; may be rare and represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; and/or may have been used by cultural groups for rare sacred purposes. Many such sites are listed on the National Register of Historic Places, which is administered by the National Park Service.
 - b. **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 rare or unique within the States of Wyoming and/or South Dakota. Consideration should be given to the historic importance to attract visitors and historians from throughout or beyond the States of Wyoming and South Dakota. Many such sites are listed on the National Register of Historic Places. A historic site(s) and/or features(s) is 50 years old or older in most cases.
7. **Other Values:** Vegetation, scientific, and paleontological values have been considered as other values for the Black Hills NF evaluation.

- a. **Vegetation:** The river, or area within the river corridor, provides exceptionally unique vegetation of regional significance. For this Black Hills NF eligibility study, consideration was given to community types and rare plants identified by Black Hills NF professional judgment. This evaluation considered Black Hills NF professional judgement and information from SCC (2021) and TES data.
- b. **Scientific:** This “other value” is considered by the Black Hills NF where concentrations of scientific studies and/or presence of scientific research facilities is located within river corridors and studies are river related. This evaluation considered Black Hills NF professional judgement and information from Research Natural Areas (RNAs) data.
- c. **Paleontology:** Some sites are of national interest to vertebrate paleontologists, archaeologists, paleo-botanists, and geologists. This evaluation considered Black Hills NF professional judgement.

Classification of Eligible Rivers

Under Section 2(b) of the National Wild and Scenic Rivers Act, eligible river segments are required to be classified as wild, scenic, or recreational. The preliminary classification is based on the existing level of development in the river and surrounding corridor. River segments may have differing classifications when levels of human use and activity create different degrees of development given that each segment is of sufficient length to warrant unique management. The three classification categories for eligible rivers include:

1. **Wild:** 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.
2. **Scenic:** Those rivers or sections of rivers free of impoundments, with shorelines or watersheds still largely undeveloped, but accessible in places by roads.
3. **Recreational:** Those rivers or sections of rivers readily accessible by road or railroad, which may have some development along their shoreline and that may have undergone some impoundments or diversion in the past.

In the case of scenic and recreational river classifications, the National Wild and Scenic Rivers Act does not specify water quality standards; however, the Federal Water Pollution Control Act Amendments of 1972 made it a national goal that all waters of the United States are made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study, provided a water quality improvement plan exists, or is being developed in compliance with applicable Federal and State laws. (FSH 1909.12-2015-1, Section 82.8 Exhibit 01).

Eligibility Evaluation Results

Meetings were held with members of the plan revision interdisciplinary team to solicit local expertise on river segments in question throughout Winter and Spring 2022. The purpose of

these meetings was to review the stream inventory, revisit eligibility evaluations conducted during previous forest planning efforts for the Black Hills NF, and to evaluate any stream segments that were not previously studied to determine which, if any, segments should be carried forward as eligible in the current forest plan revision effort. Discussions were documented and summarized in spreadsheets in the project record. As the plan revision process continues; segments agreed to by all as eligible will be carried forward to the forest supervisor, the responsible official for the plan revision. The responsible official has discretion over whether a river segment is eligible for inclusion in the National Wild and Scenic River System.

Black Hills National Forest
DRAFT Wild and Scenic Rivers Eligibility Evaluation

Table 1. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Bearlodge District

Grouping	WSR Section	Total Eligible Length (miles) ¹	Outstandingly Remarkable Values (ORVs)	FS River Corridor Acres ²	Classification	Notes
Beaver Creek	Beaver Creek (segment 2)	8.8	Scenery, Recreation, Geology, Wildlife, Fish, Vegetation	1,789	Recreational	Segment 2 of Beaver Creek runs southward from Little Creek to the confluence of Togus Creek. This segment contains numerous active beaver dams, majestic cliffs and rimrock, rare plant species, and several small waterfalls within the section from Little Creek to the earth-filled dam at Cook Lake. This segment provides abundant cold-water habitat for non-native, but highly sought after, sport fish. The northern section of segment 2 also hosts a unique geologic site with active and potential mass movement all along this section of the creek.
Sand Creek	Sand Creek (segment 1)	10.1	Scenery, Recreation, Vegetation/Rare Plants	2,460	Recreational	Segment 1 of Sand Creek extends from the Forest boundary southward to 0.3 miles north of Sand Creek Crossing. The creek flows alongside cliffs and sandstone outcroppings and flows through stands of ponderosa pine interspersed with aspen, birch, and oak. Two of the plant species in the corridor are labeled as disjunct species of plant (<i>Adrenocaulon bicolor</i>). Much of the area is considered a historic mining area and is still considered as having a “high locatable mineral potential.” The Sand Creek drainage has a total of 6 archeological sites and one historical site.
	Sand Creek (segment 2)	3.1	Vegetation	969.4	Recreational	Segment 2 of Sand Creek extends from below Sand Creek Crossing to the private land boundary above Cummins Creek. The creek flows alongside cliffs and sandstone outcroppings and flows through stands of ponderosa pine interspersed with aspen, birch, and oak. Segment 2 has special botanical interests due to occurrence, habitat, location, life history, ecology, and rarity. This segment is a cold-water fishery, but fishing opportunities are limited.

¹ Note: includes length on non-Forest Service lands

² Note: does not include non-Forest Service lands

Table 2. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Mystic District.

Grouping	WSR Section	Total Eligible Length (miles) ¹	Outstandingly Remarkable Values (ORVs)	FS River Corridor Acres ²	Classification	Notes
Rapid Creek	Rapid Creek	23.5	Scenery, Recreation, Geology, Fish/mtn sucker in upper section, Wildlife/big horn sheep, Historic & Cultural/Flumes and Railroad	4,351.4	Recreational	Rapid Creek flows from the Limestone Plateau in the western Black Hills, through the central core's and hogback ridge's physiographic zones, then enters the plains and joins the Cheyenne River east of Rapid City. The area being evaluated is the stretch from Slate Creek to Dark Canyon. There is a Research Natural Area along the upper section. The area below Pactola Dam to Dark Canyon exposes unique geologic features including grey Madison Limestone cliffs, yellow and red sandstone of the Minnelusa Formation, and the red-brown cliffs of the Deadwood Formation. The area supports non-motorized trail access (four trailheads), fly fishing (blue-ribbon trout stream on upper and lower sections), and rock-climbing (lower section) opportunities. The stream corridor provides bighorn sheep habitat and is a popular viewing area. The area containing remnants of the Rapid Canyon Line Railroad is eligible for nomination to the National Register of Historic Places based on aspects of historic significance. The creek has outstandingly remarkable scenic features as it flows through beautiful open meadows, rolling hills, and steep canyons
Battle Creek	Battle Creek	4.4	Scenery/Waterfall, & Pools, Recreation, Wildlife/Mountain Goats, Historic & Cultural	1,173.6	Recreational	The segment of Battle Creek under evaluation is the free-flowing portion from east of the unincorporated town of Harney to the Forest boundary. Battle Creek provides a recreational experience not found in other areas of the eastern side of the Black Hills. The two natural waterfalls with their respective pools provide a natural swimming and fishing opportunity for the public. As people enjoy the recreational opportunities, they also have the chance to spot a mountain goat. As a person swims or floats in the pools below the waterfalls, they can gaze upward at the granite walls of the canyon. The corridor contains multiple placer mines that are potentially eligible for the NRHP including: Koopman's placer mine and the Foster Gulch mine. The Historic Hayward Cemetery is also on the southernmost periphery of the corridor.

*Black Hills National Forest
DRAFT Wild and Scenic Rivers Eligibility Evaluation*

Castle Creek	Segment 1	5.6	Vegetation/McIntosh Fen, Fish, Wildlife/ruffed grouse/Beaver, Historic & Cultural	1,288.4	Scenic	Segment 1 of Castle Creek flows from the southern border of Prickett Ranch to Deerfield Lake. Castle Creek as a whole is recognized as one of the highest quality mountain streams in the Forest. Most of Segment 1 is closed to cattle grazing. Ruffed grouse can be heard drumming inside of the stream buffer, and beaver activity is periodic. Walk-in fisheries and wildlife habitat are the current uses. It is labeled as a Class II fishery for brook trout, and also supports a population of lake chub. Historical sites include the Deerfield Townsite, four other historic period sites, and two prehistoric sites. One of the prehistoric sites, 39PN1119, is considered eligible for the National Register of Historic Places (NRHP). This corridor is ecologically valuable due to the unique plant composition found in the McIntosh Fen.
	Segment 2	3.9	Fish, Wildlife/osprey, Historic & Cultural/Deerfield Townsite and Kenzy Archeological Site	908.9	Recreational	Segment 2 of Castle Creek flows below the Deerfield Dam to the Adventist Camp. Castle Creek as a whole is recognized as one of the highest quality mountain streams in the Forest. This segment contains a walk-in blue-ribbon trout fishery supported by a class II fishery for brook trout. This segment also supports a population of lake chub. Just below Deerfield Dam is the Deerfield Site (39PN214) and the Kenzy Site (39PN1081). Both of these sites are eligible for the NRHP. These sites are of national interest to vertebrate paleontologists, archaeologists, paleo-botanists and geologists. Segment 2 contains alterations to its shoreline and has Forest Service roads paralleling its streambed. Most of this stream segment is "free flowing" with the stream being channeled under the existing road in only two places. There are osprey nests within the stream buffer.
	Segment 3	5.7	Scenery, Fish, Historic & Cultural	1,269.1	Scenic	Segment 3 of Castle Creek flows from the Adventist Camp to the Teddy Bear Summer Home Group (excluding the Golden West portion of private land). Castle Creek as a whole is recognized as one of the highest quality mountain streams in the Forest. Only Segment 3 has an unusually beautiful area, comprising a river canyon with steep-sloped limestone bluffs enclosing the stream. This segment is only accessible by road in one area. Labeled as a Class II fishery for brook trout and also supports a population of brown trout and lake chub.
	Segment 4	12.2	Fish, Historic & Cultural/Mining, Vegetation/Fen	2,772.2	Recreational	Segment 4 of Castle Creek flows from below the Deerfield Dam from the Teddy Bear Summer Home Group to the confluence with Rapid Creek (excluding portions of private land). This corridor includes a campground and is labeled as a Class II fishery for brook

						trout. It also supports a population of lake chub. Segment 4 has one prehistoric site and seventeen historic sites representing a wide array of historic uses. This segment is intersected by a multitude of roads, directed in sections through culverts, and has had some past alterations to its shorelines for irrigation and mining purposes. This section has iron fens which contribute to the occasional rust color of the river.
Black Elk Wilderness Portions	Willow Creek	1.4	Scenery, Wildlife, Recreation/Wilderness, Historic & Cultural, Vegetation	550.3	Wild	Willow Creek is in an area known for its scenic beauty including views of the rugged granitic exposures of Black Elk Peak, Cathedral Spires, and Elkhorn Mountain, and they are located in the only wilderness area within the Black Hills region. Fishing, cross-country skiing, horseback riding and wildlife viewing include some of the recreational opportunities available. The corridor is used by mountain goats and big horn sheep as a lambing area. The creek corridor includes an area of major significance to American Indian cultures and includes established stands of "late successional" ponderosa pine and white spruce.
	Nelson Creek	1.1	Scenery, Wildlife, Recreation/Wilderness, Historic & Cultural, Vegetation/douglas fir	477.2	Wild	Nelson Creek is in an area known for its scenic beauty including views of the rugged granitic exposures of Black Elk Peak, Cathedral Spires, and Elkhorn Mountain, which are located in the only wilderness area within the Black Hills region. Fishing, cross-country skiing, horseback riding and wildlife viewing include some of the recreational opportunities available. The corridor is used by mountain goats and big horn sheep as a lambing area. The creek corridor includes an area of major significance to American Indian cultures and includes established stands of "late successional" ponderosa pine, white spruce, as well as a rare stand of Douglas fir.
	Lost Cabin Creek	2.8	Scenery, Wildlife, Recreation/Wilderness, Historic & Cultural, Vegetation	944.2	Wild	Lost cabin Creek is in an area known for its scenic beauty including views of the rugged granitic exposures of Black Elk Peak, Cathedral Spires, and Elkhorn Mountain, all of which are located in the only wilderness area within the Black Hills region. Fishing, cross-country skiing, horseback riding and wildlife viewing include some of the recreational opportunities available. The corridor is used by mountain goats and big horn sheep as a lambing area. The creek corridor includes an area of major significance to American Indian cultures and includes established stands of "late successional" ponderosa pine and white spruce.

*Black Hills National Forest
DRAFT Wild and Scenic Rivers Eligibility Evaluation*

Rhoads Fork Creek	Rhoads Fork Creek	6.8	Fish, Wildlife, Vegetation/Iron Fen, Historic & Cultural	2,571.4	Recreational	Rhoads Fork Creek flows from its headwaters to its confluence with the South Fork of Rapid Creek by Black Fox Campground. Rhoads Fork is known for its scenic beauty which is usually accessed by the road that parallels the creek. The creek follows through beautiful limestone bluffs into slates and schists of the central core. Beaver dams and ponds provide a unique and interesting sight along the creek. The creek hosts a population of mountain suckers, and the corridor hosts populations of rare snail species (<i>Oreohelix/Discus/Catinella</i>). The creek provides recreational opportunities including fishing, wildlife viewing, dispersed camping, hiking, bicycling, and snowmobiling. A fen is located at the junction of Rhoads Fork Creek and the South Fork of Rapid Creek. This fen, also called an iron fen, contains iron-oxide precipitating plants.
Slate Creek	Slate Creek	6.7	Historic & Cultural/Lumber Flume, Fish, Wildlife	1,541	Recreational	Slate Creek flows from below Slate Creek Dam to its confluence with Rapid Creek. Slate Creek winds through a flat river valley, with gently to steeply sloping hills. No human-made bridges or water diversions exist along this segment, but a dirt road parallels the streambed, intersecting the creek in many places. This area provides a wide range of recreational opportunities including hiking, fishing, wildlife viewing and water-related activities. Slate Creek has a wild brown trout fishery and supports a population of mountain suckers. It is also a common site for overwintering bald eagles. The creek holds unique historical value because it once acted as a log flume—transporting logs down the main canyon to a loading dock on Rapid Creek. A small segment of the flume is still intact.

¹ Note: includes length on non-Forest Service lands

² Note: does not include non-Forest Service lands

Table 3. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Northern Hills District

Grouping	WSR Section	Total Eligible Length (miles) ¹	Outstandingly Remarkable Values (ORVs)	FS River Corridor Acres ²	Classification	Notes
Little Elk Creek	Segment 2	3.3	Scenery, Geology, Vegetation	1,040.2	Recreational	Little Elk Creek is a stream that originates near Flagstaff Mountain northwest of Nemo, South Dakota, and flows east-southeast before exiting the Hills near Piedmont, South Dakota after originating from

						<p>springs on private land near Forest Highway 26. The stream flows into Dalton Lake, a human-made impoundment adjacent to a National Forest campground. Below the lake, the stream runs into Little Elk Canyon where it alternately runs above and below ground. There are two separate stretches of this stream that are being evaluated. The upper stretch, from FH26 to Dalton Lake, holds no "outstandingly remarkable" characteristics and is similar to much of the northern Black Hills. The lower stretch, from Dalton Lake through Little Elk Creek Canyon to the prairie, has "outstandingly remarkable" scenic, geologic, and botanic values with a "recreational river" classification. Populations of <i>Cyripedium parviflorum</i>, an R2 sensitive plant species are adjacent to the stream corridor.</p>
Little Spearfish Creek	Little Spearfish Creek	6.2	Scenery/Roughlock Falls and Limestone Cliffs, Historic & Cultural, Vegetation	1,692.6	Recreational	<p>Little Spearfish Creek was evaluated from its entry onto Forest System land in Section 9 to a point at the upper end of the dam pond on private land in Section 36. Recreation is a primary use of this creek. This corridor has two small, developed Forest Service campgrounds located along the creek, and a popular developed picnic area located on private land at Roughlock Falls. The entire creek is located in the Limestone Plateau, with Pahasapa Limestone the dominant formation exposed in the cliffs lining the creek. This area was an important prehistoric travel corridor from Spearfish Canyon up to the Limestone Plateau, and offered a valuable area for American Indians to spend summer and fall. A historic flume constructed circa-1887 known as the "Fabulous Flume" or "Buckeye Flume" runs along the entire length of the corridor. The area also contains R2 sensitive plant species including <i>Cyripedium parviflorum</i>.</p>
Spearfish Creek	Spearfish Creek	19.4	Scenery/Scenic Byway, Historic & Cultural, Vegetation	5,007.8	Recreational	<p>This segment of Spearfish Creek flows from Cheyenne Crossing north to Spearfish. Outstandingly remarkable scenic values are attributed to the canyon, the creek itself, the vegetative diversity, the rock cliffs and outcrops along the canyon, and the contrast between the canyon, adjacent Limestone Plateau, and the Great Plains. The entire creek is in a canyon of nearly 1,000 feet in depth. Historic water flumes and pipelines, dams, railroads, and homes are found in the canyon. The segment has a class I fishery with self-reproducing populations of brown and brook trout and stocked</p>

Black Hills National Forest
DRAFT Wild and Scenic Rivers Eligibility Evaluation

						populations of rainbow trout. Spearfish Creek was a major travel and resource corridor for prehistoric and historic people. There are many cultural resources located along the length of the corridor including prehistoric and historic sites eligible for the NRHP.
--	--	--	--	--	--	--

¹ Note: includes length on non-Forest Service lands

² Note: does not include non-Forest Service lands

Table 4. Eligible rivers for inclusion in the National Wild and Scenic Rivers System in the Hell Canyon District

Grouping	WSR Section	Total Eligible Length (miles) ¹	Outstandingly Remarkable Values (ORVs)	FS River Corridor Acres ²	Classification	Notes
Iron Creek	Iron Creek (segment 1)	5.6	Scenery/Granite Outcrops, Fish/Brook Trout, Wildlife/Mountain Goats	1,115	Scenic	Segment 1 of Iron Creek reaches from the headwaters to the Iron Creek Horse Camp. This section flows from the Black Elk Wilderness into the Norbeck Wildlife Preserve. There has been no stream channel or bank disturbance along the creek. The riparian area has a great variety of trees and shrubs and contains rare plant species. The fisheries/brook trout population, wildlife/mountain goat population, and scenery/granite outcrop formations are the "outstandingly remarkable" values of this segment. Springs located in the headwaters, with waterfall features are scattered along the creek during wet years.
	Iron Creek (segment 2)	6.5	Scenery/Granite Outcrops, Recreation, Wildlife/Mountain Goats, Historic & Cultural, Vegetation	1,750.9	Recreational	Segment 2 of Iron Creek flows from the Iron Creek Horse Camp to Lakota Lake. This section contains two summer home groups and multiple NRHP eligible structures. There is a gravel road along the creek serving as access to the cabins; this road crosses the creek 13 times. The riparian area is in excellent condition with a variety of trees and shrubs and rare plant species occur throughout the corridor. This corridor has some of the largest and most spectacular ponderosa pine trees in the Black Hills. The corridor gets much use from hikers, horseback riders and naturalists during the year. Wildlife/mountain goats, scenery/granitic outcrops, and recreation are found throughout the entire segment. The canyon has outstanding scenic value.

	Grizzly Creek	2.4	Scenery/Granite Outcrops, Recreation, Historic & Cultural	903	Scenic	The entire length of Grizzly Creek is located within the Norbeck Wildlife Preserve. The creek flows southeasterly into Iron Creek. Since the creek is fed by springs, the water quality is excellent. This stream corridor is very scenic with granite outcrops on the peaks and a wetland environment along the bottom land. The beaver dams along the lower portion of the creek create a unique wetland environment. The Grizzly Creek corridor contains the historic USFS Camp Remington Summer Home Group.
Grizzly Bear Creek	Grizzly Bear Creek	5.4	Scenery/Waterfalls, Fish, Wildlife, Recreation/Wilderness, Vegetation	1,485.8	Wild	The headwaters of Grizzly Bear Creek begin in the Pine Creek Natural Area east of Black Elk Peak, flow eastwardly through the Black Elk Wilderness, and empty into Battle Creek near Keystone. The entire segment is located within the Black Elk Wilderness. The water quality is excellent, which results in a good brook trout population. The stream corridor is very scenic with granite outcrops, waterfalls, and a diversity of vegetation along the corridor that includes rare species. Beaver dams occur along the creek and create a unique wetland environment in several areas along the corridor. "Outstandingly remarkable" values include scenery/waterfalls, fish and wildlife, and recreation/wilderness.

¹ Note: includes length on non-Forest Service lands

² Note: does not include non-Forest Service lands

References Cited

- McNab, W.H.; Cleland, D.T.; Freeouf, J.A.; Keys, J.E., Jr.; Nowacki, G.J.; Carpenter, C; 2007. Ecological Subregions: Sections and Subsections of the Conterminous United States. Gen. Tech. Report WO-76. Washington, DC: U.S. Department of Agriculture, Forest Service. <https://www.fs.fed.us/research/publications/misc/73327-wo-gtr-76b-mcnab2007.pdf>
- Federal Water Pollution Control Act Amendments of 1972. 1972. <https://www.govinfo.gov/content/pkg/STATUTE-86/pdf/STATUTE-86-Pg816.pdf>
- Interagency Wild & Scenic Rivers Coordination Council. 1968. Wild and Scenic Rivers Act (16 U.S.C 1271). <https://www.rivers.gov/documents/wsr-act.pdf>
- National Hydrology Dataset. 2021. <https://www.usgs.gov/national-hydrography/national-hydrography-dataset>
- USDA Forest Service. 1997. Black Hills National Forest. Final Environmental Impact Statement, Appendix D, Wild and Scenic River Evaluation. <https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:d9ac9d0a-3309-467b-8f50-0dfb25e44b70>
- USDA Forest Service. 2006. Black Hills National Forest Land and Resource Management Plan. 1997 Revision Phase II Amendment. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd592921.pdf
- USDA Forest Service. Revised 2015. FSH 1909.12-2015-1 – Land Management Planning Handbook Chapter 80 – Wild and Scenic Rivers. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5409888.pdf
- USDI National Park Service. 2017. Nationwide Rivers Inventory. <https://www.nps.gov/subjects/rivers/nationwide-rivers-inventory.htm>

Appendix A – Wild and Scenic River Evaluation

Chapter I - Introduction

The purpose of this report is to determine which rivers are eligible for wild and scenic river consideration and, if eligible, the preliminary classification as “wild,” “scenic,” or “recreational.”

The National Wild and Scenic Rivers Act of 1968 (P. L. 90-542; 16 U. S. C. 1271-1287, as amended) is designed to preserve certain rivers and streams with outstanding natural, heritage, or recreational features in a free-flowing condition for the enjoyment of present and future generations. In 2019, the National Wild and Scenic Rivers System included 226 streams totaling 13,412 miles (<https://www.rivers.gov/index.php>). There are no designated streams in the Black Hills NF.

The term "river" as used in this appendix is based on language in the Act. "River" does not confer any meaning about water quantity or quality. In the Black Hills NF, the term "river" applies to creeks or intermittent streams which are free-flowing (without impoundments). There are no rivers, of the commonly understood definition, in the Black Hills.

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

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

Landownership within designated boundaries is often a combination of federal, state and private lands. If designation of any rivers were to occur, and if private land lies within the corridors, the Forest Service would consider acquisition of these lands only when the owner is willing to sell or exchange land for the appraised value. The Forest Service would not force anyone to sell their property and is limited to acquiring no more than 100 acres per mile of stream of private land. Additionally, recreational, agricultural and residential uses may continue. Recreational users are cautioned to be aware of and respect private property rights. Existing water rights and existing jurisdiction of states and the United States over waters as determined by established principles of law are not affected by designation.

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

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

"Wild" Rivers - Rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

"Scenic" Rivers - Rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely undeveloped, but accessible in places by roads.

"Recreational" Rivers - Rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shoreline, and that may have undergone some impoundment or diversion in the past.

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

There is a two-step process required before a river can be included in the National System. The first is an evaluation of a river's "eligibility." This evaluation must consider the area within one-quarter mile of the high-water marks on both sides of a river, and other features outside this corridor if their inclusion is essential for the protection of the river's "outstandingly remarkable" values. The second step is to evaluate eligible rivers for "suitability." This evaluation considers possible Congressional inclusion of the river in the National Wild and Scenic Rivers System (NWSRS) in terms of social and economic values, effects on other resources, and effects on private lands and other uses of the area. The Administration may recommend suitable rivers to Congress for inclusion in the National System. When Congress does designate a river for inclusion, a final boundary for the corridor is established and a management plan is developed. The Administration may recommend suitable rivers to Congress.

Eligibility Evaluation Process

The Wild and Scenic Rivers Act, at Section 5(d)(1), states:

In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic, and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved.

This Act describes the National Wild and Scenic Rivers System (National System, or System), sets out the process for evaluating specific rivers Congress identifies as potential additions to the System as legislatively mandated study rivers (sec. 5(a) of the Act), and directs Federal agencies to identify and evaluate additional potential rivers for inclusion in the System during Agency planning (sec. 5(d)(1) of the Act).

Consistent with sections 1(b) and 2(b) of the Wild and Scenic Rivers Act, the evaluation process followed the Forest Service Land and Resource Management Planning Handbook (FSH) 1909.12-2015-1 at Section 80 (Wild and Scenic Rivers) dated January 30, 2015 and the U.S. Department of the Interior (USDI) “Guidelines for Eligibility, Classification and Management of River Areas” dated September 7, 1982 (USDA-USDI Guidelines). Further, the planning rule (36 CFR sec. 219.7(c)(2)(vi)) requires that, when developing a plan or plan revision, the Responsible Official shall “Identify the eligibility of rivers for inclusion in the National Wild and Scenic Rivers System, unless a systematic inventory has been previously completed and documented, and there are no changed circumstances that warrant additional review.”

This study tiers from the 1997 Wild and Scenic River Evaluation (USDA Forest Service, 1997). Beginning in 1991, all streams within the boundaries of the Black Hills NF were screened by the seven Ranger Districts to determine which should be evaluated for possible eligibility for wild and scenic river designation. The list of streams to be evaluated was narrowed to 25 and then evaluated under regulations in effect since 1982 (National Wild and Scenic Rivers System; Final Revised Guidelines for Eligibility, Classification and Management of River Areas, published in the Federal Register, Vol. 47, No. 173, September 7, 1982).

Beginning in 2021 to support the Plan Revision, previously eligible segments were re-evaluated for changes in circumstances. Meetings were held with members of the plan revision interdisciplinary team to solicit local expertise on river segments in question in Winter and Spring 2022. In these meetings the plan revision interdisciplinary team reviewed the stream inventory, revisited eligibility evaluations conducted in 1997, and evaluated any stream segments that were not previously studied. Evaluation spreadsheets and GIS data are available in the Planning Record.

Table 5. Black Hills National Forest WSR Interdisciplinary Team

Name	Affiliation & Title
Louie Conroy	Project Manager, USFS
Don Yasuda	Assistant Project Manager, USFS
Natalie Heberling	GIS, USFS
Stephen Keegan	Landscape & Scenery Specialist, USFS
Jessica Lucas	Hydrologist, USFS
Bradley Philips	Wildlife Biologist, USFS
Benjamin Schumacher	Recreation Staff Officer, USFS
Christopher Stover	Fire & Fuels Specialist, USFS
Cheryl Mayer-Stisser	Botanist, USFS
Patti Lynch	Wildlife Biologist, USFS
Luke Hittner	Archeologist, USFS
Ruben Mares	Wildlife Biologist, USFS
David Porter	Archeologist, USFS

Scott Weins	Botanist, USFS
Andrew Braker	Environmental Planner, Logan Simpson
Jeremy Call	Environmental Principal, Logan Simpson
Matthew Little	GIS, Logan Simpson

The resulting river segments recommended eligible for inclusion in the National Wild and Scenic Rivers System are listed in the following tables: Bearlodge District, Table 1; Mystic District, Table 2; Northern hills, Table 3; and Hells Canyon, Table 4. The location of these river segments on the Black Hills NF is shown in Figure 1.

Following is a brief compilation of the results of the evaluations:

- 41 streams totaling 241.9 miles in length were evaluated to determine their eligibility for Wild and Scenic River designation.
 - 15 streams or stream segments totaling 74.7 miles were found to be not eligible for inclusion in the NWSRS.
 - 21 streams or stream segments totaling 144.7 miles were found to be eligible for inclusion in the NWSRS as follows:
 - 4 miles as Wild (all located in the Black Elk Wilderness.)
 - 4 miles as Scenic
 - 13 miles as Recreational
- Total National Forest System lands in eligible corridors (1/4 mile each side of the river center) is approximately 36,061.3 acres

The streams that were deemed eligible in the 1997 evaluation, and their immediate environments, were evaluated to determine whether any "outstanding remarkable" scenic, recreational, geologic, fish, wildlife, historic, or other similar values were present. When such values were found, streams were further evaluated to determine whether they were free-flowing, or existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. Water in the streams was also examined to determine whether it was of high quality, or whether it could be effectively restored to that condition. As long as a stream was free-flowing and had at least one "outstandingly remarkable" value, it was determined to be eligible for possible inclusion in the National Wild and Scenic River System. If found eligible, the streams were evaluated to identify which classification "wild," "scenic," or "recreational" best described their existing condition.

Chapter II – Summary of Eligibility and Classification

The stream evaluation reports are summarized in tables below. Details for each individual eligible segment included in Chapter III.

Table 6. Bearlodge District Eligibility and Classification Results

Grouping	WSR Segment	Total Eligible Length (miles) ¹	FS River Corridor Acres ²	Classification	Outstandingly Remarkable Values (ORVs)
Beaver Creek	Beaver Creek (Segment 1)	2.4	n/a	Not Eligible	None
	Beaver Creek (Segment 2)	8.8	1,789	Recreational	Scenery, Recreation, Geology, Wildlife, Fish, Vegetation
	Beaver Creek (Segment 3)	5.1	n/a	Not Eligible	None
Sand Creek	Sand Creek (Segment 1)	10.1	2,460	Recreational	Scenery, Recreation, Vegetation/rare plants
	Sand Creek (Segment 2)	3.1	969.4	Recreational	Vegetation
	Sand Creek (Segment 3)	3.7	n/a	Not Eligible	None

Table 7. Mystic District Eligibility and Classification Results

Grouping	WSR Segment	Total Eligible Length (miles)	FS River Corridor Acres	Classification	Outstandingly Remarkable Values (ORVs)
Rapid Creek	Rapid Creek	23.5	4,351.4	Recreational	Scenery, Recreation, Geology, Fish/mountain sucker in upper section, Wildlife/big horn sheep, Historic & Cultural/flumes/railroad

Battle Creek	Battle Creek	4.4	1,173.6	Recreational	Scenery/waterfall & pools, Recreation, Wildlife/mountain goats, Historic & Cultural
Castle Creek	Castle Creek (Segment 1)	5.6	1,288.4	Scenic	Vegetation/McIntosh Fen, Fish, Wildlife/ruffed grouse/beaver, Historic & Cultural
	Castle Creek (Segment 2)	3.9	908.9	Recreational	Fish, Wildlife/osprey nest, Historic & Cultural/Deerfield Townsite and Kenzy Archeological Site
	Castle Creek (Segment 3)	5.7	1,269.1	Scenic	Scenery, Fish, Historic & Cultural
	Castle Creek (Segment 4)	12.2	2,772.2	Recreational	Fish, Historic & Cultural/mining, Vegetation/fen
	South Fork Castle Creek (Segment 5)	5.5	n/a	Not Eligible	None
	Ditch Creek (Segment 6)	7.2	n/a	Not Eligible	None
Black Elk Wilderness	Willow Creek	1.4	550.3	Wild	Scenery, Recreation/wilderness, Wildlife/mountain goat and bighorn, Historic & Cultural, Vegetation
	Nelson Creek	1.1	477.2	Wild	Scenery, Recreation/wilderness, Wildlife/mountain goat and bighorn, Historic & Cultural, Vegetation/douglas fir
	Lost Cabin	2.8	944.2	Wild	Scenery, Recreation/Wilderness, Wildlife/mountain goat and bighorn, Historic & Cultural, Vegetation

Rhoads Fork Creek	Rhoads Fork Creek	6.8	2,571.4	Recreational	Fish/mountain sucker, Wildlife/rare snails, Historic & Cultural, Vegetation/iron fen
Spring Creek	Spring Creek (Segment 1)	3.6	n/a	Not Eligible	None
	Spring Creek (Segment 2)	3.8	n/a	Not Eligible	None
	Spring Creek (Segment 3)	2.4	n/a	Not Eligible	None
Slate Creek	Slate Creek	6.7	1,541	Recreational	Historic & Cultural/lumber flume, Fish, Wildlife

Table 8. Northern Hills District Eligibility and Classification Results

Grouping	WSR Segment	Total Eligible Length (miles)	FS River Corridor Acres	Classification	Outstandingly Remarkable Values (ORVs)
Little Elk Creek	Little Elk Creek (Segment 1)	6.0	n/a	Not Eligible	None
	Little Elk Creek (Segment 2)	2.5	1,692.6	Recreational	Scenery, Geology, Vegetation
North Fork of Rapid Creek	North Fork Rapid Creek	9.8	n/a	Not Eligible	None
Polo Creek	Polo Creek	4.2	n/a	Not Eligible	None
Whitewood Creek	Whitewood Creek	0.2	n/a	Not Eligible	None
Beaver Creek	Beaver Creek	9.0	n/a	Not eligible	None
Little Spearfish Creek	Little Spearfish Creek	6.2	1,692.6	Recreational	Scenery/Roughlock Falls and limestone cliffs, Historic & Cultural, Vegetation

Spearfish Creek	Spearfish Creek	19.4	5,007.8	Recreational	Scenery/Scenic Byway, Historic & Cultural, Vegetation
Bear Gulch	Bear Gulch	9.0	n/a	Not Eligible	None

Table 9. Hell Canyon District Eligibility and Classification Results

Grouping	WSR Segment	Total Eligible Length (miles)	FS River Corridor Acres	Classification	Outstandingly Remarkable Values (ORVs)
French Creek	French Creek	2.8	n/a	Not Eligible	None
Iron Creek	Iron Creek (Segment 1)	5.6	1,750.9	Scenic	Scenery/granite outcrops, Fish/brook trout, Wildlife/mountain goats
	Iron Creek (Segment 2)	6.5	1,792	Recreational	Scenery/granite outcrops, Recreation, Wildlife/mountain goats, Historic & Cultural, Vegetation
	Grizzly Creek (Tributary of Iron Creek)	2.4	903	Scenic	Vegetation/McIntosh Fen, Fish, Historic & Cultural
Grizzly Bear Creek	Grizzly Bear Creek	5.4	1,485.8	Wild	Scenery/waterfalls, Fish, Wildlife, Recreation/wilderness, Vegetation

¹ Note: includes length on non-Forest Service lands

² Note: does not include non-Forest Service lands

Chapter III – Stream Evaluation Reports

Segment Descriptions

The section below offers more detail about the individual segments that are eligible for inclusion and preliminarily classified as wild, scenic, or recreational rivers. Included are locations, area maps, segment lengths, corridor acres, segment breakdowns, descriptions of outstandingly remarkable values, and rationales for classification. Length and acres are estimates from geographical information systems at the time the evaluation was conducted. “Total” lengths and acres include the entire segment and corridor regardless of land ownership. “Eligible length and areas on national forests” excludes all non-National Forest System land such as private inholdings, mining claims, and adjacent public and private lands, etc. Acreage estimates by segment also exclude non-National Forest System lands and include overlap with adjacent wild and scenic river corridors. In those overlapped areas, corridors will be managed to the more restrictive classification. These values may be adjusted based on additional information for future suitability studies or management.

Beaver Creek (Segment 2)

Location: Bearlodge District, Crook County, Wyoming.

The headwaters of Beaver Creek begin as an intermittent stream in a state section of land below Cole Spring just east of Bull Hill. From this area, it runs north as an ephemeral stream for approximately 4 miles to the confluence of Togus Creek. From this point, the stream becomes perennial for approximately 8.7 miles until it leaves the Forest boundary. This stream course eventually empties into the Blacktail River, which is a tributary of the Belle Fourche River.

Segment 2 of Beaver Creek runs northward from Togus Creek to Little Creek.

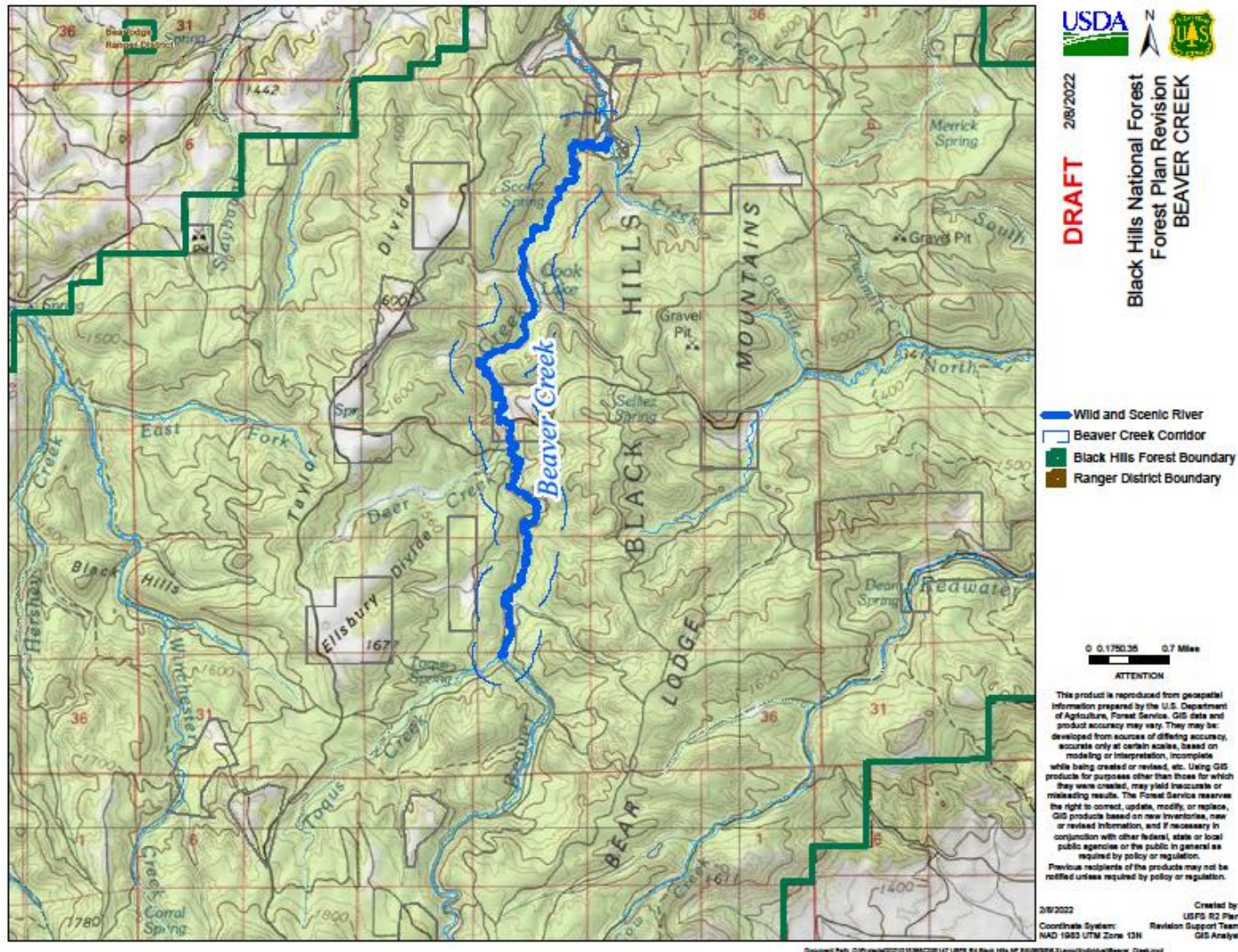


Figure 1. Eligible wild and scenic river segment for Beaver Creek segment 2.

Eligible wild and scenic river segment for Beaver Creek

Total eligible length (miles): 8.8

Eligible length in the national forest (miles): 7.7

Total eligible corridor area (acres): 1,990.2

Eligible corridor area in the national forest (acres): 1,789

Preliminary classification: Recreational

Outstandingly remarkable values: scenery, recreation, geology, fish, wildlife, vegetation

Beginning: Togus Creek

Termini: Little Creek

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values include scenery, recreation, geology, fish, wildlife, vegetation.

Segment 2 contains some of the most majestic and scenic qualities of the stream. The lower portion contains numerous active beaver dams with some natural and human-made fish structures. There are several small waterfalls within the section from Little Creek to the earth-filled dam at Cook Lake. From Cliff Swallow Trail, majestic cliffs occur along the lower portion of this segment. Elk, whitetail deer, mink, beaver, and a multitude of other wild mammals and birds are easily observed. The natural geologic features, the free-flowing nature of the stream, and the diverse wildlife and fisheries make this stream segment "outstandingly remarkable."

There is approximately one-half mile of the 4-mile section of stream that is accessible to the public. Flow volumes and water temperatures in this section support a moderate to high quality cold-water fishery. Because more than 50 percent of the stream is located one-half to one mile from the nearest open road, it offers "outstandingly remarkable" opportunities for natural studies, semi-primitive hunting and fishing, and solitude.

Segment 2 includes a geologic area with active and potential mass movement throughout its northern section. Thus, segment 2 of Beaver Creek has "outstandingly remarkable" geological value.

This reach has a diverse, albeit non-native, fishery. Species sought after by anglers include brook trout (*Salvelinus fontinalis*), brown trout (*Salmo trutta*), rainbow trout (*Salmo gairdneri*), bullhead (*Ictalurus melas*) and channel catfish (*Ictalurus punctatus*). This is the only area on the Bearlodge Ranger District where fly fishing and ice fishing are practical. This generates heavy fishing pressure. Because of this pressure, the trout fishery is dependent on stocking. However, there is ample opportunity to increase natural reproduction by improving spawning habitat. Native fish species include mountain sucker (*Catostomus platyrhynchus*), white sucker, long-nosed dace and creek chub. The section below Cook Lake has a well-developed beaver pond complex, and there are signs of increasing beaver activity above the lake. The diversity of habitats created by these beaver ponds produces a species richness greater than that found in most other riparian areas of the Bear Lodge Mountains. Cliffs and rimrock on the edges of the canyon also contribute to the diversity of habitats and thus the diversity of species. There are no wildlife species associated with this reach that cannot be found in other reaches and other riparian areas in the Bear Lodge Mountains. However, species richness, accessibility of the area and interpretive signing combine to produce "outstandingly remarkable" fish values.

The setting, the number of fish species, and the types of fishing possible also produce some outstanding fishing opportunities. Thus, fisheries was determined to be an "outstandingly remarkable" value. Segment 2 offers some unique wildlife based recreational opportunities and is "outstandingly remarkable" with respect to these values.

The corridor is scattered with wetland plant communities, and rare plant species including *Carex alopecoidea* (R2 sensitive). Thus, segment 2 of Beaver Creek has "outstandingly remarkable"

vegetation value.

Rationale for Preliminary Classification

Segment 2 was found to be eligible with a "recreational river" classification.

Sand Creek (Segments 1 and 2)

Location: Bearlodge District, Crook County, Wyoming.

The headwaters of Sand Creek begin as a perennial stream approximately one-half mile east of the Cement Ridge Lookout in Section 4, T50N, R60W. In this section, the stream flows less than 0.5 cubic feet per second (cfs) during the summer months. Near the intersection of Mallory Gulch through Spotted Tail Gulch, the stream gains an additional 1.5 cfs. This flow remains until it disappears underground north of Sand Creek Crossing. From this point, the stream becomes ephemeral until it intersects the Ranch A Fish Hatchery property boundary, approximately 11.6 miles north of Sand Creek Crossing. Sand Creek will be evaluated as two segments.

Segment 1 is that portion from the Forest boundary southward to 0.3 miles north of Sand Creek Crossing. This segment is approximately 10.1 miles long.

Segment 2 is that portion of the stream course below Sand Creek Crossing to the private land boundary above Cummins Creek. This segment is approximately 3.1 miles in length.

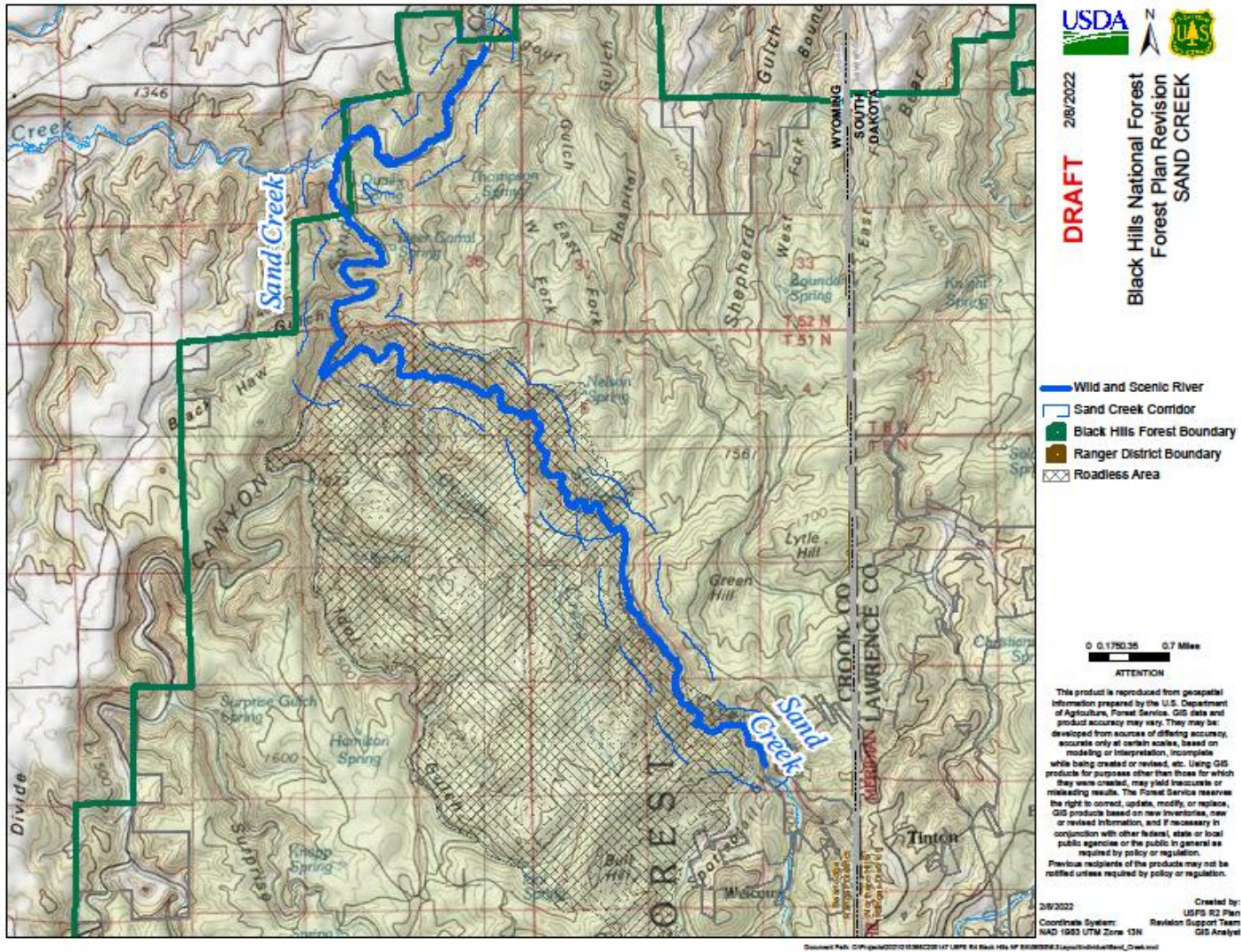


Figure 2. Eligible wild and scenic river segments of Sand Creek.

Eligible wild and scenic river segments for Sand Creek, Segments 1 and 2 combined:

Total eligible length (miles): 13.2

Eligible length in the national forest (miles): 11.8

Total eligible corridor area (acres): 3,756.9

Eligible corridor area in the national forest (acres): 3,429.3

Preliminary classification: Recreational

Individual segments:

- Segment 1

- 10.1 miles, 2691.8 acres
- Classification: Recreational
- Outstandingly remarkable values: Scenery, Recreation, Vegetation/Rare Plants
- Beginning: Forest boundary
- Termini: 0.3 miles north of Sand Creek Crossing
- Segment 2
 - 3.1 miles, 1065.1 acres
 - Classification: Recreational
 - Outstandingly remarkable values: Vegetation
 - Beginning: Below Sand Creek Crossing
 - Terminus: Confluence: Private land boundary above Cummins Creek

Description of Outstandingly Remarkable Value

Segment 1 "Outstandingly remarkable" values include scenery, recreation, and vegetation/rare plants.

The upper portion of this segment (south of FDR 863) contains most of the drainage corridor essentially undisturbed by human activities. It is as pristine as any area on the Forest. Because of heavy vegetation and steep canyon walls, opportunities for visual overlooks are very limited. The scenic cliffs and sandstone outcrops in Grand Canyon and Sand Creek can be seen close to where the two drainages merge. From this vantage point, scenic values are considered "outstandingly remarkable."

The upper part of this segment is essentially undeveloped and offers a pristine experience. This section could be considered "outstandingly remarkable" for the solitude it affords.

This segment contains two occurrences of a disjunct species of plant (*Adrenocaulon bicolor*). This plant species is native and common in the northern boreal forest of the Northern Hemisphere and may be indicative of relics of past climates. Because of the limited frequency of these plants, this segment is considered "outstandingly remarkable."

Segment 2 "Outstandingly remarkable" values include vegetation.

This segment contains the "Special Botanical Area" proposed by the Nature Conservancy. Because it contains all the plant species of "special concern," this stream is considered as having "outstandingly remarkable" vegetation values.

Rationale for Preliminary Classification

Segments 1 and 2 were found to be eligible with a "recreation river" classification.

Rapid Creek

Location: Mystic District, Pennington County, South Dakota.

Rapid Creek is a major watershed in the Black Hills region. The headwaters of Rapid Creek rise in the region known locally as the Limestone Plateau in the western portion of Black Hills NF. Rapid Creek flows through the central core and hogback ridge physiographic zones before

entering the plains and joining the Cheyenne River east of Rapid City.

The area being evaluated stretches from Slate Creek, in T2N, R4E, Section 35, to Dark Canyon in T1N, R6E, Section 14. Rapid Creek flows 23.5 miles between these locations. Near Silver City, Rapid Creek forms the Pactola Reservoir. The dam is located along U.S. Highway 385.

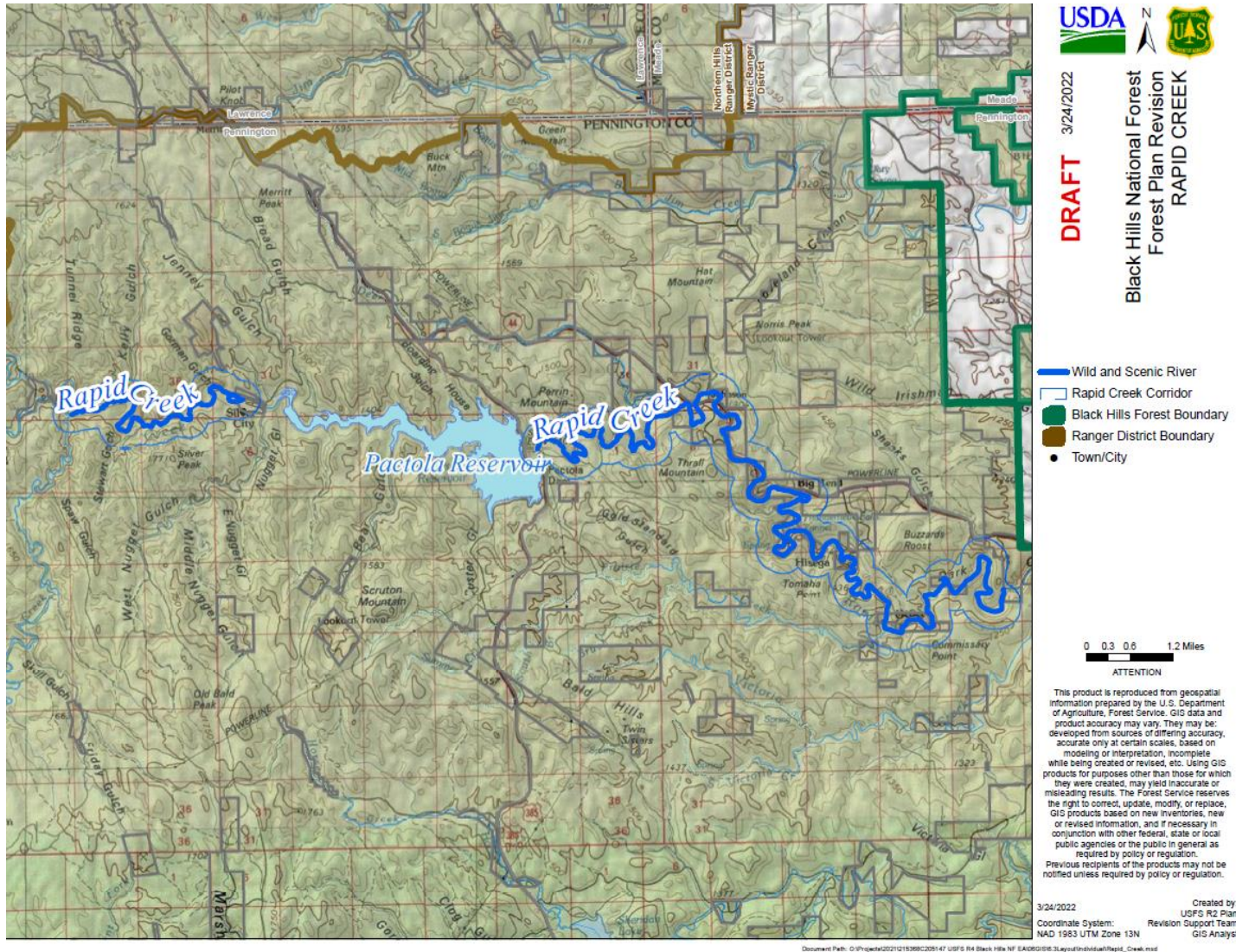


Figure 3. Eligible wild and scenic river segments of Rapid Creek.

Eligible wild and scenic river segments for Rapid Creek

Total eligible length (miles): 23.5

Eligible length in the national forest (miles): 14

Total eligible corridor area (acres): 5623.6

Eligible corridor area in the national forest (acres): 4351.4

Preliminary classification: Recreational

Outstandingly remarkable values: scenery, recreation, geological, fish/mountain sucker in upper section, wildlife/big horn sheep, historic & cultural/railroad/flumes

Beginning: From Slate Creek, in T2N, R4E, Section 35

Terminus: Dark Canyon in T1N, R6E, Section 14

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values include scenery, recreation, geological, fish/mountain sucker in upper section, wildlife/big horn sheep, historic & cultural/railroad/flumes.

Rapid Creek flows through some beautiful open meadows, rolling hills and steep canyons. Many people walk along the Centennial and Deerfield Trails to enjoy the aesthetic value of the water. This area has "outstandingly remarkable" scenic features. These scenic values are impaired by homes, businesses, and roads on the stretch below Pactola Reservoir in the vicinity of Johnson Siding and Hisega.

The portion of Rapid Creek that flows from Slate Creek to Silver City has great recreational value for hiking because the grade is easy and follows an old railroad line. Both hikers and anglers enjoy the easy access to the creek from the trailheads. The area has "outstanding remarkable" value as a blue-ribbon trout stream on both the upper and lower portions. The lower section of Rapid Creek that meanders through the steep canyon provides a challenge to the rock climber. Rapid Creek provides a wonderful opportunity to photograph some of the Black Hills' wildlife and scenery. There are currently four trailheads that provide easy access to Rapid Creek making the area an "outstandingly remarkable" recreational opportunity found nowhere else on the eastern side of the Black Hills NF.

Both sections of the creek offer habitat suitable for interesting wildlife like the American dipper and bighorn sheep. The upper portion of the creek contains a population of the native mountain sucker fish. These species qualify Rapid Creek for both fish and wildlife "outstandingly remarkable values."

The area from below Pactola Dam to Dark Canyon exposes unique geologic features including grey Madison Limestone cliffs, yellow and red sandstone of the Minnelusa Formation, and the red-brown cliffs of the Deadwood Formation. Two-hundred-foot vertical formations with caverns rise above the creek. The "outstandingly remarkable" features in Dark Canyon provide the creek user with a feeling of intimacy with nature.

The Rapid Creek Corridor is paralleled with the Historic Rapid Canyon Line, which connects with the Warren Lamb Railroad from the south. The Placerville mining camp, and the Gorman Gulch Historic Mining District are located on the western corridor, west of Pactola Reservoir. Two major flumes, the Big Bend Flume, and the Warren Lamb Flume (with multiple tunnels) exist within this corridor. Multiple historic and NRHP

eligible USFS recreation residences are within this corridor as well, and the Pactola Dam is considered Eligible to the NRHP.

Rationale for Preliminary Classification

Rapid Creek was found to be eligible with a "recreational river" classification. There are existing impoundments, substantial evidence of human activity, and existence of roads in the corridor that prevent the segment from achieving "scenic" classification.

Battle Creek

Location: Mystic District, Pennington County, South Dakota.

The segment of Battle Creek under evaluation is the free-flowing portion from east of the unincorporated town of Harney (T2S, R6E, Sec 10) to the Forest boundary (T2S, R6E, Sec 13). This is a length of 4.4 miles.

Battle Creek originates in the northern area of the Norbeck Wildlife Preserve and meanders down and through the town of Keystone, then east to Harney. The creek continues to flow east and eventually joins the Cheyenne River.

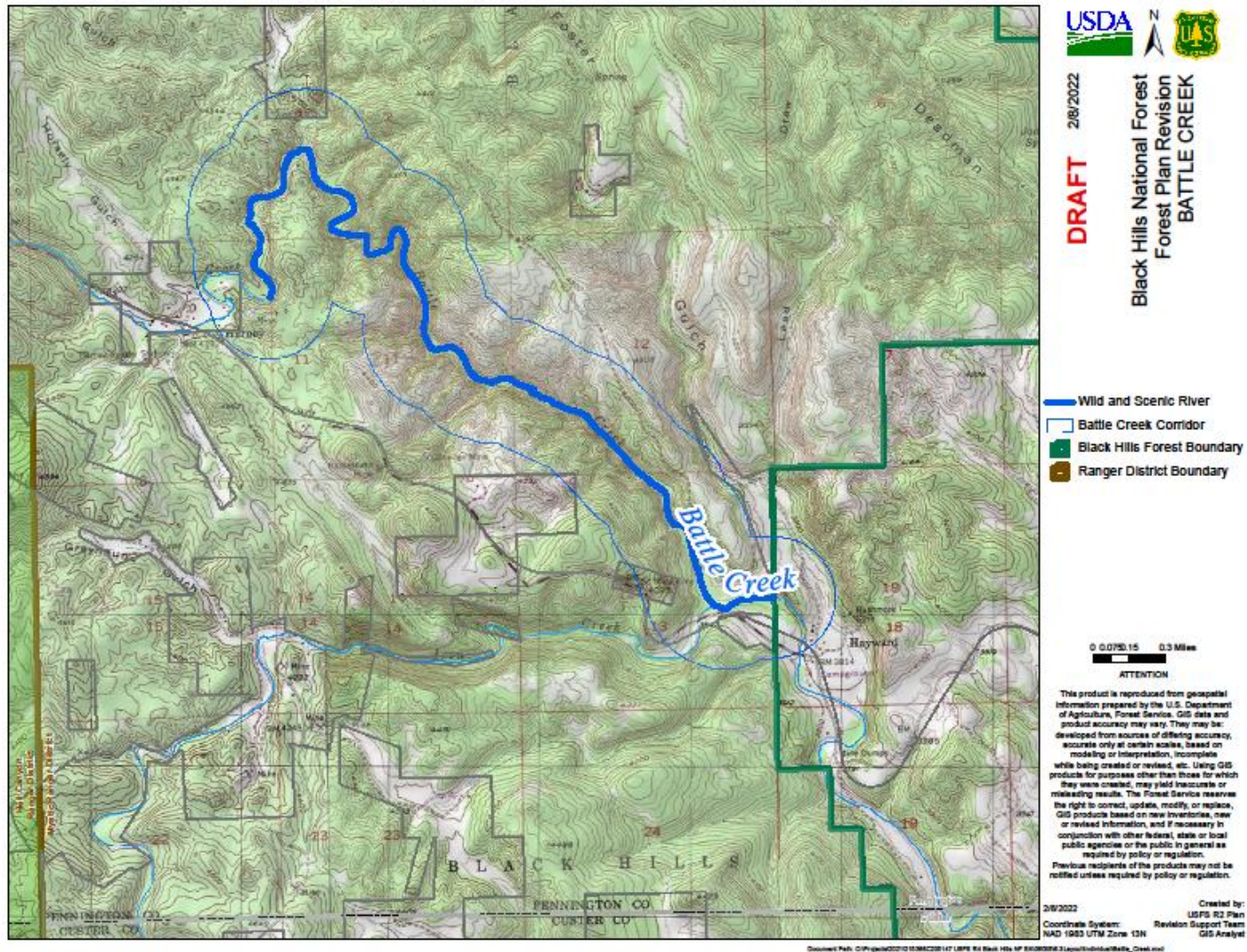


Figure 4. Eligible wild and scenic river segment of Battle Creek.

Eligible wild and scenic river segments for Battle Creek

Total eligible length (miles): 4.4

Eligible length in the national forest (miles): 4.4

Total eligible corridor area (acres): 1,316.9

Eligible corridor area in the national forest (acres): 1173.6

Preliminary classification: Recreational

Outstandingly remarkable values: scenery/waterfall & pools, recreation, wildlife/mountain goats, and historic & Cultural

Beginning: East of the unincorporated town of Harney (T2S, R6E, Sec 10)

Termini: The Forest boundary (T2S, R6E, Sec 13)

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values include scenery/waterfall & pools, recreation, wildlife/mountain goats, and historic & Cultural.

Battle Creek flows through a deep canyon with walls of granite covered with ponderosa pine and a variety of other species both in the overstory and understory. There are two waterfalls known as Upper and Lower Falls on this stretch of the creek. Natural waterfalls are a scarce formation in the Black Hills NF, especially in the eastern slopes. These two falls are the "outstandingly remarkable" feature in this segment.

As mentioned under the scenic values, two natural waterfalls are in this segment. Both waterfalls and the pools below them provide ideal swimming and fishing opportunities for public use. People from the local communities of Harney, Hayward, and Keystone, and from Rapid City and Ellsworth Air Force Base use this area for recreation. The falls are hidden from the driving public and require a short hike of one-half mile. Anglers also use the other stretches of Battle Creek to fish for brown trout and an occasional rainbow trout. The "outstandingly remarkable" recreational value is the hidden waterfalls in a secluded part of the Forest.

In addition to the usual wildlife species found throughout the Black Hills NF (white-tailed and mule deer, beavers, squirrels, coyotes, rabbits, and chipmunks), the area supports populations of elk, pronghorn antelope and mountain goats. The goat herd is the most easterly herd found in the United States. The "outstandingly remarkable" wildlife value is the mountain goat herd.

The corridor contains multiple placer mines that are potentially eligible for the NRHP including Koopman's placer mine and the Foster Gulch mine. The Historic Hayward Cemetery is also on the southernmost periphery of the corridor. These historic sites qualify as "outstandingly remarkable values."

Rationale for Preliminary Classification

Battle Creek was found to be eligible with a "recreational river" classification. There are existing impoundments, substantial evidence of human activity, and existence of roads in the corridor that prevent the segment from achieving "scenic" classification.

Castle Creek (Segments 1, 2, 3, 4)

Location: Mystic District, Pennington County, South Dakota.

The segments of Castle Creek are located within the Harney District, including the sections above and below Deerfield Dam, to the Rapid Creek confluence (excluding portions of private land).

Segment 1 flows from the southern border of Prickett Ranch to Deerfield Lake.

Segment 2 flows from below the Deerfield Dam to the Adventist Camp.

Segment 3 flows from the Adventist Camp to the Teddy Bear Summer Home Group (excluding the Golden West portion of private land).

Segment 4 flows from the Teddy Bear Summer Home Group to the confluence with Rapid Creek (excluding portions of private land).

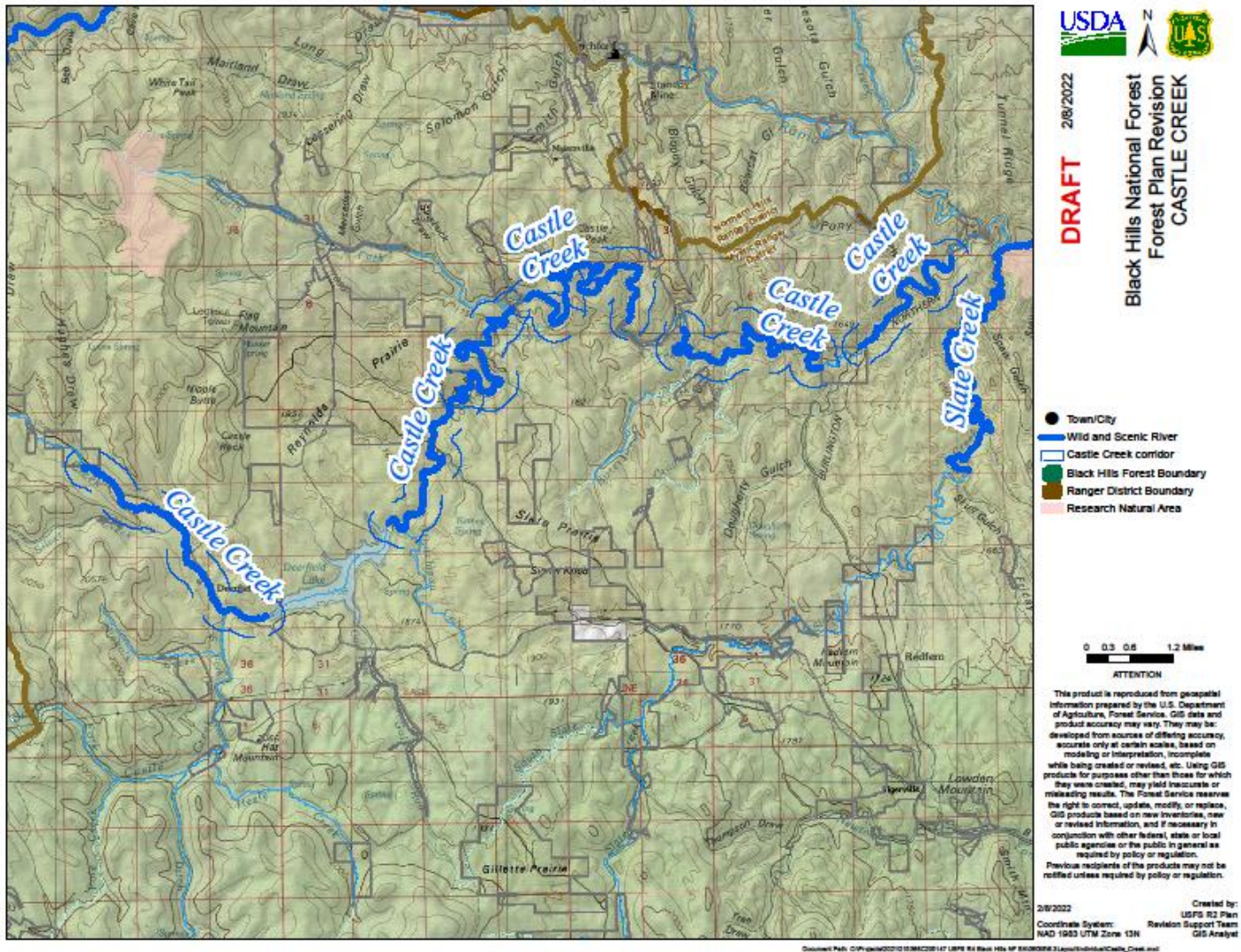


Figure 5. Eligible wild and scenic river segments for Castle Creek.

Eligible wild and scenic river segments for Castle Creek

Total eligible length (miles): 27.4

Eligible length in the national forest (miles): 26.2

Total eligible corridor area (acres): 6,820.4

Eligible corridor area in the national forest (acres): 6,238.6

Preliminary classification: Scenic, Recreational

Individual segments:

- Segment 1
 - 5.6 miles, 1361.3 acres
 - Classification: Scenic
 - Outstandingly remarkable values: vegetation/McIntosh Fen, fish, wildlife/ruffed grouse/beaver, historic & cultural
 - Beginning: Southern border of Prickett Ranch
 - Terminus: Deerfield Lake
- Segment 2
 - 3.9 miles, 1030.4 acres
 - Classification: Recreational
 - Outstandingly remarkable values: fish, wildlife/osprey, historical & cultural/Deerfield Townsite and Kenzy Archeological Site
 - Beginning: Below the Deerfield Dam
 - Terminus: The Adventist Camp
- Segment 3
 - 5.7 miles, 1448.7 acres
 - Classification: Scenic
 - Outstandingly remarkable values: scenery, fish, historic & cultural
 - Beginning: The Adventist Camp
 - Terminus: The Teddy Bear Summer Home Group (excluding the Golden West portion of private land)
- Segment 4
 - 12.2 miles, 2980 acres
 - Classification: Recreational
 - Outstandingly remarkable values: fish, historic & cultural/mining, vegetation/fen
 - Beginning: The Teddy Bear Summer Home Group
 - Terminus: The confluence with Rapid Creek (excluding portions of private land)

Description of Outstandingly Remarkable Value

Castle Creek is one of the highest quality mountain streams in the Black Hills NF. It is the only stream in the state to be simultaneously designated as a "highest valued" fishery resource by the U.S. Fish & Wildlife Service, a "high quality" trout stream by the South Dakota Game, Fish & Parks Department, and to suffer "zero impairment" of water quality as determined by the South Dakota Department of Water and Natural Resources (David J. Ode, Personal Correspondence, 1986).

Segment 1 has several "outstandingly remarkable" values including vegetation/McIntosh Fen, fish, wildlife/ruffed grouse/beaver, and historic & cultural.

Segment 1 is of particular interest and importance in relation to its biologically unique composition. This segment of Castle Creek contains what is referred to as the "McIntosh Fen." This fen is comprised of plants unique to the state, as well as to the Great Plains region. The fen was originally visited in the 1920s and '30s by Arthur C. McIntosh of the

South Dakota State School of Mines, who identified at least seven species of plants unique to this region.

This segment is rated by the State as Class II fisheries, containing approximately 25 to 150 brook trout (over 6 inches in size) per acre. The lake chub (*Couesius plumbeus*) once inhabited all segments of Castle Creek, but now is only located in Deerfield Lake. This segment qualifies for an "outstandingly remarkable" fish values due despite the extirpation of the lake chub due to its diversity of wild trout fisheries.

The corridor also holds unique wildlife qualities like ruffed grouse and beaver. The presence of these species qualifies this segment for "outstandingly remarkable values."

Segment 1 contains multiple large Prehistoric/Historic native American habitation sites north and south along grassy knolls overlooking Castle Creek. These sites include the Wayne Compton site, and the Swallow site. One of the documented "Custer Camps" from the 1874 Custer Expedition camped in this location and a historic marker has been erected to the east of the site location. The Dyer Straits Flume parallels this section of the Segment 1 corridor to the south. Multiple Homesteads, including Miller Ranch West, an important early homestead and trail stop complete with post office, general store, and lodging. Along the southeastern corridor, multiple CCC era culverts are present. These historic resources qualify as "outstandingly remarkable values."

Segment 2 includes "Outstandingly remarkable" values of fish, wildlife/osprey, historic & cultural/Deerfield Townsite and Kenzy Archeological Site.

This segment is rated by the State as Class II fisheries, containing approximately 25 to 150 brook trout (over 6 inches in size) per acre. The lake chub (*Couesius plumbeus*) once inhabited all segments of Castle Creek, but now is only located in Deerfield Lake. This segment qualifies for an "outstandingly remarkable" fish values due despite the extirpation of the lake chub due to its diversity of wild trout fisheries.

The corridor also holds unique wildlife qualities because it is an active osprey nesting area. This resource is a "outstandingly remarkable value" for the region.

Just below Deerfield Dam are the Deerfield Site (39PN214) and the Kenzy Archeological Site (39PN1081). Both of these sites are eligible for the NRHP. The Deerfield Site contains occupations from virtually every time period in which humans have occupied the Black Hills NF. A mammoth or mastodon tusk was also located here. The Kenzy Site contains butchered bison bones from one or more extinct species of bison and is be important enough to be considered a type of site for identification of extinct bison species.

Segment 3 includes "Outstandingly remarkable" values of scenery, fish, historic & cultural.

Unusually beautiful area, comprising a river canyon with steep-sloped limestone bluffs enclosing the stream. This area provides a visually appealing and isolated experience unique to this region and is rated as "outstandingly remarkable".

This segment is rated by the State as Class II fisheries, containing approximately 25 to 150

brook trout (over 6 inches in size) per acre. The lake chub (*Couesius plumbeus*) once inhabited all segments of Castle Creek, but now is only located in Deerfield Lake. This segment qualifies for an "outstandingly remarkable" fish values due despite the extirpation of the lake chub due to its diversity of wild trout fisheries.

This corridor contains the Deerfield Site, a large prehistoric/historic habitation site and Sacred Site (E.O. 13007) as a part of the greater Pe' Sla cultural landscape. Other smaller lithic and prehistoric habitation sites exist within this corridor. These historic features are "outstandingly remarkable values."

Segment 4 includes "Outstandingly remarkable" values of fish, historic & cultural/mining, and vegetation/fen.

This segment is rated by the State as Class II fisheries, containing approximately 25 to 150 brook trout (over 6 inches in size) per acre. The lake chub (*Couesius plumbeus*) once inhabited all segments of Castle Creek, but now is only located in Deerfield Lake. This segment qualifies for an "outstandingly remarkable" fish values due despite the extirpation of the lake chub due to its diversity of wild trout fisheries.

The segment contains iron fens within isolate areas. On occasion, these fens contribute to a natural rust color in segment 4 of Castle Creek. This fen is qualifies as a vegetation "outstandingly remarkable value."

While the last segment of Castle Creek contains only one known prehistoric site (39PN714, not eligible), it contains seventeen historic sites representing a wide array of historic uses. Fourteen of these sites are not considered eligible for the National Register. Mystic Townsite, which represents the early settlement and economic patterns in the Black Hills NF, has already been listed as a National Historic Site. It is open in the summers for public visitation and tours. Other eligible sites include the Chicago, Burlington, and Quincy Rail line, Castleton Townsite, and a dredge pond and tailings piles from one of only a few gold dredges known to have operated in the Black Hills NF.

Rationale for Preliminary Classification

Segment 1 was found to be eligible with a "scenic river" classification. It does not comply with Definition 1 as a "wild river," as it is surrounded by Forest Service roads. During the past 80 years, water from this stream segment had been diverted and used for irrigation and the beaver ponds were destroyed. Since 1980, this area has been allowed to revert to its natural state, which has promoted the return of natural ecological systems. It currently complies with the definition of "free-flowing." The plant life and animal life associated with the fen and the historical context of this area support a designation as "scenic."

Segment 2 was found to be eligible with a "recreational river" classification. Segment 2 does not comply with definition 1 for "wild or scenic river" area, as it contains alterations to its shoreline and has Forest Service roads paralleling its streambed. Most of this stream segment is "free flowing" with the stream being channeled under the existing road in only two places.

Segments 3 was found to be eligible with a "scenic river" classification. Segment 3 is accessible by road at only one point, providing a somewhat primitive and unspoiled experience in an

exceptionally scenic setting. Its scenic quality, use as a habitat for the nationally endangered bald eagle, state rating as BR-2 - providing excellent brown trout fisheries, and potential for providing a uniquely primitive recreational experience, support this segment's nomination as "scenic."

Segment 4 was found to be eligible with a "recreational river" classification. Section 4 is intersected by a multitude of roads, its flow is directed in sections through culverts, and has some alterations to its shorelines for irrigation and mining purposes. In relation to its unique history, a designation of "recreational" is proposed for this segment.

Willow, Nelson, and Lost Cabin Creeks (Black Elk Wilderness Portion)

Location: Mystic District, Pennington County, South Dakota.

This survey includes three creek segments located within the Black Elk Wilderness: Willow and Nelson Creeks from their origins to their junction with the Black Elk Wilderness boundary, and Lost Cabin Creek, from the west to the south boundary of the Black Elk Wilderness.

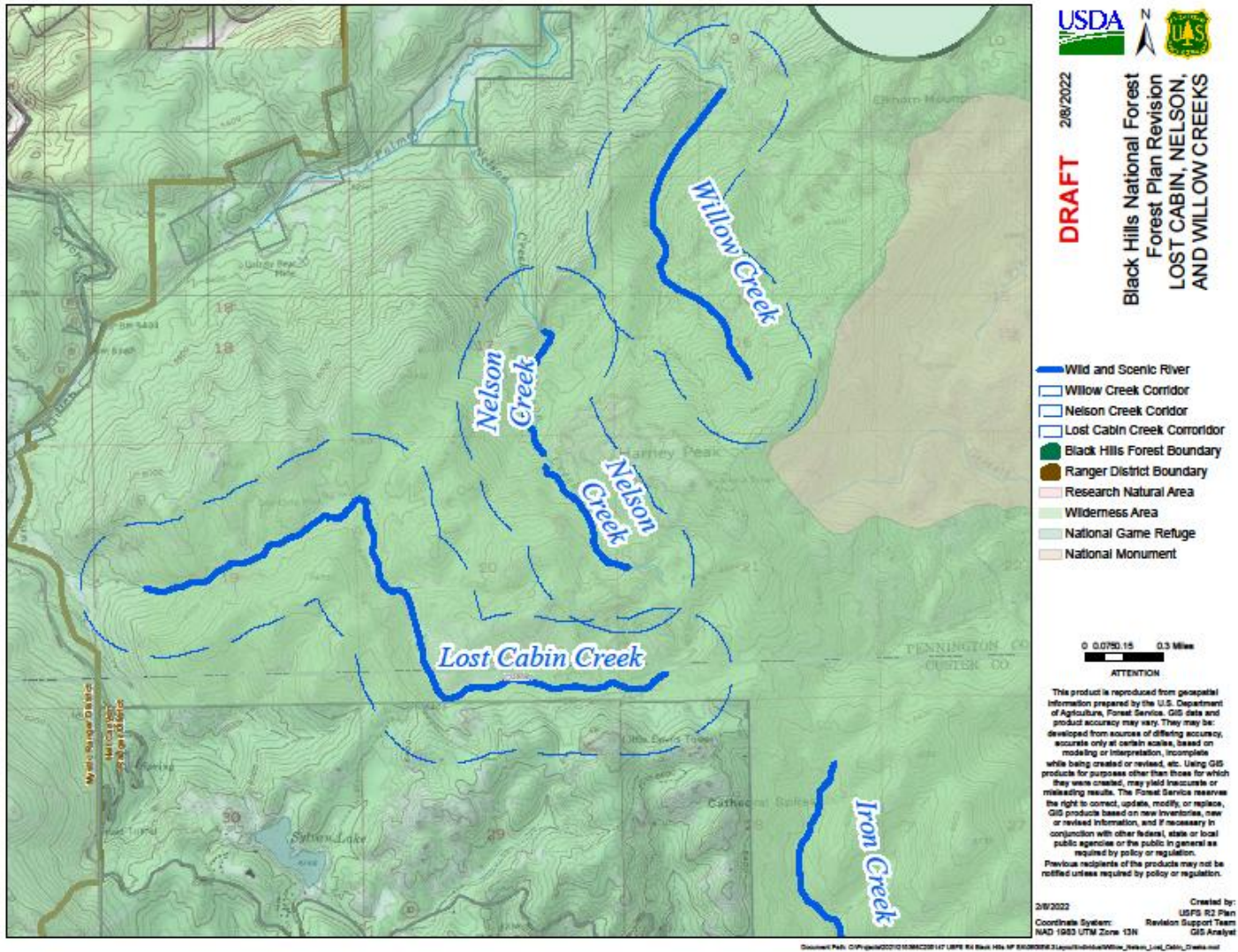


Figure 6. Eligible wild and scenic river segments for Willow, Nelson, and Cabin Creeks.

Eligible wild and scenic river segments for Willow, Nelson, and Lost Cabin Creeks

Total eligible length (miles): 5.3

Eligible length in the national forest (miles): 5.3

Total eligible corridor area (acres): 2,129.6

Eligible corridor area in the national forest (acres): 1,971.7

Preliminary classification: Wild

Individual segments:

- Willow Creek
 - 1.4 miles, 550.3 acres

- Classification: Wild
- Outstandingly remarkable values: scenery, wildlife/goat and big horn, recreation/wilderness, historic & cultural, vegetation
- Beginning: Headwaters
- Terminus: Black Elk Wilderness boundary
- Nelson Creek
 - 1.1 miles, 477.2 acres
 - Classification: Wild
 - Outstandingly remarkable values: scenery, wildlife/goat and big horn, recreation/wilderness, historic & cultural, vegetation/douglas fir
 - Beginning: Headwaters
 - Terminus: Black Elk Wilderness boundary
- Lost Cabin Creek
 - 2.8 miles, 1102.2 acres
 - Classification: Wild
 - Outstandingly remarkable values: scenery, wildlife/goat and big horn, recreation/wilderness, historic & cultural, vegetation
 - Beginning: Headwaters
 - Terminus: West boundary of Black Elk Wilderness

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values in all these stream segments include scenery, wildlife, recreation/wilderness, historic & cultural, and vegetation.

These segments are in an area known for its scenic beauty including views of the rugged granitic exposures of Black Elk Peak, Cathedral Spires, and Elkhorn Mountain, and they are in the only wilderness area within the Black Hills region.

This area provides valuable habitat for wildlife because they are mountain goat and bighorn sheep lambing areas. Therefore, the area has "outstandingly remarkable" wildlife value.

These corridors offer unique recreational opportunities including hiking, fishing, cross-country skiing, horseback riding and wildlife viewing, and more. As this is the only area in the Black Hills NF with a wilderness designation, it allows for a more primitive and pristine experience unlike that found anywhere else in the region or the state.

These three segments lie within an area of major significance to American Indian cultures; therefore, the area has "outstandingly remarkable" historic & cultural values.

This area of the BHNF contains extensive stands of "late successional" ponderosa pine and white spruce. The Nelson Creek corridor contains rare Douglas fir trees that are considered an "outstanding remarkable" vegetation resource.

Rationale for Preliminary Classification

All three creeks are located within the Black Elk Wilderness, which affords extensive protection from human-made disturbances. Motorized vehicles and equipment are not allowed in this area. These creeks were found to be eligible with a "wild river" classification.

Rhoads Fork Creek

Location: Mystic District, Pennington and Lawrence Counties, South Dakota.

This survey includes Rhoads Fork Creek from its source to its confluence with the South Fork of Rapid Creek by Black Fox Campground (excluding portions of private land).

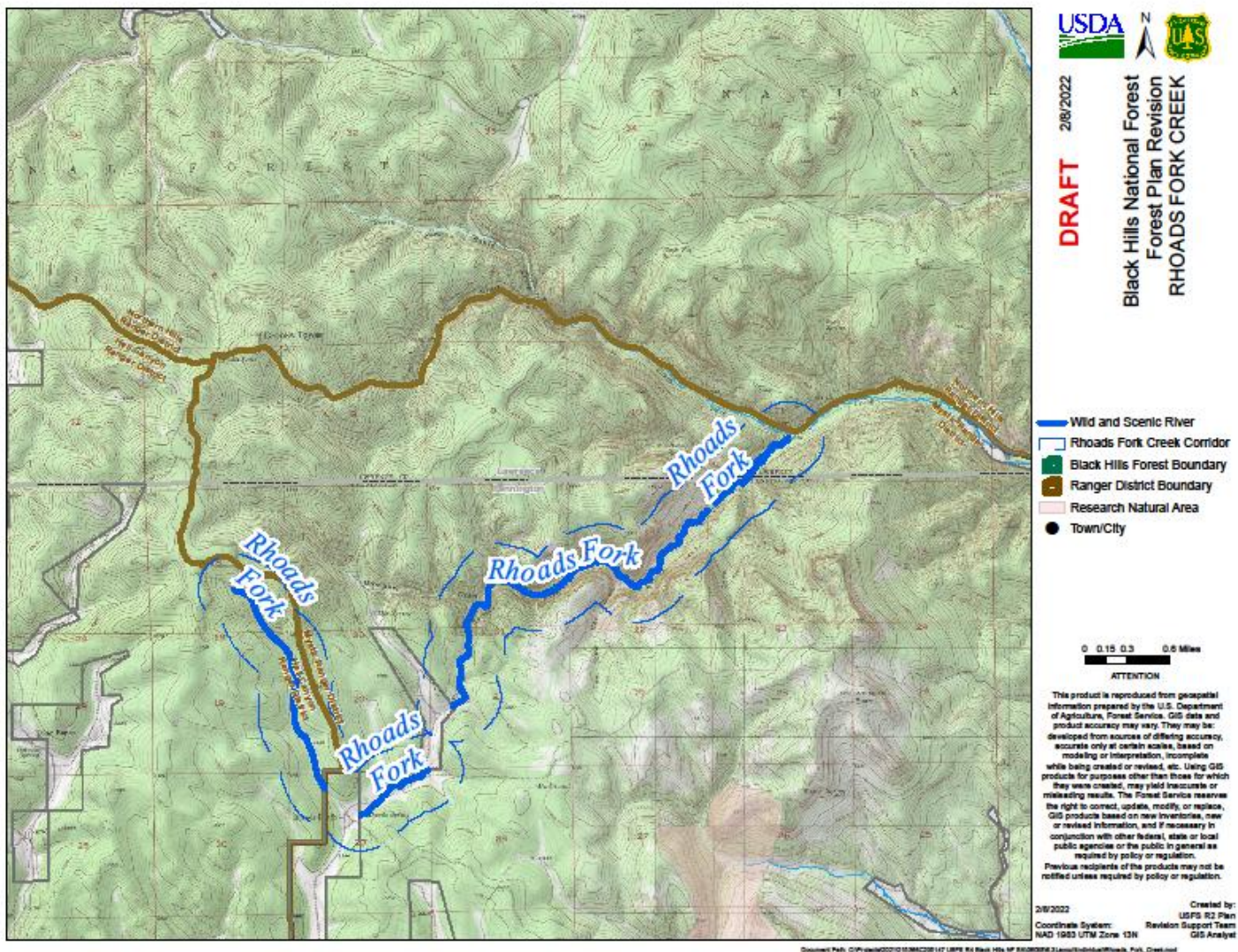


Figure 7. Eligible wild and scenic river segments for Rhoads Fork Creek

Eligible wild and scenic river segments for Rhoads Fork Creek

Total eligible length (miles): 6.8

Eligible length in the national forest (miles): 6.7

Total eligible corridor area (acres): 2756.2

Eligible corridor area in the national forest (acres): 2571.4

Preliminary classification: Recreational

Outstandingly remarkable values: fish/mountain sucker, wildlife/rare snails, historic & cultural, vegetation/iron fen

Beginning: Headwaters

Terminus: The confluence with the South Fork of Rapid Creek by Black Fox Campground (excluding portions of private land).

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values include fish/mountain sucker, wildlife/rare snails, historic & cultural, and vegetation/iron fen.

Several species of rare snails (*Oreohelix/Discus/Catinella*) are found in abundance in this corridor. A population of mountain sucker also occurs as well as American dippers and beavers. These species qualify this segment for fish and wildlife "outstandingly remarkable values."

A fen is located at the junction of Rhoads Fork Creek and the South Fork of Rapid Creek. This fen, also called an iron fen, contains iron-oxide precipitating plants. Several iron fens in the area have been exploited for "bog" iron but have never been systematically studied for their unique botanical, hydrologic/geochemical characteristics, and paleo botanical information. In addition to iron-precipitating plants, this fen contains five or six species of sphagnum moss. As this area has not been extensively studied, it may have additional plants that may provide beneficial information on present and past environments. This fen is considered "outstandingly remarkable."

Multiple Historic USFS Recreation Residences in Cave Draw exist within the northern section of the Rhoads Fork Creek Corridor. Some recreation residences from Black Fox Summer home Group are also within the Corridor. Several CCC culverts are within the Northeastern Corridor of Rhoads Fork Creek. The Cave Draw CCC temporary camp is also located within this corridor. These historic sites qualify this segment for a historic & cultural designation of "outstandingly remarkable."

Rationale for Preliminary Classification

Although Rhoads Fork contains at least one "outstandingly remarkable" feature and fulfills the definition of "recreational river," the creek is followed for its entire length by somewhat heavily traveled Forest Service Roads. It is "free-flowing" and does flow in a natural condition without modification of its waterways. Because of the sphagnum fen located at the confluence with South Fork of Rapid Creek, it should be considered eligible as "recreational."

Slate Creek

Location: Mystic District, Pennington County, South Dakota.

This area includes the portion of Slate Creek located below Slate Creek Dam to its confluence with Rapid Creek (excluding private land).

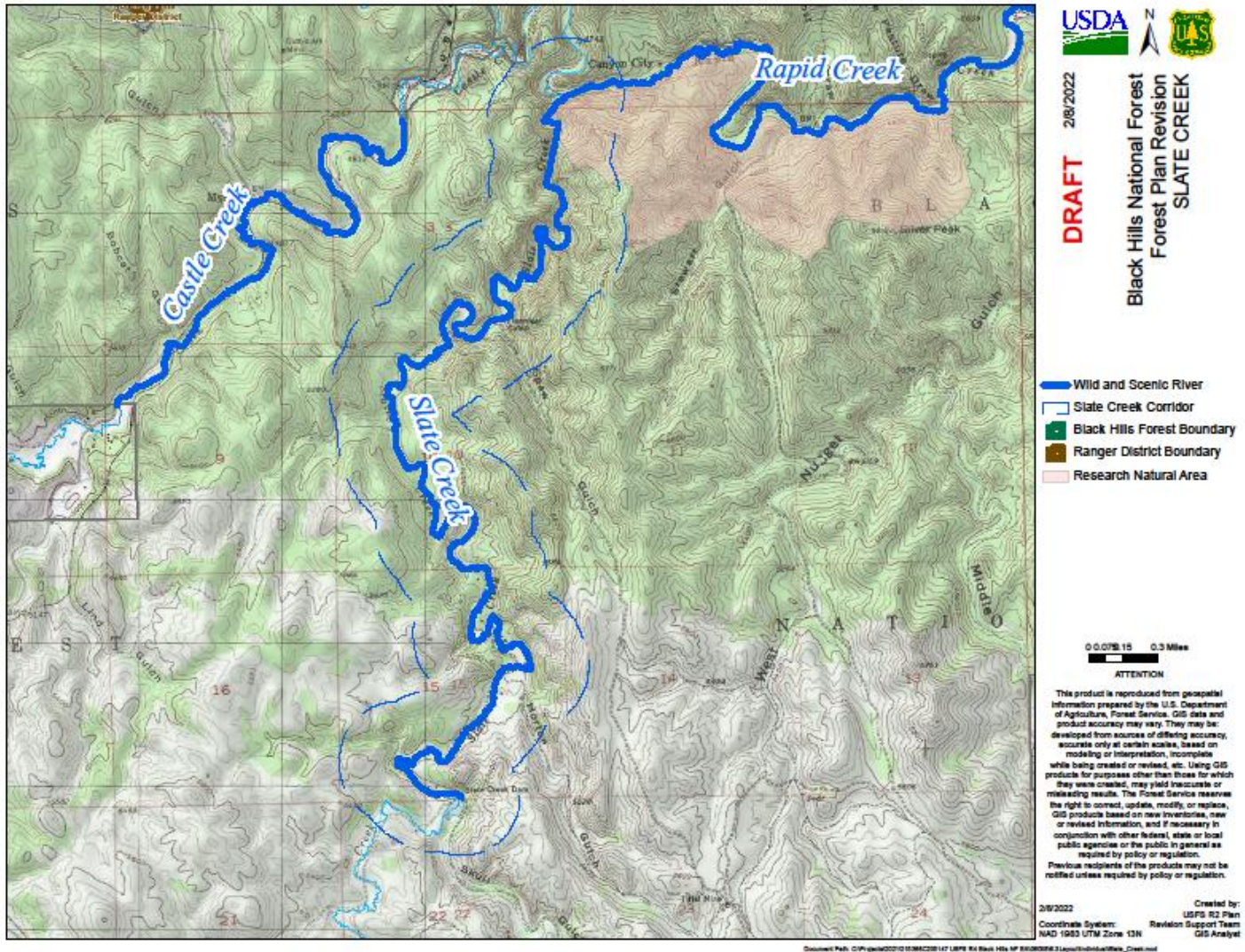


Figure 8. Eligible wild and scenic river segments for Slate Creek.

Eligible wild and scenic river segments for Slate Creek

Total eligible length (miles): 6.7

Eligible length in the national forest (miles): 6.7

Total eligible corridor area (acres): 1541.5

Eligible corridor area in the national forest (acres): 1541.1

Preliminary classification: Recreational

Outstandingly remarkable values: historic & cultural/lumber flume, fish and wildlife

Beginning: Below Slate Creek Dam

Terminus: The confluence with Rapid Creek (excluding private land)

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values include historic & cultural/lumber flume and fish and wildlife.

Before 1919, the Warren-Lamb Company purchased timber in the Slate Creek drainage between the Chicago, Burlington & Quincy Railroad and Rapid Creek. A flume was constructed to transport the logs by water down the main canyon to a loading dock on Rapid Creek. The Warren Lamb's logging flume was one of the more unique and colorful chapters in the Black Hills NF logging history and is considered "outstandingly unique" in relation to regional and national history.

Slate Creek is an excellent "naturally reproducing" brown trout fishery. It is classified by the state as BR-2, which means it contains 25 to 150 brown trout per acre. In addition, bald eagles frequent the southern portion of Slate Creek during the fall and winter. Because of its outstanding fishery potential and its seasonal use by a nationally endangered species, Slate Creek is considered "outstandingly remarkable" in its importance to fish and wildlife habitat in the state and the nation.

Rationale for Preliminary Classification

Slate Creek fulfills the criteria as "free flowing"; however, the area is currently accessible by a road that parallels the creek, eliminating it as a candidate as a "wild" or "scenic" river. The excellent habitat afforded to native fish and wildlife, and its unique regional history, support a designation as "recreational" for Slate Creek.

Little Elk Creek (Segment 2)

Location: Northern Hills District, Lawrence and Meade Counties, South Dakota.

Little Elk Creek is a stream that originates near Flagstaff Mountain northwest of Nemo, South Dakota, and flows east-southeast before exiting the Black Hills near Piedmont, South Dakota. After originating from springs on private land near Forest Road 26, the stream flows into Dalton Lake, a human-made impoundment adjacent to a National Forest campground. Below the lake, the stream runs into Little Elk Canyon, where it alternately runs above and below ground.

Segment 2 of Little Elk Creek flows from behind the Dalton Lake dam to a National Forest campground.

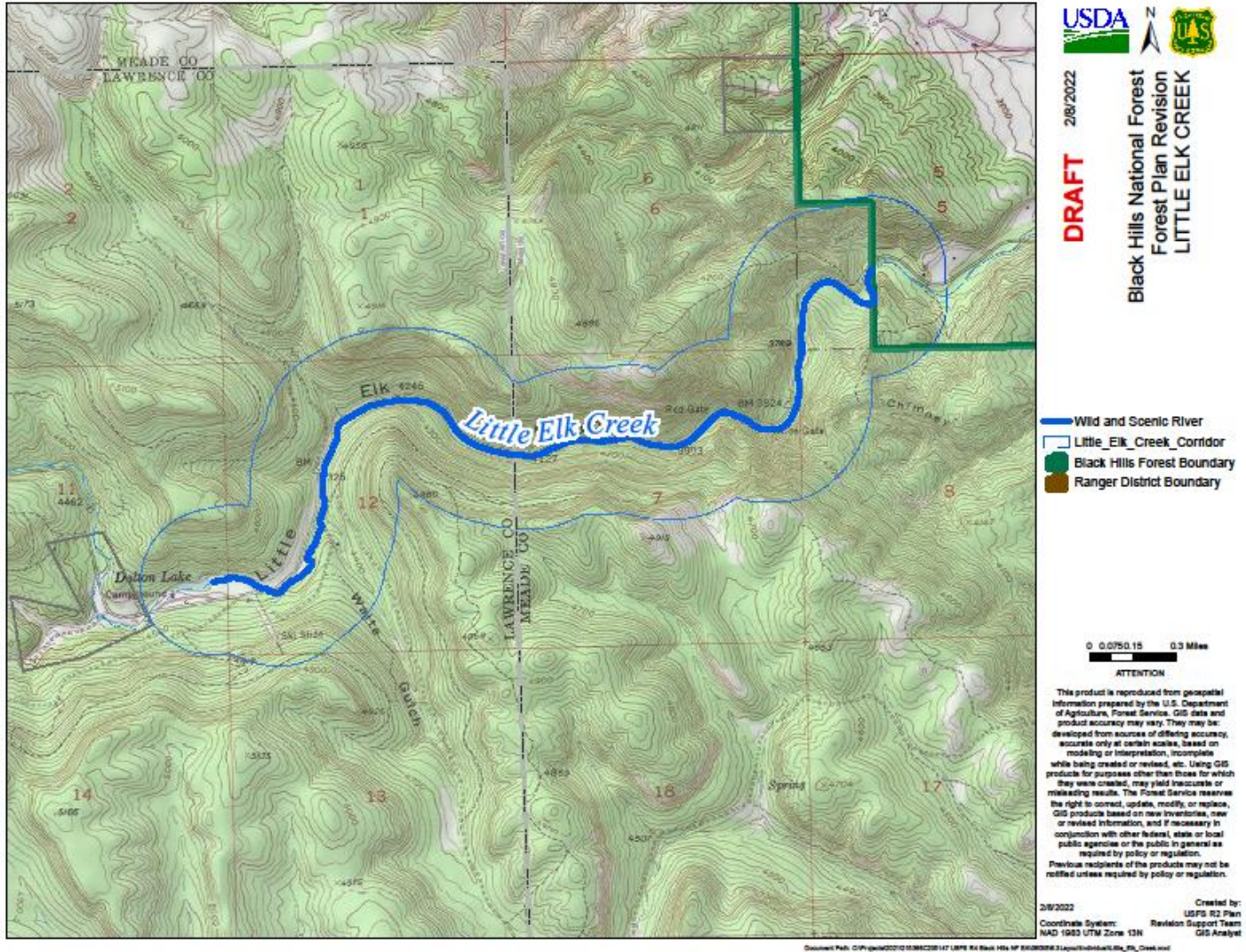


Figure 9. Eligible wild and scenic river segments for Little Elk Creek

Eligible wild and scenic river segments for Little Creek

Total eligible length (miles): 3.3

Eligible length in the national forest (miles): 3.3

Total eligible corridor area (acres): 1114.8

Eligible corridor area in the national forest (acres): 1040.2

Preliminary classification: Recreational

Outstandingly remarkable values: scenery, geology, vegetation

Beginning: Behind the Dalton Lake dam

Terminus: National Forest campground

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" features include scenery, geology, vegetation values.

The most spectacular scenic features of this stream are found in the canyon below Dalton Lake. This canyon is 800 to 1,000 feet deep with a bottom that is less than 100 feet wide in places. The geological features include several dramatic and colorful upthrusts of sandstones and shales, known locally as "red gate" and "white gate." The length of this canyon is slightly more than 2 miles.

The geology of this area, as described in the introduction to this evaluation, includes some features of value chiefly due to their dramatic scenic qualities. These geologic features can be considered "outstandingly remarkable."

The corridor contains rare plant habitats including *Picea glauca/Betula papyrifera*, *Picea glauca/Betula papyrifera/Pinus ponderosa*, *Picea glauca/Betula papyrifera/Salix*, *Betula papyrifera/Populus deltoides/Fraxinus pennsylvanica/Ostrya virginiana*, and *Pinus ponderosa/Ostrya virginiana/Betula papyrifera/Populus deltoides*. The rare plants found in this region qualifies this segment as a vegetation "outstandingly remarkable value."

Rationale for Preliminary Classification

This segment is classified as "recreational." There are existing impoundments, substantial evidence of human activity, and roads within the corridor that prevent the segment from achieving "scenic" classification.

Little Spearfish Creek

Location: Northern Hills District, Lawrence County, South Dakota.

Little Spearfish Creek was evaluated for eligibility in the Wild and Scenic River System as part of the planning process during the 1983 Land and Resource Management Plan for the Black Hills NF. At that time, the stream was not considered to be eligible for further consideration as a wild and scenic river. Since the creek is on the National River Inventory, it is being reevaluated as part of the Forest Plan Revision process.

Little Spearfish Creek is located about 11 miles south, southwest of Spearfish, South Dakota. The creek originates on private land in Section 16 and flows year-long to just above its confluence with Spearfish Creek. A dam on private land at this point diverts all the flow into a pipeline system for Homestake Mining Company. Little Spearfish Creek originally entered Spearfish Creek via Spearfish Falls. The falls are now mostly dry due to the diversion.

The springs that originate Little Spearfish Creek are located on private land and collected stored in a series of fish-rearing ponds. The creek then leaves private land and crosses National Forest land for approximately 6 miles before it enters private land again and essentially terminates at a dam. For purposes of this study, the creek will be evaluated from its entry onto Forest System land in Section 9 to a point at the upper end of the dam pond on private land in Section 36. Elevation near the headwaters is about 5,700 feet; at the dam, it is about 5,000 feet. The creek is

entrenched in a canyon that reaches 600 feet in depth in places.

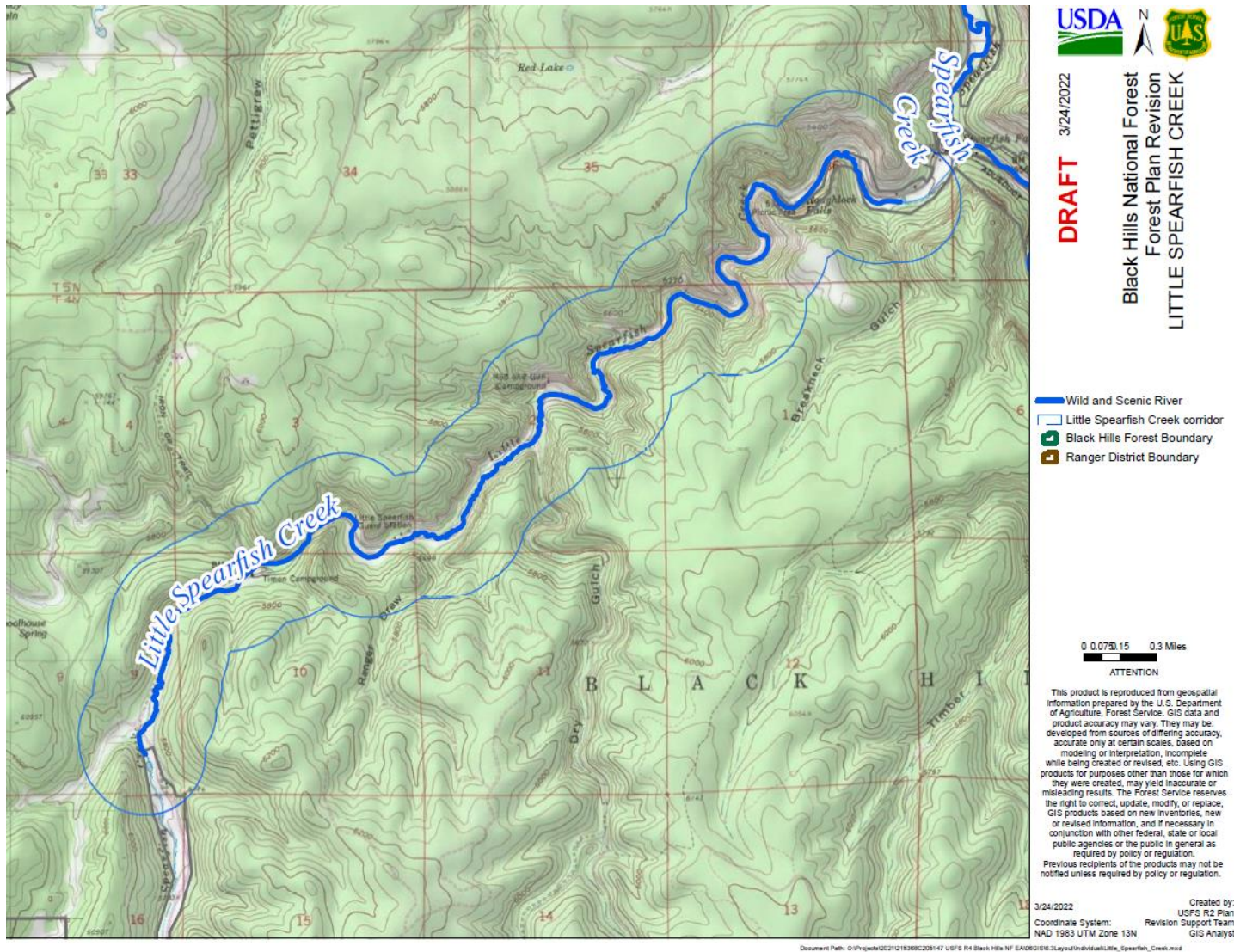


Figure 10. Eligible wild and scenic river segments for Little Spearfish Creek.

Eligible wild and scenic river segment for Little Spearfish Creek

Total eligible length (miles): 6.2

Eligible length in the national forest (miles): 5.7

Total eligible corridor area (acres): 1749.5

Eligible corridor area in the national forest (acres): 1692.6

Preliminary classification: Recreational

Individual segments:

Outstandingly remarkable values: scenery/Roughlock Falls and limestone cliffs, historic & cultural, vegetation

Beginning: Entry onto Forest System land in Section 9

Terminus: Point at the upper end of the dam pond on private land in Section 36

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values include scenery/Roughlock Falls and limestone cliffs, historic & cultural, and vegetation.

When considered as part of the adjacent Spearfish Creek and its canyon, Little Spearfish Creek has "outstandingly remarkable" scenic values. This classification is dependent on the associated values of recreational use, geology, and history, each of which might fail to meet the standards of "outstandingly remarkable." However, when considered in total, the creek merits further evaluation for suitability for wild and scenic river recommendation.

There are prehistoric cultural resources eligible for the NRHP along the stream corridor as it was likely a prehistoric travel corridor from Spearfish Canyon up to the Limestone Plateau. A historic flume ("Fabulous Flume" or "Buckeye Flume") was constructed in 1887. It was constructed to provide water for mining operations in the Iron Creek area, but ultimately failed due to engineering miscalculations. This historic flume runs along the entire length of the stream corridor.

Rare plant species like *Cypripedium parviflorum* (R2 sensitive), *Viburnum opulus* L. var. *americanum* (R2 sensitive), and *Polystichum lonchitis* (SOLC) are found within the stream corridor. Other rare habitat community types include spruce/twinflower, spruce/grouseberry, carex wetland, and birch/hazelnut. Numerous wetland/riparian specific plant communities are also present. The rare plants found in this region qualifies this segment as a vegetation "outstandingly remarkable value."

Rationale for Preliminary Classification

Eligible with a "recreational river" classification.

Spearfish Creek

Location: Northern Hills District, Lawrence County, South Dakota

Spearfish Creek is located south of Spearfish, South Dakota. The creek originates in springs about 6 miles southwest of Cheyenne Crossing, is joined with East Spearfish Creek (Hanna Creek) and Icebox Creek at Cheyenne Crossing, then goes through Spearfish Canyon for approximately 19.4 miles to the city of Spearfish. Because of the significant change in the canyon at Cheyenne Crossing, the scope of this evaluation will include Spearfish Creek from Cheyenne Crossing north to Spearfish.

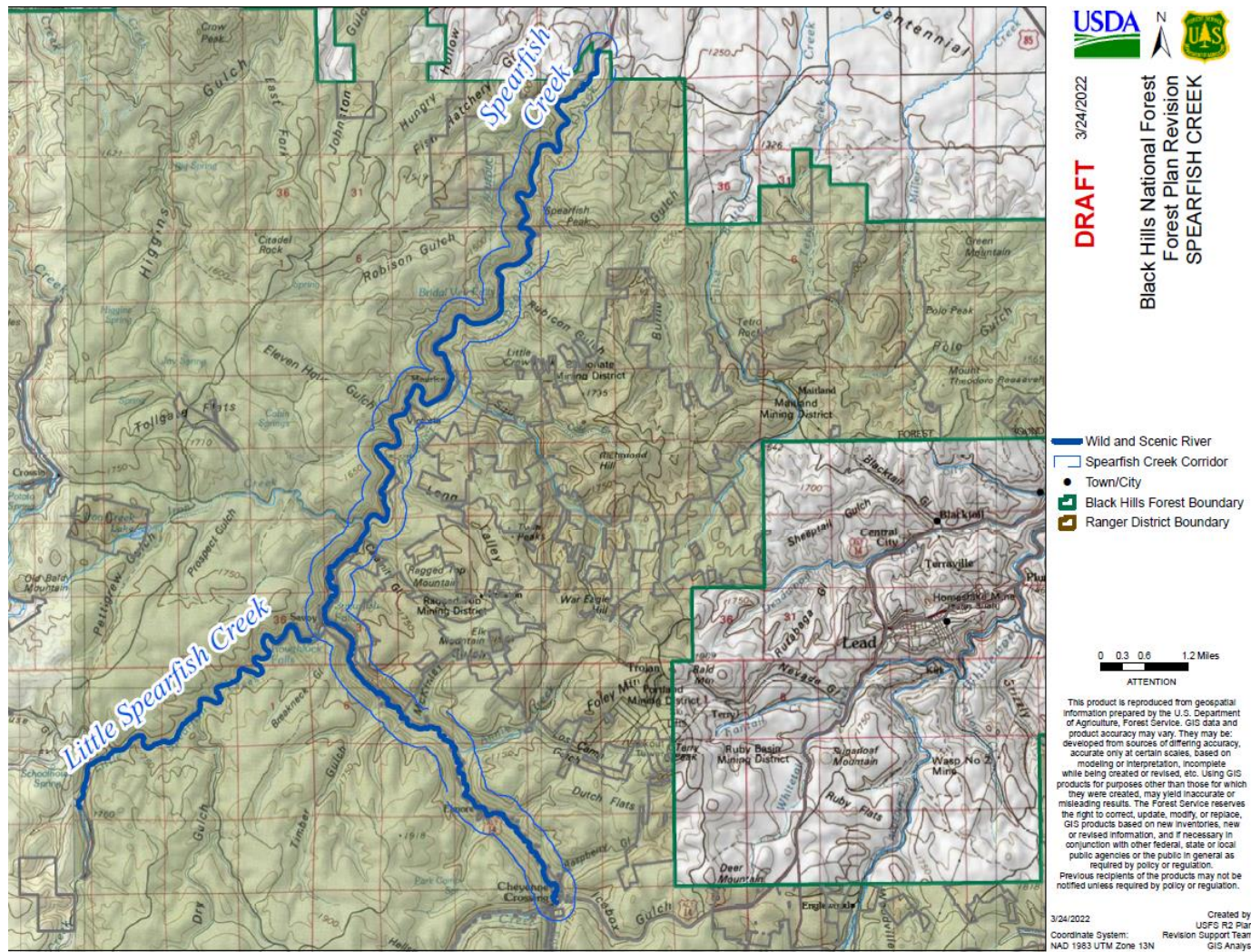


Figure 11. Eligible wild and scenic river segments for Spearfish Creek.

Eligible wild and scenic river segment for Spearfish Creek

Total eligible length (miles): 19.4

Eligible length in the national forest (miles): 16.7

Total eligible corridor area (acres): 5705.5

Eligible corridor area in the national forest (acres): 5007.8

Outstandingly remarkable values: scenery/Scenic Byway, wildlife, historic & cultural, vegetation

Beginning: Cheyenne Crossing

Terminus: The City of Spearfish

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values include scenery, wildlife, historic & cultural, and vegetation.

The scenic value of Spearfish Canyon is due to the creek, the vegetative diversity, the rock cliffs and outcrops along the canyon, and the contrast between the canyon and adjacent Limestone Plateau as well as the Great Plains. Spearfish Creek is considered to contain "outstandingly remarkable" scenic characteristics from a regional or physiographic standpoint. There are other canyons and scenic attractions in the Black Hills NF; however, Spearfish Canyon is second to none of these.

This segment is prime habitat for the American dipper (Black Hills NF Species of Local Concern (SOLC)). This qualifies the segment for a wildlife "outstandingly remarkable value."

There are many cultural resources located along the length of the corridor including prehistoric and historic sites eligible for the NRHP. In 1892, the Leppla and McLaughlin Tie and Timber Company had a sawmill in Savoy and harvested timber in the area for RR ties, eventually clearcutting the area, forcing them to move operations to Nahant. The Homestake Mining Company utilized the creek to provide hydro-electric power for the Homestake mine in Lead using two hydro-electric plants along the creek with water diverted from the creek via aqueducts. There are many historic recreation residences along the corridor. These historic values qualify this segment for a historic & cultural "outstandingly remarkable value."

Rare plant species like *Cypripedium parviflorum* (R2 sensitive), *Viburnum opulus* L. var. *americanum* (R2 sensitive), and *Polystichum lonchitis* (SOLC) are found within the stream corridor. Other rare habitat community types include spruce/twinflower, spruce/grouseberry, carex wetland, and birch/hazelnut. Numerous wetland/riparian specific plant communities are also present. The rare plants found in this region qualifies this segment as a vegetation "outstandingly remarkable value."

Rationale for Preliminary Classification

While Spearfish Creek is one of the most scenic corridors within the BHNF, it is classified as "recreational" because there are existing impoundments, substantial evidence of human activity, and existence of roads in the corridor that prevent the segment from achieving "scenic" classification.

Iron Creek

Location: Hell Canyon District, Custer County, South Dakota.

The headwaters of Iron Creek lie just east of the Cathedral Spires. The stream flows eastwardly for about 10 miles where it enters Lakota Lake. The corridor bordering the stream is entirely on National Forest land, except for a small portion that flows through Custer State Park. A highway and a gravel road border the stream in two areas.

Some quite remote areas lie along the entire length of this segment. The stream is entirely free of pollution except for some sedimentation from the gravel road in a few places. The stream evaluation is be divided into two segments. Segment 1 begins at the headwaters and ends at the Iron Creek Horse Camp; Segment 2 begins at the Horse Camp and ends at Lakota Lake.

Segment 1 consists of a 5.6-mile reach of stream from the headwaters to the Horse Camp. It flows through some remote country, then flows along Highway 87 for about one mile, and then into a roadless area for another one and a half miles to the Horse Camp.

Segment 2 is a 6.4-mile portion of Iron Creek from the Horse Camp to Lakota Lake. The entire stream length of this segment is on National Forest lands.

Grizzly Creek is a 2.4-mile tributary of Iron Creek. The entire length of this segment is located within the Norbeck Wildlife Preserve, and it flows southeasterly into Iron Creek.

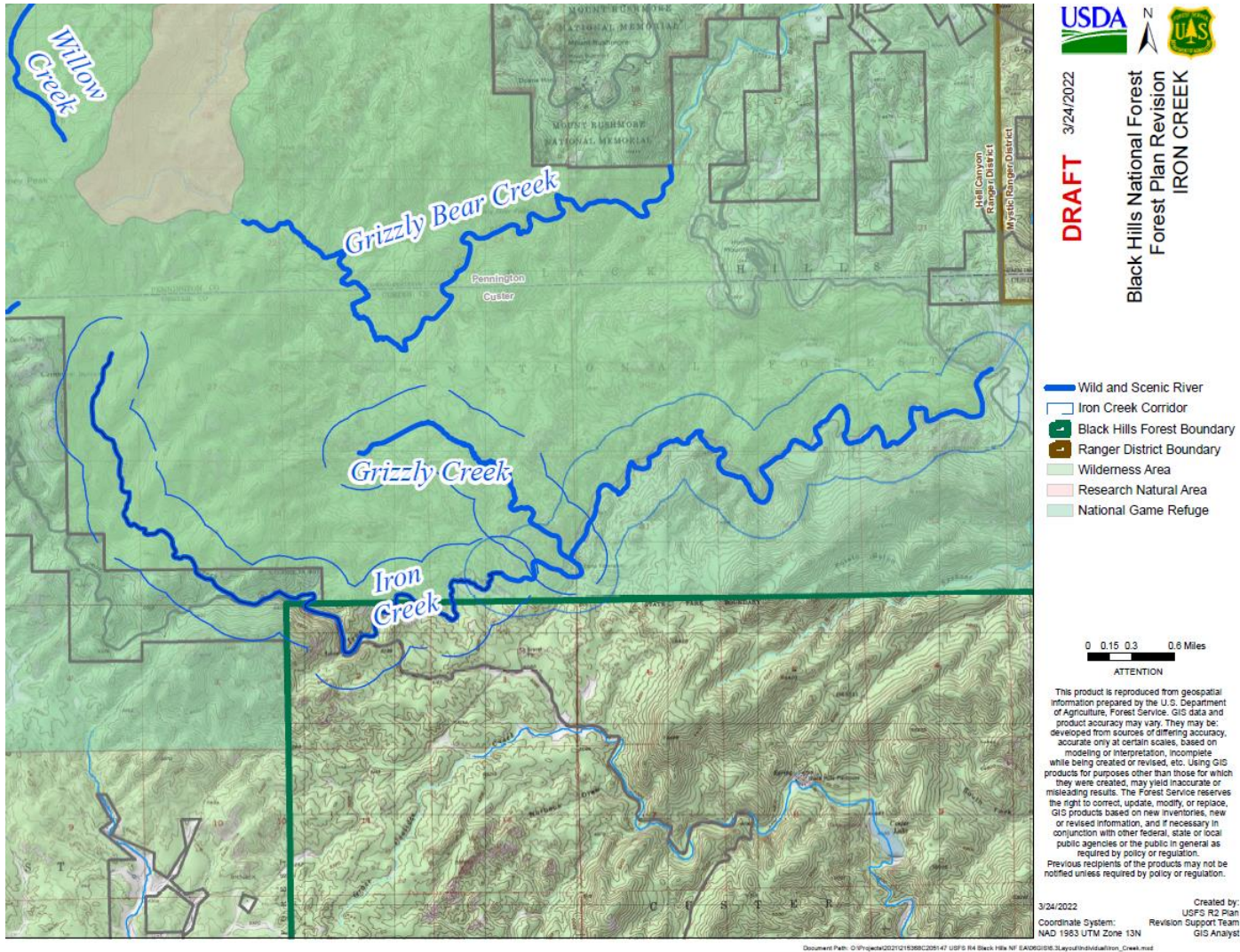


Figure 12. Eligible wild and scenic river segments for Iron Creek
Eligible wild and scenic river segments for Iron Creek and Grizzly Creek

Total eligible length (miles): 14.5

Eligible length in the national forest (miles): 11.9

Total eligible corridor area (acres): 4,477.8

Eligible corridor area in the national forest (acres): 3,768.9

Preliminary classification: Recreational, Scenic

Individual segments:

- Iron Creek Segment 1
 - 3 miles, 1,782.8 acres
 - Classification: Scenic
 - Outstandingly remarkable values: scenery/granite outcrops, fish/brook trout, wildlife/mountain goats

- Beginning: Headwaters
- Terminus: Horse camp
- Iron Creek Segment 2
 - 6.5 miles, 1,792 acres
 - Classification: Recreational
 - Outstandingly remarkable values: scenery/granite outcrops, recreation, historical & cultural, vegetation
 - Wildlife/Mountain Goats
 - Beginning: Horse Camp
 - Terminus: Confluence: Lakota Lake
- Grizzly Creek
 - 2.4 miles, 903 acres
 - Classification: Scenic
 - Outstandingly remarkable values: scenery/granite outcrops, recreation wildlife/mountain goats, historic & cultural
 - Beginning: Headwaters
 - Terminus: The confluence with Iron Creek

Description of Outstandingly Remarkable Value

"Outstandingly remarkable" values in Segment 1 include scenery/granite outcrop formations, fish/brook trout, and wildlife/mountain goats.

The entire length of Iron Creek has native reproduction of brook trout and some brown trout. Mountain goats are found along the segment. This is the eastern-most herd found in the United States. The "outstandingly remarkable" fish and wildlife values are the excellent brook trout population and the mountain goat herd.

This segment consists of large, granite outcrops. The Cathedral Spires are visible from the headwaters area. "Outstandingly remarkable" features are the granite formations along this segment.

"Outstandingly remarkable" values in Segment 2 include scenery/granitic outcrops, recreation, wildlife/mountain goats, historical & cultural, and vegetation.

Segment 2 of Iron creek contains a mountain goat herd (the eastern-most herd found in the United States). This herd is what supports this segment as having "outstandingly remarkable" wildlife values.

The canyon is very scenic with many different granite formations and a great variety of different vegetative species. Numerous hikers and horseback riders use the area. Some of the largest and most spectacular ponderosa pine in the Black Hills NF are located along this corridor. The variety of shrub and tree species, the large ponderosa pine, and the granite formations along this corridor are the "outstandingly remarkable" features in this segment.

A horse camp located in this segment and supports several recreation activities including hiking, horseback riding, nature study, and fishing. The "outstandingly remarkable" recreational value is the scenery and the outdoor recreational opportunities along the corridor.

This segment of Iron Creek contains two summer home groups with multiple NRHP eligible structures. The Camp Remington summer home group is located at the western portion of the corridor segment while the Iron Creek summer home group is spread out along Iron Creek to the northeast. There are also examples of NRHP eligible industrial mining sites with their associated isolated cabins. To the northeast, the Bismuth Townsite is currently inundated underneath Lakota Lake.

This corridor contains rare plant species including *Botrychium multifidum* (SOLC). White spruce dominated community types (white spruce alluvial and white spruce / twinflower) identified as rare in the Black Hills Community Inventory are also present along the stream corridor.

"Outstandingly remarkable" values in Grizzly Creek include scenery/granite outcrops, recreation, and historic & cultural.

In view of Grizzly Creek are large granite outcrops and formations. The combination of these granite outcrops and the great variety of shrub and tree species along the wet-meadow environment is what supports this segment as having "outstandingly remarkable" scenic value.

The recreation opportunity in this corridor is unique because of the of the views of the granite outcrops and variety of plant life, the hiking and horseback riding opportunities, and the naturalist opportunities. This segment has "outstandingly remarkable" recreation values.

This corridor also contains the historic USFS summer Home Group, Camp Remington. These historic values qualify this segment for historic & cultural "outstandingly remarkable value."

Rationale for Preliminary Classification

Segment 1 is classified as a "scenic river" because it is free from impoundments, it is largely primitive and undeveloped, and it is limited to trail accessibility.

Segment 2 is classified as "recreational" because it is used heavily by hikers, horseback riders, and wildlife/scenic viewers. The corridor has more development and road accessibility than segment 1.

Grizzly Creek was found to be eligible for a "scenic river" classification. It is free from impoundments, largely primitive and undeveloped, and only accessible by road in some areas.

Grizzly Bear Creek

Location: Hell Canyon District, Pennington and Custer Counties, South Dakota.

The headwaters of Grizzly Bear Creek begin in the Pine Creek Natural Area east of Black Elk Peak, flow eastwardly through the Black Elk Wilderness, and empty into Battle Creek near Keystone. The portion being evaluated is all within the Black Elk Wilderness boundary.

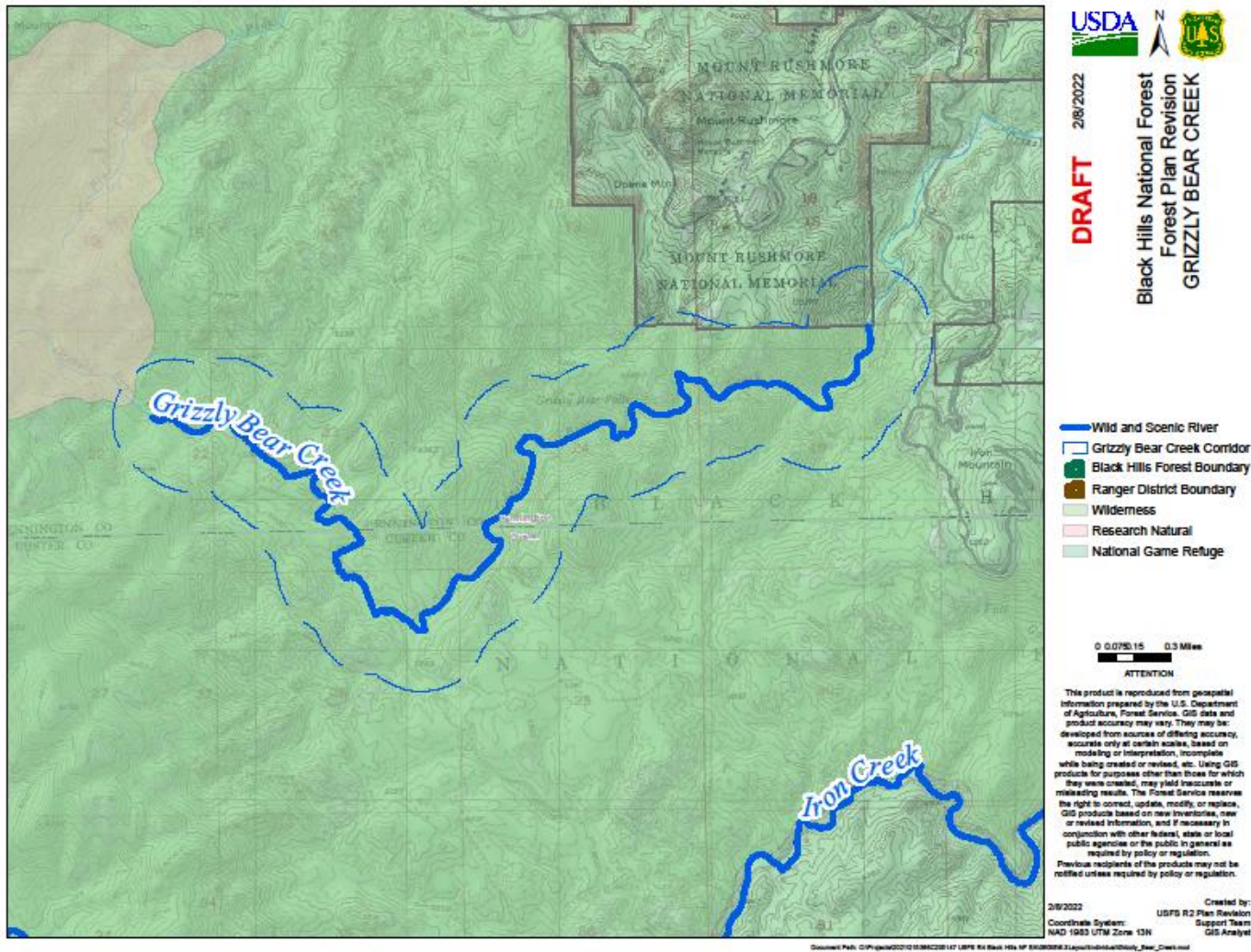


Figure 13. Eligible wild and scenic river segments for Grizzly Bear Creek.

Eligible wild and scenic river segments for Grizzly Bear Creek

Total eligible length (miles): 5.4

Eligible length in the national forest (miles): 5.4

Total eligible corridor area (acres): 1,531

Eligible corridor area in the national forest (acres): 1,485.8

Preliminary classification: Wild

Outstandingly remarkable values: scenery/waterfalls, fish, wildlife, recreation/wilderness, vegetation

Beginning: Headwaters

Terminus: The confluence with Bear Creek.

Description of Outstandingly Remarkable Value

Grizzly Bear Creek contains "Outstandingly remarkable" values of scenery/waterfalls, fish, wildlife, recreation/wilderness, and vegetation.

In view of Grizzly Bear Creek are large granite outcrops and Black Elk Peak. The entire study corridor of Grizzly Bear Creek is within the Black Elk Wilderness. Grizzly Bear Falls is located on the creek and is very scenic. There is a great variety of shrub and tree species throughout the study area. These are the "outstandingly remarkable" scenic values of Grizzly Bear Creek.

The water quality and the wild brook trout fishery are in excellent condition. These are considered "outstandingly remarkable values" for fish.

The mountain goat population in this area is healthy because of the rock outcrops and the high-quality forage. There is good natural reproduction of brook trout in Grizzly Bear Creek. Active beaver colonies on the creek keep the beaver dams repaired and provide for the unique wetland environment in a few places along the corridor. These are all "outstandingly remarkable" values along the corridor.

The unique scenery of the granite outcrops and the solitude of the wilderness environment attract naturalists, hikers, and horseback riders, and other recreationalists to the Grizzly Bear Creek Corridor. These are all "outstandingly remarkable" recreation values.

This corridor contains rare plant species include *Viola selkirkii* (R2 sensitive), *Oxyria digyna* (SOLC) and *Pinus flexilis* (SOLC). These are concentrated in the Upper Pine Creek RNA. White spruce dominated community types (white spruce alluvial and white spruce / twin flower) identified as rare in the Black Hills Community Inventory are also present along the stream corridor. These plants represent the botanical "outstandingly remarkable values."

Rationale for Preliminary Classification

Grizzly Bear Creek was found to be eligible with a "wild river" classification. Grizzly Bear Creek is free of impoundment, there is little to no evidence of human activity, is exclusively accessed by nonmotorized trail, and meets or exceeds all Federal criteria for federally approved standards for water quality.

Appendix B. Maps

Poster-size maps located here: (Public link to be determined)

Map 1. Ecological region of comparison for scenery, geology, fish, and wildlife values of the
BHNF

Map 2. Eligible wild and scenic river segments for the Black Hills NF