



U.S. Fish & Wildlife Service

Nowitna Wild and Scenic River Values



Nowitna River Canyon (USFWS)

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PURPOSE

The purpose of this document is to identify the status of efforts to document the free-flowing conditions, water quality, and outstandingly remarkable values (ORVs) for the Nowitna Wild and Scenic River (WSR) in previous planning processes and in preparation for the Comprehensive River Management Plan (CRMP). The U.S. Fish and Wildlife Service worked with the State of Alaska, Tribes, and other agencies to incorporate additional sources of information into the descriptions of river values used during the development of the CRMP.

LEGISLATIVE BACKGROUND

Congress created the National Wild and Scenic Rivers System (NWSRS) in 1968 through passage of the Wild and Scenic Rivers Act (WSRA, Public Law 90-542, as amended; 16 United States Code 1271 et seq.). Section 10(a) of the WSRA specifies “Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system . . .”

Each river in the NWSRS is managed with the goal of protecting and enhancing the values that caused it to be designated. These values include the river’s free-flowing condition, water quality, and the river-related resource values that have been found to be outstandingly remarkable for each WSR. These specific river values, known as ORVs, are identified by an interdisciplinary team of resource specialists with knowledge of an area’s resource distribution.

Consistent with Interagency guidelines¹ and Interagency Wild and Scenic Rivers Coordinating Council’s (IWSRCC) WSR Study Process publication (IWSRCC 1999), to qualify as an ORV, a resource must not only be river related or river dependent—owing its existence to the presence of the river—but it must be unique, rare, or exemplary within a relevant region of comparison. Such regions are chosen for each resource value under consideration for the ORV status; the interdisciplinary team determines these regions based on the team’s technical or professional knowledge of factors relating to the specific resource’s distribution. For example, regions of comparison for resources such as fish, wildlife, or plants are usually based on biogeographical regions, while cultural resources are usually evaluated based on the area occupied by a given culture or language group.

PLANNING HISTORY OF THE NOWITNA WILD AND SCENIC RIVER OUTSTANDINGLY REMARKABLE VALUES

The Department of the Interior’s Bureau of Outdoor Recreation (BOR) conducted the evaluation of rivers, including the Nowitna WSR (BOR 1973), for potential designation as WSRs prior to the passage of the Alaska National Interest Lands Conservation Act (ANILCA). This pre-designation assessment was carried out in accordance with Section 17(d)(2) of the Alaska Native Claims Settlement Act.

The field reports prepared by the BOR for the 25 rivers eventually designated under ANILCA did not include a comprehensive or detailed assessment of each river’s potential ORVs due to the following factors:

- Lack of a Standardized Process: At the time, the ORV identification process had not

¹ “Department of the Interior and Agriculture Interagency Guidelines for Eligibility, Classification and Management of River Areas,” published in the Federal Register (Vol. 47, No. 173; September 7, 1982, pp. 3945439461), provides direction to agencies in the study and administration of WSRs.

been standardized by the IWSRCC, particularly because ANILCA was enacted shortly after the passage of the WSRA in 1968. This meant there was no established, uniform method for assessing and documenting the unique values of these rivers.

- Limited Information: The remote and often inaccessible nature of the areas being studied during the 1970s presented challenges. There was limited information available about many of the resource values in these remote regions, making it difficult to provide detailed descriptions of baseline conditions.

As a result of these challenges faced during the pre-designation evaluation process, all 25 rivers designated under ANILCA were added to the NWSRS without specific values, attributes, and comprehensive descriptions of baseline conditions that made them deserving of inclusion in the NWSRS. This highlights the evolving nature of conservation efforts and the need for ongoing assessment and documentation of the unique qualities of protected areas.

While seven ORV categories (scenery, recreation, geology, fish, wildlife, cultural, and other similar values) are named in the WSRA, resource categories are not prescribed. The interdisciplinary team may find different or additional categories through the ORV determination process.

PREVIOUSLY IDENTIFIED OUTSTANDINGLY REMARKABLE VALUES

a. The management direction of the Nowitna WSR was initially outlined in the Nowitna National Wildlife Refuge Comprehensive Conservation Plan (CCP)/Environmental Impact Statement/Wilderness Review/Wild River Plan (USFWS 1987). According to this plan, the Nowitna Wild River [WSR] was designated because of its natural, free-flowing condition; water quality; and ORVs identified as wildlife, geology, and primitive setting.

In 2009, the Koyukuk/Northern Unit Innoko/Nowitna National Wildlife Refuges Revised CCP (USFWS 2009) replaced the management direction for the Nowitna National Wildlife Refuge CCP/Environmental Impact Statement/Wilderness Review/Wild River Plan (USFWS 1987) and associated records of decision. The Revised CCP noted that the Nowitna WSR possesses ORVs in multiple categories that were informally identified by refuge staff during the CCP process. The identified ORVs included:

- Scenic—forested river corridor, diverse landscape, and different examples of succession
- Geologic—agates
- Hydrologic—free-flowing state, oxbow lakes, and wetlands
- Fisheries—sheefish and whitefish populations
- Wildlife and habitats—nationally significant species of migratory waterfowl and large game
- Cultural/historic/prehistoric—transportation corridor and abandoned camps
- Subsistence—hunting, trapping, house logs, berry picking, and firewood
- Recreational—hunting, fishing, wildlife observation and photography, floating, and camping trips

While both the 1987 and 2009 CCPs were validated through a public process, the IWSRCC's guidelines for ORVs in the Wild and Scenic River Study Process publication ([IWSRCC 1999](#)) were not available in 1987. In 2009, refuge staff informally applied the IWSRCC's guidance, focusing their efforts on describing river values and providing direction regarding the protection of these values. The proposed changes to the previously identified river values (1987 and 2009) are aimed at aligning the values with the IWSRCC's established guidelines and making the process of addressing these values more efficient and

formal within the CRMP (Table 1).

Table 1. Previous Identification of ORVs for the Nowitna WSR

Nowitna CCP (1987)	Revised CCP (2009)	CRMP Pre-planning (2020)	CRMP (2024)
<ul style="list-style-type: none"> • Geology • Primitive setting • Wildlife 	<ul style="list-style-type: none"> • Scenery • Geology • Hydrology • Fish • Wildlife and habitats • Cultural, historic, and prehistoric • Subsistence • Recreation 	<ul style="list-style-type: none"> • Scenery • Geology • Fish • Wildlife • Cultural (prehistoric and historic) • Subsistence • Recreation • Plant community 	<ul style="list-style-type: none"> • Ecology • Fish • Cultural • Scenery

CURRENT PLANNING FOR THE NOWITNA WSR COMPREHENSIVE RIVER MANAGEMENT PLAN

To facilitate the processes of finalizing ORVs with public involvement and of developing CRMPs for wild and scenic rivers in Alaska, a river value identification workshop was held in Fairbanks, Alaska in January 2020. The workshop also provided opportunities to prioritize interim WSR management direction prior to the completion of CRMPs. Interdisciplinary river management teams were assisted by the River Management Society’s River Training Center (using tools and resources developed by the IWSRCC) to identify interim findings of ORVs and river values for each of the FWS-administered wild and scenic rivers. In anticipation of finalizing ORV designations and developing a Nowitna CRMP, the staff at Nowitna NWR continued the internal review of Nowitna WSR values throughout 2020 using the process recommended during the workshop to summarize and document available information. Sources of information included the original BOR report recommending the Nowitna River for inclusion in the NWSRS (BOR 1973) and associated field notes, held by the Alaska Resources Library and Information Services in Anchorage; other publications; and files from the refuge. When available, water resources information, including flow and water quality study data, were included. Eight ORVs were identified for the Nowitna WSR as a result of the efforts made in 2020: scenery, geology, fish, wildlife, cultural (prehistoric and historic), subsistence, recreation, and plant community.

In 2023, the U.S. Fish and Wildlife Service staff met with representatives from Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, Alaska Department of Natural Resources, U.S. Bureau of Indian Affairs, residents of local communities and members of local tribal organizations to identify and describe the final river ORVs to be used in the Nowitna CRMP. Many of the river values identified in previous documents were retained, but were reorganized in to four ORVs: ecology, fish, cultural and scenery.

CLARIFICATION ON CHANGES TO THE NOWITNA WSR OUTSTANDINGLY REMARKABLE VALUES

Information from previous ORV assessments was examined to identify commonalities and overlaps among previously identified ORVs and to group them into more comprehensive and streamlined river-related values. Changes to the previously identified river values are intended to optimize how they are addressed in the CRMP. Combining multiple resources into one river value does not in any way reduce the value of the individual parts. All river values are treated equally and retain the same status for protection under the CRMP. All river values apply to the entire river corridor.

Ecology ORV

The ecology ORV recognizes the relationship between the river's unique geology, hydrology, plant communities, and wildlife and aims to manage and protect them collectively as part of the river's broader ecological value. It also acknowledges that these features are deeply interconnected, and changes or impacts in one area can have a ripple effect throughout the ecosystem. Collectively recognizing all these river values within the ecology ORV allows management and conservation efforts to take a more holistic approach to ensure the overall health and balance of the Nowitna WSR's natural systems.

Fish ORV

The Nowitna WSR supports a remarkably diverse assemblage of fish species. It is a migration corridor to one of only six known sheefish spawning areas, thus providing fish habitat that is rare in the Arctic-Yukon-Kuskokwim Region. Initially, Nowitna River fish were included within the wildlife ORV (USFWS 1987); they were later recognized as a separate ORV (USFWS 2009). Continuing to recognize fish as a distinct ORV allows for a focused and specific approach to managing and conserving the river's fish resources while acknowledging the significant role that fish populations and their habitat play in the ecological health and overall value of the Nowitna WSR and the broader region.

Cultural ORV

The cultural ORV encompasses many aspects of the relationship between humans and the Nowitna WSR that have been consistently recognized throughout management of the Nowitna WSR. The cultural ORV for the Nowitna WSR incorporates a number of river values described in past documents, including "historic or prehistoric," "subsistence," "primitive setting," and "recreation." Subsistence, recreation, and other cultural values were described in the 1973 Nowitna WSR report and were identified within the primitive setting ORV in 1987. Subsistence, recreation, and a combined prehistoric/historic/cultural ORV were identified in 2009 and 2020. The decision to use the term "cultural" as an encompassing term reflects an inclusive and respectful approach to acknowledging the diverse cultural contributions and heritage associated with human use of the river. For example, there is no local distinction between prehistoric, historic, and modern interactions between people and the river's resources; all are part of a long continuum that extends to future generations. Additionally, some activities such as boating, camping, hunting, and fishing in the river's remote, undeveloped setting are common across these previously identified values. By encompassing the full range of human interactions with the river and its resources in the past, present and future the cultural ORV recognizes an enduring relationship between humans and the environment that is exemplary in the state.

Scenery ORV

The scenic quality of the Nowitna WSR was initially recognized within the primitive setting ORV (Service 1987). Primitive setting included the river's remoteness, diverse landscape and wildlife, river character, and geological qualities of the Nowitna WSR. Scenery was identified as a distinct ORV in 2009 and 2020. In the process of developing final ORV determinations, scenery was briefly considered as a component of the ecology ORV, but conversations with staff, partners, and local communities resulted in the decision to keep it as a separate ORV. The scenic qualities are a result of the river's diverse course and setting; however, the scenic qualities do not directly support the overall health and balance of the Nowitna WSR's natural systems in the ways that components of the ecology ORV do. The outstandingly remarkable scenic qualities of the river have been consistently recognized and are considered exemplary in Alaska's boreal region.

NOWITNA WILD AND SCENIC RIVER

The designated reach of the Nowitna WSR is “the portion from the point where the river crosses the west limit of township 18 south, range 22 east, Kateel River meridian, to its confluence with the Yukon River within the boundaries of the Nowitna NWR; to be administered by the Secretary of the Interior” (ANILCA, Sec. 602). This reach totals 220 miles.

Total River Length: 285 miles

Length on the Nowitna NWR: 220 miles

River Classification: Wild

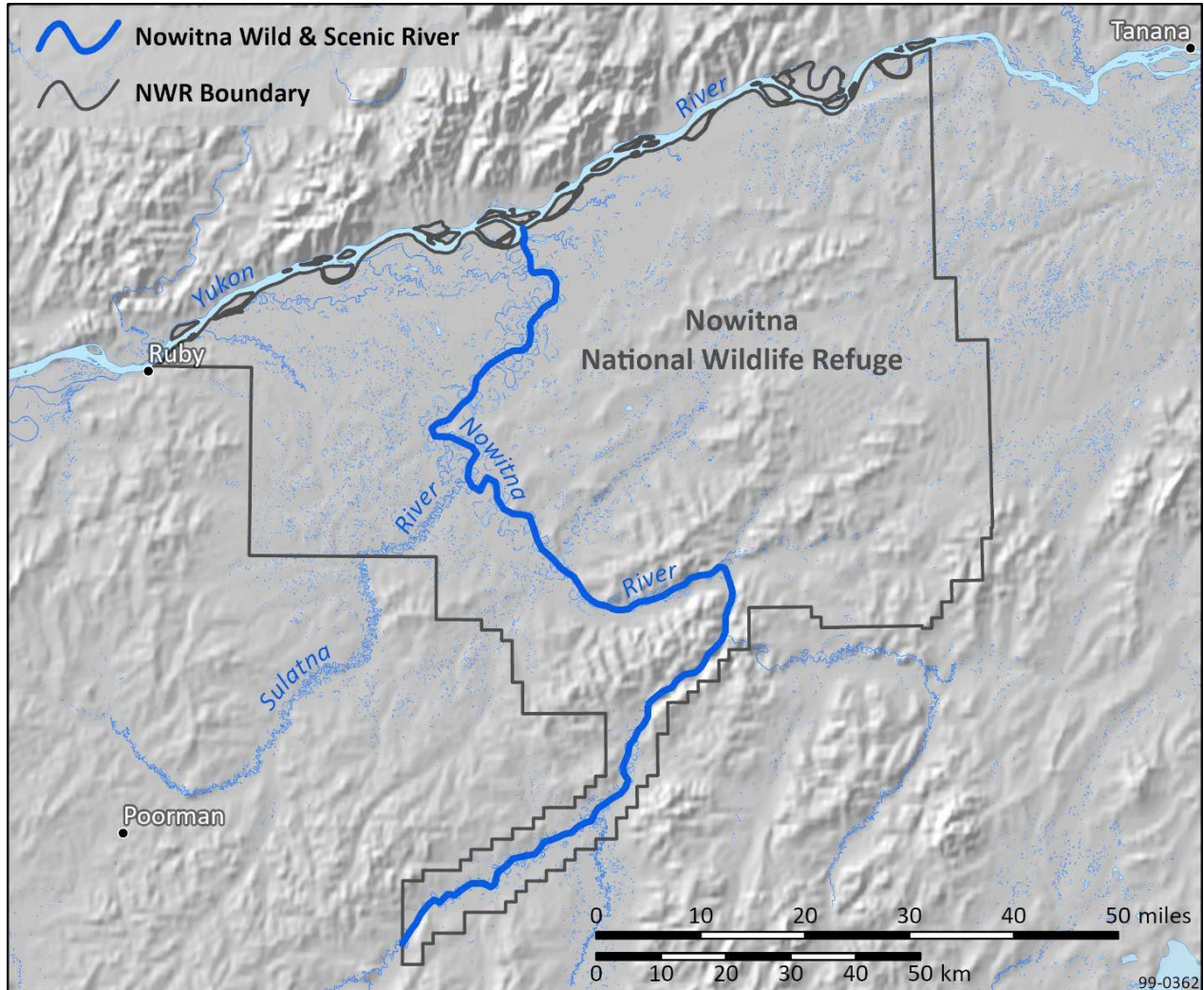


Figure 1. Nowitna WSR within Nowitna NWR

NOWITNA WSR INTERDISCIPLINARY TEAM RECOMMENDATIONS

In preparation for the CRMP, the following individuals contributed to the interdisciplinary team's findings for the Nowitna River's values. The Nowitna NWR staff consulted the following subject matter experts in development of the summaries of river values:

Name	Organization	Title
Jacob Adams	USFWS – Alaska Region	Archaeologist
Karin Bodony	USFWS – Koyukuk, Nowitna, and Innoko NWRs	Biologist and environmental educator
Randy Brown	USFWS – Fairbanks Fish and Wildlife Field Office	Fish Biologist
Tirzah Bryant	Louden Tribe	Environmental Coordinator
Greta Burkart	USFWS – Water Resources Branch	Aquatic Ecologist
David Esse	Bureau of Land Management (BLM) – Central Yukon Field Office	Fish Biologist
Jeff Fischer	State of Alaska – Department of Environmental Conservation	Environmental Specialist
Duncan Green	State of Alaska – Department of Fish and Game	Fish & Wildlife Technician 3
Nicole Gustine	USFWS – National Wildlife Refuge System (NWRS), Alaska Region	Conservation Planner, Water Resources Branch
Ray Hander	USFWS – Fairbanks Fish and Wildlife Field Office	Fish Biologist
Frank Harris	USFWS – Office of Subsistence Management	Fish Biologist
Cade Kellam	State of Alaska – Department of Fish and Game	Wildlife Biologist
Catherine Heroy	State of Alaska – Department of Natural Resources	State ANILCA Program Coordinator
James Kari	University of Alaska Fairbanks	Linguist and Professor Emeritus
Jeremy Karchut	USFWS – Alaska Region	Regional Archaeologist/Historic Preservation Officer
Tim LaMarr	BLM – Central Yukon Field Office	Field Manager
Terri Lomax	State of Alaska – Department of Environmental Conservation	Statewide Program Manager
Jennifer Nolanwing	State of Alaska – Department of Fish and Game	Natural Resource Specialist
Sarah Meitl	State of Alaska – Office of History and Archaeology	Archaeologist/Review and Compliance Coordinator

Ryan Mollnow	USFWS – NWRS, Alaska Region	Division Lead of Natural Resources
Nathan Olson	USFWS – Alaska Region	Regional Aviation Manager
Margaret Perdue	USFWS – NWRS, Alaska Region	Water Quality Specialist
Ken Pratt	Bureau of Indian Affairs	Alaska Native Claims Settlement Act (ANCSA) Program Manager
Jonathan Priday	BLM Eastern Interior Field Office	Law Enforcement Ranger
Bob Rebarchik	USFWS – Koyukuk, Nowitna and Innoko NWRs	Refuge Manager, Fire Management Officer
Josh Reuther	University of Alaska Museum of the North	Archaeologist
Sylvia Ringer	BLM – Fairbanks District Office	Assistant Field Manager
Scott Shirar	University of Alaska Museum of the North	Archaeologist
Wyatt Snodgrass	USFWS – Koyukuk, Nowitna, and Innoko NWRs	Fish Biologist
Glenn Stout	State of Alaska – Department of Fish and Game	Wildlife Biologist
Lisa Stuby	State of Alaska – Department of Fish and Game	Fisheries Biologist
Noel Turner	BLM – Central Yukon Field Office	Hydrologist
John Trawicki	USFWS – NWRS, Alaska Region	Water Resources Branch Chief
David Zabriskie	USFWS – Koyukuk, Nowitna, and Innoko NWRs	Refuge Manager

OVERVIEW

The Nowitna River originates just south of Sunshine Mountain in the western foothills of the Kuskokwim Mountains and travels approximately 60 river miles to where it enters the Nowitna NWR and becomes the Nowitna WSR. The river’s designated reach meanders northward another 220 miles, crossing the entire Nowitna NWR before emptying into the Yukon River. Almost the entire Nowitna NWR drains to the Nowitna WSR, making up the majority of the designated reach of the river’s 7,244-square-mile watershed.

The Nowitna WSR possesses a holistic, interconnected set of characteristics that present an exemplary, and in some instances unique or rare, array of superlative ORVs. Stream characteristics along the upper, middle, and lower portions of the Nowitna WSR differ notably, yielding wildlife and habitat diversity, providing scenic variability, enriching various outdoor experiences, and consistently delivering vital subsistence resources to people since prehistoric times. The river’s meandering nature has created highly productive terrestrial and aquatic habitats for fish, waterfowl, furbearers, moose, and other wildlife. Unique limestone bedrock deposits in the river’s headwaters produce carbonate-rich waters that reduce acidity and increase productivity in floodplain wetlands and waterbodies. Along its course, the Nowitna WSR is dynamic and variable but remains consistently wild and productive.

SUMMARY OF RIVER VALUES

Free-flowing Condition

No human facilities or modifications exist to impede the Nowitna River's free-flowing nature, either above or within the designated portions. The Nowitna WSR flows in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The Nowitna WSR is mainly fed by snowmelt and warm-season precipitation.

Maximum streamflow generally occurs in the spring during ice breakup. Ice jams during this time may back river water up over 100 miles, affecting water levels in adjacent lakes and sloughs. Flooding primarily occurs in the lower portion of the WSR. Streamflow generally decreases throughout the summer but varies in response to rainfall.

Extensive permafrost throughout the watershed prevents infiltration; as a result, water levels vary considerably following precipitation events. The upper and middle portions of the WSR are particularly prone to flash flooding. Due to the river's meandering nature, natural changes in stream channels are common. These occur as erosion cuts channels through bends, redirecting the water and creating sloughs and lakes. Currently, there are no continuous records of stage, discharge, mean annual flow, or other flow data.

Water Quality

The physical and chemical characteristics of water in aquatic systems, collectively known as water quality parameters, are important measures and indicators of aquatic and terrestrial ecosystem health.

The color of the Nowitna WSR's water varies. The water is generally clearest in the upper stretches and increases in suspended sediments in the lower stretches where the river meanders, velocity is decreased, and tributaries draining silty lowlands enter the river. Turbidity is highest during spring runoff and flooding when the river can become a silty brown color. The water's appearance in the lower reaches changes during the summer when the river is less turbid; it is often dominated by the brown tannic stain caused by organic matter entering the river from adjacent bogs and sloughs. The river likely clears considerably during the winter months when flow is low, the river is ice covered, and the ground is frozen.

The Nowitna WSR's water quality, including pH, conductivity, alkalinity, hardness, and settleable solids, is indicative of an undisturbed Interior Alaska stream in a well-buffered calcium and magnesium bicarbonate watershed. Limestone deposits at the river's headwaters affect the water chemistry of the Nowitna WSR and its associated wetlands. Oxbow lakes along the Nowitna WSR generally have higher alkalinity than those in other nearby boreal forest watersheds; this suggests the Nowitna oxbow lakes have relatively high productivity.

Currently, no lakes or rivers are listed as impaired under section 303(d) of the Clean Water Act (ADEC, accessed June 26, 2024). While influenced by naturally occurring mineral-rich deposits, the Nowitna WSR water quality meets or exceeds levels necessary to support fish, wildlife, aquatic and wetland habitats, and river aesthetics.

Ecology ORV

Criterion: Unique

Region of Comparison: Statewide

The combination of the Nowitna WSR's abiotic and biotic features, including the geology, hydrology, and biodiversity, creates a unique example of boreal riparian ecology. The Nowitna is one of the finest examples of a geologically old, meandering river in Alaska. Over its course the Nowitna River comprises a complete transition from a narrow, swift, gravel-bottom river in its upper reaches to a relatively broad, slowly meandering river typified by cutbanks, sandbars, sloughs and oxbow lakes in the lower floodplain region. Spring flooding enriches the oxbow lakes and sloughs with nutrients, as well as carbonates from the limestone bedrock in the river's headwaters which increase productivity in the floodplain. The river corridor encompasses a broad range of boreal habitats influenced by terrain, wildfire history, and by the winding nature of the river itself.

The river's distinct water chemistry, flood regime, and meandering nature generate diverse and highly productive riparian habitats within which a broad, interconnected array of northern wildlife species exists, including moose, black and grizzly bears, wolf, wolverine, red fox, lynx, marten, porcupine, snowshoe hare, river otter, muskrat, mink, weasel, squirrel, wood frog, waterfowl, raptors, songbirds, and other birds. The grassy margins of the river, surrounding lakes, and waterways provide some of the best breeding habitat in Interior Alaska for trumpeter swans, white-fronted geese, canvasback ducks, cranes, and many other migratory waterfowl. A mixture of mature forest and early successional plant communities provides excellent moose habitat. Moose abundance is highest along the river corridor, which in turn sustains increased populations of predators. Beavers are numerous in the river and adjacent oxbow lakes.

Extensive stands of larch, a species of conservation concern in Alaska, occur in areas along the river's upper and middle portions and owe their presence to the river's unique water chemistry. Additionally, the river corridor contains an uncommon old-growth white spruce forest community that is nourished by the Nowitna WSR's productive floodwaters and protected from wildfire by surrounding wetlands. Here white spruce grow to impressive size and are among the oldest found in Alaska, with many mature trees that are between 200 and 350 years old. These old-growth forests provide nesting areas for raptors and some of the best marten habitat in Alaska.

Taken as a whole, the diverse and abundant assemblage of boreal species is unique statewide and a defining characteristic of the Nowitna WSR. No other river in Alaska possesses the unique geology, ecology, and species diversity of the Nowitna WSR.

Fish ORV

Criterion: Rare

Region of Comparison: Arctic-Yukon-Kuskokwim Region

The Nowitna River supports a remarkably diverse assemblage of northern fish species and is a migration corridor to one of only six known sheefish (*Inconnu* spp.) spawning areas in Alaska. Thus, the Nowitna River provides fish habitat that is rare in the Arctic-Yukon-Kuskokwim Region. At least 19 fish species have been documented in the Nowitna WSR corridor, surrounding wetlands, and tributaries. The assemblage of fish species is dynamic; supports subsistence and recreational activities; and is sustained by a unique combination of water features, including swift water underlain by gravel, productive shallow lakes, and slow-moving (still) water in lower reaches.

The use of the Nowitna WSR by various fish species is slightly different above and below the Little Mud

River. Above the Little Mud River, the headwaters and tributaries (Susulatna, Sulukna, and Titna Rivers) of the Nowitna WSR watershed harbor critical spawning and rearing habitat for both anadromous and freshwater fish species. The river's upper section also provides suitable habitat for Arctic grayling and resident Dolly Varden. Below the Little Mud River, the lower section of the Nowitna WSR supports summer foraging and overwintering habitat for multiple spawning populations of fish, including sheefish. The shallow floodplain lakes, marshes, and oxbows are uniquely important habitats that provide slack water for foraging on smaller prey fish and provide spring spawning lakes for northern pike.

This river specifically provides exceptionally high-quality foraging habitat and is a continentally important migration corridor for populations of Chinook, coho, and chum salmon; resident Dolly Varden; and sheefish and other species of whitefish. Chinook salmon populations have significantly declined in recent years both in the Nowitna River and elsewhere in Alaska, but not enough is known about why this is occurring and whether the trend will continue. The sheefish that migrate up the Nowitna WSR to the Sulukna River are one of only six known spawning populations of sheefish in Alaska's Yukon River drainage. There could be a correlation between the sheefish spawning areas and upriver limestone deposits that affect water quality. Sheefish are among the most targeted subsistence and sport fishing species in the region. Sheefish are targeted in sport fisheries. Similar to salmon, the migratory habits of this species makes refuge stocks susceptible to harvest impacts outside of the refuge (USFWS 2009). The Nowitna WSR contains five other species of whitefish, including broad whitefish, humpback whitefish, round whitefish, least cisco, and, occasionally, Bering cisco. The abundant northern pike are also important for recreational sport fishing in the Nowitna WSR.

The Nowitna WSR and its unique nature provide valuable in-river habitat and a vital connection to upstream spawning habitats for a large diversity of fish species. The excellent water quality and natural seasonal patterns of dynamic flow regimes contribute to this remarkable diversity and abundance of fish. The river's role in the life cycles of such a diversity and abundance of fish, particularly sheefish, is exceptional and rare to find anywhere else in Alaska.

Cultural ORV

Criterion: Exemplary

Region of Comparison: Statewide

Though the Nowitna WSR is constantly changing, the human relationship to the river and its resources has remained remarkably constant over thousands of years. This is especially true for local Athabascans whose connection to the river goes back countless generations. The river's location and abundant natural resources have drawn people to its banks probably since their arrival to the region in the late Pleistocene.

Paleontological remains from prehistoric animals, including mammoth, can be found within the river corridor and along the Yukon River main stem nearby. The presence of these prehistoric animals and relatively close proximity of the highly valued Batza Tena obsidian source (approximately 140 miles north of the Yukon River) could signal that the Nowitna WSR was a hunting or scavenging ground and corridor to lithic raw material for some of the first inhabitants in the area. Little archaeological work has been conducted in the river corridor to date. The meandering nature and other topographic features have changed the river's course throughout time. River bends can be highly conducive for locating archaeological sites as the river slowly erodes the banks. Therefore, it is highly probable that the Nowitna WSR drainage contains numerous archaeological sites that have yet to be discovered.

Because of the diversity and abundance of fish and wildlife residing in the river corridor and the unique proximity of the Nowitna WSR's headwaters and its tributaries to tributaries of the Tanana, Kuskokwim,

and Innoko Rivers, the Nowitna WSR has long been an important location for travel, trade, recreation, and resource harvest for people from across Alaska. As a result, the Nowitna WSR is intertwined with a rich cultural history. Nowikakat, an early settlement and highly important trade center situated at the mouth of the Nowitna River, is recorded on the Alaska Heritage Resources Survey (USFWS 2009). This community and others along the Nowitna WSR were described by the earliest European explorers of the region, beginning in the 1840s. Trapping activities, which were the foundation of trade in earliest times, continue along the Nowitna WSR today and are just one facet of the ongoing cultural significance of the river.

Currently, most activity on the Nowitna WSR is associated with hunting, especially moose, and fishing (pike and sheefish). Other activities include boating and canoeing, camping, rock collecting, wildlife observation, and photography. Gravel bars in the middle section of the river contain numerous agates that attract rock hunters. The Nowitna WSR provides a unique recreational opportunity because it is relatively close to Fairbanks and road access compared to other popular rivers, including the Koyukuk and Yuki Rivers, and other destinations farther down the Yukon River. There continues to be local dependence on resources such as fish, game, waterfowl, berries, and timber. The presence of all these resources is directly tied to the unique productivity of the Nowitna River's waters and the river-meandering action that produces a mosaic of wildlife habitats.

Hunting, fishing, trapping, camping, and boat travel on the Nowitna River are culturally important activities passed down from those who depended on the river for survival thousands of years ago. Generations of Koyukon Athabascans, primarily from the communities of Kokrines, Tanana, and Ruby, once lived seasonally and year-round in the Nowitna River drainage. Families traveled the Nowitna River in all seasons, surviving by hunting, fishing, trapping, and gathering other necessities from the land and waters. Descendants of these families continue to spend time along the Nowitna River, nourished by and connected to the land and river as their ancestors were. Koyukon Athabaskan culture is built around a respectful relationship to the natural environment and its resources, and honoring the wisdom and tradition of elders. Traditional ecological knowledge continues to be passed on between generations, building a strong stewardship ethic among communities and cultures that rely on the Nowitna WSR.

A strong cultural connection also exists for some Alaskans from other parts of the state who through their visits over many years have come to cherish the river and their connection to its environment. Human cultural ties to the Nowitna River likely go back to some of the earliest human arrivals to Alaska. The long, unbroken cultural connection between people and the resources of the Nowitna WSR is exemplary for Alaska.

Scenery ORV

Criterion: Exemplary

Region of Comparison: Boreal region of Alaska

The scenery of the Nowitna WSR is exceptionally beautiful, diverse, and exemplary of an Interior Alaska river. Over the course of only 220 miles, the river transforms from a narrow, swift, gravel-bottomed watercourse to a broad, meandering floodplain river before it joins the Yukon River. The Nowitna WSR flows through a mosaic of boreal habitats shaped by wildfire and by the winding nature of the river itself. The region's varied topography, from wetland-dominated lowlands to low, rolling hills and tundra-capped mountains, intensifies the scenic beauty of this river while adding to the diversity of views. Seasonal changes weave a tapestry of color, shifting from the stark white of winter to the varied greens of spring and summer. Wildflowers flourish along the river's edge, creating swaths of vibrant hues. In autumn, deciduous foliage takes on gold, orange, and deep-red shades, with bright, golden larches and

dark-green spruce standing out in sharp contrast. With the changing light of shifting clouds and dynamic weather, the result is a visual backdrop that is never the same from one moment to the next. The remote wilderness qualities and dominance of scenery untouched by human structures contribute to this stunning visual impact.

In the Nowitna WSR's upper portion, the relatively fast-flowing, narrow waterway skirts the base of low hills and striking bedrock bluffs. The intimacy of the upper river gives way to the power of swift water flowing in a broader channel in the river's middle portion. The breathtaking backdrop of tundra-capped mountains is a stark reminder that this river is exemplary of the Interior Alaskan sub-Arctic, a wild, desolate, and often harsh northern environment.

Also in the middle section, and arguably the most visually distinct section of the river, lies the majestic Nowitna River Canyon. Here, steep, gravelly hillsides drop down to flat grassy banks cut by numerous streams and small waterfalls. In summer, wildflowers line the shore, hinting at a subtle shift in vegetation in the canyon. Colorful pebbles, including numerous agates, are scattered across the gravel bars, adding visual interest for visitors in the area. Below the Nowitna River Canyon, the Nowitna WSR is ever broadening, with wider river views. Surrounding hills give way to broad, open horizons. The current slows, silt and sand replace gravels, and river meanders create constantly changing cut banks and sandbars, oxbow lakes, and sloughs. The summer vegetation is lush, and the rich productivity of this floodplain is evident on every turn. The mountains of the Kokrine Hills can be seen to the north, and they increasingly dominate the horizon as the river moves toward its confluence with the Yukon River.

The entire Nowitna Wild River corridor provides excellent examples of riparian and post-fire succession, and a variety of boreal habitats and landscapes. Remote wilderness qualities of the watershed contribute to the impact of the visual experience. The presence of such outstanding scenic diversity over relatively short distance is exceptional.

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