United States Department of Agriculture

Environmental Assessment for the Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers Comprehensive River Management Plan

Snoqualmie Ranger District, Mt Baker-Snoqualmie National Forest, King County, WA

Middle Fork Snoqualmie River. Photo by Monty VanderBilt.

Forest Service

Updated September 2022

For More Information Contact:

Snoqualmie Ranger District
902 SE North Bend Way
North Bend, WA 98045
(425) 888-1421

Contents

List of Tables

List of Figures

Introduction

The Pratt River and a portion of the Middle Fork Snoqualmie River, located on the Snoqualmie Ranger District of the Mt. Baker-Snoqualmie National Forest (MBS), were designated by Congress in 2014 as additions to the National Wild and Scenic Rivers System. As a result of this designation, the Forest Service must establish a comprehensive river management plan (CRMP) to guide management of the river corridors.

To determine how to manage the Middle Fork Snoqualmie and Pratt Wild and Scenic River Corridors, both a CRMP and an environmental assessment (EA) are needed. The CRMP is required by the Wild and Scenic Rivers Act (WSRA) while the EA is required by the National Environmental Policy Act (NEPA). During the planning process, the two documents work hand-in-hand.

CRMP: Contains the river boundaries; river values; management direction, including desired conditions, standards, and guidelines; and monitoring plan.

EA: Contains the purpose and need for the plan, alternatives, and environmental analysis.

When the planning process is complete, the final CRMP will guide management of the river corridors and protect and enhance their free flow, water quality, and outstandingly remarkable values

This EA has been prepared to determine whether effects of the proposed activities may be significant enough to prepare an environmental impact statement. By preparing this EA, we are fulfilling agency policy and direction to comply with NEPA and other relevant Federal and State laws and regulations. For more details of the proposed action, see the “Proposed Action and Alternatives” section of this document.

Project acres and miles presented in this EA are derived from GIS planning-level shapefiles involving information-based layers and associated attribute files. Slight discrepancies that may appear are likely due to rounding errors.

During the objection period, the Forest received an objection concerning the fact that wildlife had not been found to be an outstandingly remarkable value (ORV) of the Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers. After the initial objection resolution meeting, the decision was made to revisit the resource assessment of wildlife values. MBS staff updated the CRMP resource assessment and produced a revised CRMP that includes a wildlife ORV. The objector did not withdraw their objection to the decision to adopt the CRMP on the grounds that they felt the visitor capacity estimates remain too high to adequately protect wildlife values.

The EA was updated in September 2022 to incorporate revisions to the CRMP during the objection resolution period. See Appendix B for a summary of changes to the CRMP with the inclusion of wildlife as an outstandingly remarkable value.

Tribal Consultation

The Forest Service has a duty to consult and coordinate with Tribes on a government-to-government basis (Executive Order 13175, Consultation and Coordination with Indian Tribal Governments). Government-to Government Consultation is a process that enables Tribes to provide meaningful, timely input and, as appropriate, exchange views, information, and recommendations on Forest Service proposed policies or actions that may affect tribal rights or interests prior to a decision FSM 1563.05. As part of Government-to-Government Consultation the Forest Service fully considers information from and recommendations of

tribes, and addresses tribal concerns on proposed decisions 1563.11(5). The Forest Service also informs Tribes how their information and recommendations were considered in Forest Service decisions, including explanations if tribal recommendations are not adopted or incorporated. FSM 1563.11(6).

MBS and Tribal representatives meet periodically to discuss new and ongoing concerns, partnership opportunities, and issues that may Tribes, the exercise of treaty rights, and the protection of sacred and spiritual sites. The Forest Service recognizes the long history of Tribes harvesting and managing for sustainability, fish, animals, plants and other resources, and their integral role in the stewardship of these lands, now managed by the Forest Service to meet their subsistence, spiritual, cultural, and medicinal needs, and for the purposes of trade and commerce.

Project-specific consultation with the following Tribes was invited during the development of this EA: Muckleshoot Indian Tribe, Tulalip Tribes, Puyallup Tribe of Indians, Yakama Nation, Snoqualmie Indian Tribe, and Confederated Tribes of the Colville Reservation. In a letter addressed to each of the Tribal chairpersons, the Snoqualmie District Ranger requested information on Tribal interests or knowledge of cultural uses or properties, concerns about possible effects on historic properties of religious or cultural significance, or information on reserved treaty rights within the project area.

MBS staff met with Tribes to discuss their questions and concerns for the project area. Concerns raised by Tribes included the following:

- Restoration of traditional food, medicinal or technical resources, and access for elders to these locations
- Protection of archaeological, sacred and traditional properties, and maintaining the suitability of these areas for cultural and spiritual uses in perpetuity
- Continued access to treaty-reserved resources, and access for elders to these locations
- Shared stewardship opportunities on the national forest with tribes
- Water quality and fish habitat, specifically concern for high stream temperatures and riparian management along the Middle Fork Snoqualmie River
- Wildlife habitat, including elk security, and beaver reintroductions
- Climate change and USFS appropriate adaptive response
- Need for careful management of recreational use to address potential environmental impacts to forest lands, wildlife, and to reserved treaty rights/cultural uses given increasing numbers of visitors on the MBS

The effects of the proposed action and alternatives were evaluated with consideration for both written and verbal responses received from Tribes regarding Tribal interest and Treaty reserved rights that could be affected by the project.

Public Involvement

As part of developing objectives for the project area, the MBS reached out to the local Tribes, communities, and partners to discuss the values and benefits they feel are important in the project area. This was prepared with river values mapping exercises with the Interdisciplinary Team (IDT), public meetings, an interactive

online map, and from pre-scoping mailings. The feedback received from these contributed to the CRMP development. Prominent values and interests expressed include:

- Cultural areas
- Diverse and increased public recreation opportunities
- Management of riparian areas and river restoration
- Management and prevention of invasive species
- Rapidly increasing population in the Puget Sound area, and the resulting impacts on recreational experiences, including user conflicts, and resource damage
- Nearby private land and communities – access to mineral claims and private land in this area.
- High quality wildlife habitat for a variety of species

The proposal was listed in the Schedule of Proposed Actions (SOPA) in May 2018 and has been listed on subsequent SOPAs on a quarterly schedule. Approximately 150 pre-scoping notifications were sent in the fall of 2018 seeking input on river values. One open-house meeting was held and nearly 30 individuals from a variety of organizations participated in a half-day workshop. An online collaborative map was also developed to help display some of the information, including the proposed final boundaries in an interactive map format. Participants included representatives from Tulalip Tribes, Snoqualmie Tribe, Washington Department of Fish and Wildlife, King County Natural Resources, Washington Department of Natural Resources, Snoqualmie Watershed Forum, City of North Bend, University of Washington/Burke Museum, Northwest Wilderness Programs, Mountains to Sound Greenway Trust, Washington Trails Association, Backcountry Horseman of Washington, Friends of the Issaquah Fish Hatchery, Alpine Lakes Protection Society, American Whitewater, and Valley Camp. During this extended pre-scoping period, from September 2018 – March 2019, 16 comments were submitted on the collaborative web map, and 9 comment letters were received.

The proposal was provided to the public and other agencies for comment during scoping November 13, 2019 – December 16, 2019. A legal notice was published in the Everett Herald, newspaper of record, and 1,303 scoping notifications were sent. Approximately 20 letters and emails were received from the public in response to scoping. The complete scoping mailing list and all scoping letters and emails received are in the project record.

The Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers Draft Comprehensive River Management Plan and Draft Environmental Assessment were made available on the Mt. Baker-Snoqualmie National Forest website. The 30-day comment period for this project began on October 14, 2020, with publication of a legal notice in the Everett Herald. Letters were sent to approximately 663 individuals or organizations and included directions to the Forest's website for more information. Two tribal comment letters and forty-three public comments were received. A document summarizing Forest Service response to public comments is available at the link below. Project documents, maps, and other associated information can be found in the project record and online at https://www.fs.usda.gov/project/?project=53997.

Two additional project information updates were sent out in response to some comments received. The first on October 16, 2020, just after the start of the 30-day comment period, highlighted select information in the draft EA. The second was sent on January 8, 2021 with an informational update about Botany.

Management Direction

This EA has been prepared in accordance with regulations for implementing the National Environmental Policy Act of 1969 (NEPA), located at 40 CFR 1500-1508. It is tiered to the Final Environmental Impact

Statement (FEIS) for the Mt. Baker-Snoqualmie Land and Resource Management Plan (Forest Plan, USDA Forest Service 1990), as amended. Major plan amendments since 1990 include:

Final Supplemental Environmental Impact Statement on Management of Habitat for Late Successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl, as adopted and modified by the April 1994 Record of Decision (ROD), which provides additional standards and guidelines (USDA-FS and USDI-BLM 1994, and commonly known as the Northwest Forest Plan (NWFP)); Record of Decision to Clarify Provisions Relating to the Aquatic Conservation Strategy Amending Resource Management Plans (USDA Forest Service and USDI Bureau of Land Management 1994).

Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (USDA Forest Service and USDI Bureau of Land Management 2001).

Forest-wide Environmental Assessment for Invasive Plants Record of Decision, Prevention Strategy/Best Management Practices for Noxious Weed Management (USDA Forest Service 2005); Region 6 Record of Decision for Preventing and Managing Invasive Plants (USDA Forest Service 2005); Mt. Baker-Snoqualmie National Forest Invasive Plant Treatment Record of Decision (USDA Forest Service 2015)

Additional Documents Incorporated by Reference

The following documents are incorporated by reference.

- The Middle Fork Snoqualmie Watershed Analysis (USDA Forest Service 1998) characterized the watershed processes and aquatic conditions for the Middle Fork Snoqualmie River, including the Pratt River, other tributaries, and the associated subwatersheds.
- The Middle Fork Snoqualmie River Watershed Access and Travel Management Plan (ATM) (USDA Forest Service 2005) determined access needs on roads and trails within the Middle Fork Snoqualmie River watershed, including access for private landowners and mining claimants.
- River Values Assessment for Middle Fork Snoqualmie & Pratt Wild and Scenic Rivers (River Values) (USDA Forest Service 2019) recently completed analysis describes the values for which each river was added to the National Wild and Scenic Rivers System, which include free flow, water quality, and outstandingly remarkable values (ORVs). The assessment documents the evaluation and determination of the ORVs of the Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers.

Background

In 1968, Congress passed the Wild and Scenic Rivers Act (P.L. 90-542) and established a nationwide system of outstanding free-flowing rivers. For a river segment to be considered eligible for Wild and Scenic River status it must be free-flowing and possess outstandingly remarkable values within its immediate environment. These rivers are protected for the benefit and enjoyment of present and future generations. In 1968, Congress identified 27 rivers for study with the enabling legislation. To date, 208 rivers in 40 states and the Commonwealth of Puerto Rico have been added to the National Wild and Scenic Rivers System.

In 2014, the Pratt River and a segment of the Middle Fork Snoqualmie River were designated as additions to the National Wild and Scenic Rivers System in the Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015 (P.L. 113-291 – Dec. 19, 2014). These rivers are located within the Snoqualmie Ranger District of Mt. Baker-Snoqualmie National Forest. The designated areas

include the upper 28.3 miles of the Middle Fork Snoqualmie River and the entire 10.1 miles of the Pratt River.

Congress classified segments of the Pratt and Middle Fork Snoqualmie as “wild” and “scenic.” As defined in Section 2(b) of the Wild and Scenic Rivers Act (the Act), river segments were classified as wild, or scenic based on the condition of the river and the adjacent lands as they exist at the time of designation.

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

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

Table 1. Description and Classification of Middle Fork Snoqualmie and Pratt River Segments

Designated Segment	Classification	Description	River Miles*
Middle Fork Snoqualmie River	Wild	Headwaters of the Middle Fork Snoqualmie River near La Bohn Gap to the Alpine Lakes Wilderness boundary at the west section line of sec. 3, T. 23 N., R. 12 E.	6.9
Middle Fork Snoqualmie River	Scenic	Alpine Lakes Wilderness boundary at the west section line of sec. 3, T. 23 N., R. 12 E., to the northern boundary of sec. 11, T. 23 N., R. 9 E. The lower terminus is located approximately 0.5 river miles upstream from the bridge on National Forest System (NFS) Road 56, near the confluence of Granite Creek and the Middle Fork Snoqualmie River.	21.4
Pratt River	Wild	Entirety of the river from the outlet of Lower Melakwa Lake to confluence of Middle Fork Snoqualmie River	10.1

*River miles are estimated by GIS and may vary overtime.

Following the designation of the rivers listed above as wild or scenic rivers the Wild and Scenic Rivers Act in section 3(d)(1) requires the Federal agencies charged with the administration of each component of the national Wild and Scenic Rivers System to prepare a comprehensive management plan for each designated river segment to provide for the protection of the river values. The primary goal of this plan is to provide management direction for protecting and enhancing the river values (free-flowing condition, water quality, and outstandingly remarkable values). The CRMP includes resource protection related to the WSR's free-flowing condition, water quality, and ORVs, with particular emphasis on: development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of the Wild and Scenic Rivers Act.

Location of the Proposed Project Area

This project is in King County of northwest Washington State and located to the north and east of the city of North Bend. Table 2 provides the legal land descriptions of the project area to be evaluated.

Table 2. Legal land description of project area

River	Township	Range	Sections
Middle Fork Snoqualmie	23 N	9 E	1, 2
	23 N	11 E	1, 2, 6-11, 15-17
	23 N	12 E	3
	24 N	9 E	36
	24 N	10 E	20-22, 25-32
	24 N	11 E	31
	24 N	12 E	24-27, 34, 35
	24 N	13 E	19, 20, 30

Pratt	23 N	10 E	5, 6, 8, 9, 16, 17, 21, 22, 25-28, 35, 36
	24 N	10 E	30-32

The Middle Fork Snoqualmie River and its tributary the Pratt River are located in the Middle Fork Snoqualmie River watershed (HUC 10). It is in the Washington Department of Ecology (DOE) Upper Snoqualmie River Basin in the Snohomish Watershed (WRIA 7). The Middle Fork Snoqualmie River headwaters are located at La Bohn and Dutch Miller Gaps, along the crest of the Cascades Mountain Range. The Pratt River is fully within Alpine Lakes Wilderness while the Middle Fork Snoqualmie is both adjacent to Alpine Lakes Wilderness and within it. The project area is located northeast of North Bend, WA (Figure 1).

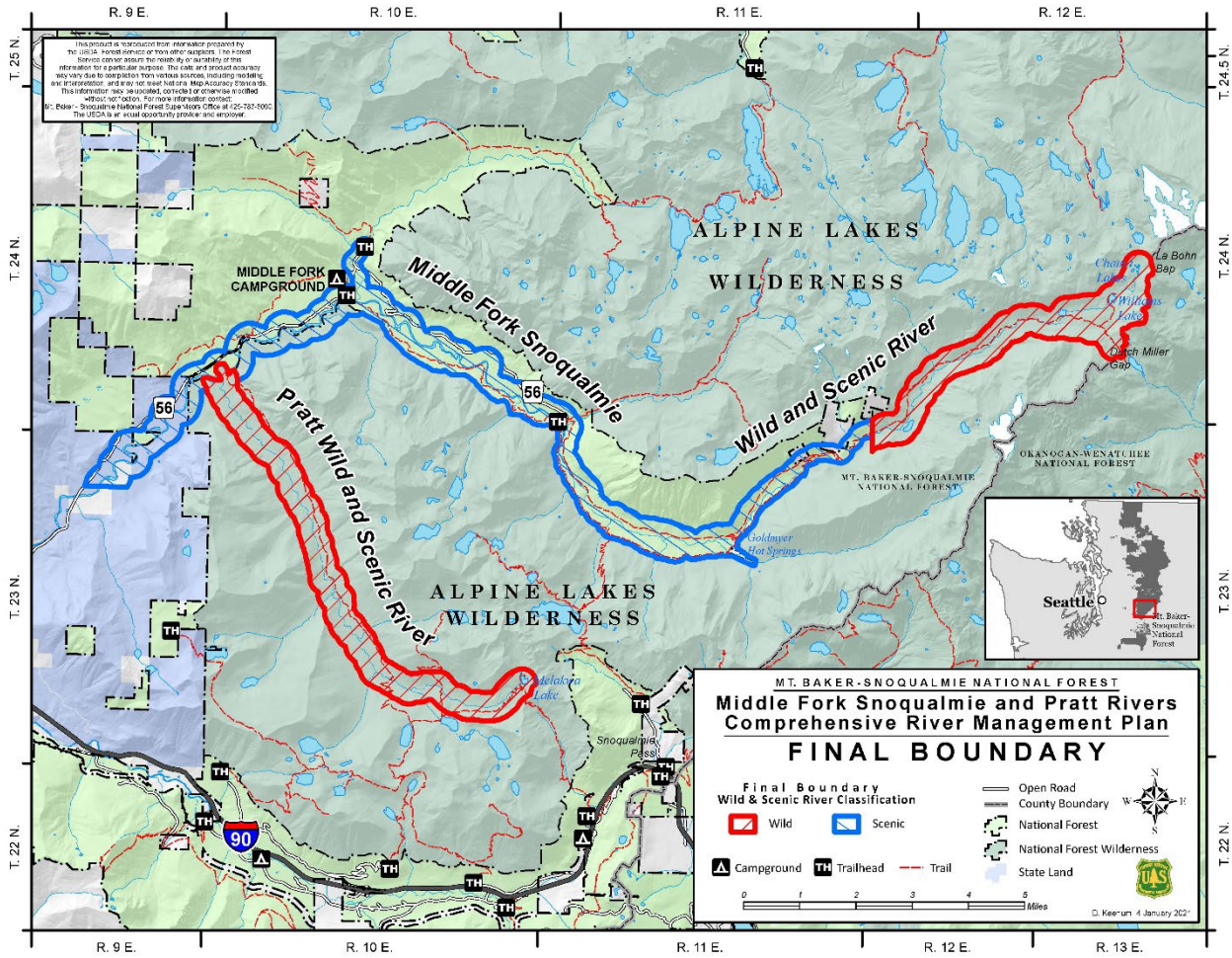


Figure 1. Project area map.

Need for the Proposal

The Wild and Scenic Rivers Act mandates that river managing agencies with jurisdiction over newly designated rivers complete comprehensive river management plans. The purpose of this proposal is to a develop a comprehensive river management plan to protect and enhance the values for which the Middle Fork Snoqualmie and Pratt Wild and Scenic rivers were designated (free flowing condition, water quality,

and outstandingly remarkable values) and to identify Forest Service management actions needed to protect these values on Federally managed lands within the wild and scenic river corridors.

The primary purpose of the comprehensive river management plan is to protect and enhance the outstandingly remarkable values, water quality, and free-flowing characteristics of the designated Wild and Scenic Rivers for the benefit and enjoyment of present and future generations. Based upon the evaluation of corridor conditions, existing management direction, and need for action, the CRMP would:

- address current conditions and other management practices, as required by law;
- protect and enhance outstandingly remarkable values;
- ensure free-flowing conditions and water quality are maintained;
- determine types and amounts of uses (visitor capacity) that each river can support while protecting river values;
- inform future management actions within the designated river corridors; and,
- develop a monitoring strategy to maintain desired conditions.

Another purpose of this proposal is to establish the final river corridor boundaries to facilitate the protection and enhancement of the outstandingly remarkable values, within the limits set in the Wild and Scenic Rivers Act. A Forest Plan amendment, described below, is necessary to modify plan components including the Wild and Scenic River corridor boundaries and revise existing standards and guidelines, and management areas (allocations) for lands within the river corridor.

Proposed Action and Alternatives

Alternative 1 - No Change from Current Management

Under this alternative no changes would be made to the interim corridor boundary, which would be submitted to Congress as the final detailed corridor boundary. The corridor boundary would be located approximately ¼ mile from the banks of the river. Standards and guidelines from the existing Mt. Baker-Snoqualmie National Forest LRMP direction for Potential Wild and Scenic River Management Area would continue to be applied to the Middle Fork Snoqualmie and Pratt Rivers without any changes.

Consistent and inconsistent uses would be determined using guidance in the WSRA, and interpretation of existing Forest Plan language. Visitor capacity analysis is still required and was conducted (page 29 in CRMP). Monitoring would be ad hoc and consist of data already being collected for other purposes.

Alternative 2 - The Proposed Action

This alternative would recommend a modified permanent boundary and include a Forest Plan amendment to apply a new management area (MA), MA-28 Designated Wild and Scenic Rivers, to all National Forest Service lands within the permanent boundary. In addition to the new management area including standards and guidelines for management of the wild and scenic river corridors, this alternative would adopt a CRMP to identify strategies to achieve the purposes of the WSRA. The CRMP can be found on the project website: https://www.fs.usda.gov/project/?project=53997. Also included in this alternative is a proposed management action to enact a closure to dispersed camping within a ¼ mile of Middle Fork Snoqualmie River Road/NFS Road 56 from the Forest boundary to junction with NFS Road 5640 and up NFS Road 5640 to Snoqualmie Lake Trailhead.

Forest Plan Amendment

The Forest Plan guides planning on the forest through land allocations (Management Areas) across the MBS, and each MA contains prescribed standards and guidelines. Standards and guidelines are intended to help the manager achieve the goals and objectives, while staying within constraints prescribed by law. There are two categories of standards and guidelines: Forest-wide, applying to all management areas; and specific to individual management areas. Currently, the Forest Plan includes a management area for potential wild and scenic rivers. As mentioned above, the proposed MA-28 would be a management area specific to designated wild and scenic rivers.

Alternative 2 proposes a programmatic[1] Forest Plan amendment to add a new management area, MA-28 Designated Wild and Scenic Rivers to the Forest Plan. This programmatic Forest Plan amendment would be applied specifically to the Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers project area. The interim Wild and Scenic boundary would be adjusted, and finalized, and the Management Area Allocations that applied to the area under the Forest Plan would be amended as follows: everything within the final Wild and Scenic boundary would become MA-28 Designated Wild and Scenic Rivers, with the exception of the wilderness management areas (MA-10) in the Pratt River corridor and the wild classified section of the upper Middle Fork Snoqualmie River. These designations would stay the same and be overlapped by MA-28. Matrix lands available for timber and silvicultural activities would no longer occur within the wild and scenic river corridor because the area becomes congressionally reserved. The NWFP defines matrix lands as those federal lands outside the six categories of designated areas: Congressionally Reserved Areas, Late-Successional Reserves, Adaptive Management Areas, Managed Late-Successional Areas, Administratively Withdrawn Areas, and Riparian Reserves. See Appendix A for maps of current management areas and NWFP allocations.

Where the wild and scenic river corridors overlap with wilderness, the most restrictive policies apply. Where mountain goat habitat features exist along the portion of the boundary overlapping the Taylor River, guidelines have been included in MA-28 to maintain applicable MA-15 (Mountain Goat Habitat) habitat protections.

Forest plan amendment direction comes from the 2012 Planning Rule (36 CFR 219). All future projects and activities must be consistent with the amended plan. Current management allocations applying to other designated wild and scenic rivers on the Forest would be unchanged by the proposed forest plan amendment. MA-28 could apply to any wild and scenic river corridors designated in the future. Application of MA-28 to areas outside of the Middle Fork Snoqualmie and Pratt WSR corridor would require later site-specific analysis and plan amendment.

Proposed Management Area Direction: MA-28 Designated Wild and Scenic River

This management area applies to river segments that are designated for inclusion as part of the wild and scenic river system under the authority granted by the Wild and Scenic Rivers Act of 1968, as amended. Wild and scenic river segments are classified as wild, scenic, or recreational.

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

[1] A programmatic amendment changes the Forest Plan for the duration of the Plan whereas a site-specific amendment arises from the need to take a specific action to meet a forest plan goal or a desired condition and only applies to that project or activity.

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

Desired Future Conditions

Desired conditions are a description of the specific social, economic, and/or ecological characteristics of an area toward which the management of the area should be directed.

1. The free flowing condition, water quality and specific outstandingly remarkable values of designated wild, scenic, and recreational rivers are protected or enhanced.
2. Wild classified wild and scenic rivers are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
3. Scenic classified wild and scenic rivers are free of impoundments, with shorelines or watersheds still largely primitive and undeveloped but accessible in places by roads.
4. Recreational classified wild and scenic rivers are readily accessible by road or railroad and may have some development along their shorelines but the shoreline and surrounding area should be predominantly natural and riverine in appearance.
5. Administrative facilities on designated wild and scenic rivers are screened or designed to blend into the natural river environment and development is consistent with the river's classification.
6. Management is consistent with a current comprehensive river management plan.
7. Public recreation and resource uses are provided that do not adversely impact or degrade the values for which the river was designated.

Standards

Standards are mandatory constraints on projects and activity decision-making established to help achieve or maintain the desired conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

1. Designated rivers must be managed to protect the free-flowing character, water quality, and outstandingly remarkable values for which they were designated.
2. Wilderness management direction must be followed where segments of designated rivers are located in congressionally designated wilderness areas.
3. Road and motorized trail access to rivers must be consistent with river classification and travel management direction.
4. If new recreation facilities are needed, they should be consistent with river classification and scenic integrity objectives and located to protect the river's free-flowing condition, water quality, and outstandingly remarkable values.
5. Proposed water resources projects, including activities within the bed and banks and below the ordinary high water mark of the river, require an evaluation for direct and adverse effects to river values per Section 7(a) of the Wild and Scenic Rivers Act and cannot result in a direct and adverse impact on free-flowing condition.

6. All operations authorized under the 1872 Mining Law shall be conducted so as, where feasible, to minimize environmental impacts on National Forest surface resources; including provisions to maintain streamside banks in a natural condition.
7. For river segments designated as recreation or scenic a no-surface occupancy stipulation shall be required in mineral leases. Operation plans will include provisions to maintain streamside banks in a natural condition.
8. Salable mineral activities shall not occur in the bed and banks of recreation or scenic rivers but may occur within river corridors only if objectives for the protection of river values can be met.

Guidelines

Guidelines are constraints on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met.

1. Where the deficiency of complex habitat is considered a limiting factor for water quality and other river values, riparian management and aquatic restoration should favor conditions that facilitate the return of natural processes and habitat improvement, including placement of large woody debris and the reintroduction of beavers.
2. Where the river erodes roads, trails, or other developed features along the shoreline, these features should be relocated, when feasible, out of the floodplain and away from important habitat areas.
3. In areas where existing critical infrastructure is threatened by erosion but relocation out of the floodplain is not possible, any necessary river bank restoration should be implemented through the installation of soil reinforcements as necessary to support riparian vegetation; planting or installing large wood and native trees, shrubs, and herbaceous cover as necessary to restore ecological function in riparian and floodplain habitats; or a combination of the above methods. Rock will not be used for riverbank restoration, except as ballast to stabilize large wood.
4. Within the Middle Fork Snoqualmie River scenic corridor, where mountain goat habitat features exist near the Taylor River, trails and campsites within 1,500 feet of known key habitat features should be discouraged. There shall not be motorized use October 31 -June 15 nor shall new roads be constructed within 1,500 feet of key mountain goat habitat features. Key habitat features characteristically contain diverse vegetation including mature and old growth stands, steep rocky cliffs, projecting pinnacles, ledges and talus slides winter range is generally at lower elevations (tree-line and below) than summer habitat.
5. Management activities should be consistent with the scenic integrity objectives of:
    a) “Very high” in designated wild rivers,
    b) “High” in designated scenic rivers, and
    c) “Moderate to high” in designated recreational rivers.
6. Where visitor use and associated infrastructure is considered a limiting factor for wildlife values, management techniques that limit or constrain visitor use and facilitate the recovery of affected species should be favored.

Suitability of lands

Suitability of lands is a determination that specific lands within a plan area may be used, or not, for various multiple uses or activities, based on the desired conditions applicable to those lands.

1. Wild river corridors are not suitable for timber production or for commercial use of non-timber forest products; timber harvest is not allowed.

2. Scenic and recreational river corridors are not suitable for scheduled timber production; however, timber harvests, salvage and fuelwood cutting may be utilized to achieve desired riparian conditions consistent with the Aquatic Conservation Strategy, including wildlife habitat connectivity. Scenic river corridors are suitable for non-commercial (personal) use of non-timber forest products.

3. Recreational river corridors are suitable for the commercial and non-commercial (personal) use of non-timber forest products.

Summary of Management Direction Changes

The change of management direction within the river corridor, with MA-28, is summarized in Table 3 below.

Table 3 - Summary of Management Direction Changes

Program Area	Proposed changes to standards and guidelines	Current forest standards and guidelines	Rationale for change
Wild and Scenic Rivers	Designated rivers must be managed to protect the free-flowing character, water quality, and outstandingly remarkable values for which they were designated.	No language specifically addressing management of congressionally-designated wild and scenic rivers in the current Forest Plan.	This standard would provide overarching direction consistent with the Wild and Scenic Rivers Act for all activities and could be applied to unanticipated future activities.
	Proposed water resources projects, including activities within the bed and banks and below the ordinary high water mark of the river, require an evaluation for direct and adverse effects to river values per Section 7(a) of the Wild and Scenic Rivers Act and cannot result in a direct and adverse impact on free-flowing condition.		
Roads and facilities	Where the river erodes roads, trails, or other developed features along the shoreline, these features should be relocated, when feasible, out of the floodplain.	No language specifically addressing the relationship of roads and facilities to the floodplain in the current Forest Plan.	This standard would provide overarching direction consistent with the Wild and Scenic Rivers Act for all activities and could be applied to unanticipated future activities.
	In areas where existing critical infrastructure is threatened by erosion but relocation out of the floodplain is not possible, any necessary river bank restoration should be implemented through the installation of soil reinforcements as necessary to support riparian vegetation;		

Program Area	Proposed changes to standards and guidelines	Current forest standards and guidelines	Rationale for change
	planting or installing large wood and native trees, shrubs, and herbaceous cover as necessary to restore ecological function in riparian and floodplain habitats; or a combination of the above methods. Rock will not be used for riverbank restoration, except as ballast to stabilize large wood.		
Recreation	If new recreation facilities are needed, they should be consistent with river classification and scenic integrity objectives and located to protect the river's free-flowing condition, water quality, and outstandingly remarkable values. Where the river erodes roads, trails, or other developed features along the shoreline, these features should be relocated, when feasible, out of the floodplain.	No language specifically addressing recreation facilities consistency with river values in the current Forest Plan.	This change is consistent with meeting the purposes of the Wild and Scenic Rivers Act.
Timber	Scenic and recreational river corridors are not suitable for scheduled timber production; however, timber harvests, salvage and fuelwood cutting may be utilized to achieve desired riparian conditions consistent with the Aquatic Conservation Strategy, including wildlife habitat connectivity.	Full range of silvicultural practices should be allowed. Stands will be managed on an extended rotation to meet visual objectives. (MA-2) Apply standards and guidelines for MA 17 (Timber Management Emphasis) program element E: Plant-Commercial Thin (1) - Final Harvest - Genetic Stock, which may be applied to stands that have not been pre-commercially thinned, commercial thinning permitted in timber stands accessible by road in which 50% of the trees are Douglas-fir. (MA-5B) Commercial forest lands shall be placed in the unregulated timber component. Timber	This change would not expressly prohibit vegetation management in Scenic sections but it would mean that any vegetative treatments would have to be done for the purpose of protecting and enhancing river values (free-flow, water quality, ORVs) and/or wildlife habitat .

Program Area	Proposed changes to standards and guidelines	Current forest standards and guidelines	Rationale for change
		harvest would only be permitted to protect adjacent lands from insect, disease, or fire damage. (MA-27) Commercial forest land within SF will be included in the programmed allowable timber harvest under the regulated component. A full range of silvicultural practices will be used to meet visual and recreational objectives. (MA-27)	
Scenery	Under the Scenery Management System terminology the Scenic Integrity Objective (SIO) is "High" for scenic sections and "Very High" for wild sections. Under the Visual Management System terminology the Visual Quality Objective (VQO) is "retention" for scenic sections and "preservation" for wild sections	The Visual Quality Objectives and Recreation Opportunity Classes assigned to these Management Areas are: Wild River VQO - Preservation Scenic River VQO - Retention	Since completion of the Forest Plan in 1990 the Scenery Management System has replaced the Visual Management System as the standard under the Forest Service Manual. There is a requirement to use the Scenery Management System in new planning, which requires a crosswalk between the two systems.

Current management areas within the Middle Fork and Pratt WSR corridors to be replaced with MA-28 Designated Wild and Scenic Rivers

Acres are displayed in the Proposed Boundary Acres column of Table 4.

MA-2A – Scenic Viewshed (Foreground)
Goal: Provide a visually appealing landscape as viewed from major travel corridors and use areas.

MA-5A – Recommended Recreation Rivers, MA-5B – Recommended Scenic Rivers
Goal: Protect from degradation the outstanding remarkable values and wild, scenic, and recreation characteristics of recommended rivers and their environment, pending a decision on inclusion into the National Wild and Scenic River System.

MA-12 – Mature and Old Growth Wildlife Habitat
Goal: Provide and maintain mature and/or old growth forest as habitat for those species that can utilize either for their primary habitat needs.

MA-15 – Mountain Goat Habitat
Goal: Protect and manage habitat to maintain or increase mountain goat populations.

MA-27DR – Alpine Lakes Management Area, Dispersed recreation
Goal: Objective is to retain or enhance viewing and recreation experiences.

MA-27SF – Alpine Lakes Management Area, Scenic Forest

Goal: Land will be managed primarily in an unroaded condition with emphasis on dispersed recreation, scenic wildlife, or other amenities.

Wild and Scenic River Boundaries

The interim boundaries on wild and scenic rivers are ¼ mile from high water unless otherwise designated by Congress. WSRA directs the administrating agency to develop final boundaries to ensure that river values are protected and enhanced. The final boundaries shall average not more than 320 acres per river mile, as measured from the ordinary high-water mark on both sides of the river. **Private or non-federal lands may be included within the drawn corridor, as per Interagency Wild and Scenic Rivers Council recommendation, although the designation does not change jurisdiction over those lands.** County or state regulations continue to govern activities on non-federal lands. Forest Service review is required only for federally assisted proposals within the bed and banks of designated rivers.

The proposed action includes adjustments to the interim boundaries as follows.

Middle Fork Snoqualmie River Boundary Adjustments

The designated portion of the Middle Fork Snoqualmie River is measured at 28.3 river miles, resulting in a total maximum acreage of 9,024 acres for the boundary within the limits of the Act. The total acreage of the proposed river boundary for the Middle Fork Snoqualmie river corridor is 8,527 acres, with approximately 6,018 acres in the Scenic classification, and 2,509 acres classified as Wild. The boundary protects river values while meeting requirements that the boundary be locatable and manageable on the ground. Additional modifications to include the maximum amount of acreage allowable under the Act were not found to be necessary for river value protection.

Wild Section Adjustments: Inclusion of the entirety of the headwaters from Chain Lakes at La Bohn Gap along the ridgeline to Dutch Miller Gap.

Rationale: Recognition of the hydrological function of the headwaters for protecting water quality and quantity.

Scenic Section Adjustments: The wild and scenic river boundary along the southern shore of the river would expand or contract to follow the Alpine Lakes Wilderness boundary while the northern boundary will remain offset for ¼ mile from high-water until the boundary reaches the Taylor River (at the west section line of Sec. 22, T. 24 N., R. 10 E.). The boundary extends up the Taylor River approximately 1.25 river miles with a 1/8-mile offset on both sides of the river. Downstream of the Taylor River, the boundary resumes a ¼ mile offset, with minor adjustments to include the floodplain, from both sides of the river to the terminus of the wild and scenic river designation at the northern boundary of Sec. 11, T. 23 N., R. 9 E. The boundary near the lower terminus was expanded to include the floodplain and incorporate two remnant oxbows at the SW corner of Sec. 36 T. 24 N., R. 9 E. and the S.E. Corner of Sec. 35 T. 24 N, R, 9 E, 33.

Rationale: The interdisciplinary team found that the wilderness designation sufficiently protects river values and in most cases the wilderness boundary is above the floodplain. Making the wild and scenic river and wilderness boundary coincident would assure seamless management across the landscape. Where the floodplain overlaps the wilderness boundary, the river boundary is drawn as an offset so as to encompass any area that the river may occupy in the future. The boundary includes the private parcel containing Goldmyer Hot Springs. The hot springs were found to be a regionally unique feature and support the rationale for recreation as an outstandingly remarkable value of the Middle Fork Snoqualmie. As one of the major tributaries of the Middle Fork Snoqualmie River, the Taylor River is an important source of cold water and trout habitat. The lower Taylor River also includes important goat winter range. Recreation amenities along the Taylor River are an integral part of the visitor experience and are linked to major access points along the

Middle Fork Snoqualmie. The lower 1.25 miles of the Taylor River tributary is included in the proposed boundary because of its importance for water quality, fish, wildlife, and recreational river values.

Pratt River Boundary Adjustments

The Pratt River is measured at 10.1 river miles from its origin at the outlet of Lower Melakwa Lake to the confluence of the Middle Fork Snoqualmie River, resulting in a total maximum acreage of 3,232 acres for the boundary within the limits of the Act. The total acreage of the proposed river boundary for the Pratt river corridor is 3,133 acres, all classified as Wild.

The proposed boundary adjustment for the Pratt River would extend the upland terminus to 1/4 mile from the origin of the river at outlet of Lower Melakwa Lake. The ¼ mile buffer includes the Lower and Upper Melakwa Lakes and is bounded on the east by the hydrological divide between the Pratt River drainage and Denny Creek drainage. The boundary at the downstream terminus follows the Alpine Lakes Wilderness boundary along the Middle Fork Snoqualmie River.

Rationale: The extension of the terminus at the headwaters recognizes the importance of water quality in Melakwa Lakes in relation to the Pratt River.

Table 4. Comparison of Acres of Land Use Allocations Within Interim and Final Boundaries.

River	Merged Land-Use Allocation	NWFP Allocation	Acres in Interim Boundary	Acres in Final Boundary
Middle Fork Snoqualmie WSR	*Non-Forest Service Land	Non-Forest Service Land	935.24	957.51
	2A ~ Foreground	Matrix, Riparian Reserves, and other unmapped land allocations	8.47	8.46
	2A 5A ~ Foreground, Recommended Recreation Rivers	Matrix, Riparian Reserves, and other unmapped land allocations	66.36	67.00
	10 ~ Wilderness	Congressionally Reserved	1,196.73	522.37
	10C ~ Wilderness - General Trailless	Congressionally Reserved	2,133.11	2,508.84
	12 5A LSOG ~ Mature and Old Growth Wildlife Habitat, Recommended Recreation Rivers, Late Successional Old Growth	Late Successional Old Growth	15.66	15.66
	15 5B ~ Mountain Goat Habitat, Recommended Scenic Rivers	Administratively Withdrawn	0.00	25.21
	15 5B LSR ~ Mountain Goat Habitat, Recommended Scenic Rivers, Late Successional Reserve	LSR in Marbled Murrelet Areas	0.00	15.71
	27DR ~ Alpine Lakes - Dispersed Recreation	Administratively Withdrawn	20.99	20.99
	27DR 5B ~ Alpine Lakes - Dispersed Recreation, Recommended Scenic Rivers	Administratively Withdrawn	180.15	180.10
	27DR 5B LSR ~ Alpine Lakes - Dispersed Recreation, Recommended Scenic Rivers, Late Successional Reserve	LSR in Marbled Murrelet Areas	26.46	26.46

River	Merged Land-Use Allocation	NWFP Allocation	Acres in Interim Boundary	Acres in Final Boundary
	27DR LSR ~ Alpine Lakes - Dispersed Recreation, Late Successional Reserve	Late Successional Reserve	0.96	2.68
	27DR LSR ~ Alpine Lakes - Dispersed Recreation, Late Successional Reserve	LSR in Marbled Murrelet Areas	2.98	2.99
	27SF ~ Alpine Lakes - Scenic Forest	Matrix, Riparian Reserves, and other unmapped land allocations	211.06	293.75
	27SF 5A ~ Alpine Lakes - Scenic Forest, Recommended Recreation Rivers	Matrix, Riparian Reserves, and other unmapped land allocations	468.29	580.00
	27SF 5A LSOG ~ Alpine Lakes - Scenic Forest, Recommended Recreation Rivers, Late Successional Old Growth	Late Successional Old Growth	185.61	192.44
	27SF 5A LSR ~ Alpine Lakes - Scenic Forest, Recommended Recreation Rivers, Late Successional Reserve	LSR in Marbled Murrelet Areas	0.00	6.39
	27SF 5B ~ Alpine Lakes - Scenic Forest, Recommended Scenic Rivers	Matrix, Riparian Reserves, and other unmapped land allocations	1,033.02	1,032.82
	27SF 5B LSOG ~ Alpine Lakes - Scenic Forest, Recommended Scenic Rivers, Late Successional Old Growth	Late Successional Old Growth	305.01	327.06
	27SF 5B LSR ~ Alpine Lakes - Scenic Forest, Recommended Scenic Rivers, Late Successional Reserve	Late Successional Reserve	1,094.11	1,095.15
	27SF 5B LSR ~ Alpine Lakes - Scenic Forest, Recommended Scenic Rivers, Late Successional Reserve	LSR in Marbled Murrelet Areas	282.23	282.22
	27SF 5B LSR ~ Alpine Lakes - Scenic Forest, Recommended Scenic Rivers, Late Successional Reserve	LSR in Northern Spotted Owl Activity Centers	33.70	33.69
	27SF LSOG ~ Alpine Lakes - Scenic Forest, Late Successional Old Growth	Late Successional Old Growth	10.58	10.54
	27SF LSR ~ Alpine Lakes - Scenic Forest, Late Successional Reserve	Late Successional Reserve	75.84	125.95
	27SF LSR ~ Alpine Lakes - Scenic Forest, Late Successional Reserve	LSR in Marbled Murrelet Areas	45.86	73.78
	27SF LSR ~ Alpine Lakes - Scenic Forest, Late Successional Reserve	LSR in Northern Spotted Owl Activity Centers	1.30	1.30

River	Merged Land-Use Allocation	NWFP Allocation	Acres in Interim Boundary	Acres in Final Boundary
	FS ~ Forest Service Land acquired after completion of Forest Plan	Not Designated	118.16	118.17
	Middle Fork Snoqualmie WSR Total		**8,451.88**	**8,527.24**
**Pratt WSR	10 ~ Wilderness	Congressionally Reserved	2,396.64	2,441.92
	10C ~ Wilderness - General Trailless	Congressionally Reserved	634.08	691.19
	27SF 5A ~ Alpine Lakes - Scenic Forest, Recommended Recreation Rivers	Matrix, Riparian Reserves, and other unmapped land allocations	3.74	0.00
	27SF 5A LSOG ~ Alpine Lakes - Scenic Forest, Recommended Recreation Rivers, Late Successional Old Growth	Late Successional Old Growth	6.83	0.00
	Pratt River WSR Total		**3,041.29**	**3,133.11**
Grand Total			**11,493.17**	**11,660.35**

*Private or non-federal lands may be included within the drawn corridor, as per Interagency Wild and Scenic Rivers Council recommendation, although the designation does not change jurisdiction over those lands. County or state regulations continue to govern activities on non-federal lands. Forest Service review is required only for federally assisted proposals within the bed and banks of designated rivers or their tributaries.

** The interim boundary for the Pratt WSR was originally mapped using an out-of-date wilderness boundary for its configuration which resulted in the Pratt River WSR overlapping non-Wilderness MBS land allocations. The final boundary was adjusted to follow the wilderness boundary in the Forest Service's corporate GIS at the time of project analysis.

Proposed Management Actions

Section 10(a) of WSRA requires river-administering agencies to protect and enhance the river values. According to the Interagency Wild and Scenic Rivers Coordinating Council, this mandate translates as a non-degradation standard, measured against conditions and functions at the time of designation. In order to help the Forest meet this requirement, the comprehensive river management plan would include one immediate proposed management action (Table 5) to address known impacts to river values, as well as potential management actions (
Table 6). The potential management actions would require additional development of a proposed action and site-specific analysis.

Table 5. Proposed management action

River	River Value Enhanced or Protected	Proposed Management Action
Middle Fork Snoqualmie	Water quality, Recreation	Closure to dispersed camping within a ¼ mile of the road. Area includes Middle Fork Snoqualmie River Road/NFS Road 56 from the Forest boundary to junction with NFS Road 5640 and up NFS Road 5640 to Snoqualmie Lake Trailhead.
Middle Fork Snoqualmie	Wildlife	Update and improve messaging to public on how to reduce the potential for human-wildlife conflicts and disturbance or displacement impacts on wildlife. Target trailhead kiosks, campgrounds and other sites, internal and external social media platforms related to relevant outdoor recreation.

Table 6. Potential management actions[2]

River	River Value Enhanced or Protected	Management Action
Middle Fork Snoqualmie	Wildlife	Install bear-resistant food storage lockers at Middle Fork Snoqualmie Campground. Evaluate and test options for backcountry bear-resistant food and garbage storage. Install vent cap screens on all outhouses to reduce entrapment potential.
Middle Fork Snoqualmie and Pratt	Wildlife	Implement food storage order and prohibition against feeding wildlife.
Middle Fork Snoqualmie	Water quality, Recreation	River access improvements at Bridgeview, approximately 200 yards downstream of the Middle Fork Trailhead. Contingent upon inventory and assessment of impacts to harlequin duck nesting habitat and utilization downstream of Bridgeview.
Middle Fork Snoqualmie	Wildlife	Survey and monitor rivers for nesting activity in cooperation with WDFW and other partners. Identify nesting areas for protection.
Middle Fork Snoqualmie	Fish, free-flow, water quality	Restoration of large woody debris to improve channel complexity and habitat in the scenic river segment. Restoration of in-stream woody debris will consider best practices for design and placement in regard to boater safety. Additional analysis required.
Middle Fork Snoqualmie	Recreation, fish, water quality	Installation of trail bridges and/or improvement of fords on Middle Fork Trail #1003 across tributaries at Burnboot Creek, Thunder Creek, and Wildcat Creek.
Middle Fork Snoqualmie	Water quality, Recreation	Evaluate opportunities for designated dispersed and/or additional developed campsites in the lower river corridor (from the Forest boundary to approximately the junction with NFS Road 5640).
Pratt	Water quality	Evaluate and improve or restore, as needed, current campsites and toilets near Melakwa Lakes to maintain or improve water quality and riparian condition.
Middle Fork Snoqualmie and Pratt	Wildlife, Recreation	Manage Middle Fork Scenic Sections and Pratt consistent with winter range management strategies. This includes restrictions on motorized activities and other forms of disturbance in wintering areas, where needed, including seasonal road closures. Seasonal road closures may also provide enhanced opportunities for non-motorized recreation including cross-country skiing, snowshoeing, and road biking.

[2] Additional analysis would be required prior to implementation.

		Motorized access would be maintained for those with existing access rights including mining claimants and private land in-holders.
Middle Fork Snoqualmie	Wildlife	Evaluate opportunities for wildlife habitat restoration. Where feasible, improve wildlife habitat and foraging areas away from roads, trails, and other disturbances.
Middle Fork Snoqualmie and Pratt	Fish, Wildlife	Expand beaver relocation efforts and evaluate potential beaver dam analog sites, if necessary.

Dispersed Campsite Closure

This proposed management action would enact a day-use only policy and closure to dispersed camping within a ¼ mile buffer of the paved road section of the Middle Fork Snoqualmie River Road/NFS Road 56 from the forest boundary with Washington Department of Natural Resources (DNR) lands to the junction with NFS Road 5640 and up NFS Road 5640 to Snoqualmie Lake Trailhead (See Table 7 for description and Figure 2 for map). Within this corridor a designation of "closed unless designated open" or "day use only" would apply, meaning all dispersed camping would be prohibited unless physically signed as "open to dispersed camping."

Relationship to river values

Dispersed campsite inventories conducted in the summer of 2017 identified 45 dispersed campsites in the proposed closure corridor, most of them within 50 yards or less of the Middle Fork Snoqualmie River. The majority of site surveys recorded the presence of litter, unburied human waste, damaged trees, and denuded riparian areas. Since 2017, approximately 15 of the dispersed campsites have been converted into day-use areas with the development of the Garfield Ledges Trailhead and the Camp Brown Picnic Area. This proposed management action would further reduce recreation-related impacts to riparian areas and would improve the recreation experience for day-use visitors.

Table 7 Dispersed campsite closure area

Road	Location Description: ¼ mile on both sides from centerline of FS roads	Approx. miles
NFS Road 56	Forest Service boundary with DNR lands on NFS Road 56 to the end of the pavement at the Middle Fork Campground.	3
NFS Road 56	Continued from above from start of graveled section of NFS Road 56 at the Taylor Fork bridge to the junction of NFS Road 56/5640.	0.3
NFS Road 5640	Junction of Roads 56/5640, following NFS Road 5640 to the Snoqualmie Lake Trailhead.	1.5

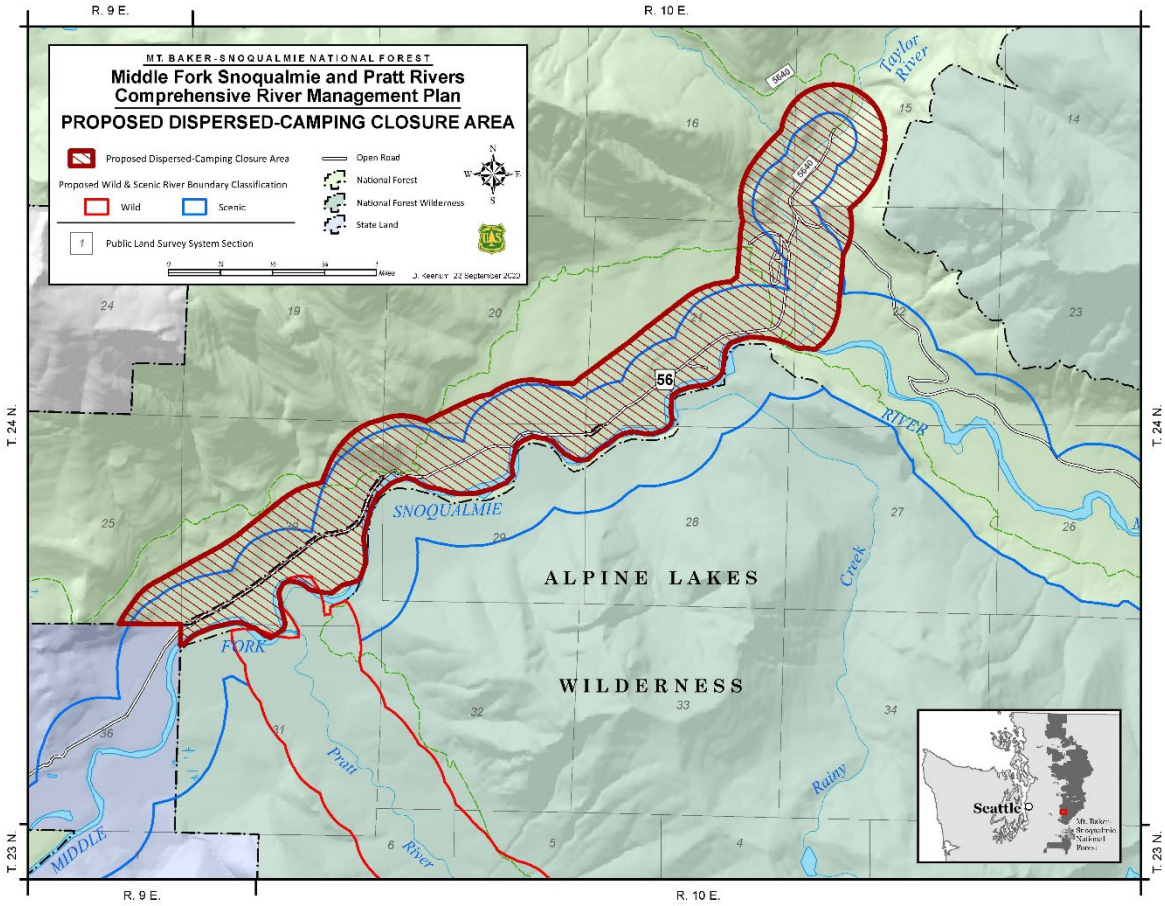


Figure 2 - Dispersed camping closure area.

Alternatives Considered but Eliminated from Detailed Study

The following alternatives represent those that were considered by the IDT and responsible official, but for various reasons, were eliminated from detailed study. These alternatives were considered to address the purpose and need; Tribal consultation; and concerns raised during public scoping for this project.

Boundary Adjustments

Several comments suggested additional areas to be included within the river boundary for the Middle Fork Snoqualmie such as upstream along the Taylor River and upland areas comprising glaciolacustrine soils north of the river, above the floodplain. These additions were not found to be necessary to protect river values. Outstandingly Remarkable Values (ORVs) were evaluated in a Resource Assessment in 1990 and then reviewed and validated or refined using updated criteria (FSH 1909.12, Chapter 82.14) in the River Values Assessment for Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers in 2019 (USFS 2019).

Other comments suggest removing private lands from the river boundary. Policy guidance for wild and scenic rivers states that existing land ownership, whether federal or nonfederal, should not be a factor in

determining boundaries. The Wild and Scenic Rivers Act does not provide the U.S. Forest Service the authority to regulate non-federal lands.

Bridgeview River Access Improvements

River access improvements at Bridgeview, approximately 200 yards downstream of the Middle Fork Trailhead, were scoped as part of the proposed action but dropped from detailed analysis at this time due do timing and capacity concerns for surveys and potential consultation needs with other agencies. This project was retained as a potential management action. See
Table 6.

Trail Bridges

The IDT discussed the installation of trail bridges and/or improvement of fords on Middle Fork Snoqualmie Trail #1003 across tributaries at Burntboot Creek, Thunder Creek, and Wildcat Creek. These were dismissed from detailed analysis at this time due do timing and capacity concerns for surveys and potential consultation needs with other agencies. These projects were retained as potential management actions. See
Table 6.

Dispersed Camping Closure Expansion

Comments suggested extending dispersed camping closure to include areas upstream of the Taylor River and/or on the eastern banks of the Middle Fork Snoqualmie along the Pratt River Connector Trail. The proposed closure area was found to be adequate in addressing the greatest impacts from dispersed camping on river values. The visitor use management strategy in the comprehensive river management plan addresses monitoring and potential management approaches for responding to the prevalence and condition of additional dispersed campsites outside of the proposed closure area.

Road Access

Based on several scoping comments received, access to the area, particularly for private landholders, and mining claimants, is confusing. The IDT considered ways to provide clarification in the document, and whether any alternatives might be needed to address this. No alternatives were fully developed, and no alternatives fully analyzed propose any changes to existing access to this area.

The Middle Fork Snoqualmie River Watershed Access and Travel Management Plan (ATM) (USDA Forest Service 2005) determined access needs on roads and trails within the Middle Fork Snoqualmie River watershed, including access for private landowners and mining claimants. The ATM Decision Notice directed that a gate be installed on NFS Road 56 at Dingford Creek and that the remainder of the road be converted to an NFS trail, Dutch Miller Gap Trail #1030, and a private (non-system) road that allows for limited motorized access for authorized private landowners and mining claimants. This section of former NFS Road 56 beyond Dingford Creek is managed as a trail by the Forest and is under an easement for use and maintenance for motorized vehicle access by private landowners. This project does not propose any changes to the ATM final decision, nor does it alter terms and conditions of the easement.

Road maintenance and repairs conducted by easement holders will continue to be reviewed and subject to approval by the Forest Service. The proposed management standards and guidelines do not prohibit the maintenance of the roadway per the current agreement. The WSR congressional designation, however, does require additional scrutiny for activities within the bed and banks and below the ordinary high-water mark of the river, such as bank stabilization. Such projects require an evaluation for direct and adverse effects to river values per Section 7(a) of the Wild and Scenic Rivers Act and cannot result in a direct and adverse impact on a river's outstandingly remarkable values or free-flowing condition. Free-flowing is defined by Section 16(b) of the Act as:

> "…existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway".

Forest Service policy FSM 2354.04, requires Regional Forester approval for proposed actions subject to Section 7(a) determinations.

Outstandingly Remarkable Values

Several comments suggested botany and wildlife should be reconsidered as outstandingly remarkable river values. Outstandingly Remarkable Values (ORVs) were evaluated in a Resource Assessment in 1990 and then reviewed and validated or refined using updated criteria (FSH 1909.12, Chapter 82.14) in the River Values Assessment for Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers in 2019 (USFS 2019). Additional analysis of a potential botany and ecology ORV for the presence of lowland Sitka spruce (*Picea sitchensis*) was completed after the initial scoping period but was mistakenly not incorporated into the river values assessment released with the Draft CRMP. The final CRMP includes documentation of this analysis. Wildlife was added as an ORV for both the Middle Fork Snoqualmie and Pratt Rivers after objection meetings in 2021, and the Resource Assessment and CRMP have been updated. See River Values Assessment for the wildlife ORV rationale, Appendix A in the CRMP.

Evaluation of the Forest Plan Amendment

As discussed previously in this EA, the Forest Service has identified a need to amend the 1990 Mt. Baker-Snoqualmie Land and Resource Management Plan to add a new management area, MA-28 Designated Wild and Scenic Rivers to the Forest Plan, to establish the final Wild and Scenic River boundary, and change the underlying management allocations.

The need for this programmatic Forest Plan Amendment closely ties to the purpose and need for the project, which includes developing a CRMP to protect and enhance the outstandingly remarkable values, water quality, and free-flowing characteristics of these rivers; establish the final river corridor boundaries; and revise management areas and existing standards and guidelines for lands within the river corridor.

Based on the direction provided in 36 CFR 219, the Responsible Official must determine the appropriate scope and scale of forest plan amendments and which substantive provisions of 36 CFR 219.8 through 219.11 apply to the project. Based on the need for change, the site-specific conditions for the project area, and the relevant forest-specific information and data, the following substantive requirements of 36 CFR 219.8 through 219.11 apply to the proposed amendment.

36 CFR 219.8(a)(2)(iii) and (a)(2)(iv) – to maintain or restore water quality and water resources.

Water resources were considered in the development of the proposed boundary and management allocation changes. Designated rivers must be managed to protect water quality. MA-28 would apply additional standards and guidelines that would ensure water quality and protection of the free-flowing condition of these rivers.

Specifically, MA-28 standards would require new recreational facilities within the MA to be consistent with the river classification and to protect the water quality of the river. Additional mining standards would maintain streambanks in their natural conditions and not allow salable mineral activities within the bed and banks of recreation or scenic rivers. Further, guidelines in the new MA-28 encourage roads or trails to be moved out of floodplains if they are impacting water quality and other river values, as well as reconstruction of road infrastructure using techniques that are designed to promote ecological, floodplain and riparian

function, thus promoting water quality improvement where road segments are currently having localized effects.

36 CFR 219.8(a)(3)(i) -- to maintain or restore the ecological integrity of riparian areas in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity

Key watersheds and Riparian Reserves would not change and would continue to overlap with the new MA-28 allocation. Standards and guidelines for the new allocation include components to help manage and protect the free-flowing character, water quality and outstandingly remarkable values. In the Wild sections, the Pratt River and the upper Middle Fork Snoqualmie River within the Alpine Lakes Wilderness, wilderness management direction would continue to apply. Aquatic restoration projects could be proposed to enhance fishery resources as guided by management direction and the adopted CRMP.

Specifically, guidelines in the new MA-28 encourage roads or trails to be moved out of floodplains if they are impacting water quality and other river values, as well as reconstruction of road infrastructure using techniques that are designed to promote ecological, floodplain and riparian function over time. Further, MA-28 includes additional mining standards which would maintain streambanks in their natural conditions and not allow salable mineral activities within the bed and banks of recreation or scenic rivers.

36 CFR 219.10(a)(1) – Aesthetic values, air quality, cultural and heritage resources, ecosystem services, fish and wildlife species, forage, geologic features, grazing and rangelands, habitat and habitat connectivity, recreation settings and opportunities, riparian areas, scenery, soil, surface and subsurface water quality, timber, trails, vegetation, viewsheds, wilderness, and other relevant resources and uses.

The goal of the Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP is to protect and enhance the river values for which the Middle Fork Snoqualmie and Pratt Rivers were included in the Wild and Scenic Rivers System. In addition to free-flow and high water quality, Outstandingly Remarkable Values (ORVs) were evaluated in a Resource Assessment in 1990 and then reviewed and validated or refined using updated criteria (FSH 1909.12, Chapter 82.14) in the River Values Assessment for Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers in 2019 (USFS 2019).

36 CFR 219.10(b)(1)(i) Sustainable recreation; including recreation settings, opportunities, and access; and scenic character. Recreation opportunities may include non-motorized, motorized, developed, and dispersed recreation on land, water, and in the air.

The new MA-28 includes new standards that would require scenery management and any potential future new recreational facilities to be consistent with the river classification, and to protect the water quality of the river. The CRMP outlines monitoring and potential management responses for addressing visitor use within the river corridors.

36 CFR 219.10(b)(1)(v) Protection of designated wild and scenic rivers as well as management of rivers found eligible or determined suitable for the National Wild and Scenic River system to protect the values that provide the basis for their suitability for inclusion in the system.

Modifying and finalizing the boundary and management allocations in the Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP EA applies for protection of these rivers designations as wild and scenic "wild" and "scenic" rivers. The goal of the CRMP is to protect and enhance the river values for which the Middle Fork Snoqualmie and Pratt Rivers were included in the Wild and Scenic Rivers System. In addition to free-flow and high water quality, Outstandingly Remarkable Values (ORVs) were determined in a Resource Assessment in 1990 and then reviewed and validated or refined using updated criteria (FSH 1909.12, Chapter 82.14) in the River Values Assessment for Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers in 2019 (USFS 2019).

Effects of Proposed Forest Plan Amendment

Alternative 1 – No Change from Current Management

Under Alternative 1, MA-28 Designated Wild and Scenic River Corridors would not be added to the Forest Plan. There would be no change to the land allocations along the current river corridor. All existing allocations under the Mt. Baker-Snoqualmie Forest Plan, as amended by the Northwest Forest Plan would remain in effect as well as the interim Wild and Scenic boundary. No Comprehensive River Management Plan would be adopted and the area would continue under the interim direction of the MBS Forest Plan.

Alternative 2 – Proposed Action

The proposed action would add a new MA-28 Designated Wild and Scenic Rivers to the Mt. Baker-Snoqualmie Forest Plan. Changing and finalizing the final boundary of the Middle Fork Snoqualmie and Pratt wild and scenic rivers, and their underlying management areas, would allow for new standards and guidelines to help protect the outstanding remarkable values, as well as preserve the free-flowing conditions and water quality of the river corridors.

As this project does not propose ground disturbing actions, there would be no direct or indirect effects and the proposed project would be consistent with the substantive provisions described above. Additional Forest Plan amendments would be required to apply MA-28 to other designated wild and scenic river corridors.

Cumulative Effects of Amendment

The analysis area for cumulative effects is the river corridors. The Middle Fork and Pratt Wild and Scenic Rivers Comprehensive River Management Plan Environmental Assessment project does not propose any ground disturbing actions therefore, there would be no cumulative effects. There would be no anticipated effects that would overlap in time and space.

The new MA-28 Designated Wild and Scenic Rivers could only be applied to other specific locations through the analysis of additional Forest Plan amendments. Those site-specific locations would be evaluated at that time.

Environmental Impacts of the Proposed Action and Alternatives

This section summarizes the potential impacts of the proposed action and alternatives. Information on resource specific methodology, regulatory framework, and references cited can be found in resource reports, available on the project website and in the project record.

Hydrology

Existing Condition

Water Quality

The Middle Fork Snoqualmie River currently exceeds state standards for water temperature. Waters that do not meet state standards are deemed water quality limited by the Washington State Department of Ecology (DOE). The DOE lists water quality limited bodies on the 303(d) list and establishes a Total Maximum Daily Load (TMDL). TMDLs determine total acceptable levels of degradation for a specific waterbody to meet water quality standards and recommendations for future management actions to improve temperature in the

basin. River segments listed in the Snoqualmie River Watershed Temperature TDML within and adjacent to the Middle Fork Snoqualmie and Pratt Rivers are displayed in Table 8 and Figure 3.

Table 8. State of Washington 303(d) listed waters within the watersheds draining the Middle Fork Snoqualmie and Pratt River Wild and Scenic River corridors.

Impairment Listing #	Stream Name	Impairment Category (TMDL in place)	Miles
72540 (Temperature)	Unnamed Tributary to MF Snoqualmie	4A	3.0
72553 (Temperature)	Burnboot Creek	4A	2.3
72554 (Temperature)	Middle Fork Snoqualmie River	4A	9.8
72556 (Temperature)	Kimball Creek	4A	0.8
72557 (Temperature)	Unnamed Tributary to MF Snoqualmie	4A	10.1

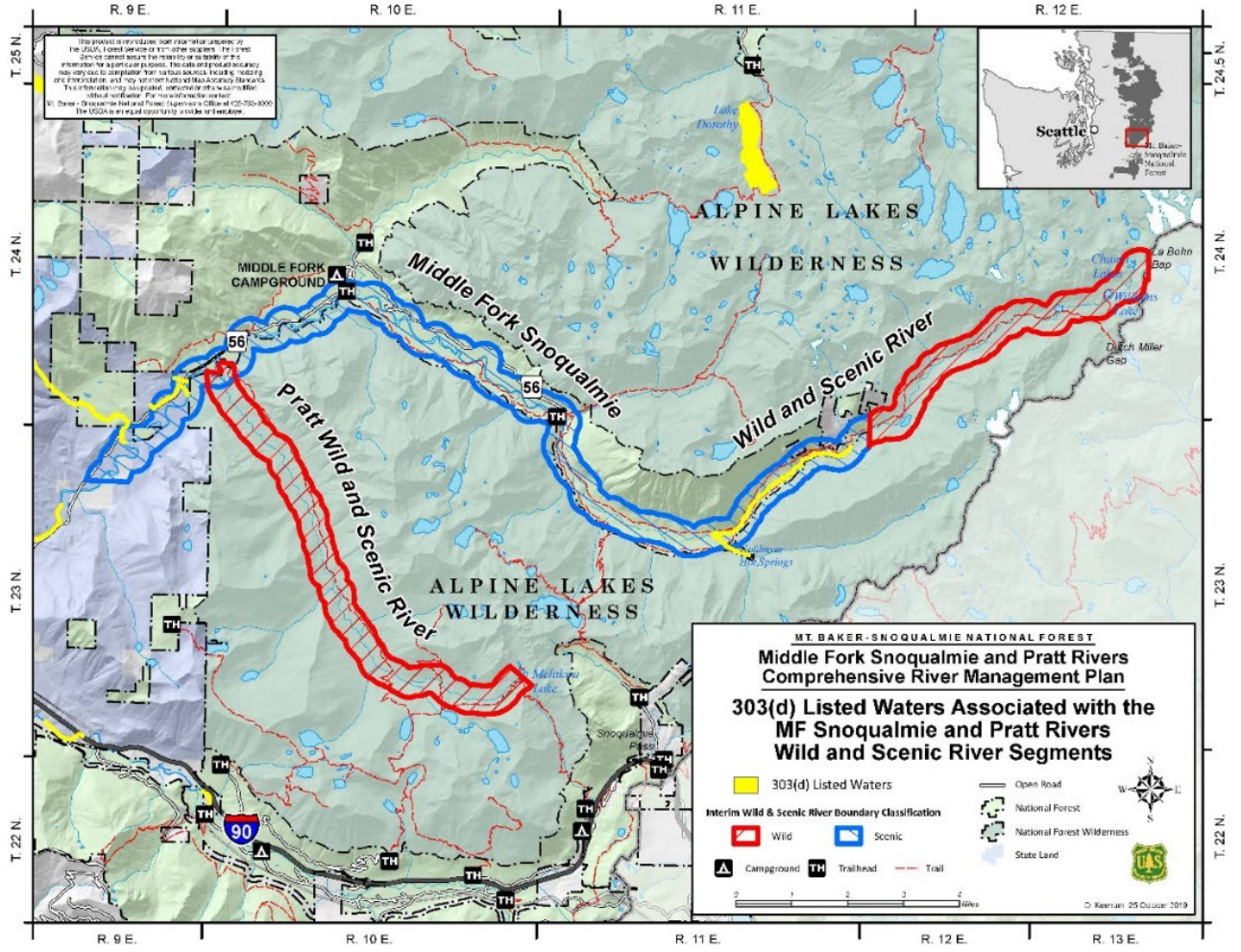


Figure 3. Location of impaired waters related to stream temperature within close proximity to the MF Snoqualmie and Pratt Rivers Wild and Scenic River Segments.

A study by King County during the hot, dry summer of 2015 showed that the temperatures observed in the Middle Fork fell within the temperature range observed downstream on the main stem. While the stream temperature data collected in the past decade has not produced definitive conclusions about the cause of the temperature increase in the Middle Fork Snoqualmie, inferences can be made. Within the Middle Fork Snoqualmie wild and scenic river corridor it's likely that the elevated temperatures are due to some

combination of the factors described below. The upper Middle Fork watershed has natural hot springs that impact stream temperature (most notably the Goldmeyer Hot Springs). Further, the shape and orientation of the Middle Fork valley naturally allows more sunlight to reach the stream channel.

The Middle Fork Snoqualmie River scenic section and the Pratt River are currently estimated to have wider and shallower stream channels than they may have had in the past. There is less large wood habitat in these reaches causing shallower pools, wider bankfull widths, and less hyporheic exchange (Scott and Wohl 2018, Fox and Bolton 2017). This reduced channel complexity creates more surface area for radiant heat to affect stream temperature. These anthropogenic modifications, along with climate change, and the natural aspect of the basin are likely contributing to the increases in temperature.

These natural factors, along with historic logging of riparian areas, and road building in the last century, has created a second growth forest that lacks the shade capabilities of an old growth forest. The impacts to riparian areas from past harvest likely resulted in increased erosion and sedimentation, as well as decreased shade and a reduction in large wood recruitment to the channels.

There are sections of NFS Road 56 and the Dutch Miller Gap Trail (formerly part of NFS Road 56) along the Middle Fork Snoqualmie scenic section where the road prism has locally impacted the channel by reducing channel migration and permanently removing riparian vegetation. These additional anthropogenic actions have impacted the Middle Fork Snoqualmie in similar ways that riparian harvest has, albeit to a lesser degree. While the road currently impacts some water quality parameters, it does not impact the overall high water quality seen in the watersheds associated with the Wild and Scenic River corridors. Roads are not believed to be major contributors to water quality issues, especially the increased temperatures, in the basin.

NFS Road 56 is the only motorized access route to the area and it was recently reconstructed and paved to Taylor River, where the road has a graveled surface until it is gated at Dingford Creek. The paved section of the road has and will continue to reduce sediment into the Middle Fork Snoqualmie River Scenic section for years to come. The gate at Dingford Creek serves as a trailhead for the Dutch Miller Gap Trail #1030, which acts as a hiking, biking, equestrian, and administrative route until reaching the Wilderness access trailhead at the former Dutch Miller Gap Trailhead.

According to a 1987 report cited in the Middle Fork Snoqualmie Watershed Analysis (1998), in the headwaters of the Middle Fork Snoqualmie River, Williams Lake water quality has been found to contain toxic concentrations of copper. In the 1990's when the Forest Service acquired the lands containing the former copper mine at La Bohn Gap, above Williams Lake, there was discussion about whether the copper levels were naturally occurring in the lake or the result of previous mining activity. No additional research or monitoring has been completed. Due to the remote location and wilderness designation of these lands, no future mining is expected to occur at this site. None of the WSR corridor waters on the latest 303 (d) list are listed as impaired for any parameters related to mining activity.

Free-Flow Conditions

Middle Fork Snoqualmie River

Scott and Wohl (2018) describe the Middle Fork Snoqualmie as, "a system that exhibits glaciogenic topography, with streams ranging from steep, debris flow-dominated headwater channels (wild section and the upper areas of the scenic section) to lower gradient, wide, laterally unconfined channels in its lower reaches (lower less confined area of the scenic section), and has been extensively logged in the lower elevation reaches." Sixty tributaries drain into the Middle Fork Snoqualmie River. Major named tributaries related to the Wild and Scenic River Corridor include the Pratt River, Taylor River, Dingford Creek, and Burntboot Creek.

The Middle Fork Snoqualmie channel has impacts from railroad logging operations from approximately 80 years ago. The overall hydrology of this system is intact with few impervious surfaces. Land management and fire has had limited to no impacts in many decades. An extensive amount of the upper watershed is located in the Alpine Lakes Wilderness, originally designated in 1976 and expanded to include an additional 22,000 acres in 2014.

The Middle Fork Snoqualmie is a typical Westside Cascades hydrologic system. Autumn rains generally begin in late September or early October and last into December, when winter snow occurs more regularly and a snow pack develops in the higher elevations of the watershed. There is the potential for rain on snow and winter rain events as well. Freeze and thaw events can trigger increases in water flow at any time during the winter. Spring snowmelt and rains trigger spikes in the water flow from March until July, when the flow drops significantly during the dry summer months. These summer months are when temperatures rise to levels which can impact aquatic life.

Development along the Middle Fork Snoqualmie River includes NFS Road 56 (Middle Fork Snoqualmie River Road), paved until it reaches Taylor River Bridge, where the road is gravel until the Dingford Creek Trailhead. At the Dingford Creek Trailhead, the former NFS Road 56 road is now Dutch Miller Gap Trail and this trail extends another 8.5 miles to the Dutch Miller Gap Campground.

The paved Middle Fork Road impacts both the floodplain function and eliminates the potential for riparian regrowth along certain northern stretches of the river. Figure 4 shows the locations of know rip rap, bridge abutments and channel encroachment in and above the Middle Fork Snoqualmie Scenic section boundary. From aerial imagery, it is estimated that approximately 0.5 river mile is impacted along the paved stretch of the road. Figure 5 shows one such location where the road has been hardened with riprap to protect road fill. There are also many smaller, more localized hardening locations that support stream and relief culverts along the main road, and the Dutch Miller Gap Trail. Numerous trail bridges in the Alpine Lakes Wilderness support recreation in the Middle Fork corridor. Forest engineering and recreation staff confirm these bridges are not constructed with abutments that impact the active channel or 100 year floodplain.

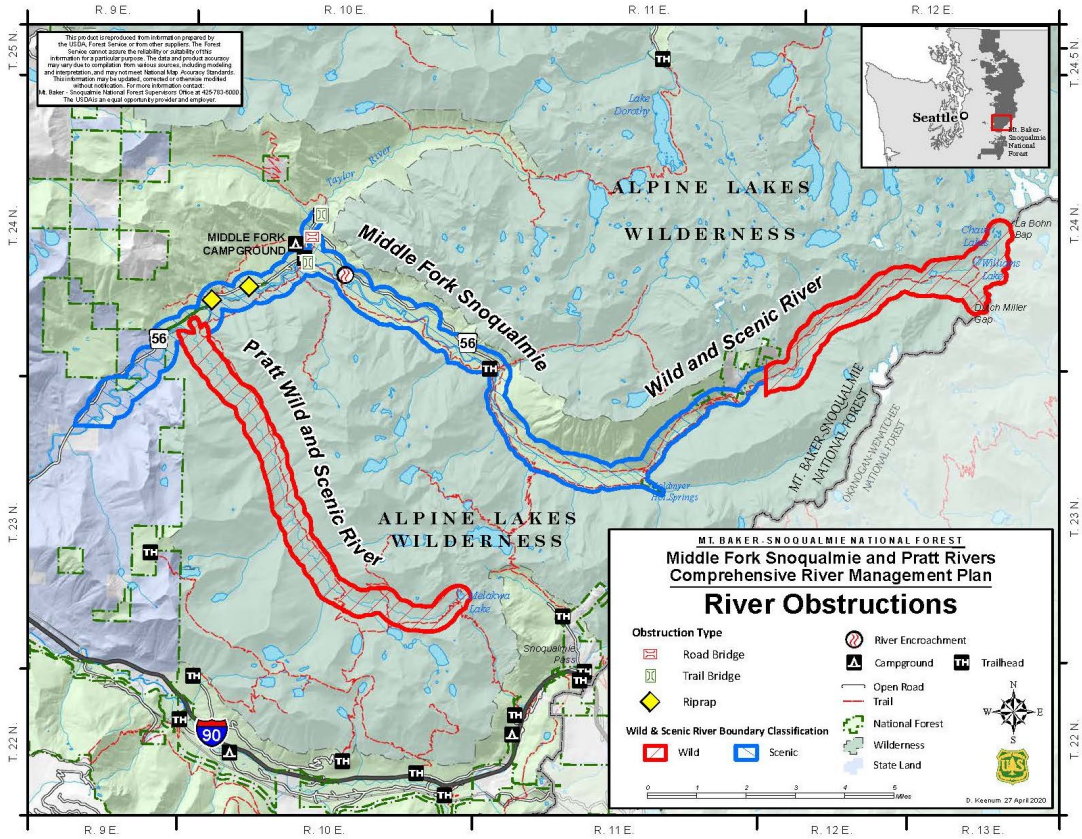


Figure 4. Known existing river obstructions within the Middle Fork Snoqualmie and Pratt Wild and Scenic River Corridors.

Figure 5. Example of rip rap that has been placed in the Middle Fork Snoqualmie River to protect the Middle Fork Road. Photo by Chad Hermandorfer.

Pratt River

There is no current or historical flow data specific to the Pratt River. The Pratt River contains lengthy reaches with moderate gradients and good pool-riffle conditions. Short stretches of rapids are common. The last documented major disturbance was in the 1940s. Logging operations of the early 20th century created debris flow channels. Those impacts can still be seen today.

There are no roads or homes along the Pratt River and few backcountry campsites along the Pratt River Trail. The hydrology of this river is intact with no impervious surfaces or impoundments.

Watershed Condition

Watershed condition assessment is the process of describing watershed condition in terms of three discrete classes that reflect the level of watershed health. Primary emphasis is placed on indicators that directly or indirectly impact soil and hydrologic functions and riparian and aquatic ecosystems. These include past and current resource management activities (i.e. grazing, vegetation management, roads, recreation, etc.), and natural events and conditions (i.e. wildfire, climate change, flooding, etc.)

Forest Service Manual 2521.1 directs the establishment of watershed condition and designated Watershed Condition Class (WCC) ratings. In 2011, the Forest Serviced initially used the watershed classification and assessment tracking (WCAT) protocol (USDA Forest Service 2011) to determine the health of 6th level watersheds. Sixth level (HUC 12) watersheds were assessed because the Forest Service National Watershed Condition Team, set up in 2007, determined that in order to demonstrate improvement in condition class, activities must be tracked at the smallest feasible watershed unit, the 6th level watershed (typically 10,000 to 40,000 acres in size).

WCCs are determined through a process where a series of attributes are rated and averaged for each indicator of watershed health. The results are then compiled for watershed process indicators (Table 9) and then a WCC is determined by adding together weighted averages (Table 10).

Table 9. Summary of Watershed Condition Classes and definitions.

Watershed Condition Class	Watershed Condition Class Definition
WCC I (Functioning properly - good)	Watersheds exhibit high geomorphic, hydrologic and biotic integrity relative to their natural potential condition. The drainage network is generally stable. Physical, chemical, and biologic conditions suggest that soil, aquatic, and riparian systems are predominantly functional in terms of supporting beneficial uses.
WCC II (Functioning at risk - fair)	Watersheds exhibit moderate geomorphic, hydrologic, and biotic integrity relative to their natural potential condition. Portions of the drainage network may be unstable. Physical, chemical, and biologic conditions suggest that soil, aquatic, and riparian systems are at risk in being able to support beneficial uses.
WCC III (Impaired function - poor)	Watersheds exhibit low geomorphic, hydrologic, and biotic integrity relative to their natural potential condition. A majority of the drainage network may be unstable physical, chemical, and biologic conditions suggest that soil, aquatic, and riparian systems do not support beneficial uses.

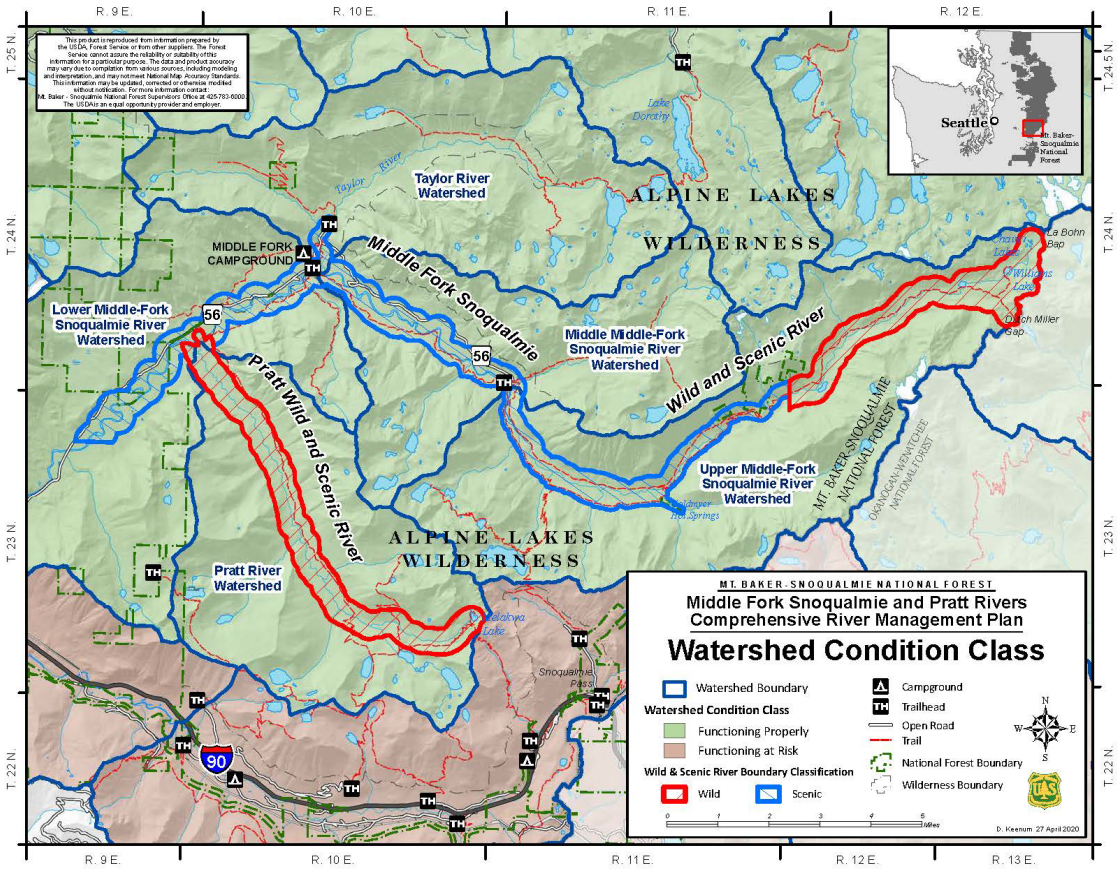


Figure 6. Watershed Condition Class ratings for the Middle Fork Snoqualmie and Pratt Rivers CRMP Project.

Results from the watershed condition analysis (Table 10, Figure 6) indicated that project area analysis watersheds are all "functioning properly". Resources indicators show concerns in certain drainages for water quality due to temperature, riparian vegetation, and aquatic habitat condition due to historic logging.

Table 10. Existing Watershed Condition Classes and watershed condition indicators for the Middle Fork Snoqualmie and Pratt Rivers Wild and Scenic River CRMP Project.

6th Field HUC Watershed	Lower Middle Fork Snoqualmie River	Lower Middle Fork Snoqualmie River	Pratt River	Taylor River	Upper Middle Fork Snoqualmie River
Aquatic Biota	Good	Good	Good	Good	Good
Riparian/ Wetland Vegetation Condition	Fair	Good	Good	Good	Fair
Water Quality	Good	Good	Good	Fair	Good
Water Quantity	Good	Good	Good	Good	Good
Aquatic Habitat	Fair	Good	Fair	Fair	Good

6th Field HUC Watershed	Lower Middle Fork Snoqualmie River	Lower Middle Fork Snoqualmie River	Pratt River	Taylor River	Upper Middle Fork Snoqualmie River
Roads and Trails	Good	Good	Good	Good	Good
Soil Conditions	Good	Good	Fair	Fair	Good
Fire Effects/ Fire Regime Condition	Good	Good	Good	Good	Good
Forest Cover	Good	Good	Good	Good	Good
Forest Health	Good	Good	Good	Good	Good
Terrestrial Invasive Species Condition	Good	Good	Good	Good	Good
Range Health	Not Applicable	Not Applicable	Not Applicable	Good	Not Applicable
Watershed Condition Class	Functioning Properly	Functioning Properly	Functioning Properly	Functioning Properly	Functioning Properly

Environmental Consequences

Direct and Indirect Effects

Alternative 1: No Change from Current Management

There are no direct, indirect, or cumulative hydrologic effects from this alternative. Management direction in existing plans, such as the Northwest Forest Plan and the Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan, would protect water quality in the Middle Fork Snoqualmie and Pratt Rivers, and protect aquatic features in the landscape within the 0.25-mile Wild and Scenic River corridor. With its designation, water quality and free flow would be maintained. Future projects in the river corridor would be evaluated for effects on these resources.

Alternative 2: Proposed Action

There are no direct, indirect, or cumulative hydrologic effects of implementing the proposed action. The proposed action is administrative, and no ground-disturbing activities are proposed, therefore there would be no direct effects to hydrologic resources.

The proposed action does not authorize any actions that would modify or degrade water quality, free-flow, or watershed conditions. The proposed action includes guidelines in the new MA-28 that encourage roads or trails to be moved out of floodplains if they are impacting water quality and other river values (Guideline 2),

as well as reconstruction of road infrastructure using techniques that are designed to promote ecological, floodplain and riparian function over time (Guideline 3). This promotes water quality improvement where road segments are currently having localized effects.

In the Middle Fork Scenic section, the proposed action would enact a closure to dispersed camping within a ¼ mile of NFS Road 56 from the Forest boundary to junction with NFS Road 5640 and up NFS Road 5640 to Snoqualmie Lake Trailhead. This represents a change from the current management where dispersed camping is permitted in the entire Scenic Section. This change in dispersed recreation management would improve protection of water quality from recreational users. This includes reducing human waste along the river and floodplain area, and less impacts to riparian vegetation.

Monitoring would occur in the Scenic section under both alternatives, resulting in overall water quality protection. However, the change to dispersed recreation management in the lower Scenic corridor represents a higher probability for water quality protection.

Further, the proposed action includes new standards that would require any potential future new recreational facilities to be consistent with the river classification, to protect the water quality of the river (Standard 4), and additional mining standards (Standards 6-8) which would maintain streambanks in their natural conditions and not allow salable mineral activities within the bed and banks of recreation or scenic rivers. This would be more explicit to WSR classifications, however a similar level of protection currently exists as the current Forest Plan directs the management of the corridors for water quality.

Cumulative Effects

The watershed condition analysis forms the baseline for our cumulative watershed effects analysis. This cumulative effects analysis looks at whether implementation of the proposed action would impact the resource indicators involved in determining the current watershed function ratings, when added to other past, present or future projects disclosed in the EA. This includes impacts to such indicators as water quality, stream morphology, and riparian function.

Effects to the hydrology resource from the proposed action would incrementally add to cumulative effects because of the beneficial effects predicted by the added guidelines. Neither Alternative 1 (No change from current management) or Alternative 2 (proposed action) authorize any ground disturbing actions. Any potential management actions from the CRMP would be analyzed for effects prior to implementation.

The current watershed condition class for the five project area watersheds (Table 10) would remain stable or improve over time.

Fisheries Resources

Existing Condition

General

From its headwaters in the Alpine Lakes Wilderness in the Chain Lakes area, the Middle Fork Snoqualmie River flows over 41 miles to the confluence with the North Fork Snoqualmie River, and is considered the upstream extension of the mainstem Snoqualmie River. The three major forks merge here, flowing for about 44 miles as the Snoqualmie River to its confluence with the Skykomish River to become the Snohomish River. The Snohomish River system is the second largest basin draining to Puget Sound, contributing 16% of the anadromous fish production. Snoqualmie Falls, a 268-foot falls located on the Snoqualmie River at about river mile (RM) 40.3 is a total barrier to anadromous fish. There is no fishway or trap-and-haul in place.

Below the falls, the Snoqualmie watershed provides spawning and rearing habitats for several fish with special federal status—Chinook salmon (*Oncorhynchus tshawytscha*), steelhead (*O. mykiss*), and bull trout (*Salvelinus confluentus*), which are listed as Threatened under the federal Endangered Species Act, coho salmon (*O. kisutch*), pink salmon (*O. gorbuscha*), chum salmon (*O. keta*), coastal cutthroat trout (anadromous and resident; *O. clarki clarki*), and rainbow trout (resident *O. mykiss*).

Throughout the MBS, the miles of habitat for eight fish species of interest, displaying both anadromous and resident life histories, are shown in Table 11. These fish generally depend on cold, clean water, appropriately sized spawning gravels, and a variety of slow- and fast-water habitat types to meet their needs at various life stages.

Table 11. Miles of documented and presumed presence on the Mt. Baker-Snoqualmie National Forest by fish species of interest.

Fish species	Miles[1]
Chinook salmon	202
Bull trout	513
Steelhead	356
Coho salmon	366
Pink salmon	154
Chum salmon	54
Sockeye salmon	141
Cutthroat trout	587
Rainbow trout	491

[1]From Statewide Washington Integrated Fish Distribution (SWIFD) data; does not include miles on other land ownerships.

Special Status Fish Species and Habitats

While the Middle Fork Snoqualmie River watershed supports several species of native and non-native fish, the focus of the analysis is on the fish species and habitats with special status, which are summarized in Table 12 along with their utilization of streams related to the analysis area.

Federally Listed Species and Habitats

The three fish species listed under the federal Endangered Species Act, Chinook, steelhead and bull trout, and their designated critical habitats, occur on the Mt. Baker-Snoqualmie National Forest and in the Snoqualmie River watershed, but not in the analysis area (Table 12). Essential fish habitats (EFH) per the Magnuson-Stevens Fishery Conservation and Management Act, as amended, are “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity,” and pertain to fish in the Pacific Coast Salmon Plan: Chinook, coho, and pink salmon. EFH for these fish also occur in the watershed but not in the analysis area (Table 12).

Forest Service Regional Sensitive Species

Per the 2019 updated Regional Forester's Special Status Species list, the Mt. Baker-Snoqualmie National Forest does not have fish species designated as sensitive (USDA FS 2019).

Forest Management Indicator Species

The MBS management indicator species (MIS) are identified in the Forest's Land and Resource Management Plan (USDA FS 1990, 4-46). The management indicator fish are Chinook, coho, pink and chum salmon, steelhead and resident rainbow trout, sea-run and resident cutthroat trout, and bull trout. With Snoqualmie Falls a total barrier to anadromous fish, the Middle Fork Snoqualmie and its tributaries, including the Pratt and Taylor Rivers, provide refugia habitat for both resident rainbow and cutthroat, with populations composed primarily of coastal cutthroat of native origin (Thompson et al. 2011a). Many of the smaller tributaries are steep gradient, though cutthroat have been found in channels up to 22% gradient (Latterell 2001).

Table 12. Summary of special status fish species and habitats

Species (Stock)	Federal Status[1]	Utilization
Chinook Salmon (Snoqualmie)	NMFS—Listed threatened (3/99, 6/05); Designated critical habitat (9/05); Essential fish habitat FS—MIS	Snoqualmie River downstream of Snoqualmie Falls, over 4 miles downstream of the Middle Fork watershed; same for critical habitat and EFH.
Bull Trout (Skykomish)	USFWS—Listed threatened (11/99); Revised designated critical habitat (10/10) FS—MIS	Strays in Snoqualmie River downstream of Snoqualmie Falls, over 4 miles downstream of the Middle Fork watershed; same for critical habitat. Anecdotal sightings, but none found during bull trout detection study.
Steelhead (Snoqualmie Winter)	NMFS—Listed Threatened (5/07; anadromous only); critical habitat proposed FS—MIS (anadromous and resident rainbow)	Snoqualmie River downstream of Snoqualmie Falls, over 4 miles downstream of the Middle Fork watershed; same for critical habitat. Resident rainbow trout in mainstem and fish-bearing tributaries. Non-native rainbow stocked in the system.
Coho Salmon (Snoqualmie)	NMFS—Candidate; Species of Concern (7/95); Essential fish habitat FS—MIS	Snoqualmie River downstream of Snoqualmie Falls, over 4 miles downstream of the Middle Fork watershed; same for EFH.
Pink Salmon (Snohomish odd-year)	NMFS—Not Warranted (10/95); Essential fish habitat FS—MIS	Snoqualmie River downstream of Snoqualmie Falls, over 4 miles downstream of the Middle Fork watershed; same for EFH.
Chum Salmon (Snoqualmie Fall)	NMFS—Not Warranted (3/98) FS—MIS	Snoqualmie River downstream of Snoqualmie Falls, over 4 miles downstream of the Middle Fork watershed.

Species (Stock)	Federal Status[1]	Utilization
Coastal Cutthroat Trout (Snohomish)	NMFS—Not Warranted (4/99) FS—MIS (anadromous and resident)	Anadromous coastal cutthroat trout in Snoqualmie River downstream of Snoqualmie Falls, over 4 miles downstream of the Middle Fork watershed; native residents in mainstem and fish-bearing tributaries. Westslope cutthoat (non-native) have been stocked in the system.

[1] NMFS—National Marine Fisheries Service; FS—Forest Service (USDA FS 1990); USFWS—United States Fish and Wildlife Service; MIS—Management Indicator Species (from USDA FS 1990).

Fish Stocking

Fishing is a popular recreational activity in the Middle Fork watershed in both the rivers and lakes. Washington Department of Fish and Wildlife and area Tribes co-manage the fisheries in the state. With a history of stocking non-native species, the Middle Fork Snoqualmie River is currently managed as a wild trout resource with a year-round catch-and-release fishery (Thompson et al. 2011b), and genetic analyses showed both the composition and distribution of trout in the Middle Fork Snoqualmie mainstem to be dominated by native coastal cutthroat (Thompson et al. 2011a) with subpopulations that were genetically distinct in the mainstem and tributaries, as well as from other South Puget Sound cutthroat trout (Latterell 2001).

Many of the lakes in the Middle Fork Snoqualmie and Pratt River drainages are currently stocked with non-native rainbow trout, brook trout, and cutthroat trout. However, they are stocked in areas where they are considered functionally sterile, where spawning habitat is either not present or is not suitable during the spawning period (Spinelli 2019).

Habitat Assessments and Fish Passage

The MBS completed a watershed condition assessment in 2011 (Table 10). Stream gradients in the mainstem are conducive to maintaining fish habitat primarily downstream of Burntboot Creek, and tributary streams in the Middle Fork contribute both fine and coarse sediments that in some reaches of the mainstem have helped to destabilize the channel and degrade spawning and rearing habitats. Channel complexity may be limiting, though large pools help provide cover, and instream wood helps to sort gravels and form larger pools.

For the Pratt, overall aquatic habitat was rated as fair, primarily due to a rating of poor/impaired function for channel shape and function (unstable streambeds and banks). Raleigh Consultants (1992) noted the lack of quality pool habitat to be the primary limiting factor for fish in a 1992 Pratt River survey.

Utilizing a stream crossing assessment done for the Middle Fork Snoqualmie River Road Project, the Federal Highway Administration improved fish passage at several crossings in the lower Middle Fork segment downstream of Taylor River in association with that project. Several other culvert barriers are shown in a FS online map as having been replaced. Additional passage barriers may exist that have not been identified.

Land Management Allocations and Use

The land management allocations for the proposed corridors of the “wild” segments of the Middle Fork and Pratt River are Wilderness, where the primary objective is to maintain a natural ecosystem by limiting the effects of visitor use on habitat. These segments include Williams Lake and the Chain Lakes in the

headwaters of the Middle Fork Snoqualmie River and the Pratt River mainstem up to lower and upper Melakwa Lakes in its headwaters.

The “scenic” segment of the Middle Fork Snoqualmie River includes several management areas under the Forest Plan, as amended. They are described in the Forest Plan Amendment section of the Proposed Action. Of relevance to Fishery Resources is the Aquatic Conservation Strategy (USDA FS 1994), which is intended to maintain and restore ecosystem health, preventing further degradation and restoring habitat over broad landscapes instead of small watersheds or individual projects. The ACS includes key watersheds and Riparian Reserves that overlay all other land allocations. The Middle Fork Snoqualmie River (including its tributaries) is a Tier 2 Key Watershed important as a source of high-quality water for downstream uses, and Riparian Reserves have special standards and guidelines that direct uses along streams, wetlands, and unstable/potentially unstable areas. The scenic segment of the Middle Fork Snoqualmie River is the most accessible segment to visitors and where most of the dispersed camping and associated impacts to riverbank and riparian conditions have occurred. While paving of NFS Road 56 in recent years has restricted the amount and accessibility to many of the popular dispersed sites in this segment, many areas remain heavily compacted with lingering localized effects to riparian function, and dispersed camping is still allowed.

Environmental Consequences

Direct and Indirect Effects

Alternative 1 - No Change from Current Management

Under the no-action alternative, management of the project area would continue to be guided by the 1990 Forest Plan, as amended, which includes the Aquatic Conservation Strategy. The corridor boundary would be located approximately ¼ mile from the banks of these rivers, with no additional management standards and guidelines established. Dispersed camping would be allowed throughout the corridor. Existing and new impacts associated with recreational use may be addressed and adjusted to meet Forest Plan standards and to not retard or prevent meeting Aquatic Conservation Strategy objectives. As the proposed action does not change the designation of these waters under the Wild and Scenic Rivers Act, proposed water resources projects in or potentially affecting the free-flowing condition or values of the corridor would still require additional evaluation.

Alternative 2 - Proposed Action

Implementing the proposed action would not have any direct effects, and incremental, localized indirect and cumulative effects. The proposed action is administrative, and no ground-disturbing activities are proposed so there would be no direct effects to fishery resources. The proposed action would recommend a permanent boundary and include a Forest Plan amendment to apply MA-28 to all NFS lands within the permanent boundary, and adopt a CRMP to achieve the purposes of the Wild and Scenic Rivers Act.

The proposed change in corridor boundary and new MA standards and guidelines would not result in substantial changes to how fish habitat is managed, and management of fish would remain with the state and Tribes. Forest-wide standards and guidelines would still apply. Key watersheds and Riparian Reserves would not change and would continue to overlap with the new MA-28. Standards and guidelines for the new MA would help manage and protect the free-flowing character, water quality and outstandingly remarkable values. While the most restrictive standards in all areas would apply, existing standards and guidelines of the Forest Plan, as amended, provide protection for fishery resources and guidance for maintaining and restoring aquatic habitat conditions. The additional evaluation triggered by proposed water resources projects in or potentially affecting the free-flowing condition or values of the corridor would be the same as under the no-action alternative where such projects would not be allowed to result in a direct and adverse impact on free-

flowing conditions. Aquatic restoration projects could be proposed to enhance fishery resources as guided by existing management direction and the adopted CRMP.

In the Wild Sections, Pratt River and the upper Middle Fork Snoqualmie River within the Alpine Lakes Wilderness, wilderness management direction would continue to be followed, which includes numeric standards for limits on the amounts of impacts from users.

In the Scenic Section, scheduled timber harvest would not be suitable, but vegetation management would still be an allowable tool to achieve desired riparian conditions consistent with the Aquatic Conservation Strategy. Existing Forest Plan standards and guidelines also call for operation plans of mineral leases to include provisions to maintain streamside banks in a natural condition, and for salable mineral activities to not occur in the bed or banks.

The proposed dispersed camping closure could indirectly result in incremental, localized improvements to riparian function and reduced sedimentation into the Middle Fork and Taylor Rivers. Creation of new riparian recreation sites would be less likely, and existing riparian sites could further be restored by decompacting areas of heavy use, which would allow water to infiltrate and not carry sediments to these rivers, and also allow vegetation to become re-established. Resulting improvements to fish spawning and rearing habitats would not likely be measurable, however. Dispersed camping and its associated effects may shift upriver beyond the closure area. With visitor use analyses completed for the CRMP, recreation and aquatic managers would be better able to assess effects to aquatic resources from recreation and adjust where needed.

Cumulative Effects

Implementation of the proposed action would have incremental, localized indirect benefits to aquatic resources that could cumulatively contribute to any lingering effects from past or ongoing actions, or with reasonably foreseeable future actions that reduce sedimentation or improve riparian conditions in the scenic section of the Middle Fork Snoqualmie River drainage.

Effect Determinations

Federally listed fish and critical and essential habitats

Federally listed fish species, designated critical habitats, and essential fish habitats are not present in the area. The project is also administrative and would have “No Effect” on listed Chinook, steelhead, or bull trout, “No Effect” on designated critical habitats for Chinook, steelhead, or bull trout, and “Would Not Adversely Affect” essential fish habitats for Chinook, coho, or pink salmon.

Viability of management indicator species

The project is administrative and does not include ground-disturbing activities. It would not affect the Forestwide viability of fish MIS. The localized, indirect benefit of the dispersed camping closure would not have a measurable effect to the quality or quantity of habitat for resident rainbow and cutthroat in the Middle Fork Snoqualmie River or lower Taylor River.

Botanical Resources

Existing Condition

Special Status Plant Species

No federally listed Proposed, Threatened, or Endangered plant species, nor suitable habitats for these listed plants are known to occur in the proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP area. Although no Regional Forester's Sensitive plant species are known to occur within the proposed management area, habitat exists for these species to occur.

Several survey and manage botanical species are documented within the proposed boundary of the Middle Fork Snoqualmie and Pratt Wild and Scenic management area. A summary of all rare and uncommon botanical plant species currently documented from the area is shown in Table 13.

Table 13. Rare and Uncommon Plants in the proposed Middle Fork Snoqualmie/Pratt Wild and Scenic River Management Area

Botanical Species	Lifeform	Management Category[1]	Number of Sites
Cetrelia cetrarioides	Lichen	Survey and Manage E	1
Galerina atkinsoniana	Fungus	Survey and Manage B	1
Galerina cerina	Fungus	Survey and Manage B	2
Hypogymnia duplicata	Lichen	Survey and Manage C	1
Platanthera orbiculata	Vascular plant	Survey and Manage C	12
Pseudocyphellaria rainierensis	Lichen	Survey and Manage A	2
Usnea longissima	Lichen	Survey and Manage F	2

[1]Management categories
Survey and Manage categories
Category A – Rare species. Pre-disturbance surveys are practical. The objective of this category is to manage all known sites and minimize inadvertent loss of undiscovered sites. Management direction includes manage all known sites, survey prior to habitat-disturbing activities, and conduct strategic surveys.
Category B – Rare species. Pre-disturbance surveys are not practical. The objective of this category is to manage all known sites and minimize inadvertent loss of undiscovered sites. Management direction includes manage all known sites and conduct strategic surveys.
Category C – Uncommon species. Pre-disturbance surveys are practical. The objective of this category is to identify and manage high priority sites to provide for reasonable assurance of species persistence. Until high-priority sites can be determined, manage all known sites. Management direction includes manage high priority sites, survey prior to habitat-disturbing activities, and conduct strategic surveys.
Category E – Rare species for which status is undetermined. The objective is to manage all known sites while determining if the species meets the basic criteria for Survey and Manage. Management direction includes manage all known sites and conduct strategic surveys.
Category F – Uncommon species for which status is undetermined. The objective is to determine if the species meets the basic criteria for Survey and Manage. Management of known sites is not required; direction is to conduct strategic surveys.

No additional special status plant sites were recorded during targeted field surveys.

Invasive Plants

There are approximately 137 acres of invasive plant infestations currently known from the project area. Documented invasive species include orange eye butterfly bush, Canada thistle, bull thistle, field bindweed, hedge false bindweed, Scotch broom, Indian rhubarb, Robert's geranium, orange hawkweed, meadow

hawkweed, English holly, jewelweed, reed canarygrass, Himalayan blackberry, cutleaf blackberry, tansy ragwort, common tansy, and common periwinkle. Treatment of these species is ongoing, according to species priority and available resources.

Environmental Consequences

All Alternatives: Direct, Indirect, and Cumulative Effects

No direct, indirect, or cumulative impacts are anticipated from either the no action alternative or from the proposed action. No habitat disturbance would occur within the boundaries of the proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers management area, or the Middle Fork Snoqualmie watershed, as a result of the proposed action. No special status plant habitat disturbance is expected from either alternative. Invasive plant populations are not expected to increase or decrease as a result of either alternative. Management for botanical resources including special status plant species as well as invasive plants would remain the same under either alternative.

Potential management actions in the area include river access improvements, including parking expansion, and connector trail. Other future projects could include large woody debris, trail bridges, designation of dispersed camping sites, and restoration or improvement of campsites and toilets. Additional analysis would be completed prior to implementation of these and any other future projects.

Wildlife

Existing Condition

The quality and distribution of wildlife habitat in the proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers (WSR) management area and within the greater Middle Fork Snoqualmie watershed has been shaped in large part by historic timber harvest and associated road building activities that were focused along the lower slopes of the river valleys, along with natural processes that are at work elsewhere within the proposed management area boundary. More than half (54%) of the area in the proposed management area consists of even-aged stands that are between 81 and 91 years old due to timber harvest, with about 1 percent of the area in managed stands between 35 and 51 years old. These types of stands generally do not have the degree of understory development, dead and down wood abundance, and multiple canopy layers typified by older and more diverse naturally-regenerated stands. However, they would generally provide cover and potential for movement for a variety of wildlife species.

Older forests, such as mature, late-successional or old-growth forests, are important to a variety of wildlife species because of the diverse structure that provides for nesting, roosting, and denning structures as well as ample prey. It was estimated that no more than 15 to 20 percent of the total proposed management area consists of these older and naturally-regenerated habitat types. However, there are small pockets of mature and old growth forest and individual old growth trees found scattered among younger forest and deciduous riparian forest, especially along the floodplain as well as in the open forests at higher elevations.

These conifer-dominated forest types are in places broken by, or intermixed with riparian forests and other deciduous forest patches, open shrub fields and avalanche chutes, wetlands, abandoned river channels, small ponds and other water bodies, rock and talus, river bars, and human-made features such as road corridors, trails, and other facilities.

Special Status Wildlife Species

Wildlife species are addressed in several different categories: threatened and endangered species, Region 6 sensitive species, forest management indicator species, and migratory birds. To determine which species

could occur within the analysis area, species occurrence records for the area were checked and the habitat requirements of the species were compared with the habitat present in the analysis area. Table 14 shows wildlife species considered for this analysis.

Table 14. Terrestrial Wildlife Species Considered for the Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers Comprehensive River Management Plan Analysis.

Species or Habitat	Status	Preferred Habitats	Suitable Habitat Present in Action Area	Likelihood of Species Occurring in Action Area
Northern Spotted Owl *(Strix occidentalis caurina)*	Threatened /MIS	Mature, old-growth forests (nesting, roosting, foraging); second-growth used for dispersal	Yes	Likely
Northern Spotted Owl Critical Habitat	Designated	Primary constituent elements (PCE) are defined as forest types that support the northern spotted owl itself (PCE 1), nesting and roosting habitat (PCE 2), foraging habitat (PCE 3), and dispersal habitat (PCE 4)	Yes	Designated
Marbled Murrelet (*Brachyramphus marmoratus m.)*	Threatened	Mature, old-growth forests (nesting, roosting)	Yes	Likely
Marbled Murrelet Critical habitat	Designated	Primary Constituent Elements: Individual trees with potential nesting platforms (PCE-1), and forested areas within 0.5 miles of PCE-1 that have a canopy height of at least one-half the site-potential tree height (PCE-2).	Yes	Designated
Grizzly Bear (*Ursus arctos horribilis)*	Threatened /MIS	Core Security habitat with adequate forage and > 300 m from motorized roads and high-use trails	Yes	Very Unlikely
Gray Wolf (*Canis lupus)*	Endangered /MIS	Security habitat with reliable prey base and > 300 m from road and high-use trails	Yes	Unlikely
Bald Eagle *(Haliaeetus leucocephalus)*	Sensitive/ MIS	Roost, nest habitat and forage areas near lakes, reservoirs, rivers with readily available food source (fish and carrion)	Yes	Unlikely
Common Loon (*Gavia immer*)	Sensitive	Large lakes	No	Very Unlikely
Harlequin Duck (*Histronicus histronicus)*	Sensitive	Swift, moving streams (rivers and creeks), adequate pool habitat for foraging and brooding.	Yes	Likely
Northern Goshawk (*Accipiter gentilis*)	Sensitive	Mature or old forest habitat for nesting	Yes	Likely
Little Brown Myotis (*Myotis lucifugus*)	Sensitive	Conifer and hardwood forests, but also occupies open forests, forest margins, and shrub-steppe clumps of trees in open habitats, cliffs and urban areas	Yes	Likely

Mountain Goat (*Oreamnos americanus)*	Sensitive/ MIS	Habitat of cliffs, isolated rock outcrops, forest cover in winter	Yes	Likely
California wolverine (*Gulo gulo luscus*)	Sensitive	Large expanse of minimally disturbed habitats, persistent snow fields, & reliable prey base.	Yes	Unlikely
Cascade Red Fox (*Vulpes vulpes cascadensis*)	Sensitive	Inhabits the upper forest, subalpine parkland, and alpine areas of the Cascade Range. It is only found in Washington where it has been documented from 2,500 feet but primarily occurs above 4,900 feet.	Yes	Unlikely
Giant Palouse Earthworm (*Driloleirus americanus*)	Sensitive	Native habitat consists of the bunch grass prairies of the Palouse region. The fertile soil consists of deposits of volcanic ash and rich layers of organic matter.	No	Very Unlikely
Broadwhorl Tightcoil (*Pristiloma johnsoni*)	Sensitive	Includes abundant ground cover, conifer or hardwood overstory, and moderate to deep litter	Yes	Unlikely
Shiny Tightcoil (*Pristiloma wascoense*)	Sensitive	Ponderosa pine and Douglas-fir forests at moderate to high elevations	Yes	Unlikely
Western Bumblebee (*Bombus occidentalis*)	Sensitive	A generalist forager and has been reported to visit a wide variety of flowering plants	Yes	Likely
Suckley Cuckoo Bumble bee (*Bombus suckleyi*)	Sensitive	Nest parasites of other species of bumble bee, that depend on these other species to collect pollen upon which to raise their young	Yes	Likely
Johnson's Hairstreak (*Callophrys johnsoni*)	Sensitive	Old-growth coniferous forests; associated with conifer mistletoe (genus Arceuthobium)	Yes	Likely
Melissa Arctic (*Oeneis Melissa*)	Sensitive	Dry tundra, talus slopes, fellfields, rocky summits and saddles, ridges, and frost-heaved clear-cuts; generally occurs above the timberline, which, in Washington, is at about 7,000 to 8,000 ft.	No	Very Unlikely
Valley Silverspot (*Speyeria zerene bremnerii*)	Sensitive	Inhabits windy peaks with nearby forest openings. It is also found in native prairies and grasslands, often tending towards more mesic sites.	Yes	Likely
Beller's Ground Beetle (*Agonum belleri*)	Sensitive	Wetland-dependent species that is restricted to sphagnum bogs in the Pacific Northwest.	No	Very Unlikely
Larch Mountain Salamander *(Plethodon larselli)*	Sensitive/ Survey and Manage	Associated with hardwood logs, leaf litter, and beneath cool and moist rocks and talus.	Yes	Likely

Van Dyke's Salamander *(Plethodon vandykei)*	Sensitive/ Survey and Manage	Associated with hardwood logs, leaf litter, and beneath cool and moist rocks and talus.	Yes	Likely
Puget Oregonian (*Cryptomastix devia*)	Survey and Manage	Mature to old growth conifers with bigleaf maples	Yes	Unlikely
Evening Fieldslug (*Deroceras hesperium*)	Survey and Manage	Perennially wet meadows in forested habitats	Yes	Very Unlikely
Pacific Marten (*Martes caurina)*	MIS	Old-Growth and Mature Forest for denning, resting	Yes	Likely
Pileated Woodpecker *(Dryocopus pileatus)*	MIS	Old-Growth and Mature Forest	Yes	Likely
Primary Cavity Excavators	MIS	Availability of snags and downed Logs	Yes	Likely
Neotropical Migratory Birds	Species of Concern	Vegetation of all successional stages including diverse seral stages, water features and rock/cliff features.	Yes	Likely
Mountain Goat Winter Range (MA-15)	MR	Forested stands, steep rocky cliffs, projecting pinnacles, ledges, talus generally tree-line and below.	Yes	Designated
Elk (*Cervus canadensis*)	Local Species of Concern	Early-successional habitats for foraging, forested areas for cover and snow interception.	Yes	Likely
Columbian Black-tailed Deer (*Odocoileus hemionus columbianus*)	Local Species of Concern	Forested areas with understory forage, small openings, and cover.	Yes	Likely
Beaver (*Castor canadensis*)	Local Species of Concern	Riparian areas, floodplains, & wetlands with vegetation for food and construction materials.	Yes	Likely

There are federally-listed wildlife species that are known to occur or have the potential to occur based on available habitat within the proposed management area. These four species, two of which also have Designated Critical Habitat, are briefly described below.

Northern Spotted Owl

There are no documented spotted owl sites within the proposed boundary. However, there are three historic spotted owl sites with home ranges that would potentially overlap with the proposed boundary. One of those sites core use area likely overlaps with the proposed boundary as well. Spotted owl home ranges in the Western Cascades are approximated by a 1.8 mile radius circle, and core areas are approximated by a 0.7 mile radius circle. Suitable habitat for the northern spotted owl largely consists of mature and old-growth habitat used for nesting, roosting foraging, and dispersal (Thomas et al 1990). Dispersal habitat, at a minimum, consists of stands with adequate tree size and canopy closure to provide protection from avian predators, and at least minimal foraging opportunities (57 FR 1805, January 15, 1992). It is normally defined as stands on average of 11 inches dbh, with canopy cover between 40 and 60 percent (Thomas et al. 1990).

The Regional spotted owl habitat model estimated that the proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP area contains approximately 1,949 acres of suitable nesting, roosting and foraging habitat (17% of WSR) and 4,638 acres of dispersal habitat (40% of WSR), with the balance of area being considered as non-habitat for the species. The even-aged managed stands within the proposed management area generally would be considered dispersal habitat. Although the older (81-91 year old) managed stands have trees exceeding 20 inches dbh, they do not typically have the elements of structural complexity that

characterize nesting, roosting, or foraging habitat. Exceptions to this can occur when legacy elements (large snags and logs and individuals old-growth trees, etc.) remained in the stand after harvest or where disease or other natural events created pockets of mortality.

Northern Spotted Owl Designated Critical Habitat

The proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP area contains approximately 4,386 acres of designated critical habitat for the northern spotted owl within Unit 4, West Cascades North subunit 2 (WCN-2). The amount of designated critical habitat within the proposed management area represents approximately 4 percent of the total acres in WCN-2. This subunit has a key role in maintaining connectivity between northern spotted owl populations, both north to south in the West Cascades and west to east between the West and East Cascades units (USDI 2012). Primary constituent elements (PCE) are defined as forest types that support the northern spotted owl itself (PCE 1), nesting and roosting habitat (PCE 2), foraging habitat (PCE 3), and dispersal habitat (PCE 4) (USDA 2012).

Marbled Murrelet

There were four historic detections of marbled murrelets within the proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP area, and three additional detections within 0.25 mile of the proposed boundary. Marbled murrelets typically nest in forests containing old-growth characteristics, with important attributes including the presence of nesting platforms, adequate canopy cover over the nest, larger patch size of mature forest, and being within commuting distance to the marine environment (Raphael et al 2018). Very little suitable marbled murrelet nesting habitat is present within the proposed management area. The Regional marbled murrelet habitat model estimated that there were only about 628 acres of suitable nesting habitat for the marbled murrelet, which represents only about 5 percent of the proposed management area. In general, the larger proportion of marbled murrelet nesting habitat remaining in the watershed is on the slopes above and outside of the proposed boundary, especially in the upper reaches of the Middle Fork Snoqualmie River (USDA 1998).

Marbled Murrelet Designated Critical Habitat

The proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP area contains approximately 4,557 acres of designated critical habitat for the marbled murrelet within unit WA-10-c (USDI 2016). The amount of designated critical habitat within the proposed management area constitutes approximately 18 percent of WA-10-c. The primary constituent elements of marbled murrelet critical habitat include: 1) individual trees with potential nesting platforms, and 2) forested areas within 0.8 kilometers (0.5 miles) of individual trees with potential nesting platforms, and with a canopy height of at least one-half the site-potential tree height (USDI 2016).

Grizzly Bear

The proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers CRMP area is within the North Cascades Ecosystem (NCE) Grizzly Bear Recovery Zone (USDI 1993, 1997b). The proposed management area is within the Snoqualmie Bear Management Unit (BMU), and contains only about 1,010 acres of area identified as core habitat. This represents only about 2 percent of the total core acres in this BMU. The presence of motorized roadways and associated human activities are factors that can contribute towards lowering habitat quality for grizzly bears (McLellan and Shackleton 1988). A lack of verifiable grizzly bear detections in Washington in the past 10 years suggests that there are no resident populations or individuals currently occupying the Washington portion of the NCE Recovery Zone (Lewis 2018). There are no recent records of known grizzly bear activity within the project area or surrounding watershed.

Gray Wolf

There is no documented gray wolf pack activity within the proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers management area and surrounding watershed. There have been unverified reports in the proposed management area, as well as a documented mortality along I-90 near North Bend, WA. Wolves can disperse several hundred miles or more (WDFW et al. 2017, WDFW et al. 2018). Therefore, the analysis area is well within the dispersal capability of the nearest established packs in Eastern Washington. Wolves can occupy a variety of habitat types provided that they have an adequate prey base (Fuller 1989, Haight et al. 1998). Wolves generally select den sites based on specific habitat features within the immediate vicinity (within 110 yards) of a den, such as proximity to freshwater, and prefer locations away from roads and human activity (Person and Russell 2009). Security habitat for wolves is often related to road density since studies have shown that there is a negative correlation between road density and suitable wolf habitat (Thiel 1985, Mech et al. 1988, Mladenoff et al. 1995).

Other Special Status Species

There are a variety of species on the 2019 Regional Forester's Sensitive Species list for the Pacific Northwest Region that are documented or suspected to occur on the MBS, and a subset (10) of these have a greater likelihood of occurrence within the proposed Middle Fork Snoqualmie/Pratt Wild and Scenic River management area based on documented range, habitat preferences, and other factors (Table 14). Designation as a "sensitive" species means that these species are given special management consideration to ensure their continued viability on National Forest lands.

One of these sensitive species, the mountain goat, also has a special Management Area allocation (MA 15) to protect winter range that overlaps with a portion of the proposed management area boundary along the Taylor River. Mountain goat populations state-wide have declined relative to estimated historical levels, although a few populations are improving, and recent translocation efforts were aimed at improving goat populations in the Cascades (WDFW 2019). Increasing recreational human use and disturbance of alpine habitat have the potential to impact mountain goats (WDFW 2019). In general, the higher elevation or alpine habitat in the proposed management area is limited to the upper headwaters of the Pratt River and Middle Fork Snoqualmie River.

Habitat for all four Survey and Manage Species is presumed to be present within the proposed management area, although the two mollusk species are not expected given that they have not been detected on the MBS despite years of surveys. Habitat for all of the MBS Forest Plan Management Indicator Species is believed to be present in the proposed WSR boundary, although not all are likely to occur in the area due to rarity, lack of adequate prey resources or other factors. The variety of habitat types present within the proposed management area provides seasonal habitat for a variety of neotropical migratory bird species as well as year round resident species.

Deer and elk are two additional species present in the watershed that have great recreational, aesthetic, spiritual, and subsistence values to residents of western Washington. The elk population in game management unit (GMU) 460 is considered to be growing, though elk in the Middle Fork Snoqualmie River watershed are believed to primarily occur in small groups (WDFW 2019a). Residential and commercial developments and agriculture have an influence on elk distribution in GMU 460 (WDFW 2019a). Local managers believe that populations of black-tailed deer within the management zone that includes GMU 460 are stable, which is supported by consistent long-term harvest rates (WDFW 2016, WDFW 2017b, WDFW 2019b). Natural succession, reduction in timber harvest, and human encroachment, have reduced deer habitat in Western Washington as a whole, although timber production in GMU 460 creates a mosaic of seral stages used by deer (WDFW 2019b).

The availability, abundance and quality of forage are important factors influencing the productivity of deer and elk populations. Elk reproductive rates and survival are influenced by home range quality and nutrition (Cook et al. 2004, Hutchins 2006). Models to evaluate elk habitat have been developed and validated by researchers and include elk nutrition and elk habitat use components (Rowland et al. 2018). Productive forage areas for elk are in natural openings or managed stands generally less than 20 years old. Small openings and structural heterogeneity within and between stands are also beneficial to black-tailed deer (Nelson et al. 2008). The type of even-aged, managed stands that comprise more than half of the proposed WSR area typically have a dense canopy cover that does not allow for a high volume of preferred forage species.

Both species are susceptible to disturbance or direct mortality associated with vehicle access. For example, a high density of roads can lead to increased disturbance from legal hunting and poaching (CEMG 1999, McCorquodale et al. 2003), and avoidance of roaded areas (Montgomery et al. 2012). This suggests that vehicle traffic on Forest Service Road 56 along the valley bottom in the Middle Fork Snoqualmie watershed could create disturbance impacts for deer and elk under existing conditions.

Closing roads to vehicle access can result in a notable reduction in disturbance to elk (Witmer and deCalesta 1985) and has also been suggested to reduce road-related effects to black-tailed deer (Nelson et al. 2008). Therefore, past management actions (i.e., Revised Middle Fork Snoqualmie ATM; USDA 2005) which reduced the amount of open roads in the watershed likely benefitted deer and elk. However, in some cases, the reduction in open road density in the watershed coincided with conversion of those former roads into hiking or mountain biking trails (USDA 2005), which still have the potential to create impacts.

Deer and elk may move away from an area or ceasing feeding areas while recreationists are present. Naylor et al. (2009) and Wisdom et al. (2018) found that elk response to ATV riding was greatest, followed by mountain biking, with comparatively lower responses to hiking and horseback riding. Taylor and Knight (2003) found that deer moved away from mountain biking or hiking relatively equally and responded more strongly to recreational traffic that was outside of established trails. The presence of dogs with recreationists has also been found to have a disturbance effect on wildlife such as deer, and the response can be greater than when the humans are not accompanied by dogs (Miller et al. 2001, Lenth and Knight 2008).

Taken in combination this suggests that under existing conditions, there is a higher potential for disturbance and displacement of deer and elk related to vehicles and recreation along the Middle Fork of the Snoqualmie River where both the open road and trails parallel the river, often on both sides. Fewer recreation-related impacts would be expected along the Pratt River and upper reaches of the Middle Fork Snoqualmie River where there are no drivable roads open to the public, but where trails are still present. The even-aged managed stands that surround some of the trails are not likely to provide extensive foraging opportunities which could reduce the extent of the disturbance impacts in those areas. Under current conditions, the fewest recreation-related impacts would be expected in higher elevation areas of the watershed outside of the WSR or other areas that are further away from roads and trails, especially where there are natural openings that provide forage for deer and elk.

While there is a Forest Plan MA allocation for deer and elk winter range (MA 14) in the lower Middle Fork Snoqualmie River watershed, it is wholly outside of the proposed Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers management area. Habitat improvement including forage enhancement is encouraged in MA-14, which would provide forage enhancement opportunities in the Middle Fork watershed outside of the WSR boundary. The MA 14 would not be impacted by the proposed action.

Beaver have been viewed as an important partner in stream, wetland, and floodplain restoration (Pollock et al 2015). Tribal entities have translocated beaver into the watershed to augment existing numbers in an effort to improve water quality conditions. Beaver impoundments can increase water retention and base flows,

decrease peak flows, expand habitat area and complexity, increase wetland area, increase groundwater recharge, retain sediment, moderate temperature, and influence nutrient cycling and geomorphology (Various authors as cited in Pollock et al 2015). This can have a positive influence on the density, distribution, species composition, and abundance of invertebrates, fish, plants, amphibians, reptiles, birds and mammals (Baker and Hill 2003). Managing for larger beaver populations that create functional wetlands that store water and regulate runoff has been suggested as a climate change adaptation tactic (Lawlor et al 2014).

Environmental Consequences

Alternative 1 - No Change from Current Management

Implementation of Alternative 1 is not expected to have any direct, indirect or cumulative effects on the federally-listed threatened and endangered species, Region 6 Sensitive Species, Northwest Forest Plan Survey and Manage Species as well as Protection Buffer Species, Management Indicator Species, Neotropical Migratory Bird Species, Management Area 15 (MA-15) Mountain Goat Winter Range, and local species of concern that are listed in Table 14. The current management structure does not, by itself, authorize any specific actions that would cause any modification or removal to the habitat of these species nor would it cause direct mortality or disturbance effects to these species. The standards and guidelines from the 1990 Forest Plan (USDA 1990) that provide protections to wildlife species and their habitats (e.g., 4-124, 4-127) and all applicable Management Area prescriptions would still be applicable under this alternative.

Alternative 1 would not have any direct or indirect effects on the wildlife species listed in Table 14, therefore it would not add incremental or substantive cumulative effects on any of these species.

Alternative 2 - Proposed Action

Direct and Indirect Effects

Implementation of the proposed action is not expected to have any direct, indirect or cumulative effects on the federally-listed threatened and endangered species, Region 6 Sensitive Species, Northwest Forest Plan Survey and Manage Species as well as Protection Buffer Species, Management Indicator Species, Neotropical Migratory Bird Species, Management Area 15 (MA-15) Mountain Goat Winter Range, and local species of concern that are listed in Table 14.

The proposed action identifies a corridor along the Middle Fork Snoqualmie River and Pratt River and does not fundamentally change management of these species or their habitats. The change in dispersed campsite management would not impact these wildlife. Forest-wide standards and guidelines from the 1990 Forest Plan (USDA 1990) that provide protections to wildlife species and their habitats (e.g., 4-124, 4-127) would still be applicable to the proposed Wild and Scenic River corridor under this alternative. Overall management and protection of wildlife species and their habitats would not fundamentally change.

The proposed action does not authorize any actions that would modify, degrade or remove the suitable habitat of the spotted owl and marbled murrelet, spotted owl dispersal habitat, affect the primary constituent elements of the critical habitat of these two species, or create disturbance effects to suitable habitat. The proposed action does not authorize road or trail building activities that would affect grizzly bear core habitat, affect grizzly bear or wolf food and denning resources, or cause disturbance effects for the grizzly bear and gray wolf.

The proposed action would not authorize any actions that would directly or indirectly impact the other special status species. The proposed action would not impact the habitat of or cause disturbance to Region 6 Sensitive species and therefore would not result in a loss of population viability or cause a trend toward federal listing. The proposed action would not authorize any activities that impact the habitat of Survey and

Manage species, therefore pre-disturbance surveys are not required. Northwest Forest Plan Protection Buffer Species would continue to receive protection for special sites. The proposed action would not authorize any activities that would impact the habitat of MIS. Therefore, it would not contribute to a negative trend in the viability of these management indicator species on the Forest.

Under the proposed action, provisions from the current management area prescriptions for MA 15 (Mountain Goat Winter Range) are accommodated within new guidelines for the proposed action. Guideline number 4 would ensure that no new road construction would occur within 1,500 feet of key mountain goat habitat features near the Taylor River, and also discourages trails and campsites within this same distance. Key habitat features characteristically contain diverse vegetation including mature and old growth stands, steep rocky cliffs, projecting pinnacles, ledges and talus slides winter range is generally at lower elevations (tree-line and below) than summer habitat. There is also a restriction on motorize use in this area between October 31 and June 15. This is an important conservation measure since typical populations of mountain goats are sensitive to human disturbance (Festa-Bianchet and Côté 2008). The language in this guideline is the same as the current Management Area prescription for MA-15 (USDA 1990), and would therefore afford the same level of protection to this important winter range area.

The proposed action does not authorize any activities that would impact deer or elk. The MA 14 deer and elk winter range area that is in the lower Middle Fork Snoqualmie River watershed is wholly outside of the proposed Middle Fork Snoqualmie/Pratt Wild and Scenic River management area. The ability to manage this land allocation or the benefit of deer and elk habitat would not be impacted by the proposed action. Likewise, standards and guidelines would continue to protect riparian areas important to beaver, and the proposed action would not authorize any activities that would build roads in riparian areas, remove riparian vegetation or cause other negative impacts to beaver. The proposed action would not preclude the ability for wildlife management agencies and tribal partners to continue translocation efforts of this ecologically important species.

Potential management actions in the area include river access improvements at Bridgeview. Additional analysis would be completed prior to implementation of this and any other future projects.

Cumulative Effects

The proposed action would not have any direct or indirect effects on the federally-listed threatened and endangered species, Region 6 Sensitive Species, Northwest Forest Plan Survey and Manage Species as well as Protection Buffer Species, Management Indicator Species, Neotropical Migratory Bird Species, Management Area 15 (MA-15) Mountain Goat Winter Range, and other local species of concern. Therefore it would not add incremental or substantive cumulative effects on any of these wildlife species.

Scenic Resources

Scenery is often integral to a community's sense of place and quality of life. The benefits of natural appearing scenery can be social, economic, and, when managed to perpetuate healthy resilient landscapes, contribute to ecological sustainability. Scenery is also an important component of recreation settings and can influence visitor's recreation experiences.

Existing Condition

Forest Service policy requires that the agency inventory and manage scenic resource values on all acres of Forest Service managed public lands. The Scenery Management System (SMS) represents the agency's latest science in fulfilling its legal requirements for managing scenic resources.

The management direction for scenic resources of the existing condition (1990 Forest Plan) utilizes Visual Quality Objectives (VQO) as defined by the Visual Management System (VMS). The management direction for scenic resources of the proposed management area utilizes Scenic Integrity Objectives as defined by the SMS. While the terminology has changed the concepts are the same. Table 15**Error! Reference source not found.** is a crosswalk between the two system's terminologies.

Table 15. **Terminology crosswalk between Scenery Management and Visual Management Systems**

Visual Management System Visual Quality Objectives	Scenery Management System Scenic Integrity Objectives	Scenic Integrity
Preservation	Very High	Unaltered – landscapes where the valued landscape character is intact with only minute if any deviations.
Retention	High	Appears Unaltered – landscapes where the valued landscape character "appears" intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common in the landscape so completely that they are not evident.
Partial Retention	Moderate	No Slightly Altered – landscapes where the valued landscape character "appears slightly altered". Noticeable deviations must remain visually subordinate to the landscape character being viewed.
Modification/Maximum Modification	Low/Very Low	Moderately to Heavily Altered – landscapes where the valued landscape character "appears moderately to heavily altered." Deviations may begin to dominate the valued landscape character

The scenic character description for the designated sections of the Middle Fork Snoqualmie and Pratt Rivers are detailed in the 2018 river values report located in the project record. The following is a brief description of the existing scenic integrity for the river sections, as documented in the field (September, 2018).

Wild Section Middle Fork Snoqualmie River

The existing scenic integrity is Very High. The entire wild section of the Middle Fork Snoqualmie River is located in the designated Alpine Lakes Wilderness. Evidence of man is limited to trail, trail structures and dispersed camping sites. Some evidence of mining exists but is historic in nature. The remote setting maintains a sense of solitude and primitive America.

Scenic Section Middle Fork Snoqualmie River

The existing scenic integrity is High. The scenic section of the Middle Fork Snoqualmie River has active patented mining claims in its upper corridor. Periodic blasting is reported as a part of the mining operations. Starting from Hardscrabble Creek, the road is directly adjacent to the river for the entire corridor. In some places, it is located above the elevation of the river, but it is often in the river's floodplain. Armoring, such as rip rap, is evident as well as other road infrastructure such as culverts. The road becomes paved after the Taylor River confluence.

Former widespread logging is evident. Stream structure lacks large wood and has lost habitat complexity. The forest has recovered but is mostly even-aged, dense, and similar size classes, with few large trees. From certain vantages, such as gravel bars downstream from Taylor River, active timber management is evident on low forested mountains to the northwest, outside the river corridor boundary.

Recreational facilities are features valued by recreating visitors. For the most part modifications add favorably to visual variety, while promoting visual harmony.

Wild Section Pratt River

Existing scenic integrity is Very High. Evidence of historic logging is the only ostensible cultural modification. Coniferous forest is second growth with even aged and even size-class stands. Forest is thick and uniform due to this widespread disturbance and is recovering. Mountain Hemlock and other select stands were not cut and remain as old growth. The loss of large wood to recruit into the stream is likely to have lingering effects on channel morphology (see hydrology report for more information).

Today the Pratt is located in the Alpine Lakes Wilderness. Recent evidence of man is limited to trail, trail structures and dispersed camping sites. The remote setting and narrow, incised valley maintains a sense of solitude and primitive America.

Environmental Consequences

Alternative 1 - No Change from Current Management

There are no direct, indirect, or cumulative effects to scenic resources from this alternative. Standards and guidelines from the existing Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan would continue to be applied to the Middle Fork Snoqualmie and Pratt Rivers without any changes.

Alternative 2 - Proposed Action

Management Area 28 (MA-28)

The proposed action includes the addition of a new management area (MA-28) that would apply to the Middle Fork Snoqualmie and Pratt Wild and Scenic River corridors, as defined by the final adopted river boundary. The 2012 planning rule requires establishing management direction for scenic resources under the Scenery Management System. Under the shift to the SMS. The proposed action includes guidelines in the new MA-28 that applies visual objectives that are consistent with new management direction under SMS (Guideline 5).

Management activities should minimize visual disturbances and be consistent with or move the area toward achieving scenic integrity objectives, as defined by the corresponding river classification.

- In wild river sections with very high scenic integrity objectives, the scenic character should have only minor, if any, deviations. The areas should appear unaltered and the majority of the area should be dominated by ecological changes.

- In scenic river sections with high scenic integrity objectives, the scenic character should appear intact but may include deviations that are not evident (e.g., completely repeat the scenic attributes of size, shape, form, line, color, texture, or patterns common to the scenic character).

While the shift in terminology between the VMS and SMS changes, the direction of management for scenery does not. There is no difference between the alternatives.

Change to the river corridor boundary

The change in the boundary would also not have an effect to management of scenery.

Dispersed camping closure

There would be an expected improvement to scenic integrity with the closure of dispersed camping. Scenic effects typical of dispersed camping, such as the presence of trash, human waste, trampled vegetation and invasive species would be expected be eliminated or at least diminish in intensity. The closure would be along the lower portion of the Middle Fork Snoqualmie scenic section where the scenic integrity objective is high (visual quality objective of retention). The effects of the closure would be consistent with this scenic integrity objective.

Cumulative Effects

The proposed action is administrative, and no ground-disturbing activities are proposed, therefore there would be no incremental or substantive cumulative effects to scenic resources from either alternative.

Recreation

Existing Condition

Diverse recreation opportunities exist both on and next to the river corridor, including: whitewater rafting and kayaking, fly fishing, swimming, picnicking, horseback riding, hiking, backpacking, camping, mountain and road biking, and hot spring soaking. Sights and sounds of the river features prominently in the recreation experience even for those activities that are not dependent upon the water. Recreation access in the valley has transformed recently since the paving of NFS Road 56 to the Taylor River, reducing travel times to the corridor, and allowing low clearance vehicles easy access to the valley. It has also made the valley easier to patrol for education and enforcement purposes.

Middle Fork Snoqualmie River Corridor

River Recreation

River kayaking and rafting is a relatively low use activity within this area. Use is generally low to moderate during high spring flows along the section beginning near the Middle Fork Snoqualmie Trailhead at the site known informally as “Bridgeview”, to the concrete bridge located near the end of the proposed corridor boundary. This section of river contains various class II rapids and is suitable for beginner levels, making it a unique opportunity in the region for novice paddlers to experience whitewater recreation. Currently there is no designated put-in point for kayaks or rafts along this section of river. Most boaters will use the Bridgeview site parking area along the road located about 600 feet south west of the Middle Fork Snoqualmie Trailhead to access the river. Recreational boating use is rare along the river upstream of the Middle Fork Snoqualmie Trailhead due to its technical difficulty.

Fishing is a relatively popular activity along the river corridor, especially where there are designated areas to park. The Middle Fork Snoqualmie offers opportunities for catch-and-release fishing for game fish year-round, including cutthroat trout.

Swimming is a common activity, especially at popular access points such as the confluence with the Taylor River, Camp Brown, and various river access points along trails and roads. This type of use is most common in the summer because the river stays relatively cold throughout even the hottest months.

Wilderness and Trails Recreation

Wilderness and WSR designations share similar legislative intent and are generally seen as compatible. The Dutch Miller Gap Trail #1030, and Pratt Connector Trail #1003, within the corridor, access the Alpine Lakes Wilderness (ALW).

The Dutch Miller Gap trail #1030 is a 14.9-mile hike that begins at the Dingford Creek Trailhead. The initial 7 miles of the trail are located on a roadbed that are still utilized as a road by Goldmyer Hotsprings caretakers as well as various miners who hold existing claims in the area. At approximately the 4.5-mile mark is a turnoff to the Goldmyer Hot Springs, which is on private land. Goldmyer Hot Springs is the destination for the majority of visitors who travel on this trail. At the terminus of this roaded section is an old horse camp which receives light overnight camping use. From this point the trail becomes a traditional single-track trail, entering the Alpine Lakes Wilderness (ALW) at mile point 8.1 and continues on to the headwaters of the Middle Fork Snoqualmie River to a mountain pass known as Dutch Miller Gap. This trail is located entirely within the river corridor. The river is an integral aspect of the trail experience. Camping areas along the trail include Pedro Camp and Williams Lake via the Williams Lake trail #1030.1. Camping use at these sites are low. For the intrepid backcountry traveler, Chain Lakes offers an off-trail experience that begins at Williams Lake and leads to a granitic landscape with various closed mines to explore as well as a web of small lakes known as the Chain Lakes. The trail is open to hikers, stock and bicycles for the first 7 miles, and then open to hikers and stock beyond the old horse camp. Stock are not permitted on the Williams Lake Trail.

The Pratt Connector Trail #1035 begins at the Middle Fork trailhead. The trail is open to hikers and equestrians. Current use on this trail is low to medium depending on the time of year.

The Middle Fork Trail #1003 is a popular hike that is open to hikers as well as stock and mountain bikes during the summer months. This trail has experienced various landslides over time due to the unique soil composition in the area, resulting in temporary closures. The trail has two creek fords along the middle section of the trail (Dingford Trailhead to the Goldmyer Hot Springs). The first ford is at Thunder Creek (approximately 9.0 mile mark) and the second at Burntboot creek (approximately 10.0 mile mark). At about the 10.3 mile mark the trail reaches the popular destination of Goldmyer Hot Springs, located on private land.

The Middle Fork Connector Trail #1002.3 and the Middle Fork Nature Trail are both short trails that receive low use throughout the year and are mostly used by visitors who camp at the Middle Fork Campground, and who park at the Middle Fork trailhead and want a longer hike to access the Garfield Ledges trail (Garfield Ledges trailhead is within the river corridor, however the trail is located outside of this project area).

Camp Brown Nature Trail #1008

Construction on this trail was started in 2019 and is anticipated to be completed by November 2020. The trail is less than a half mile loop that is rated for ADA access. It is planned to include various picnic sites as well as interpretive panels placed along the trail. The trail will include ADA access to the river bar as well. This area would be designated day use only.

Recreation Activities in the Middle Fork Snoqualmie Valley

According to a visitor survey conducted in the Middle Fork Snoqualmie Valley in 2018 by the University of Washington, hiking was the most popular activity in the valley, with almost 30% of visitors engaging in this activity during their visit. Among the most popular trail destinations was the Middle Fork Snoqualmie Trail and the Pratt River Trail. Hiking is a primary activity for visitors within the valley. However, visitors

participate in a wide variety of recreational activities in the Middle Fork Snoqualmie valley. These activities will be discussed in further detail below.

Dispersed Camping

In 2012 a wilderness campsite inventory was conducted on all wilderness area on the forest including the project area. This survey was conducted in support of a standard agency-wide wilderness stewardship metric required of all wilderness areas on a rolling basis. In an effort to gain additional field data in preparation for wild and scenic river planning, a 2017 survey of dispersed sites within the river corridors was conducted that included areas outside of the wilderness boundary. This section will describe conditions of dispersed sites surveyed in 2012 and 2017 that are located within the wild and scenic river corridors.

Dispersed Roadside Camping

The 2017 survey detected approximately 65 dispersed sites along NFS Road 56 and NFS Road 5640. Data collectors summarized impacts to sites by analyzing tree damage, ground disturbance, litter, human waste, campfires and distance to water. From this data, a 'total impact rating' was generated. The majority of dispersed sites, as well as the most negative resource impacts, were observed at the road segment between the Camp Brown trailhead, to the bottom of a segment of NFS Road 56 known as 'Hell Hill', located about 2 miles west of the Garfield Ledges trailhead, including NFS Road 5640. This area has been the most popular area to disperse camp due to convenient road access as well as views of the river. Unburied human waste was commonly observed in these areas as well as litter and extensive tree damage. Another notable dispersed site includes the Pratt River Bar, where visitors park at a small designated parking area and hike a short distance to various impacted sites on the river bar.

There have been two major development projects since the 2017 survey which have resulted in limiting dispersed camping at two high impact sites. These sites are the Camp Brown trailhead, and the Garfield Ledges trailhead. Both of these sites have or are being formally developed into picnic/day use hiking areas, eliminating dispersed camping use. Besides those two sites however, dispersed roadside camping remains a popular activity within the Middle Fork Snoqualmie River wild and scenic river corridor.

Backcountry (Trail) Dispersed Camping

The 2012 Wilderness Campsite inventory detected 32 sites along the wilderness section of the Dutch Miller Gap trail (Figure 7). Pedro Camp and Williams Lake contained the highest concentration of campsites. Overall impact ratings at these sites were low, with no human waste found, and very little litter. The 2017 dispersed site survey revealed 4 campsites on the Pratt Connector trail across the river from the Pratt Bar. Human waste was found at two of the sites and litter was found at each site.

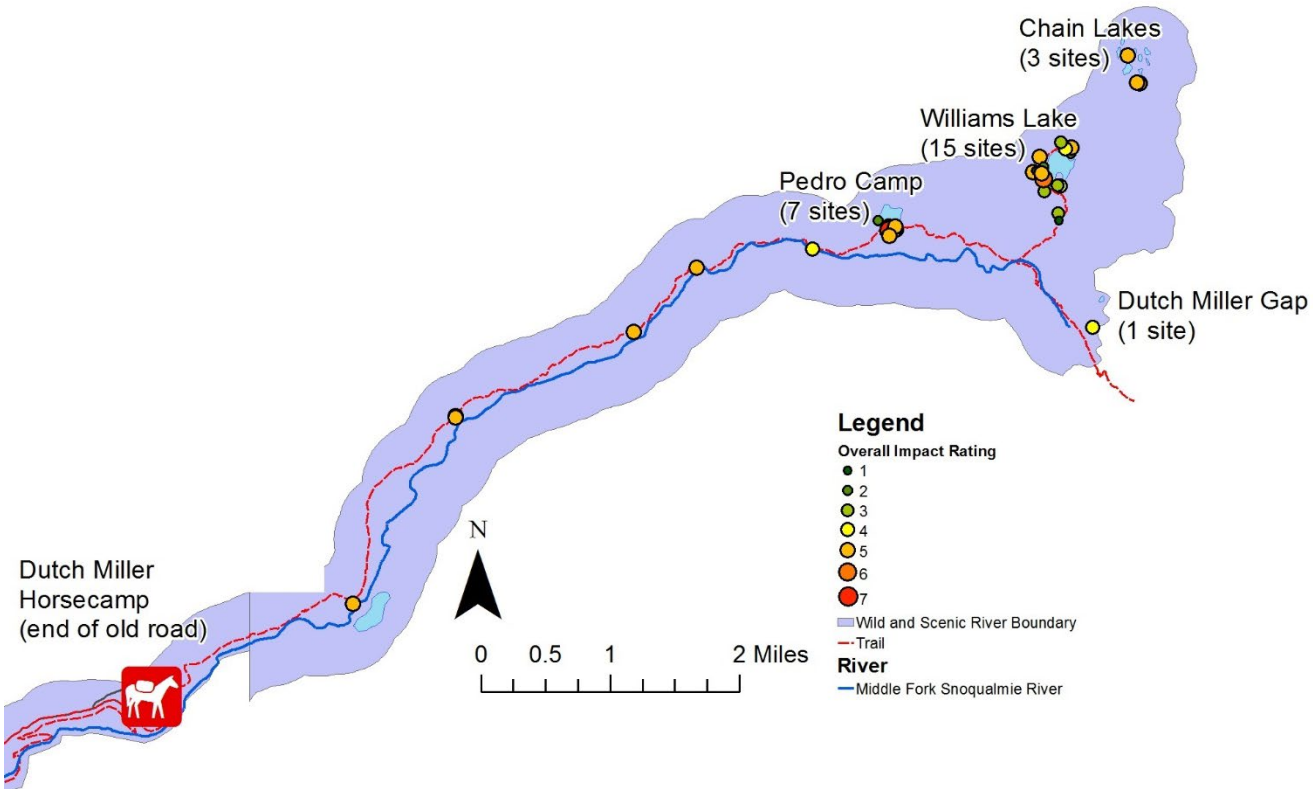


Figure 7. 2012 Wilderness campsite inventory

Outfitter guides and Recreation Events

Various events have been held in the Middle Fork Snoqualmie corridor during the summer months. The Middle Fork Trail Run has been a single day, annual event that hosts up to 200 participants and spectators. The race typically occurs on the Middle Fork Trail, sections of NFS Road 56 and the CCC trail. A National Public Lands Day event hosted by REI occurs on trails and facilities around the Middle Fork trailhead, much of it within the river corridor. This event typically hosts about 300 participants and occurs on National Public Lands Day near the end of September.

There are also infrequent special use permits issued to allow commercial rafting on the Middle Fork Snoqualmie River. The permit requests involve floating from Bridgeview to the concrete bridge downstream of the terminus of the wild and scenic river boundary. These permits have been issued on an annual basis.

There are occasional request for commercial filming in the area. The Middle Fork Gateway Trail Bridge is a popular location for commercial filming, located at the beginning of the Middle Fork Snoqualmie Trail.

Other Recreation Uses

The Goldmyer Hot Springs, located on private land, is a popular destination year-round and is commonly fully booked for many weeks during the summer. It is accessed via a 5-mile hike upriver on either the Dutch Miller Gap trail, or the Middle Fork trail beginning at the Dingford trailhead. The hot springs are privately owned and operated and allow 20 visitors per day through a required reservation system.

Picnicking use is relatively low in the valley, as evidenced by the 2018 survey which found that less than 5% of visitors engaged in this activity. There are various developed opportunities for picnicking in the river corridor. The Camp Brown nature trail includes three picnic areas for large groups or multiple small groups

and is anticipated to be a popular destination once construction is completed due to the family friendly nature of the trail and scenic location. Another picnic area is accessed from the Middle Fork trailhead by a short path that leads to an old growth stand and a river bar at the Taylor River. Another picnic site is located at the newly constructed Garfield Ledges trailhead which has multiple picnic sites next to the Taylor River as well.

Road biking is a commonly observed activity in the valley. There is no shoulder on the road and minor conflicts between cyclists and vehicles have been reported. Mountain bikers also are known to ride the gravel section of NFS Road 56 from the Taylor River to the Dingford trailhead and then ride the Middle Fork Trail back to their vehicle to complete a loop.

Off-Highway Vehicle Use

There are no designated areas for off-highway vehicle (OHV) use in the river corridor. Illegal OHV use in the valley has rarely been documented since the road paving was completed in 2018.

Winter Use

Winter recreation in the river corridor is intermittent and is dependent on snow falling in the lowlands. Since the majority of the NFS Road 56is below 1,500 feet elevation, snow is an infrequent sight during the winter. The road is not plowed in the winter so when it does snow, visitors will snowshoe or cross-country ski along the road. When there is a lot of snow on the road, King County will close the road to vehicles in order to prevent search and rescue events that can occur when vehicles travel up the valley and get stuck. When NFS Road 56 is snow free during the winter the river corridor will receive low to moderate recreation use due to its accessibility and relatively snow free lowlands hikes available.

Pratt River Corridor

Although the Pratt River Trail #1035 offers access to recreational opportunities within the river corridor for both stock and hikers, the trail for the most part is out of sight and sound of the river and therefore recreation does not meet the basic criteria of river-dependent and therefore is not an outstandingly remarkable value for the Pratt Wild and Scenic River.

River Recreation

River recreation on the Pratt River is low. The river is mostly comprised of class IV rapids and running it by kayak requires a significant portage. Some swimming may occur along various sections of the Pratt River trail that allow access to the river, but for the most part the trail is far enough from the river where access is difficult.

Wilderness and Trails Recreation

The Pratt River Corridor is almost entirely within the ALW except for a small section on the Pratt Bar. Wilderness and WSR designations share similar legislative intent and are generally seen as compatible. There are four trails within the Pratt River corridor.

The Pratt River Trail #1035 extends approximately 9.2 miles from the end of the Pratt Connector trail, up the Pratt River Valley, crossing the Pratt River at 7 miles and meandering on a primitive path to Pratt Lake. The trail seldom provides access to the Pratt River as it stays above and parallel to the river up the valley. Hikers and equestrian users are permitted on this trail and overall use on this trail is relatively low.

The final ¼ mile of the 4.4 mile-long **Denny Creek Trail #1014** (hiker only) is located within the proposed boundary and leads to Melakwa Lake, the most visited area within the proposed Pratt River WSR corridor. Both this trail and the **Melakwa Lake Trail #1011** (hiker only) lead to Melakwa Lake, but the Denny Creek trail is the more popular access point. In 2012 the Forest Service conducted a standardized wilderness site

condition survey at Melakwa Lake. The survey found 14 sites. No human waste was discovered, and minimal litter was found. The lake has two pit toilets that are managed seasonally by backcountry rangers.

The **Kaleetan Lake Trail #1010** (hiker only) begins at Lower Tuscohatchie Lake and climbs to Windy Lake before descending to Kaleetan Lake. This is a low use area due to its remote nature. The trail intersects the proposed Pratt River corridor boundary shortly after it begins and exits the boundary at about the 1.25 mile mark. This is a remote area and receives low recreation use.

Outfitter guides and Recreation Events

There are and have been no permitted outfitter guides or recreation events in this area.

Winter Use

Visitor use in the winter is low and consists of snowshowing or hiking on the Pratt River trail, or occasionally up to Melakwa Lake via the Denny Creek trail. Traveling to Melakwa Lake in the winter requires expert winter navigation as the route consistently travels through avalanche terrain.

Environmental Consequences

Alternative 1 - No Change from Current Management

There are no direct, indirect, or cumulative recreation effects from this alternative. Any recreation improvements, developments, or management actions would continue to be guided by management direction in the Mt. Baker-Snoqualmie National Forest Land and Resource Management Plan, and applicable laws. The corridor boundary would be located approximately ¼ mile from the banks of the river. No additional management strategies or thresholds would be implemented to accomplish the purpose of the wild and scenic river designation.

The quantity and nature of dispersed recreation use would continue in the river corridors. Recreation use would continue current trends for the foreseeable future. The paved section of NFS Road 56, as well as portions of the non-paved section, would continue to experience high dispersed camping use, resulting in resource damage ranging from unburied human waste, ground disturbance, litter and fire ring scars along the river corridor.

Alternative 2 - Proposed Action

The proposed action is administrative so would have limited impacts to recreation. The proposed change in corridor boundary and new MA-28 standards and guidelines would not result in substantial changes to how recreation is managed. However, recreation within the river corridors would be monitored and impacts to river values would be addressed in accordance with the visitor use management strategy within the Comprehensive River Management Plan. Forestwide standards and guidelines would still apply. For portions of the river corridor within Wilderness areas, wilderness management direction would continue to be followed, including numeric standards for limits on the amounts of impacts from users.

The proposed action includes new standards that would require any potential future new recreational facilities to be consistent with the river classification, scenic objectives, protect the river's free-flowing condition, water quality, and outstandingly remarkable values (Standard 4). As an outstandingly remarkable value within the Middle Fork Snoqualmie river corridor, recreation values would need to be considered for decisions about future management activities. This change is consistent with meeting the purposes of the Wild and Scenic Rivers Act.

In the Middle Fork Snoqualmie, the proposed action includes a closure to dispersed camping within a ¼ mile of NFS Road 56 from the Forest boundary to junction with NFS Road 5640 and up NFS Road 5640 to Snoqualmie Lake Trailhead. This would change visitor use within the area by eliminating this popular activity. As a result of the dispersed camping closure, resource conditions at dispersed campsites within the closure area would recover over time, presence of litter, human waste and other resource damage would decrease, protecting river values. Dispersed camping may increase in areas where it is permitted within the corridor. Visitor use would be monitored, and management strategies considered in alignment with the CRMP.

Potential management actions in the area include river access improvements, including parking expansion, and connector trail. Other future projects could include large woody debris, trail bridges, designation of dispersed camping sites, and restoration or improvement of campsites and toilets. Additional analysis would be completed prior to implementation of these and any other future projects.

Cumulative Effects

The proposed action is administrative, and no ground-disturbing activities are proposed, therefore there would be no incremental or substantive cumulative effects to recreation resources from either alternative.

Cultural Resources

Existing Condition

The analysis area lacks a thorough exploration of archaeological sites, historical sites, and traditional cultural properties. While there are some historic properties associated with 20th century logging, these sites do not contribute to the overall defining qualities of the river corridor. This does not preclude the presence of such sites, it merely reflects the current status of the record.

Environmental Consequences

All Alternatives: Direct, Indirect, and Cumulative Effects

As administrative changes in management categories, and corridor boundaries, the proposed action and alternatives do not meet the definition of an "undertaking" as defined in 36CFR800.16(y). The proposed action does not include specific actions to implement the management changes, therefore, the MBS has no further obligations under Section 106 in accordance with 36CFR800.3(a). Additional analysis, including Section 106 and consultation, would be completed prior to implementation of any future site-specific projects.

Climate Change

Rationale for Project-Scale Effects on Climate Change

This proposed action does not authorize ground disturbing activities. Implementation of potential management actions, shown in Tables 5 and 6, would require additional site-specific analysis. Climate change is a global phenomenon, because major greenhouse gasses (GHGs)[3] mix well throughout the planet's lower atmosphere (IPCC 2013). Considering emissions of GHGs in 2010 were estimated at 49 ± 4.5

[3] Major greenhouse gases released as a result of human activity include carbon dioxide (CO_2), methane, nitrous oxide, **hydrofluorocarbons, and perfluorocarbons.**

gigatonnes[4] carbon dioxide (CO_2) equivalent[5] globally (IPCC 2014) and 6.9 gigatonnes CO_2 equivalent nationally (US EPA 2015), potential future management actions, would make an extremely small contribution to overall emissions. Because local GHGs emissions mix readily into the global pool of GHGs, it is difficult and highly uncertain to ascertain the indirect effects of emissions from single or multiple projects of this size on global climate. Therefore, at the global and national scales, this project's potential contribution to GHGs and climate change would be negligible.

The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) summarized the contributions of global human activity sectors to climate change (IPCC 2014). From 2000 to 2009, forestry and other land uses contributed just 12 percent of the human-caused global CO_2 emissions[6]. The forestry sector's contribution to GHG emissions has declined over the last decade (IPCC 2014, Smith et al. 2014, FAOSTAT 2013). The largest source of GHG emissions in the forestry sector globally is deforestation (Pan et al. 2011, Houghton et al. 2012, IPCC 2014), which is defined as the removal of all trees to convert forested land to other land uses that do not support trees or allow trees to regrow for an indefinite period of time (IPCC 2000) (e.g., conversion of forest land to agricultural or developed landscapes). However, forest land in the United States has had a net increase since the year 2000, and this trend is expected to continue for at least another decade (Wear et al. 2013, USDA Forest Service 2016).

This Wild and Scenic River Comprehensive Management Plan is not considered a major source of GHG emissions. In accordance with the 2012 National Forest Planning Rule, a determination for suitability of lands was made (EA at 12, CRMP at 23). In the project area, with "wild" and "scenic" designations, scheduled timber production is not suitable. Harvest for purposes consistent with riparian restoration and wildlife connectivity are allowable. Forested land will not be converted into a developed or agricultural condition or otherwise result in the loss of forested area. In fact, forest stands are being retained, thus contributing to long-term carbon uptake and storage. In 2010, forests in the United States removed about 757 megatonnes[7] of CO_2 from the atmosphere after accounting for natural emissions (e.g., wildfire and decomposition) (US EPA 2015).

Some assessments suggest that the effects of climate change in some United States forests may cause shifts in forest composition and productivity or prevent forests from fully recovering after severe disturbance (Anderson-Teixeira et al. 2013), thus impeding their ability to take up and store carbon[8] and retain other ecosystem functions and services. Climate change is likely already increasing the frequency and extent of droughts, fires, and insect outbreaks, which can influence forest carbon cycling (Kurz et al. 2009, Allen et al. 2010, Joyce et al. 2014).

Forests have a "boom and bust" cycle with respect to carbon, as forests establish and grow, experience mortality with age or disturbances, and regrow over time. Forest management activities such as harvests and hazardous fuels reduction have characteristics similar to disturbances that reduce stand density and promote regrowth through thinning and removal, making stands and carbon stores more resilient to environmental change (McKinley et al. 2011). The proposed action would not release any carbon into the atmosphere as it does not authorize any ground disturbing actions. Any potential management actions implemented in the

[4] Gigatonne is one billion metric tons; equal to about 2.2 trillion pounds.
[5] Equivalent CO_2 (CO_2e) is the concentration of CO_2 that would cause the same level of radiative forcing as a given type and concentration of greenhouse gas. Examples of such greenhouse gases are methane, perfluorocarbons, and nitrous oxide.
[6] Fluxes from forestry and other land use (FOLU) activities are dominated by CO_2 emissions. Non-CO_2 greenhouse gas emissions from FOLU are small and mostly due to peat degradation releasing methane and were not included in this estimate.
[7] A megatonne is one million metric tons; equal to about 2.2 billion pounds.
[8] The term "carbon" is used in this context to refer to carbon dioxide.

future would be at considerably smaller scale than a typical vegetation management project. The relatively small quantity of carbon released to the atmosphere and the short-term nature of the effect of the potential management actions on the forest ecosystem are justified, given the overall change in condition increases the resistance to wildfire, drought, insects and disease, or a combination of disturbance types that can reduce carbon storage and alter ecosystem functions (Millar et al. 2007, Amato et al. 2011). Furthermore, any initial carbon emissions from potential management actions would be balanced and possibly eliminated as the stand recovers and regenerates, because the remaining trees and newly established trees typically have higher rates of growth and carbon storage (Hurteau and North 2009, Dwyer et al. 2010, McKinley et al. 2011).

In summary, this CRMP affects a relatively small amount of forest land and carbon on the Mt. Baker-Snoqualmie National Forest and, might contribute an extremely small quantity of GHG emissions relative to national and global emissions. This proposed action will not convert forest land to other non-forest uses, thus allowing any carbon initially emitted from the proposed action to have a temporary influence on atmospheric GHG concentrations, because carbon will be removed from the atmosphere over time as the forest regrows. This proposed action is consistent with internationally recognized climate change adaptation and mitigation practices.

Summary of Project-scale Impacts from Predicted Climate Change

Ongoing and predicted regional climate changes have the potential to affect the hydrologic regime in the upper Cascade Mountains, such as increased year-round temperatures, changes in the precipitation patterns (including rain on snow events), and greater magnitude and frequency of storm flows. Predicted changes would impact access and travel, distribution of plant and wildlife species, fire frequency, invasive species, and forest pests. For any potential management actions, measures would be developed and incorporated into their design, which would address climate sensitivity consistent with strategies from the Forest's Climate Change Vulnerability Assessment (USDA Forest Service, 2014).

The global climate has changed through time and will continue to change. Scientific models and methodologies project an increasing rate of climate change in upcoming years. Applying regional climate models to site-specific project areas makes the conclusions less certain. However, some general projections are possible.

The following projections for the Pacific Northwest are derived from the Climate Impacts Group of the University of Washington, Seattle. Models developed by the Climate Impacts Group project temperature increases during the 21st century along with large year-to-year and decade-to-decade variation in precipitation (Mauger, 2015). The 2015 State of Knowledge: Climate Change in Puget Sound report highlights the following climate changes and how they may alter the water cycle in the land area of the Puget Sound region:

Snowpack and Streamflow: Warming will cause a greater proportion of winter precipitation to fall as rain rather than snow. Snowpack is projected to decline, causing the spring peak in streamflow to occur earlier in the year. Winter streamflow is projected to increase in snow-influenced watersheds, while most locations are projected to experience a decline in summer streamflow.

Landslides and Sediment Transport: Changes in rainfall, snowpack, and streamflow may lead to an increase in landslide risk, erosion, and sediment transport in fall, winter, and spring, while reducing the rates of these processes in summer. Quantitative projections of the likely changes in sediment transport and landslides are limited, in part because it is challenging to distinguish climate change effects from non-climatic factors such as development patterns and forest management.

Flooding: Both the extent and the frequency of flooding is projected to increase. Heavy rain events are projected to intensify, increasing flood risk in all Puget Sound watersheds. Continued sea level rise

will extend the reach of storm surge, putting coastal areas at greater risk of inundation. In snow-accumulating watersheds, winter flood risk will increase as the snowline recedes, shifting precipitation from snow to rain.

Adaption strategies and tactics to address climate sensitivities for hydrology-access, fish and wildlife habitat, and forest health are selected in response to projected climate change for the subwatersheds encompassing the project area. Four sets of climate data are presented:

Precipitation Type - a classification of watersheds into categories of rain-dominant, snowmelt-dominant or mixed-rain-and-snow dominant, current type along with projected changes for the years 2040 and 2080.

The peak flood statistic - the percent change of the 100-year flood level over historic (1916-2006) levels, aggregated by watershed and based on 2080 climate scenario dataset.

Soil moisture percent change - used as an indicator for potential landslides and slope failure, and utilizing thewinter season 2080 climate scenario dataset.

Snowmelt date - the number of days earlier that snowmelt is predicted to occur relative to the present, for each of the climate scenarios.

Together, these four data sets reflect the drivers of climate change across the project area and integrate region wide increases in temperature with changes in precipitation type and early onset of snowmelt. These changes have the potential to impact social, cultural, aquatic and terrestrial aspects of the project area.

In terms of dominant precipitation type for subwatersheds of the CRMP area, the area is a mix of snow dominated, mixed rain-and-snow, and rain dominated, reflecting the elevation gradients of the overall area and associated subwatersheds (rain dominated in lower elevation portion). However, projected increases in temperature result in a loss of snow dominated moisture regime (2040) while rain dominated areas increase in area by 2080. Specific to the Snoqualmie watershed, recent climate change modeling projects a near complete loss of winter snowpack by the 2080's (Lee et al, 2020). Changing from a mixed precipitation dominated regime to a mostly rain dominated regime will alter the hydrograph reducing summertime flows. Summer water temperature in the Snoqualmie is predicted to increase due to both lower summertime flows and increased air temperature.

Potential increase in flood risk (increase in 100-year flood events) summarized at the subwatershed scale is projected to increase for the entire area by 2080. Increases in 100-year flood events would affect fish habitat and roads and those activities that rely on access. As areas shift from snow to mixed dominant precipitation types, the projected change in flood events increases.

Changes in soil moisture are used to infer landslide risk. Greater projected changes in soil moisture can influence slope stability as the type and timing of precipitation changes.

Increasing winter temperatures will result in decreasing snowpack and result in certain areas to be snow-free earlier in the year. On-water visitor use by whitewater boaters is correlated with spring snowmelt. Visitation in the upper reaches of the river corridors by trail users depends upon snow levels. As climate change influences the snowpack volume and/or the timing of snowmelt, visitation patterns may respond accordingly. A longer snow-free season might result in an increased in use in alpine regions of the river corridors.

Climate changes across the Project Area have the potential to result in lower water flows which reduce fish habitat, reduced tree vigor, increased susceptibility to forest pests and diseases, increased fire frequency, reduce native plant populations (increased competition from invasive species), road damage/closures leading

to loss of access for cultural practices and recreation opportunities. Adaption strategies to help reduce climate impacts have been incorporated in the Proposed Actions and are derived from recommendations in the Forest's Climate Change Vulnerability Assessment.

Other Required Disclosures

Prime Farmlands, Rangelands, Forestlands, and Parklands

USDA Departmental Regulation 9500-003 describes obligations of USDA agencies with respect to prime farmlands, rangelands, forestlands, and parklands. The alternative described in this EA does not propose changes in land use as described in the regulation and would not result in the conversion of these lands to other uses.

Floodplains and Wetlands

USDA Departmental Regulation 9500-003 and Executive Orders 11988 and 11990 describes obligations of Federal agencies with respect to floodplains and wetlands. DR 9500-003 advocates that beneficial functions and values of wetlands and floodplains be reserved. EO 11988 directs Federal agencies to restore and preserve the natural and beneficial values served by floodplains. EO 11990 directs Federal agencies to "avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." There would be no adverse effects to wetlands or floodplains because there are no ground disturbing actions. Effects to floodplains and wetlands are described in the Hydrology section of this EA.

Environmental Justice and Civil Rights

Executive Order 12898 directs federal agencies to identify and address the problem of adverse environmental effects by agency programs on minority and low-income populations. The principle behind Environmental Justice is that people should not suffer disproportionately because of their ethnicity or income level.

Effects of alternatives on the human environment (including minority and low-income populations) are expected to be similar for all human populations regardless of nationality, gender, race, or income. No disproportionately high and adverse human health or environmental effects on minority populations and low-income populations are expected because of implementing the proposed action.

The activities in the proposed action do not appear to have a disproportionately high or adverse effect on consumers, minorities or women. The project would not have any effect on the civil rights of any human being.

Conflicts with Plans, Policies, or Other Jurisdictions

There are no known conflicts with plans and policies of other jurisdictions associated with implementing this project, including the Clean Water Act, Endangered Species Act, National Historic Preservation Act, and National Forest Management Act.

The National Forest Management Act (NFMA) requires national forests to preserve and enhance the diversity of plant and animal communities to meet multiple use objectives based on the suitability and capability of the land. All alternatives are consistent with NFMA.

Clean Water Act

The Clean Water Act of 1972, and subsequent amendments (CWA), makes it unlawful for any person to discharge any pollutant into waters of the United States, unless a permit was obtained under its provisions.

The Washington State Department of Ecology (WDOE) is responsible for enforcing the CWA. A Memorandum of Agreement (MOA) between the Washington State and the USDA Forest Service (USDA – U.S. Forest Service and WDOE 2000), describes the process that shall be used by the Forest Service to meet CWA requirements on National Forest System lands in the State of Washington. State water quality standards apply to all water bodies on national forest lands in Washington. State water quality standards include an anti-degradation policy that is intended to maintain and restore the highest water quality possible in surface waters of the State.

One of the key components of the process is a requirement to implement Best Management Practices (BMPs) in project work. BMPs are means of protecting or improving water quality through appropriate project design features and implementation strategies. This EA is solely a planning document and is not proposing or analyzing for specific project actions. Any future projects within the corridor would have appropriate BMPs in place to meet the intent and provisions of the CWA.

Endangered Species Act

The United States Department of Interior, Fish and Wildlife Service (USFWS) is responsible for protection and recovery of terrestrial species and non-anadromous fish species that are listed as endangered or threatened under the Endangered Species Act (ESA). The United States Department of Commerce, National Marine Fisheries Service (NMFS) is responsible for the protection and recovery of anadromous fish species that are listed as endangered or threatened under the ESA. Under Section 7 of the ESA, the Forest Service is required to consult with the USFWS and/or NMFS any time a project may have an effect on a species listed under the ESA. Because this analysis is determining a planning framework and not prescribing any action, consultation is not required. Any future site-specific projects would include an analysis of consultation needs.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) (Public Law 89-665; 54 U.S.C. 300101 *et seq*.) is legislation intended to preserve historical and archaeological sites in the United States of America. The act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation Offices. Section 106 of the National Historic Preservation Act mandates federal agencies undergo a review process for all federally funded and permitted projects that will impact sites listed on, or eligible for listing on, the National Register of Historic Places. It allows interested parties, including affected tribes and local communities, an opportunity to comment on the potential impact projects may have on significant archaeological or historic sites. The main purpose for the establishment of the Section 106 review process is to minimize potential harm and damage to historic properties. Any federal agency whose project, funding or permit may affect a historic property, both those listed or eligible for inclusion in the National Register of Historic Places, must consider the effects on historic properties and "seek ways to avoid, minimize or mitigate" any adverse effects on historic properties.

All steps in the cultural resource process are coordinated with the Washington State Historic Preservation Office. Cultural Resource Site Reports are filed with and approved by the Washington State Historic Preservation Officer. Because this analysis is determining a planning framework and not prescribing any action, consultation is not required. Any future site-specific projects would include an analysis of consultation needs.

Potential or Unusual Expenditures of Energy

There would be no potential or unusual expenditures of energy with this project. The proposed action does not involve any forms of energy expenditure.

Agencies and Persons Consulted

The Forest Service consulted the following individuals, Federal, State, tribal, and local agencies during the development of this environmental assessment:

Federal, State, and Local Agencies:

King County Department of Natural Resources and Parks

U.S. Fish and Wildlife Service

Washington Department of Ecology

Washington Department of Fish and Wildlife

Washington Department of Natural Resources

Tribes:

Confederated Tribes of the Colville Reservation

Muckleshoot Indian Tribe

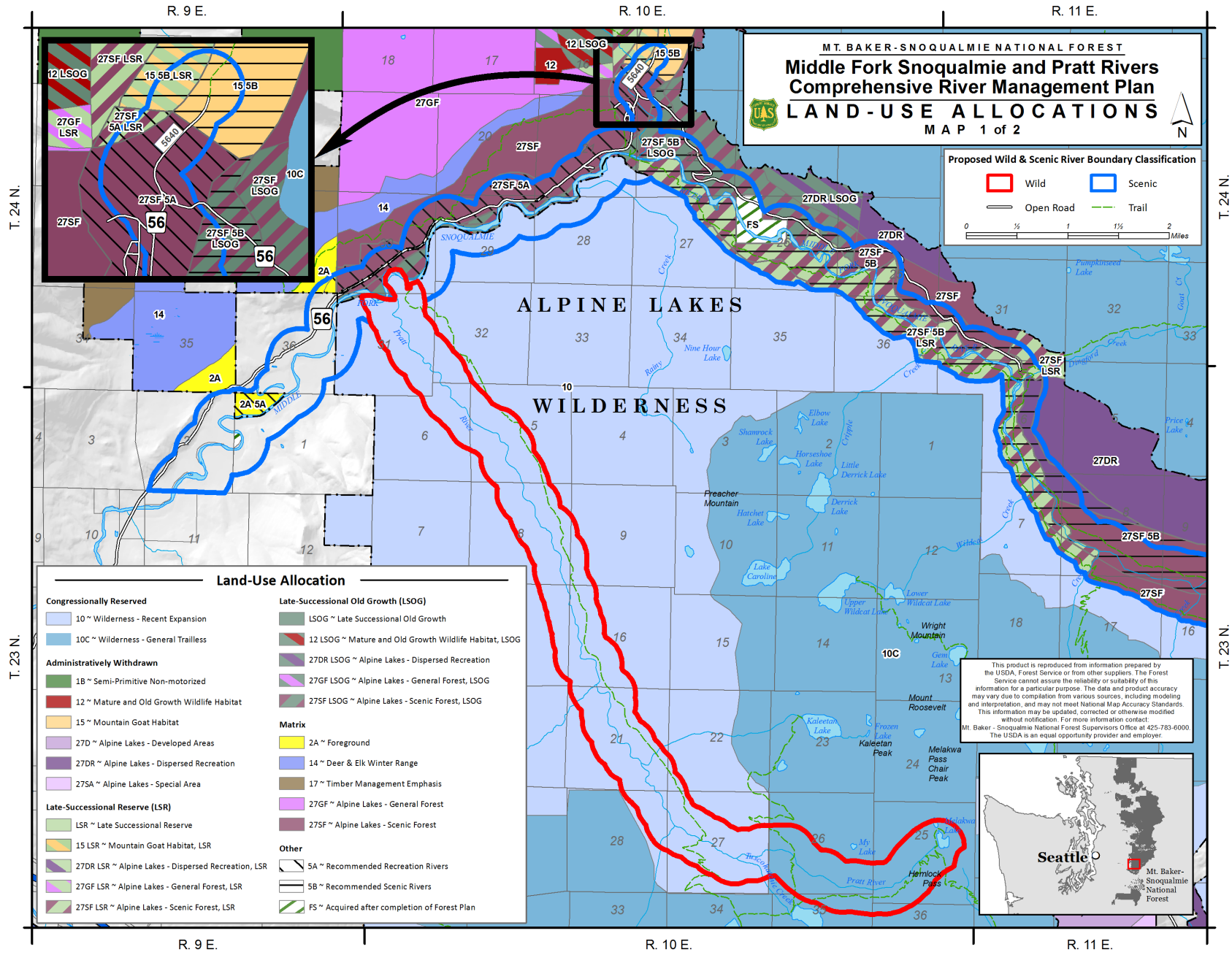
Puyallup Tribe of Indians

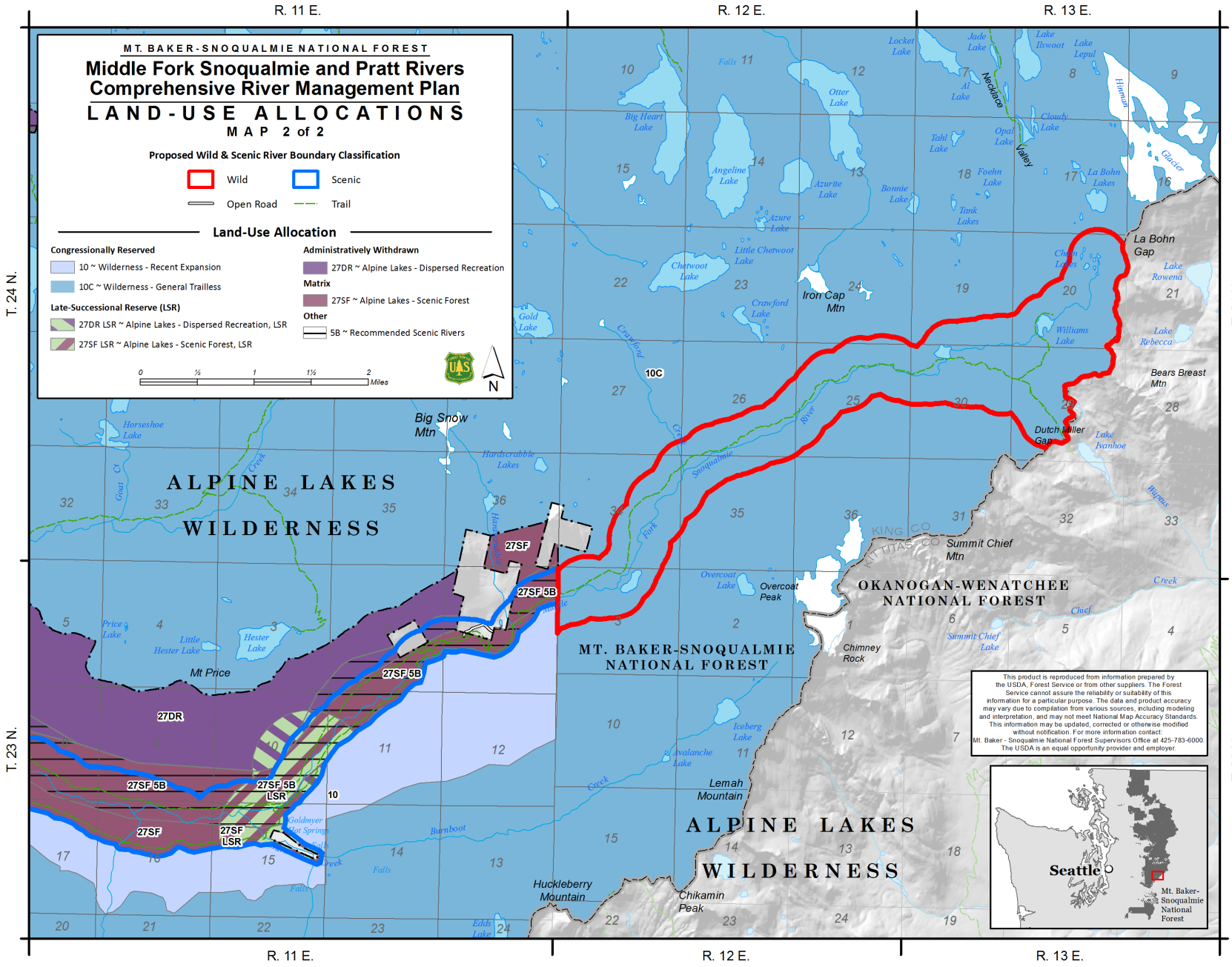
Snoqualmie Indian Tribe

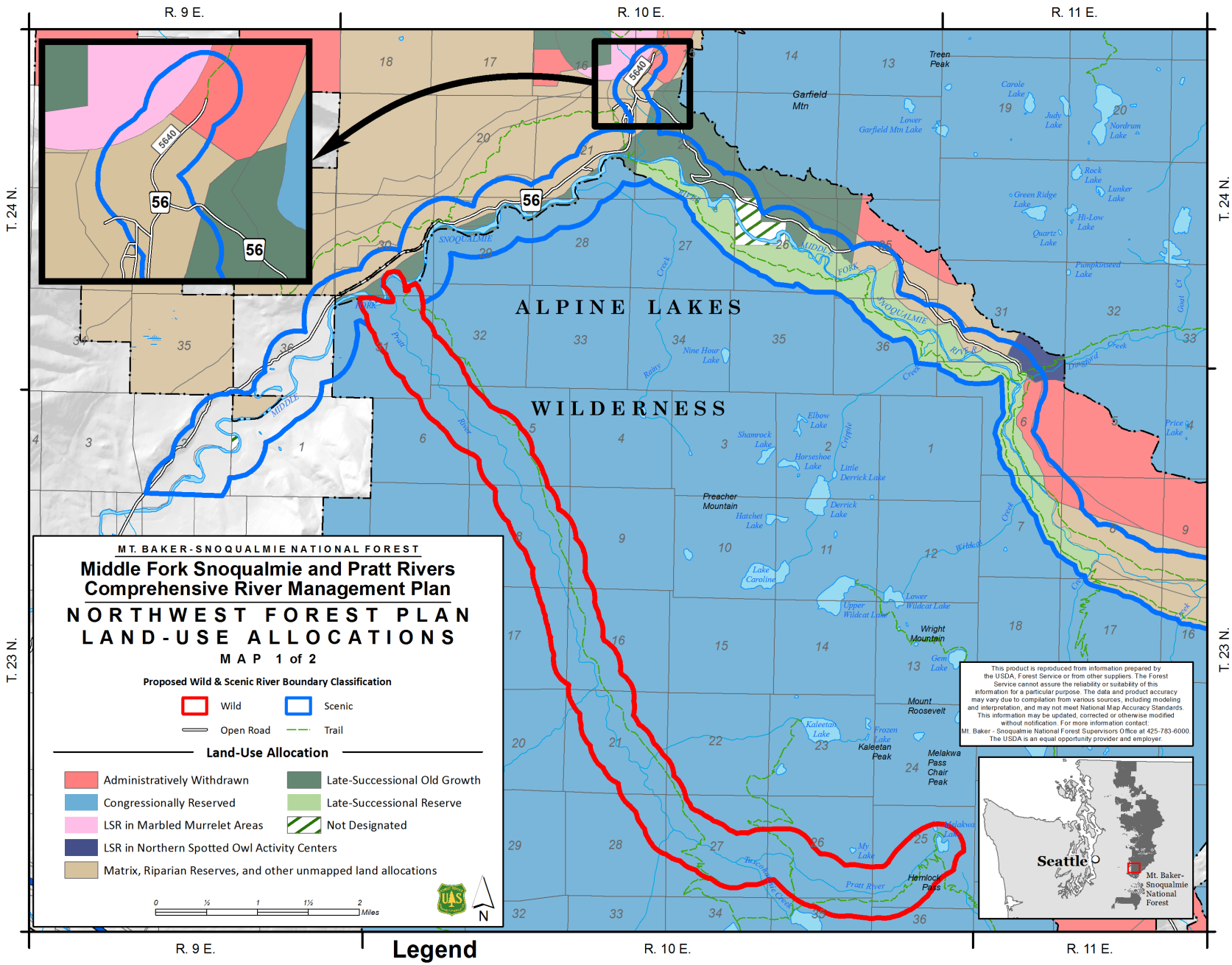
Tulalip Tribes

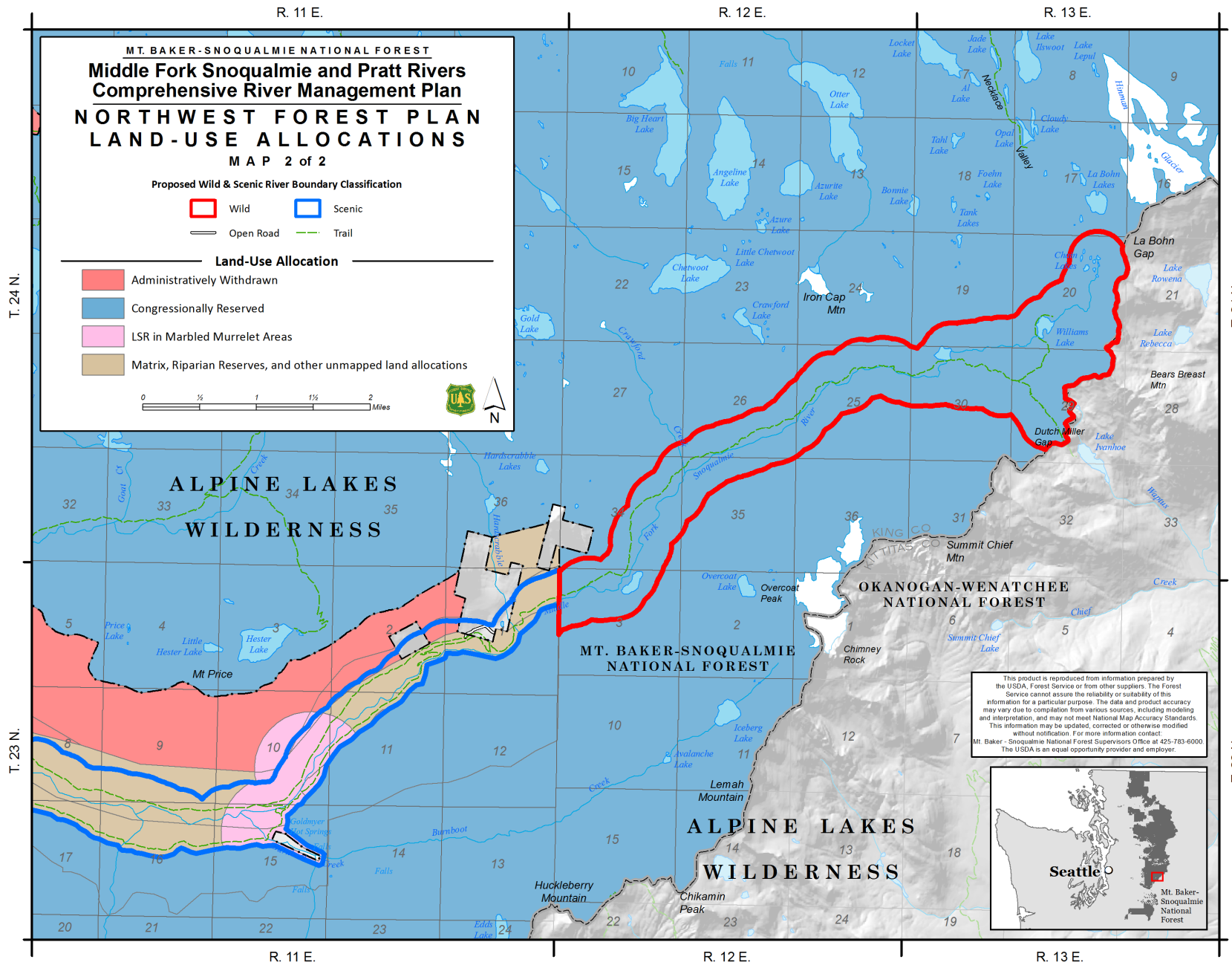
Yakama Nation

Appendix A: Maps




MT. BAKER-SNOQUALMIE NATIONAL FOREST
Middle Fork Snoqualmie and Pratt Rivers Comprehensive River Management Plan
LAND-USE ALLOCATIONS
MAP 2 of 2
Proposed Wild & Scenic River Boundary Classification
Wild
Scenic
Open Road
Trail
Land-Use Allocation
Congressionally Reserved
10 ~ Wilderness - Recent Expansion
10C ~ Wilderness - General Trailless
Late-Successional Reserve (LSR)
27DR LSR ~ Alpine Lakes - Dispersed Recreation, LSR
27SF LSR ~ Alpine Lakes - Scenic Forest, LSR
Administratively Withdrawn
27DR ~ Alpine Lakes - Dispersed Recreation
Matrix
27SF ~ Alpine Lakes - Scenic Forest
Other
5B ~ Recommended Scenic Rivers
0 ½ 1 1½ 2 Miles
N
R. 11 E.
R. 12 E.
R. 13 E.
T. 24 N.
T. 23 N.
ALPINE LAKES WILDERNESS
MT. BAKER-SNOQUALMIE NATIONAL FOREST
OKANOGAN-WENATCHEE NATIONAL FOREST
KING CO.
KITTITAS CO.
Big Snow Mtn
Iron Cap Mtn
La Bohn Gap
Dutch Miller Gap
Bears Breast Mtn
Summit Chief Mtn
Overcoat Peak
Chimney Rock
Lemah Mountain
Huckleberry Mountain
Chikamin Peak
Mt Price
10C
27SF
27SF 5B
27DR
27SF LSR
10
Seattle
Mt. Baker-Snoqualmie National Forest
This product is reproduced from information prepared by the USDA, Forest Service or from other suppliers. The Forest Service cannot assure the reliability or suitability of this information for a particular purpose. The data and product accuracy may vary due to compilation from various sources, including modeling and interpretation, and may not meet National Map Accuracy Standards. This information may be updated, corrected or otherwise modified without notification. For more information contact: Mt. Baker - Snoqualmie National Forest Supervisors Office at 425-783-6000. The USDA is an equal opportunity provider and employer.


R. 9 E.
R. 10 E.
R. 11 E.
T. 24 N.
T. 23 N.
ALPINE LAKES
WILDERNESS
MT. BAKER-SNOQUALMIE NATIONAL FOREST
Middle Fork Snoqualmie and Pratt Rivers
Comprehensive River Management Plan
NORTHWEST FOREST PLAN
LAND-USE ALLOCATIONS
MAP 1 of 2
Proposed Wild & Scenic River Boundary Classification
Wild
Scenic
Open Road
Trail
Land-Use Allocation
Administratively Withdrawn
Congressionally Reserved
LSR in Marbled Murrelet Areas
LSR in Northern Spotted Owl Activity Centers
Matrix, Riparian Reserves, and other unmapped land allocations
Late-Successional Old Growth
Late-Successional Reserve
Not Designated
Miles
N
Legend
Seattle
Mt. Baker-Snoqualmie National Forest
Garfield Mtn
Treen Peak
Preacher Mountain
Wright Mountain
Mount Roosevelt
Kaleetan Peak
Melakwa Pass
Chair Peak
Hemlock Pass
Pratt River
Middle Fork
Snoqualmie River
5640
56


MT. BAKER-SNOQUALMIE NATIONAL FOREST
Middle Fork Snoqualmie and Pratt Rivers Comprehensive River Management Plan
NORTHWEST FOREST PLAN
LAND-USE ALLOCATIONS
MAP 2 of 2
Proposed Wild & Scenic River Boundary Classification
Wild
Scenic
Open Road
Trail
Land-Use Allocation
Administratively Withdrawn
Congressionally Reserved
LSR in Marbled Murrelet Areas
Matrix, Riparian Reserves, and other unmapped land allocations
0 ½ 1 1½ 2 Miles
N
R. 11 E.
R. 12 E.
R. 13 E.
T. 24 N.
T. 23 N.
ALPINE LAKES WILDERNESS
MT. BAKER-SNOQUALMIE NATIONAL FOREST
OKANOGAN-WENATCHEE NATIONAL FOREST
Iron Cap Mtn
La Bohn Gap
Bears Breast Mtn
Dutch Miller Gap
Summit Chief Mtn
Overcoat Peak
Chimney Rock
Lemah Mountain
Huckleberry Mountain
Chikamin Peak
Mt Price
Seattle
Mt. Baker-Snoqualmie National Forest
This product is reproduced from information prepared by the USDA, Forest Service or from other suppliers. The Forest Service cannot assure the reliability or suitability of this information for a particular purpose. The data and product accuracy may vary due to compilation from various sources, including modeling and interpretation, and may not meet National Map Accuracy Standards. This information may be updated, corrected or otherwise modified without notification. For more information contact: Mt. Baker - Snoqualmie National Forest Supervisors Office at 425-783-6000. The USDA is an equal opportunity provider and employer.

Appendix B: Summary of CRMP Revisions and Updated Effects Analysis

The Middle Fork Snoqualmie and Pratt Wild and Scenic Rivers (WSR) Comprehensive River Management Plan (CRMP) is revised after finding wildlife to be as an "outstandingly remarkable value" (ORV) within both the Middle Fork Snoqualmie and Pratt river corridors. The Wildlife ORV rationale (CRMP, p. 22) includes reference to the following features:

- Valuable riparian habitat and winter range for several species, particularly considering climate change impacts.
- Harlequin duck as a species of concern; quality habitat for this species.
- The proximity to an urban population center provides outstanding opportunity for education & interpretation as well as a potential threat to viability of species and habitat.

The desired conditions for the wildlife ORV are described on p. 27 of the CRMP. Desired condition statements describe what conditions, outcomes, and opportunities are to be achieved and maintained in the future.

Management Direction

A new guideline was added to the management area direction for Designated Wild and Scenic River (MA-28). Guidelines are constraints on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met. The additional guideline reads: "Where visitor use and associated infrastructure is considered a limiting factor for wildlife values, management techniques that limit or constrain visitor use and facilitate the recovery of affected species should be favored."

Management Action Priorities

The list of potential management actions identified in the CRMP (CRMP p. 67-68) is expanded to include new projects to enhance and/or better understand the wildlife ORV. The recommendation to improve river access at Bridgeview was revised to stipulate a need to first conduct an inventory and assessment of impacts to harlequin duck nesting habitat and utilization downstream of the proposed boat launch.

Visitor Use Management and Capacity

The management plan identifies known or potential conflicts between visitor use and desired conditions for river values (CRMP p.26-27). For the wildlife ORV, the primary potential conflicts include:

- Degradation or removal of riparian & upland vegetation.
- Displacement from habitat and disruption of critical life history activities.
- Anthropogenic food sources, food-conditioning, and associated human-wildlife interactions.
- Defensive or predatory wildlife attacks.

The visitor use analysis is updated with a range of new data to inform assessment of current conditions (CRMP p. 34-35). The team identified new monitoring indicators for impacts to the wildlife ORV:

- Reports of human-wildlife conflicts or disruption
- Reports of unsecured food and garbage
- Presence of off-leash dogs
- Evidence of social trails (previously the plan only included social trails on riverbanks)
- Harlequin duck nest disturbance or abandonment

Rationale and potential management responses relative to the above indicators are outlined in the visitor use monitoring & management strategy (p. 58-66).
Capacity estimates suggest acceptable use levels over time (i.e. over duration of CRMP) assuming positive trends in visitor use indicators. Visitor capacity estimates are now reduced throughout the visitor use analysis areas to reflect new information about current conditions and potential threats to the wildlife ORV (CRMP p. 29-58). The CRMP emphasizes a need to manage for desired outcomes for river values and avoid or reduce resource impacts rather than managing to achieve a certain total number of visitors.

Effects Analysis Update

The effects analysis below focuses on the three resource areas that are most affected by the CRMP, as they were found to be outstandingly remarkable values of the Pratt and Middle Fork Snoqualmie Wild and Scenic Rivers.

Recreation

The addition of wildlife as an ORV brings an additional emphasis to the management of recreation within the river corridors to reduce or avoid negative impacts to wildlife species and habitat. The addition of new monitoring indicators and potential management responses within the visitor use monitoring and management strategy may result in additional emphasis on education and enforcement, the restoration of heavily impacted recreation sites, adjustments to the location or design of trails or recreational infrastructure, temporary or permanent closures where warranted, or even a reduction in the total amount of visitors within certain areas. Many of these management responses will require additional decision making and analysis. While these actions could change or limit recreational use patterns within the plan area, they are consistent with the desired conditions for quality recreation experiences within the river corridors. These additions to the CRMP do not change the effects determination for recreation resources within the plan area.

Wildlife

The addition of wildlife as an ORV is not expected to change effects determinations for federally-listed wildlife species and designated critical habitat. Existing protection measures for federally-listed species and Forest Plan direction regarding a variety of wildlife species still apply. Incorporating wildlife-related responses (e.g., education) into ongoing recreational maintenance and operations has the potential to have positive impacts on wildlife species by reducing recreation-related disturbance and other impacts, depending on the degree to which these measures are implemented. The new wildlife-related guideline has the potential to have positive impacts on wildlife depending on the degree to which it is applied in any future actions, which would require separate analysis and determinations.

Fisheries

The addition of wildlife as an ORV is not expected to change effects determinations for fish species and habitats within the Middle Fork Snoqualmie River watershed. The revised CRMP does not change any of the existing protections for aquatic habitat and species. Incorporation of additional monitoring and management responses to protect wildlife and habitat have the potential to have positive impacts upon fish by reducing recreation-related disturbances.