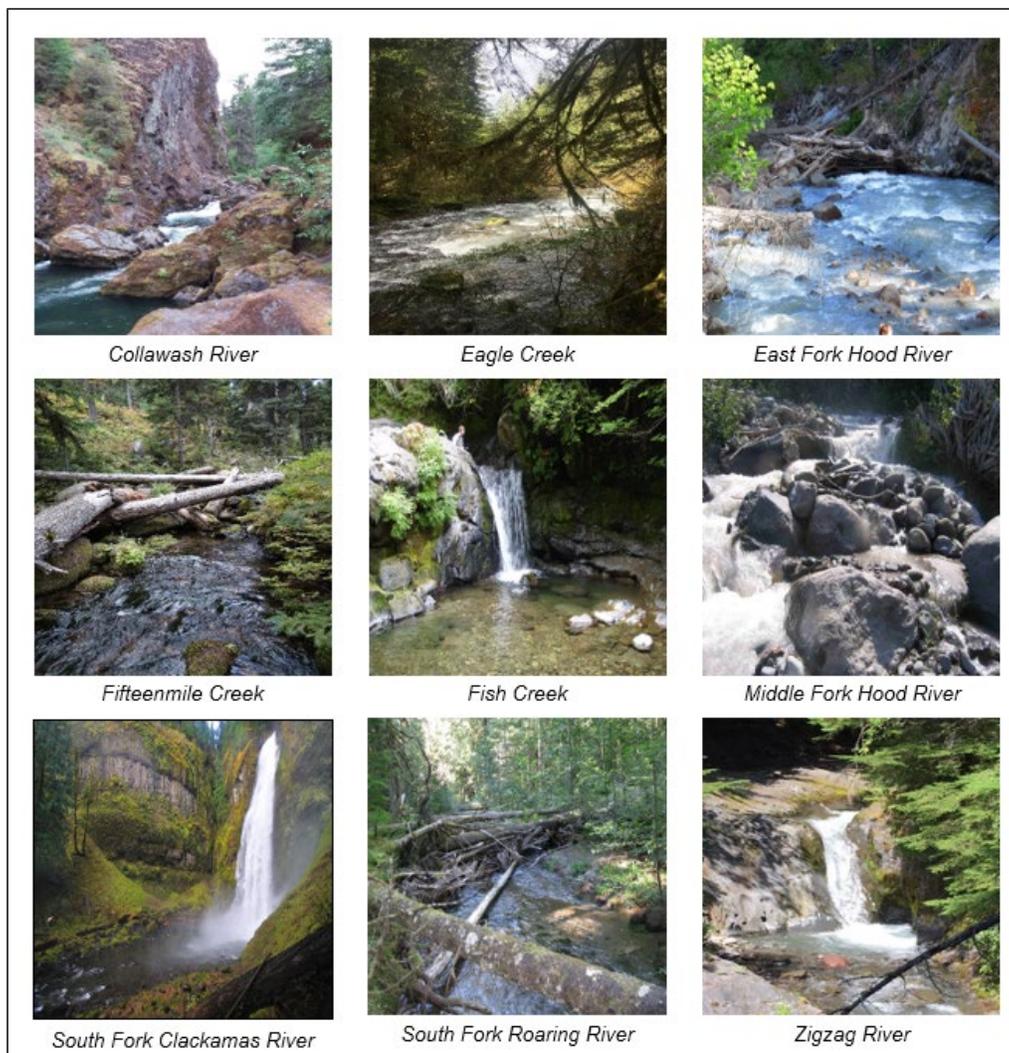


Wild and Scenic River Comprehensive River Management Plan for Nine Wild and Scenic Rivers

Environmental Assessment



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Introduction

In 2009, nine rivers primarily on the Mt. Hood National Forest were designated as additions to the National Wild and Scenic Rivers System in the Omnibus Public Land Management Act of 2009 (Public Law 111-11, 123 Stat. 991). (This act is hereafter referred to as the Omnibus Act.) The Omnibus Act designated 81 miles of wild and scenic rivers across the Mt. Hood National Forest (the forest) on the Barlow, Hood River, Clackamas, and Zigzag Ranger Districts; and on a portion of lands managed by the Northwest Oregon District of the Bureau of Land Management (BLM).

Federal agencies charged with the administration of the National Wild and Scenic Rivers System are required to prepare a comprehensive river management plan (the plan) for designated river segments (Wild and Scenic Rivers Act, Section 3(d)(1)). The purpose of the plan is to establish overall management direction to protect and enhance the values for which these rivers were designated. The plan establishes river corridor boundaries, management direction, user capacities, monitoring, and other management practices necessary to protect and enhance the river values.

To determine how to manage these wild and scenic river corridors, both a comprehensive river management plan and this environmental assessment (the assessment) are needed. The plan is required by the Wild and Scenic Rivers Act while this assessment is required by the National Environmental Policy Act (NEPA). During the planning process, the two documents work hand-in-hand.

Comprehensive River Management Plan: Contains the river boundaries; river values; management direction, including desired conditions, standards, and guidelines; determine types and amounts of uses (visitor capacity; and monitoring plan). A draft comprehensive river management plan has been published on the [project website](#) concurrently with this environmental assessment. Upon completion of the environmental analysis process, a final plan will be issued.

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

This assessment has been prepared to determine whether effects of the proposed action may be significant enough to prepare an environmental impact statement. By preparing this assessment, the forest is 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 Alternatives, including the Proposed Action section of this document.

Project acres and miles presented in this assessment 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.

Background

Wild and Scenic Rivers Act

In 1968, Congress passed the [Wild and Scenic Rivers Act \(Public Law 90-542\)](#)¹ (hereafter referred to as the Act) and established a nationwide system of outstanding free-flowing rivers. For a river segment to be considered eligible for designation as a wild and scenic river 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. As of April 2019, 226 rivers in 40 states and the Commonwealth of Puerto Rico have been added to the National Wild and Scenic Rivers System.

The Act protects free-flowing waters, water quality, and outstandingly remarkable values of many of our Nation's most spectacular rivers and safeguards the special character of these rivers, while also recognizing the potential for appropriate use and development. The Act purposefully strives to balance river development with permanent protection for the Nation's most outstanding free-flowing rivers.

To accomplish this, the Act prohibits Federal support for actions, such as the construction of dams or other instream activities that would adversely affect the river's free flow, water quality, or outstanding resource values. Designation neither prohibits development nor gives the federal government control over private property. The Act specifically:

- prohibits dams and other federally assisted water resource projects that would adversely affect river values (Section 7 of the Act);
- protects outstanding natural, cultural, or recreational values;
- ensures water quality is maintained;
- directs that river-administering agencies address visitor use capacities to protect the free-flowing conditions, water quality, and outstandingly remarkable values of designated rivers (Section 3(d)(1)); and,
- requires the creation of a comprehensive river management plan that addresses resource protection, development of lands and facilities, user capacities, and other management practices necessary to achieve the purposes of Section 3(d)(1) of Act.

Following the designation of the rivers listed below as wild, scenic, or recreational rivers, the 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 plan includes resource protection related to the wild and scenic river's free-flowing condition, water quality, and outstandingly remarkable values, with particular emphasis on: development of lands and facilities, kinds and amounts of visitor use (user capacity), and other management practices necessary or desirable to achieve the purposes of the Act.

¹ The original act along with all the amendments in order is available here: <https://www.rivers.gov/documents/act/complete-act.pdf>

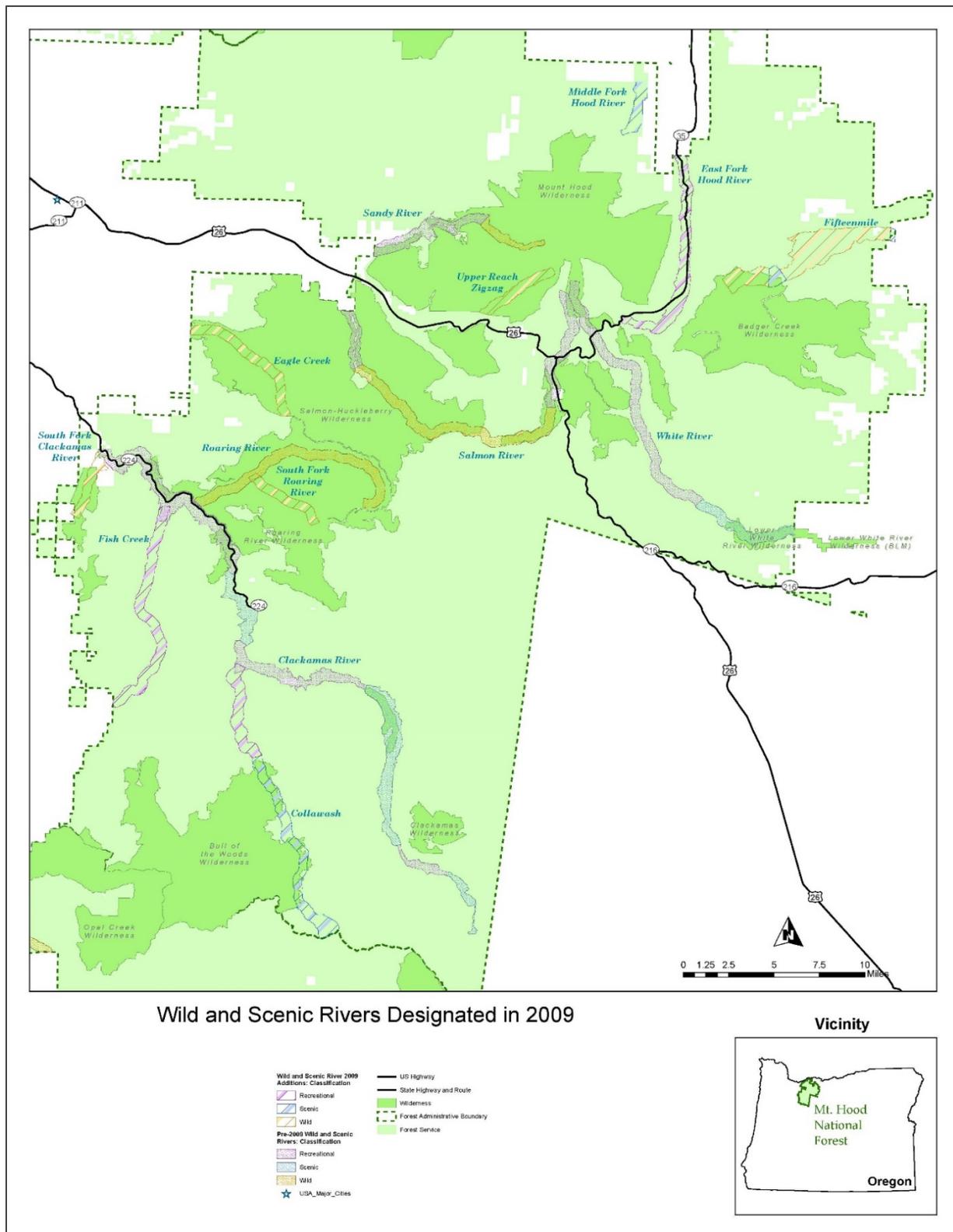


Figure 1. Vicinity map

Omnibus Public Land Management Act

The [Omnibus Public Land Management Act of 2009](#) was passed by Congress on March 30, 2009. Congress passed the Omnibus Act “to designate certain land as components of the National Wilderness Preservation System, to authorize certain programs and activities in the Department of the Interior and the Department of Agriculture, and for other purposes” (Public Law 111-11). This analysis, and the accompanying comprehensive river management plan, addresses the Collawash River, Eagle Creek, East Fork Hood River, Fifteenmile Creek, Fish Creek, Middle Fork Hood River, South Fork Clackamas River, South Fork Roaring River, and Zigzag River.

Rivers designated by the Wild and Scenic Rivers Act are classified as wild, recreational, or scenic (Section 2(b)). The 2009 Omnibus Act established a classification for each river segment based on the level of development within the river corridor (see table 1). These classifications are defined as follows.

- **Wild River:** A river or segment of a river that is 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 River:** A river or segment of a river that is free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.
- **Recreational River:** A river or segment of a river that is readily accessible by road or railroad, that may have some development along its shorelines, and that may have undergone some impoundment or diversion in the past.

All nine of the wild and scenic river segments and the interim corridors are managed as directed by the Wild and Scenic Rivers Act of 1968. These designated segments are displayed in figure 1 and summarized in table 1.

Table 1. Description, length, and classification of wild, scenic, and recreational river segments designated by the Omnibus Act

Designated Segment	Description	Miles	Classification
Collawash River	Segment 1: Headwaters of the East Fork Collawash River to Buckeye Creek	12.9	Scenic
Collawash River	Segment 2: Buckeye Creek to Clackamas River	6.9	Recreational
Eagle Creek	Headwaters to the Mt. Hood National Forest boundary	8.4	Wild
East Fork Hood River	Oregon State Highway 35 to the Mt. Hood National Forest boundary	14.1	Recreational
Fifteenmile Creek	Segment 1: Source at Senecal Spring to the Badger Creek Wilderness boundary	2.6	Wild
Fifteenmile Creek	Segment 2: Badger Creek Wilderness boundary to the point 0.4 miles downstream	0.8	Scenic
Fifteenmile Creek	Segment 3: Point 0.4 miles downstream of the wilderness boundary to the western edge of T2S, R12E, Section 20	7.4	Wild
Fifteenmile Creek	Segment 4: Western edge of T2S, R12E, Section 20 to the southern edge of the NW quarter of the NW quarter of T2S, R12E, Section 20	0.3	Scenic
Fish Creek	Headwaters to the confluence with the Clackamas River	13.6	Recreational
Middle Fork Hood River	Confluence of Clear and Coe Branches to the North section line of section 11, T1S, R9E, Section 11	3.7	Scenic

Designated Segment	Description	Miles	Classification
South Fork Clackamas River	Confluence with the East Fork of the South Fork Clackamas to its confluence with the Clackamas River	4.3	Wild
South Fork Roaring River	Headwaters to its confluence with Roaring River	4.7	Wild
Zigzag River	Headwaters to the Mount Hood Wilderness Boundary	4.7	Wild

Outstandingly Remarkable Values

Outstandingly remarkable values were identified for each of these designated segments using a set of evaluation criteria and public involvement, which are described in the [River Values Report](#). The outstandingly remarkable values (ORVs) are summarized in table 2 and the relevant resource sections.

Table 2. Summary of Outstandingly Remarkable Values

River	Outstandingly Remarkable Values
Collawash River	Recreation, Geology, Fisheries, and Botany
Collawash River	Geology and Fisheries
Eagle Creek	Recreation and Botany
East Fork Hood River	Wildlife, Recreation, and Botany
Fifteenmile Creek	Wildlife
Fifteenmile Creek	Wildlife and Recreation
Fifteenmile Creek	Wildlife, Recreation, Historic, and Fisheries
Fifteenmile Creek	Wildlife and Fisheries
Fish Creek	Fisheries
Middle Fork Hood River	Geology, Scenery, and Fisheries
South Fork Clackamas River	Scenery and Historic
South Fork Roaring River	Botany
Zigzag River	Scenery, Recreation and Macroinvertebrate

Management Direction

Management direction can be found in the [Mt. Hood Land and Resource Management Plan](#) (Forest Plan) of 1990 and BLM’s [Northwestern and Coastal Oregon Resource Management Plan](#) (BLM Resource Management Plan) of 2016. The desired conditions and applicable standards and guidelines are described in the following sections.

Desired Condition

National Forest System Lands

National Forest System lands are assigned a land-use allocation, which is a management emphasis to particular land areas with the purpose of achieving the goals and objectives of that management area. The designed wild and scenic river corridors are within B1-Wild, Scenic & Recreational Rivers and A1-Reserved land use allocations on the Mt. Hood National Forest. Generally, the “A” land-use allocations preclude regulated timber harvest while the “B” land-use allocations allow timber harvest. When two sets

of standards and guidelines are not consistent, the standards and guidelines which are most restrictive to vegetation and access management predominate (Forest Plan, page Four-133).

The goal of B1 lands are to “protect and enhance the resource values for which a river was designated into the Wild and Scenic Rivers System. The specific goals for Wild, Scenic, and Recreational classified river segments as described in the Forest Plan on page Four-208 are:

- **Wild** – Perpetuate a primitive recreation experience and protect the river corridor to maintain an essentially unmodified environment.
- **Scenic** – Maintain or enhance quality scenery and protect the essentially undeveloped character of the shoreline.
- **Recreational** – Provide opportunities for recreation activities and maintain visual quality of the river corridors.

Then, the major characteristics of the desired condition for all classifications are: Congressionally designated areas of National significance; and river corridors divided into wild, scenic, and recreational segments with each providing different opportunities. Also, there are examples of the following features located in the river corridors: deep, incised canyons and gorges, old-growth forests, glacier-fed headwaters, outstanding views of majestic mountains and river canyons, and alpine and subalpine meadows (Forest Plan, page Four-209).

The desired conditions for wild segments also include: the corridor is essentially free of recreation facilities and signs; access is generally by trail or water; the corridor is essentially an unmodified environment; motorized boats are not present; minimal evidence of recreational users; and, very low interaction between recreational users (Forest Plan, page Four-209).

The desired conditions for scenic segments include: shorelines are typically undeveloped; characterized by a natural-appearing environment with high quality scenery; accessed by roads and trails and seen from major travel routes paralleling the river; motorized boats are not present; low interactions between recreational users, but with evidence other recreational users are present; and, minimal on-site controls of recreational use patterns (Forest Plan, page Four-209 to Four-210).

Lastly, the desired conditions for recreational segments include: visible public roads parallel the river; developments such as campgrounds are close by; access is by roads and trails; opportunities exist for a wide variety of river related recreation activities; characterized by a predominately natural appearing environment; dispersed motorized recreation activities such as car camping, motorcycle use, boating, and snowmobiling occur; and motorized boats may be present (Forest Plan, page Four-210).

The A1 allocation is used for rivers classified as wild to preclude regulated timber harvest. All other goals, desired conditions, and standards and guidelines apply to these river segments. This applies to the wild segments along Eagle Creek, Fifteenmile Creek, South Fork Clackamas River, South Fork Roaring River, and Zigzag River. Then, Collawash River, East Fork Hood River, Middle Creek Hood River, and Fish Creek are managed using the B1 land use allocation as described above.

Bureau of Land Management Administered Lands

The BLM administered lands along the South Fork Clackamas River are managed using the objectives and management direction found within the Northwestern & Coastal Oregon Resource Management Plan. These are Congressionally Reserved Lands and National Conservation Lands and the management

direction is found on pages 55-56 of the Resource Management Plan. The management objectives for this land use allocations are as follows.

- Conserve, protect, and restore the identified outstanding cultural, ecological, and scientific values of national conservation lands and other congressionally designated lands.
- Protect and enhance the free-flowing condition, water quality, and outstandingly remarkable values of eligible, suitable, and designated wild and scenic river corridors.
- Provide protection to wild and scenic river corridors that are suitable for inclusion as components of the National Wild and Scenic Rivers System until Congress makes a decision on designation.
- Provide protection to wild and scenic river corridors that are eligible but have not yet been studied for suitability as components of the National Wild and Scenic Rivers System pending suitability evaluations.

Management Standards and Guidelines

The management standards prioritize in protecting and enhancing wild and scenic river values during the planning and implementation of resource management activities in the river corridors. They are intended to preserve the designated rivers' free-flowing condition and protect and enhance river values, including water quality and outstandingly remarkable values. These standards and guidelines are from the Forest Plan and Resource Management Plan.

B1 land use allocation for designated wild, scenic, and recreational river segments standards and guidelines can be found on page Four-208 through Four-217 of the Forest Plan. The standards and guidelines for the A1-Reserved land use allocations are the same as those listed here for B1. They are given a different land use allocation because regulated timber harvest is not permitted in the A1 allocation.

Similarly, the BLM Resource Management Plan includes the management direction for Congressionally Reserved Lands and National Conservation Lands, which includes wild and scenic rivers, on pages 55 and 56. The BLM administered lands include the South Fork Clackamas Waterfalls Extensive Recreation Management Area (see Appendix D of the comprehensive river management plan for more details). According the BLM Northwestern and Coastal Oregon Resource Management Plan, Extensive Recreation Management Areas are administrative units that require specific management consideration in order to address recreation use, demand, or recreation and visitor services program investments (page 251). The BLM manages these areas to support and sustain the principal recreation activities and the associated qualities and conditions of the area. Management of these areas are commensurate with the management of other resources and resource uses.

Purpose and Need for Action

The purpose of this proposal is to develop a comprehensive river management plan, as required by the Act, to protect and enhance the values for which the rivers were designated (free-flowing, water quality, and outstandingly remarkable values), and to identify and implement management actions needed to protect these values within the nine wild and scenic river corridors designated in 2009. The outstandingly remarkable values for these rivers include scenery, recreation, wildlife, fish, geologic/hydrologic, historic, botany, and macroinvertebrates. 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 Act. The underlying need is to address the requirements in section 3(d)(1) of the Wild and

Scenic Rivers Act for federal agencies to prepare a comprehensive management plan for each designated river segment that provide for the protection of the river values.

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 comprehensive river management plan will:

- 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 (user 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.

Location of the Proposed Project Area

The project area is located within the Clackamas, Hood River, Multnomah, and Wasco Counties in the state of Oregon (figure 1). The Collawash River, Eagle Creek, East Fork Hood River, Fish Creek, Middle Fork Hood River, South Fork Roaring River, and Zigzag River are located solely on lands managed by the Mt. Hood National Forest. South Fork Clackamas River includes National Forest System lands and BLM administered lands, along with a small parcel owned by Portland General Electric. Fifteenmile Creek includes lands owned by the City of Dufur and private landowners. This section of the assessment addresses non-federal land ownerships in more detail. A detailed map of each river, and the proposed final boundaries, can be found in the map packet on the project website:

<https://www.fs.usda.gov/project/?project=54674>.

Collawash River

Segment 1 is designated from the headwaters of the East Fork Collawash River (T9S, R7E, Section 04) to Buckeye Creek (T7S, R6E, Section 14). Segment 1 then continues to Buckeye Creek and 4th-order perennial reach that originates from headwater springs and wetlands. Within this segment, the Collawash River changes name to the East Fork Collawash above its confluence with Elk Lake Creek. This segment falls within the East Fork Collawash and Happy Creek-Collawash subwatersheds (12th-field Hydrologic Unit Codes (HUC) 170900110105 and 170900110106 respectively).

Segment 2 of the Collawash River is designated from Buckeye Creek to the Clackamas River (T6S, R6E, Section 22). Most of the length of this segment is visible from Forest Service Road 63 along which there are several developed and undeveloped riverside campsites featuring large, quality pools that are enjoyed by recreational users. The elevation of this segment ranges between about 1,900 and 1,500 feet. Segment 2 is mostly a 5th and 6th-order perennial reach. The segment lies within the Farm Creek-Collawash River subwatershed (12th-field HUC 170900110107).

Portions of both segments are within the Bull of the Woods Wilderness additions that were designated in the Omnibus Act. Also, the northern termini of the Collawash Wild and Scenic River in segment2

overlaps with the Clackamas River wild and scenic river corridor. The Clackamas River is designated as a recreational wild and scenic river where the corridors overlap.

Eagle Creek

Eagle Creek is a tributary of the Clackamas River on the western slopes of the Cascade Range in northwest Oregon. Eagle Creek flows to the west and joins the Clackamas River north of the town of Estacada, Oregon. Eagle Creek is designated from its headwaters (T4S, R6E, Section 12) to the Mt. Hood National Forest boundary (T3S, R6E, Section 19). The segment falls within the Upper Eagle Creek subwatersheds (12th-field HUC 170900110501). The designated Eagle Creek river corridor lies completely in the Salmon Huckleberry Wilderness.

East Fork Hood River

The East Fork Hood River flows out of the Newton-Clark Glacier on the south face of Mount Hood in the Cascade Range of Oregon. After flowing for about 2.5 miles toward the southeast, the river makes a sweeping turn to the north, following Oregon State Highway 35. The designated segment of the East Fork Hood River begins where the river first crosses Highway 35 (T3S, R9E, Section 11) and ends at the Mt. Hood National Forest boundary (T1S, R10E, Section 32). The designated segment of the East Fork Hood River is located within the Middle and Upper East Fork Hood River subwatersheds (12th-field HUC 170701050502 and 170701050501 respectively).

Fifteenmile Creek

Fifteenmile Creek flows toward the northeast eventually joining the Columbia River just below The Dalles Dam. Fifteenmile Creek is located within the Headwaters Fifteenmile subwatershed (12th-field HUC 170701050301).

Fifteenmile Creek, segment 1 flows entirely through the Badger Creek Wilderness, starting at Senecal springs (T3S, R10E, Section 2), and ends at Badger Creek Wilderness boundary at Forest Service Road 2730 crossing (T2S, R11E, Section 31). In segment 1, the elevation descends about 1,621 feet.

Segment 2 of Fifteenmile Creek flows downriver from the Badger Creek Wilderness boundary at Fifteenmile Creek Campground to about 0.4 river miles downriver of Fret Creek confluence with Fifteenmile Creek (T2S, R11E, Section 32). Fifteenmile Creek Trail (Forest Service Trail #456) parallels Fifteenmile Creek for its entirety of segment 2.

Segment 3 starts 0.4 river miles downriver from Bader Creek Wilderness boundary and ends at Forest Service Road 4421 (T2S, R12E, Section 20). Fifteenmile Creek Trail parallels Fifteenmile Creek for about 5.7 of its 7.9 river miles. In segment 3, the elevation descends about 2,138 feet.

Segment 4 of Fifteenmile Creek starts at Forest Service Road 4421 and ends at the forest boundary (T2S, R12E, Section 20). The elevation descends about 41 feet within this segment.

The lower southwest corner of segment 1 falls entirely within the Badger Creek Wilderness, and parts of segments 2 and 3 are within the Mount Hood National Recreation Area. The recreation area was designated in the Omnibus Act to “to provide for the protection, preservation, and enhancement of recreational, ecological, scenic, cultural, watershed, and fish and wildlife values, there is established the Mount Hood National Recreation Area within the Mount Hood National Forest” (Public Law 111-11, Section 1204(a)).

Fish Creek

Fish Creek Wild and Scenic River begins at its headwaters (T7S, R5E, Section 33) and terminates at the confluence with the Clackamas River (T5S, R5E, Section 11). Elevation of the termini range between about 920 and 4,940 feet. This segment lies within the Fish Creek subwatershed (12th-field HUC 170900110403). The northern termini of the Fish Creek Wild and Scenic River overlaps with the Clackamas River wild and scenic river corridor. The Clackamas River is designated as a recreational wild and scenic river where the corridors overlap.

Middle Fork Hood River

The Middle Fork Hood River has its origins in several glaciers on the north slope of Mount Hood. The designate section of the Middle Fork Hood River begins at the confluence of Clear and Coe Rivers' branches (T1S, R9E, Section 23) and ends along the north section line of section 11 (T1S, R9E, Section 11). The river flows in a northerly direction, joins the West and the East Fork Hood River and eventually flows into the Columbia River near the town of Hood River, Oregon. The designated segment of the Middle Fork Hood River is located within the Lower Middle Fork Hood River and the Upper Middle Fork Hood River subwatersheds (12th-field HUC 170701050505 and 170701050504 respectively).

The Parkdale Lava Beds occur within the wild and scenic corridor of the Middle Fork Hood River and are listed as a special interest area with a geologic emphasis in the Forest Plan (page Four-151). The goal of special interest areas are to “protect and, where appropriate, foster public recreational use and enjoyment of the important historic, cultural, and natural aspects of our national heritage;” and to “preserve and provide interpretation of unique geological, biological, and cultural areas for education, scientific, and public enjoyment purposes.”

South Fork Clackamas River

The upper terminus of the South Fork Clackamas Wild and Scenic River is at the confluence with the East Fork South Fork Clackamas River (T5S, R5E, Section 7). The lower terminus is at the river's mouth at the Clackamas River (T4S, R5E, Sec 29). Elevation of the termini range between about 1,900 and 600 feet above mean sea level. This segment lies within the South Fork Clackamas subwatershed (12th-field HUC 170900110404).

This wild and scenic river segment is located primarily within the Clackamas Wilderness, which was designated in the Omnibus Act, and is partially located on lands managed by the Bureau of Land Management. The northern termini of the South Fork Clackamas River overlaps with the Clackamas River wild and scenic river corridor. The Clackamas River is designated as a recreational wild and scenic river where the corridors overlap.

On BLM administered lands, this corridor overlaps with the South Fork Clackamas Waterfalls Extensive Recreation Management Area. According the BLM Northwestern and Coastal Oregon Resource Management Plan, Extensive Recreation Management Areas are administrative units that require specific management consideration in order to address recreation use, demand, or recreation and visitor services program investments (page 251). The BLM manages these areas to support and sustain the principal recreation activities and the associated qualities and conditions of the area. Management of these areas are commensurate with the management of other resources and resource uses.

South Fork Roaring River

The entire 4.6-mile segment of the South Fork Roaring River from its headwaters (T5S, R 7E, Section 08) to its confluence with the Roaring River (T4S, R6E, Section 34) is administered as a wild river. The river flows through a narrow, deeply incised canyon, which has large rock outcroppings and cliffs along portions of the canyon. This segment lies within the Roaring River subwatershed (for example, 12th-field HUC 170900110402). The entire designated river is located within the Roaring River Wilderness. Also, the northwestern termini of the South Fork Roaring River overlaps with the Roaring River wild and scenic river corridor. The Roaring River is classified as a wild river where the corridors overlap.

Zigzag River

The Zigzag River arises from the base of Zigzag Glacier at approximately the 5,000-foot elevation on Mount Hood. The designated segment of the Zigzag River begins at its headwaters (T2S, R8.5E, Section 47) at the Mt. Hood Wilderness boundary (3S, R8E, Section 14). The segment is located entirely within the Mt. Hood Wilderness and lies within the Zigzag Canyon subwatershed (12th-field HUC 170800010202).

Public Involvement and Government Consultation

This project has been included in the [Mt. Hood National Forest Schedule of Proposed Action](#) beginning in September 2018, and has been included in the [BLM National NEPA Register](#) beginning in July 2019. No comments were received through those efforts.

Public Involvement

A letter with an overview of the outstandingly remarkable values and summary of a River Values Report, including an interactive GIS story map, were shared with the public in September 2018. The letter was shared with approximately 340 individuals, organizations, and government agencies. Individual letters were sent to government agencies with specific management responsibilities within the wild and scenic river corridors. These government agencies are Oregon Department of Environmental Quality, Oregon Department of Transportation, National Marine Fisheries Service, U.S. Fish and Wildlife Service, and Natural Resources Conservation Service.

Through this effort, we asked for input on the following questions.

- Are there additional river-related natural, cultural, and recreational resources that are rare, unique or exemplary within these river corridors?
- What observations or concerns do you have about the current conditions within these river corridors that may be impacting the river values?

Fifteen comments were received from individuals and organizations. The organizations included: Middle Fork Irrigation District, Northwest Rafting Company and ECHO River Trips, Mt. Hood Forest Study Group, American Whitewater, Oregon Wild, Oregon Equestrian Trails, Oregon Department of Water Quality, Bark, and U.S. Fish and Wildlife Service, along with three individuals.

All comments were considered by the interdisciplinary team. Suggestions for changes or additions to the outstandingly remarkable values were evaluated using the same evaluation process and criteria included in the River Values Report. As a result, we altered the outstandingly remarkable values on the Collawash River and East Fork Hood River. Geology and recreation were added as outstandingly remarkable values

on segment1 on the Collawash River, and botany was removed as an outstandingly remarkable value for segment2. Then, recreation was added as an outstandingly remarkable value for East Fork Hood River.

In July 2019, a scoping packet was distributed to the same mailing list. The scoping packet included a summary of the proposed action, identified user capacity, wild and scenic river corridor boundaries, potential management actions, and a Forest Plan amendment. Eight comments were received, which were from the National Marine Fisheries Service, Friends of Mt. Hood, Access Fund, Oregon Fish and Wildlife Service, Oregon Wild, and four individuals.

The comments received included the following suggestions: access to the water and surrounding area for horses and cattle; proposed management actions and needs at Pete's Pile climbing area within the East Fork Hood River wild and scenic river corridor; impacts of increasing use and user capacity on big game travel corridors and habitat; and, recommended minor changes to the boundaries. The comments within the scope of this project were incorporated to the proposed action, where appropriate. This resulted in minor changes to the boundaries for South Fork Clackamas River, Fish Creek, Collawash River, and Zigzag River.

Tribal Consultation

Both the Confederated Tribes of Warm Springs and Confederated Tribes of Grand Ronde have ceded lands within the designated wild and scenic river corridors. Ceded lands are those lands where the tribes ceded, relinquished, and conveyed to the United States all their right, title, and interest in the lands and country occupied by them at treaty signing or when reservations were established. Reserved rights to natural resources and lands extend far beyond the boundaries of the reservations. Provisions of the treaty ensured tribes could continue to fish at all usual and accustomed places, and to hunt and gather on all open and unclaimed lands. Federal lands such as the Mt. Hood National Forest and the Northwest Oregon BLM District are "open and unclaimed" lands on which the tribes reserved treaty rights to hunt and gather.

Treaty rights encompass more than an ability to gather, hunt, or fish. The role of tribes in stewardship on the national forest is crucial to restoring, sustaining, and protecting the integrity of lands and resources, vital to the lifeways of indigenous peoples. In partnership with the Forest Service and BLM, tribes contribute traditional knowledge, technical expertise, and funding to restore and manage indigenous biomes for the long-term ecological health and resilience of these public lands.

Under the trust responsibility, federal agencies have a legal obligation to ensure the protection of tribal treaty resources and treaty rights. The trust responsibility applies to federal agency decision-making under the National Environmental Policy Act. Management of these nine wild and scenic rivers will honor the federal trustee's responsibility to protect and recover tribal treaty resources and treaty rights, and to work with the treaty tribes as co-managers of the resources. Project-specific consultation with the following tribes was invited during the development of this plan: Confederated Tribes of Warm Springs, Confederated Tribes of Grand Ronde, and Confederated Tribes of Siletz Indians.

Other Coordination

In addition to the public involvement, we have coordinated with state agencies, landowners and permittees based on the land ownership and management actions within the wild and scenic river corridors that are captured by this comprehensive river management plan. Fifteenmile Creek and South Fork Clackamas wild and scenic river corridors include in-holdings owned by State or private

landowners. We reached out to the other landowners within these corridors to share this project and determine management actions. No future management actions were identified at this time.

East Fork Hood River wild and scenic river corridor includes State Highway 35 that is maintained by the Oregon Department of Transportation (ODOT). Roads and infrastructure in designated river corridors provide important transportation networks, but they may also threaten the values for which the wild and scenic rivers were designated, particularly their free-flowing condition, water quality and outstandingly remarkable values. It is important that the Forest Service (federal river administering agency) and ODOT work together to protect and enhance the wild and scenic river values and attributes, while maintaining a safe transportation system along Highway 35. The two agencies discussed this project and outlined a management process to be followed to achieve these goals. This management process is described later in this environmental assessment.

Fifteenmile Creek wild and scenic river corridor overlaps with the Friend unit of the Badger Creek Allotment. The range permittee received the scoping letter and provided no comments. This project was discussed at the annual operations meeting with the permittee prior to the 2020 grazing seasons. The Badger Allotment annual operating instructions include the following: “Multiple Indicator Monitoring (MIM) will be implemented on Fifteenmile Stream in the Friend unit. This will be a coordinated effort with the permittee, hydrologist, fish biologist, and range specialist to decide where to monument new sampling sites and how often to monitor. Additional management focus will be implemented in the Friend unit to comply with Wild and Scenic River policy.”

Lastly, this project was discussed with Oregon Fish and Wildlife Department and Oregon Department of Parks and Recreation. No changes were made as a result of these discussions, and coordination will continue throughout the planning and implementation processes.

Alternatives, including the Proposed Action

Alternative Development

While a no action alternative is not explicitly described or analyzed in this document, the existing management conditions were described in the [River Values Report](#) (available on the [project website](#)) and the analysis below compares, as needed, the effects of continuing this existing management. to the effect of the decisions that would be made through the comprehensive river management plan. The River Values Report documents the evaluation of resource conditions and river values at the time that Congress designated these rivers as wild and scenic rivers, and updates these conditions and values to present condition. This is used as baseline throughout this environmental assessment and meets the requirements of 36 CFR 220.7(b)(2)(ii).

The BLM National Environmental Policy Act Handbook describes the no action alternative as “a useful baseline for comparison of environmental effects (including cumulative effects) and demonstrates the consequences of not meeting the need for the action” (BLM NEPA Handbook H-1790-1 page 51). The [River Values Report](#) provides the baseline management and resource conditions for the nine wild and scenic rivers; therefore, it meets the requirements for having a no action alternative included in the analysis. When necessary, the analysis below contrasts the difference in effect between the existing management conditions and the modifications.

We are required to develop a reasonable range of alternatives. Alternatives to the proposed action should fulfill the purpose and need and address unresolved conflicts related to the proposed action. As previously

described, we have conducted two public comment periods on this project as well as ongoing tribal consultation and coordination with other government agencies. No unresolved conflicts were identified through these issues. Also, as demonstrated in the Environmental Impacts of the Proposed Action section of this environmental assessment, there are no unresolved resource concerns associated with this project. For that reason, no alternatives were developed or analyzed for this project. The proposed action is described and fully analyzed in this environmental assessment.

Proposed Action

The proposed action is to adopt a comprehensive river management plan for the nine rivers designated by the Omnibus Act. Specifically, the accompanying comprehensive river management plan includes the following:

- a description of the existing resource conditions including a detailed description of the outstandingly remarkable values;
- desired conditions for protecting river values;
- a determination of recreational user capacities;
- descriptions of land uses, infrastructure, current management actions and potential management actions within the corridor;
- description of instream flow and water quality requirements;
- identification of regulatory authorities of other governmental agencies that assist in protecting river values; and,
- a monitoring strategy to maintain desired conditions.

Much of the content of the comprehensive river management plan is informational and provides a baseline for future management (such as planning context and existing water rights). The proposed action analyzed in this environmental assessment includes only the parts of the comprehensive river management plan that change existing management practices. This includes establishing user capacity and final boundaries for each river, identifying management actions to protect and enhance river values, amending the Mt. Hood Land and Resource Management Plan, and adopting a monitoring plan for wild and scenic rivers.

User Capacity

The Wild and Scenic River Act directs that river-administering agencies address visitor-use capacities to protect the free-flowing conditions, water quality, and outstandingly remarkable values of designated rivers (Section 3(d)(1)). The 1982 National Wild and Scenic Rivers System: Final Revised Guidelines for Eligibility, Classification and Management of River Areas (1982) define carrying capacity as:

The quantity of recreation use which an area can sustain without adverse impact on the outstandingly remarkable values and free-flowing character of the river area, the quality of recreation experience, and public health and safety. To further meet the requirement of the act, the guidelines note that: Management plans will state the kinds and amounts of public use that the river can sustain without impact to the values for which it was designated (1982).

User capacity can be described as a subset of the larger visitor-use management framework. User capacity is an estimate and not always a definitive number. This is particularly true in situations where the amount of use is low and does not threaten desired conditions or river values. In these situations, capacity

estimates yield visitor use numbers that are far higher than current amounts of use; thus, decisions about capacity do not result in near-term management actions to regulate use levels.

The amount of investment devoted to determining user capacity needs to be commensurate with the consequence of the potential decisions to be made about managing visitor use. For most of the nine river segments, identified user capacity numbers do not reflect current use; however, monitoring would still occur, and more precise numbers will be developed if trends suggest river values could be threatened. There were three rivers (Collawash River, East Fork Hood River, and Zigzag River) where use levels reported were moderate and consequently the amount of analysis devoted to identifying user capacity on those rivers was greater. Capacity numbers for those segments are still higher than the current use.

Based on field work and data collection in the summer of 2018, existing data (including wilderness carrying capacity), and interdisciplinary knowledge and review, the user capacities in table 3 were developed for these rivers according to the requirements of the Wild and Scenic Rivers Act.

Table 3. Summary of identified user capacity (people per day) by river

River	Segment	Wilderness/Other Use	Overnight Use	Day Use	Total User Capacity
Collawash River	Segment 1	n/a	50	120	170
Collawash River	Segment 2	n/a	305	330	635
Eagle Creek	n/a	*Wilderness: 120	n/a	n/a	120
East Fork Hood River	n/a	Climbing: 20	Developed: 234 Dispersed: 180	1,394	1,828
Fifteenmile Creek	4 segments, capacity for all segments^	^^n/a	82	120	202
Fish Creek	n/a	n/a	48	50	98
Middle Fork Hood River	n/a	n/a	3	50	53
South Fork Clackamas River	n/a	^^n/a	6	24	30
South Fork Roaring River	n/a	*Wilderness: 120	n/a	n/a	120
Zigzag River	n/a	Wilderness: 177	n/a	n/a	177
Grand Total	--	--	--	--	3,463

*Includes both People and Recreational Livestock per day

^Due to the particular use types and activities occurring on Fifteenmile Creek, capacity numbers were not identified by segment. Collawash River had a different pattern of use and resource concerns, therefore, Collawash capacity numbers were identified by segment.

^^While both Fifteenmile and South Fork Clackamas contain designated Wilderness, encounter rates were not used to calculate capacity due to how the rivers weave in and out of Wilderness.

To monitor each river value, one or more key indicators are selected that will allow managers to keep attuned to changes in the ecosystem or social setting. For each key indicator, a threshold is set. This value determines the amount of change desired or that will be accepted before river management objectives are no longer being met. In this manner, indicators and thresholds provide managers with information to

determine if the resource values, and opportunities they are managing, are being protected. The standards serve as triggers that cause predetermined management actions to be implemented when the limit is being approached. For each indicator and standard, a management action is identified would be triggered if a particular threshold is reached. These can be found in the User Capacity Report for Mt. Hood National Forest Wild and Scenic River Analysis (2020) which provides more details on how these numbers were determined, along with the user-capacity numbers, indicators, thresholds, and measures. The User Capacity Report for Mt. Hood National Forest Wild and Scenic River Analysis is available on the [project website](#).

Final Boundaries

The Wild and Scenic Rivers Act requires that each federally administered river in the National System have a legally established boundary. Section 3(b) of the Act provides specific direction to the river-administering agencies.

The agency charged with the administration of each component of the national wild and scenic rivers system designated by subsection (a) of this section shall . . . establish detailed boundaries . . . which boundaries shall include an average of not more than 320 acres of land per mile . . . measured from the ordinary high water mark on both sides of the river.

The Omnibus Act (Section 1203(a)(1)(176)(B)) specified that: “the lateral boundaries of both the wild river area and the scenic river area along Fifteenmile Creek shall include an average of not more than 640 acres per mile measured from the ordinary high water mark on both sides of the river.” The rivers are managed with an interim corridor boundary of a quarter mile from the ordinary high water mark (and a half mile for Fifteenmile Creek) on either side of the river until there are final decisions for this comprehensive river management plan, including the final boundaries. The Forest Service and BLM are preparing separate decisions that will apply to the land administered for their respective agency. After the decisions are signed, the Forest Service (as the river-administering agency) will prepare a final boundary package for each wild and scenic river and publish notice of the final boundaries and availability for review in the Federal Register.

Establishing a wild and scenic river boundary that includes identified river-related values is essential as a basis from which to provide necessary protection. Section 10(a) of the Act describes factors which must be considered in wild and scenic river management and, therefore, provides direction on features which must be included within boundaries.

Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its aesthetic, scenic, historic, archeologic, and scientific features.

Proposed boundary maps are available in map packet on the [project website](#). The proposed changes from the interim boundaries include the following:

- The boundary on the Collawash River was widened near the headwaters to fully encompass and protect the fisheries and botany outstandingly remarkable values. The boundary was also extended to the watershed boundary to better protect the fisheries outstandingly remarkable value. The boundary was narrowed in the wilderness to balance the addition because the wilderness designation protects the river values, including the identified outstandingly remarkable values.

- The boundary on the East Fork Hood River was adjusted to include two wetlands and meadows that are being used by elk and other wildlife to enhance the wildlife outstandingly remarkable value. The boundary was then narrowed near the forest boundary to balance the addition because the recreation, wildlife and botany outstandingly remarkable values are not located in this area.
- The boundary on Fish Creek was extended to the watershed boundary to better protect the fisheries outstandingly remarkable value. The boundary was narrowed along the length of the designated segment to account for this change because water quality, free flow, and fisheries (the identified outstandingly remarkable value) are adequately protected given the limited access within the corridor.
- The boundary on Fifteenmile Creek was adjusted to follow the Mount Hood National Recreation Area boundary to capture the recreation outstandingly remarkable value; this adjustment also provides benefits for the fisheries and wildlife outstandingly remarkable values. The boundaries were also adjusted to follow Forest Service Road 4420 in the first segment in order to capture the historic outstandingly remarkable value.
- The boundary on Middle Fork Hood River was adjusted to encompass as much of the lava beds as possible within the lateral boundary requirements (average of 320 acres per river mile) to protect the geology outstandingly remarkable value. The boundary was then narrowed to exclude the pipeline at the Coe diversion towards the settling pond within the Middle Fork Irrigation District to balance the addition because this area is not contributing to the identified outstandingly remarkable values of scenery, fish, or geology.
- The boundary on South Fork Clackamas River was adjusted to incorporate the additional features of the South Fork Water Board infrastructure and thus to protect the historic outstandingly remarkable value. The boundary was then adjusted to follow the forest boundary in one place, and then narrower where it overlaps with the Clackamas River Wild and Scenic River to balance these additions. The Clackamas River Wild and Scenic River affords the same protections.
- The boundary on Zigzag River was extended to the watershed boundary to better protect the macroinvertebrate outstandingly remarkable value. The boundary was narrowed along the length of the designated segment to account for this change because it is within the designated wilderness, which protects the water quality, free flow, and outstandingly remarkable values.

We propose to adopt the interim boundaries (a quarter mile from the ordinary high water mark) without changes for Eagle Creek and South Fork Roaring River. These rivers are within designated wilderness and the existing corridors adequately protect the river values, including the identified outstandingly remarkable values.

Management Actions

Proposed Management Actions

Section 10(a) of the Wild and Scenic River Act requires river-administering agencies to protect and enhance the river values. Existing management actions and proposed activities were reviewed and analyzed to ensure that they were consistent with the Wild and Scenic River Act and were not negatively impacting river values.

In order to help the Forest and BLM meet the Wild and Scenic River Act requirements, several management actions (table 4) are proposed to address known impacts to river values. In addition, the proposed management actions are described in the comprehensive river management plan. These proposed management actions may be considered when the existing or future use starts to negatively

impact the river values. These proposed management actions will require additional development of a proposed action and site-specific environmental review.

Table 4. Proposed management actions

River	River Value Enhanced or Protected	Proposed Management Action
Collawash River	Water quality	Install toilet(s) along the river to address fecal contamination at specific sites, where there is evidence of dispersed camping or other concentrated recreation use, in areas without sanitary facilities.
South Fork Clackamas River	Historic Outstandingly Remarkable Value	Develop and install interpretative signs to educate recreationalists on potential conflict between Townsend bat health and use of the historic tunnels. Apply native seed or certified weed-free mulch to any disturbed areas after the installation in complete as early as practicable to increase germination and growth. Select seed species that are fast-growing, provide ample ground cover, and have adequate soil-binding properties.

Management of Highway 35

Roads and infrastructure in designated river corridors provide important transportation networks, but they may also threaten the values for which the wild and scenic rivers were designated, particularly their free-flowing condition, water quality, and outstandingly remarkable values. It is important that the Forest Service (federal river-administering agency) and Oregon Department of Transportation (ODOT) work together to protect and enhance the East Fork Hood River’s special values and attributes, while maintaining a safe transportation system along Highway 35. The following management process focuses on maintenance activities since those occur routinely and are foreseeable. The following process is agreed upon by both the Forest Service and Oregon Department of Transportation for the management of State Highway 35 within the East Fork Hood River wild and scenic river corridor. The adoption of this process would help to meet the needs of both agencies and protect the river values.

Potential maintenance projects within the river corridor that may impact river values include sediment build-up below structures; riprap maintenance; hazard tree abatement; and, culvert repair, replacement, and general maintenance. All planned maintenance projects along Highway 35 within the East Fork Hood River wild and scenic river corridor, including in-water projects, will be presented, and discussed at the annual meeting between the Mt. Hood National Forest and Oregon Department of Transportation Region 1.

For in-water maintenance projects (projects occurring in bed or banks), the following process would be used during project development. This process is reviewed and updated as necessary by both agencies approximately every five years when the memorandum of understanding is reviewed. The current process agreed upon process between the two agencies will be followed for the life of this management plan.

- The ODOT Maintenance Supervisor or District Manager would contact the ODOT Regional Environmental Coordinator for any in-water projects. The ODOT Regional Environmental Coordinator works with all regulatory or administering agencies, including the Forest Service, to ensure all requirements are met.
- The ODOT Regional Environmental Coordinator would contact the Forest Service Special Uses Permit Administrator. The permit administrator would coordinate with the Hood River District Ranger and other Forest Service employees as necessary to ensure that the project has considered and complies with all Wild and Scenic River Act requirements.

- The Forest Service Special Uses Permit Administrator would provide feedback to the ODOT Regional Environmental Coordinator in a timely manner. If any modifications to the project are required to comply with the Wild and Scenic River, these changes would be provided in writing by the Forest Service Special Uses Permit Administrator. Only after this coordination has occurred between the agencies would the maintenance project be implemented.

If a Section 7 review is required under the Wild and Scenic Rivers Act, the Forest Service Special Uses Permit Administrator or District Ranger would notify both the ODOT District Manager and Regional Environmental Coordinator as soon as possible. The project cannot be implemented until the Section 7 review is completed and approved by the Forest Service Regional Forester.

Forest Plan Amendment

A programmatic amendment to the Mt. Hood Land and Resource Management Plan (Forest Plan) is necessary to modify plan components including land use allocations (management areas) and standard and guideline B1-076. No amendments are needed to the BLM Northwestern & Coastal Oregon Resource Management Plan to adopt the comprehensive river management plan.

The land use allocations (management areas) would be changed as outlined in table 5. These changes would follow the final boundaries previously discussed. The goal of all Wild, Scenic & Recreational Rivers land use allocations is to: “Protect and enhance the resource values for a river was designated into the Wild and Scenic River system” (Forest Plan, page Four-208). All wild segments would be changed to the A1-Reserved land use allocation, which has been used in the past for designated wild and scenic rivers that preclude regulated timber production.

All these lands are designated as Congressionally Reserved Areas under the Northwest Forest Plan and the Northwestern and Coastal Oregon BLM Resource Management Plan. Most of the lands within the corridors are also within Riparian Reserves. Riparian Reserves include areas along rivers, streams, wetlands, ponds, lakes, and unstable or potentially unstable areas where the conservation of aquatic and riparian-dependent terrestrial resources receives primary emphasis. Riparian Reserves are designed to protect the health of the aquatic system and its dependent species (NFWP ROD, page 7). As such, these lands would be managed under both the Riparian Reserve and Congressionally Reserved Areas standards and guidelines given the extensive overlap.

Table 5. Proposed Forest Plan amendment for land use allocations by river

Designated Segment	Classification	Land Use Allocation
Collawash River, Segment 1	Scenic	B1
Collawash River, Segment 2	Recreational	B1
East Fork Hood River	Recreational	B1
Fifteenmile Creek, Segment 1	Wild	A1
Fifteenmile Creek, Segment 2	Scenic	A1
Fifteenmile Creek, Segment 3	Wild	A1
Fifteenmile Creek, Segment 4	Scenic	A1
Middle Fork Hood River	Scenic	B1
South Fork Clackamas River	Wild	A1

Table 6 shows the amendment to standard and guideline B1-076 within the Fifteenmile Creek corridor to allow snowmobile use as designated on the over-snow map. Existing snowmobile routes include Forest Service Roads 4420 and 2730, and cross-country travel is permitted. This change is being made within the Mount Hood National Recreation Area (outside of designated wilderness) in order to be consistent with the Omnibus Act. All other standards and guidelines for B1 lands would apply to all river corridors, regardless of classification (see Forest Plan, pages Four-211 to Four-217).

Table 6. Proposed Forest Plan amendment for standard and guideline B1-076

Standard and Guideline	Existing Language	Proposed Amendment for Fifteenmile Creek (Additions are bolded, deletions are strikethrough)
B1-076	Within wild river corridors, motorized recreational use shall not be allowed.	Within wild river corridors, over snow vehicle motorized recreational use is the only motorized use permitted outside of wilderness areas. All other motorized recreational use shall not be allowed. Over-snow vehicle use is only permitted as designated on the over-snow map.

The impacts of the proposed Forest Plan amendment, along with the substantive requirements of the 2012 Planning Rule, are fully analyzed in the resource sections of this environmental assessment.

Monitoring Plan

The Mt. Hood Forest Plan monitoring program was updated in May 2016 to be consistent with the 2012 Planning Rule (36 CFR 219). The questions in table 7 would be added to the monitoring program to address wild and scenic rivers (B1 land use allocation). Then, the monitoring questions in table 7 would be used to help answer these Forest Plan monitoring questions as indicators. Monitoring on all wild and scenic rivers across the Mt. Hood National Forest would be used as part of the Forest Plan monitoring.

Table 7. Additional questions for Mt. Hood Forest Plan Monitoring Program

Forest Plan Component	Monitoring Questions	Indicators
(ii) The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.		
Standards and Guidelines: B1-001, B1-004 and B1-005	ii.e. Are the classifications, outstandingly remarkable values, free-flowing conditions, and water quality of designated wild and scenic river corridors being maintained or enhanced?	Comprehensive River Management Plan monitoring results and data.
(v) The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.		
Desired condition: River corridors divided into wild, scenic, and recreational segments with each providing different opportunities.	v.e. Is the existing use within the user capacities identified for designated wild and scenic rivers?	Monitoring data and trends based on the user capacity indicators, triggers and thresholds.

The Northwestern and Coastal Oregon BLM Resource Management Plan (August 2016) includes the following monitoring question:

M36. Monitoring Question: Are the outstandingly remarkable values of designated Wild and Scenic river corridors (including those classified as Wild, Scenic, or Recreational) being maintained? (page 128)

No additional monitoring questions would be added to the Resource Management Plan. The monitoring questions related to BLM lands within the South Fork Clackamas River wild and scenic river would be used to answer this overarching monitoring question.

Evaluation of the Forest Plan Amendment

As discussed previously in this environmental assessment, the Forest Service has identified a need to amend the Mt. Hood Land and Resource Management Plan to change the land use allocations based on the final wild and scenic river boundaries and classifications, and to adjust one standard for the Fifteenmile Creek wild and scenic river corridor.

The need for this programmatic Forest Plan Amendment closely ties to the purpose and need for the project, which includes developing a comprehensive river management plan 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.

Planning Rule Requirements

The Forest Plan would be amended under the 2012 Planning Rule (36 CFR 219). The 2012 Planning Rule has different provisions than the 1982 Planning Rule under which the existing Forest Plan was developed. The purpose of this amendment is to make the Forest Plan consistent with the Omnibus Act (123 Stat. 991, Public Law 111-11), specifically the wild and scenic river designations on Mt. Hood National Forest. All future projects and activities must be consistent with the amended plan.

The 2012 Planning Rule requires the Forest Service to identify which substantive rule provisions within 36 CFR 219.8 through 219.11 that are directly related to the amendment must be applied to the amendment. The applicable substantive provisions apply only within the scope and scale of the amendment (36 CFR 219.13(b)(5)). The substantive requirements that are directly related to this amendment include the following:

36 CFR 219.8(a)(2)(iii) and (a)(2)(iv) –The plan must include plan components, including standards or guidelines, to maintain or restore water quality and quantity.

36 CFR 219.8(a)(3)(ii)(B) – The plan must include plan components, including standards and guidelines, to maintain or restore the ecological integrity of riparian areas, including plan components to maintain or restore function and connectivity.

36 CFR 219.10(a)(1) – The plan must include plan components, including standards and guidelines, for integrated resource management to provide for ecosystem services and multiple uses, including outdoor recreation, as well as consider the following: 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 amendment is modest in scope, because it finalizes what Congress has already legislated and what has been managed as eligible since 1990 through the Forest Plan. Currently, the designated wild and scenic river segments are managed under a variety of land use allocations. These allocations were

changed through an administrative change in 2016, but the boundaries do not exactly align with the proposed final boundaries on the Clackamas River, East Fork Hood River, Fifteenmile Creek, Middle Fork Hood River, or South Fork Clackamas River. Similarly, the standard B1-076 does not align with the direction provided by Congress for the management of the Mount Hood National Recreation Area.

Substantive Requirements

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

Water quality and resources were considered in the development of the proposed boundary changes and associated changes to the land use allocations. Designated rivers must be managed to protect water quality. After implementation of the plan amendments proposed under the proposed action, the Forest Plan would continue to provide the necessary components, mainly in the standards and guidelines, for protection of soil, water, riparian, wild and scenic rivers and overall watershed function to meet the substantive requirement listed above. The Hydrology section of this environmental assessments provides more details and analysis on the proposed Forest Plan amendment and this substantive requirement.

36 CFR 219.8(a)(3)(ii)(B) – to maintain or restore the ecological integrity of riparian areas.

The ecological integrity of the riparian areas, including as related to the fisheries and botanical outstandingly remarkable values, were considered in the development of the proposed boundary changes and associated changes to the land use allocations. Riparian Reserves would not change and would continue to overlap with land use allocations. Standards and guidelines to provide water resource would not change, and help manage and protect the free-flowing character, water quality, and outstandingly remarkable values. Aquatic restoration projects could be proposed to enhance fishery resources as guided by management direction and the adopted comprehensive river management projects. The Hydrology section of this environmental assessment provides more details and analysis on the proposed Forest Plan amendment and this substantive requirement.

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 comprehensive river management plan is to protect and enhance the river values for which the Collawash River, Eagle Creek, East Fork Hood River, Fifteenmile Creek, Fish Creek, Middle Fork Hood River, South Fork Clackamas River, South Fork Roaring River, and Zigzag River were included in the National Wild and Scenic Rivers System.

The implementation of the proposed Forest Plan amendments would continue to provide the necessary components, mainly in the standards and guidelines, for protection of the outstandingly remarkable values, including fisheries species, wildlife species, macroinvertebrates, botanical species, cultural resource, and recreation opportunities scenery to meet this substantive requirement. The Environmental Impacts of the Proposed Action section of this environmental assessment provides more details and analysis on the proposed Forest Plan amendment and this substantive requirement.

The proposed action provides for aesthetic values within the river corridors. This is accomplished in the comprehensive river management plan through: visual resource management direction for each river segment identified through visual quality objectives based on viewer position, Landscape Character descriptions that address specific scenic features and qualities for each of the river segments, protection

and enhancement of the scenery outstandingly remarkable values identified for Middle Fork Hood River, South Fork Clackamas River, and Zigzag River and description of the existing conditions and trends for the scenic resource for each river segment. The Scenic Resources section of this environmental assessment provides more details and analysis on the proposed Forest Plan amendment and this substantive requirement.

36 CFR 219.10(b)(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 land use allocations and finalizing the wild and scenic river corridor boundaries protects and enhances the rivers values for which these nine rivers were designated. In addition to free flow and water quality, outstandingly remarkable values were determined by an interdisciplinary team using the process discussed in the [River Values Report](#), completed in August 2019.

Environmental Impacts of the Proposed Action

This analysis of environmental impacts does not include a discussion of affected environment. For a complete description of the affected environment by resource, as well as an overview of free flow condition, water quality and outstandingly remarkable values for each of the nine wild and scenic river segments associated with this analysis, please refer to the [River Values Report](#) or to the specific resource section below.

Methodology

Information on resource specific methodology, regulatory framework, and references cited can be found in the project record. This section summarizes the environmental impacts of the proposed action. Specifically, the analysis discloses effects related to the following components of the comprehensive river management plan:

- adoption of the comprehensive river management plan
- user capacity
- proposed wild and scenic river boundaries
- proposed management actions
- forest plan amendment
- monitoring plan

The following analysis also discloses consistency with relevant law, regulation, and policy, including the Forest Plan for each resource area.

Hydrology

River Values (Free Flow and Water Quality)

Under the proposed action, all river management would continue to be guided by the existing Forest Plan and BLM Resource Management Plan. This includes the standards and guidelines for Designated Wild, Scenic, and Recreational Rivers as well as appropriate watershed and soil resource direction in the Forest Plan and the Management Direction for Congressional Reserved Lands and appropriate watershed and

soil resource direction in the BLM Resource Management Plan. Any future proposed water resource projects would be reviewed under Section 7 of the Wild and Scenic Rivers Act.

This would ensure protection of both the water quality and free flow characteristics of the corridors.

Water Quality

Collawash River, Eagle Creek, East Fork Hood River, Fifteenmile Creek, Fish Creek, and Middle Fork Hood River all have listed 303(d) segments (impaired waters) for biological criteria (Eagle Creek and Middle and East Fork Hood Rivers), heavy metals (Middle and East Fork Hood Rivers), sedimentation (Fifteenmile Creek), or have a completed total maximum daily load (TMDL) for temperature (Middle and East Fork Hood Rivers, Collawash River, Fifteenmile Creek, and Fish Creek). See the River Values Report, located on the [project website](#) (USDA 2019a), for further information.

The majority of water quality impacts to the corridors were caused by past logging and road building. Streamside forests were removed for timber or to build roads. Stream channels were moved and confined to accommodate road infrastructure in the narrow river valleys. These water quality impacts persist today in the form of degraded aquatic habitat and increased stream temperature from the lack of channel complexity caused by historical logging of stream side forests and sedimentation from road locations.

Free Flow and Existing Infrastructure

Maps showing the locations of existing rip rap, concrete walls, major culverts (not road cross drain culverts), and bridges are shown in figure 2 through figure 5, as well as, the draft comprehensive river management plan (available on [the project website](#)). Fish Creek, Collawash River, Fifteenmile Creek and East Fork Hood River are the segments where existing road infrastructure are currently impacting stream channels and free flow. The infrastructure may impede the ability of the rivers to flow freely across their valleys, which impacts channel morphology and general stream processes, including flooding, riparian and large wood recruitment, and water quality (mainly stream temperature from the removal of stream side forests which provides shade).

Fish Creek, Collawash River, Fifteenmile and East Fork Hood River were all designated Wild and Scenic Rivers after road and bridge infrastructure had been constructed. Figure 2 shows the location of road infrastructure along Fish Creek, which parallels Forest Road 54. Figure 3 shows the location of road infrastructure along the Collawash River, which parallels Forest Road 63. Figure 4 shows the location of road infrastructure along Fifteenmile Creek, where Forest Road 2730 crosses just below the Badger Creek Wilderness and Forest Service Road 4421, where the wild and scenic river corridor ends just above BLM lands. Figure 5 shows the location of road infrastructure along the East Fork Hood River, which parallels Oregon State Highway 35.

For Fish Creek, Collawash River, and Fifteenmile Creek, Forest Service best management practice (BMP) Road-4 (Road Operations and Maintenance (USDA 2012) will continue to be utilized to manage existing roads and bridges. Should further in channel rip rap or bridge/culvert construction/reconstruction be needed a Section 7 evaluation would be completed to ensure that effects to free flow characteristics are minimized to the greatest extent possible. This management approach would continue to protect the free flow and water quality in these segments.

As mentioned, the East Fork Hood River recreational section parallels Oregon State Highway 35. The Oregon Department of Transportation (ODOT) is the responsible Agency for the management of the road infrastructure through the segment.

The Forest Service has worked with ODOT to develop a management process for Highway 35, which includes regular and emergency maintenance using both Forest Service (USDA 2012) and ODOT BMPs (ODOT 2014) and any new or improvement projects (which would require a Section 7 analysis). The full description of the agreed management approach developed between the Forest Service and ODOT can be found in the proposed action section.

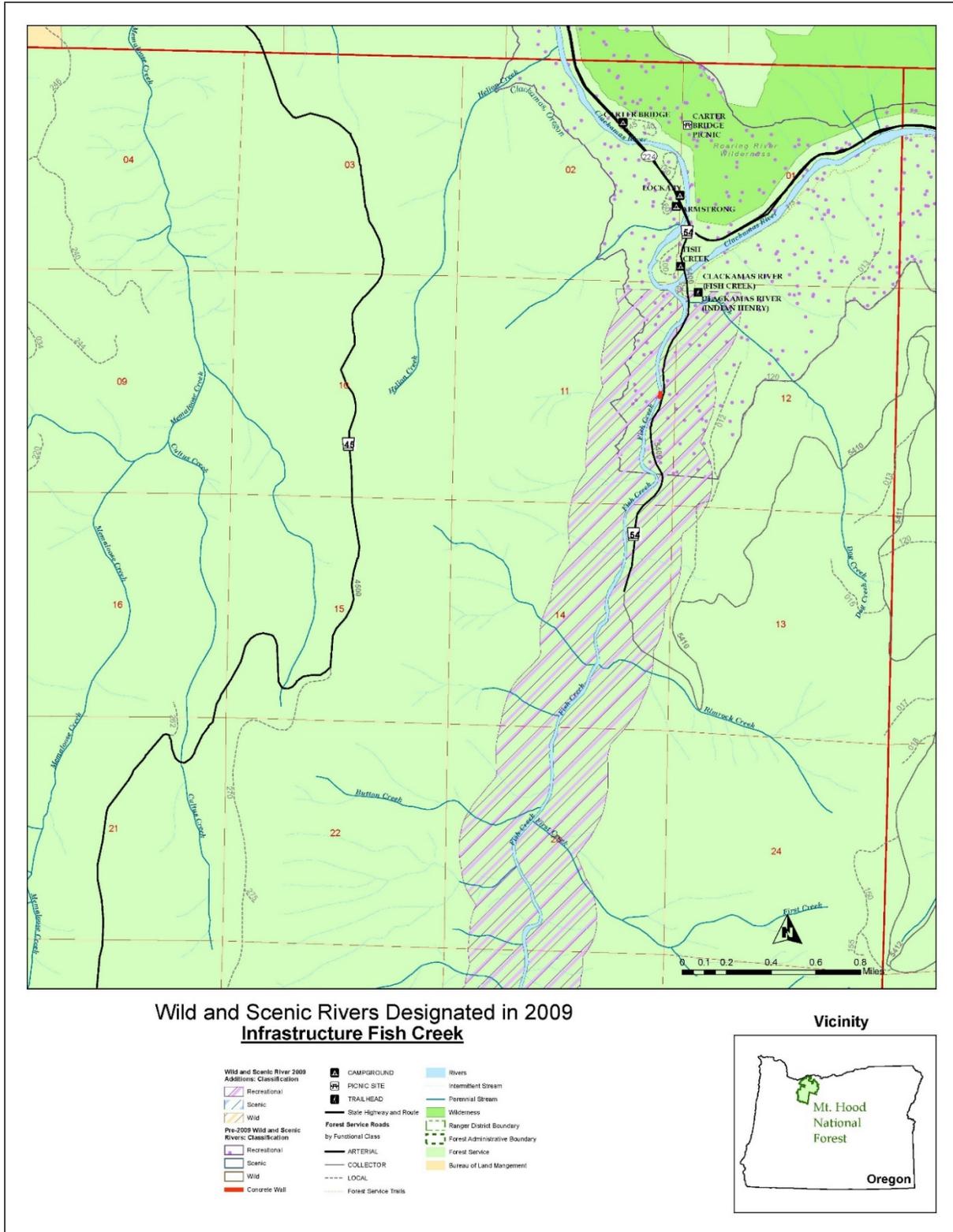


Figure 2. Location of existing infrastructure in the Fish Creek WSR corridor

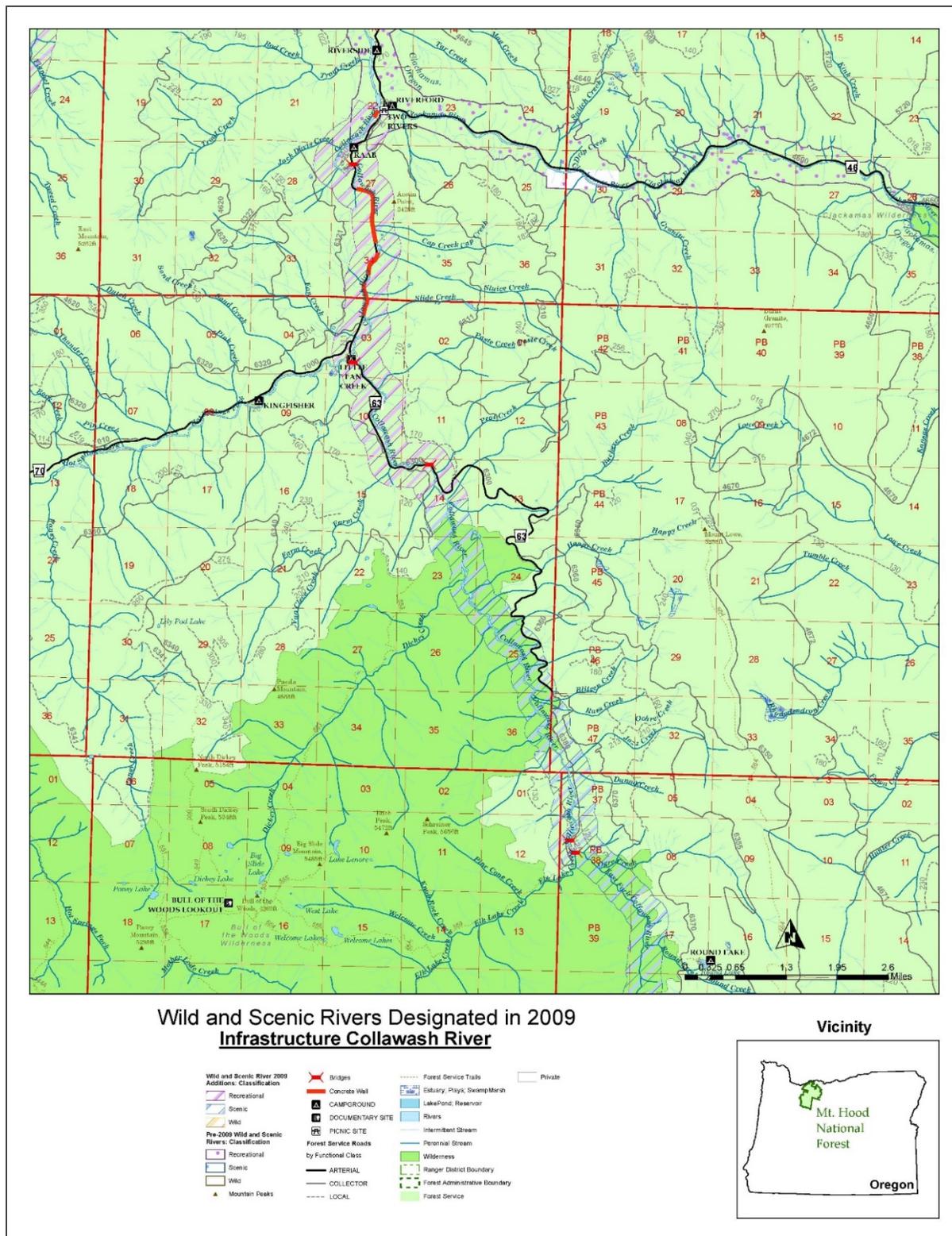


Figure 3. Location of existing infrastructure in the Collawash River WSR corridor

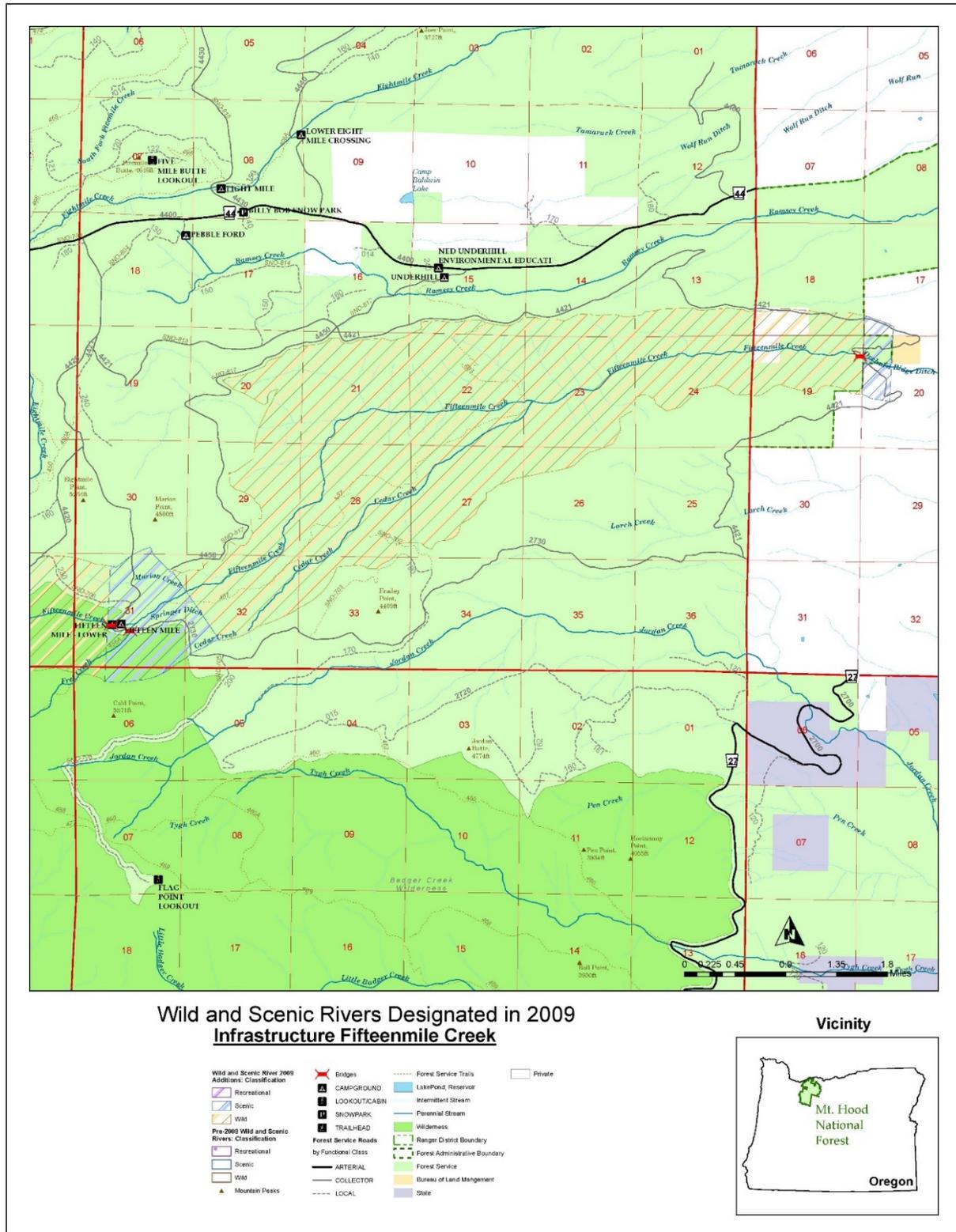


Figure 4. Location of existing infrastructure in the Fifteenmile Creek WSR corridor

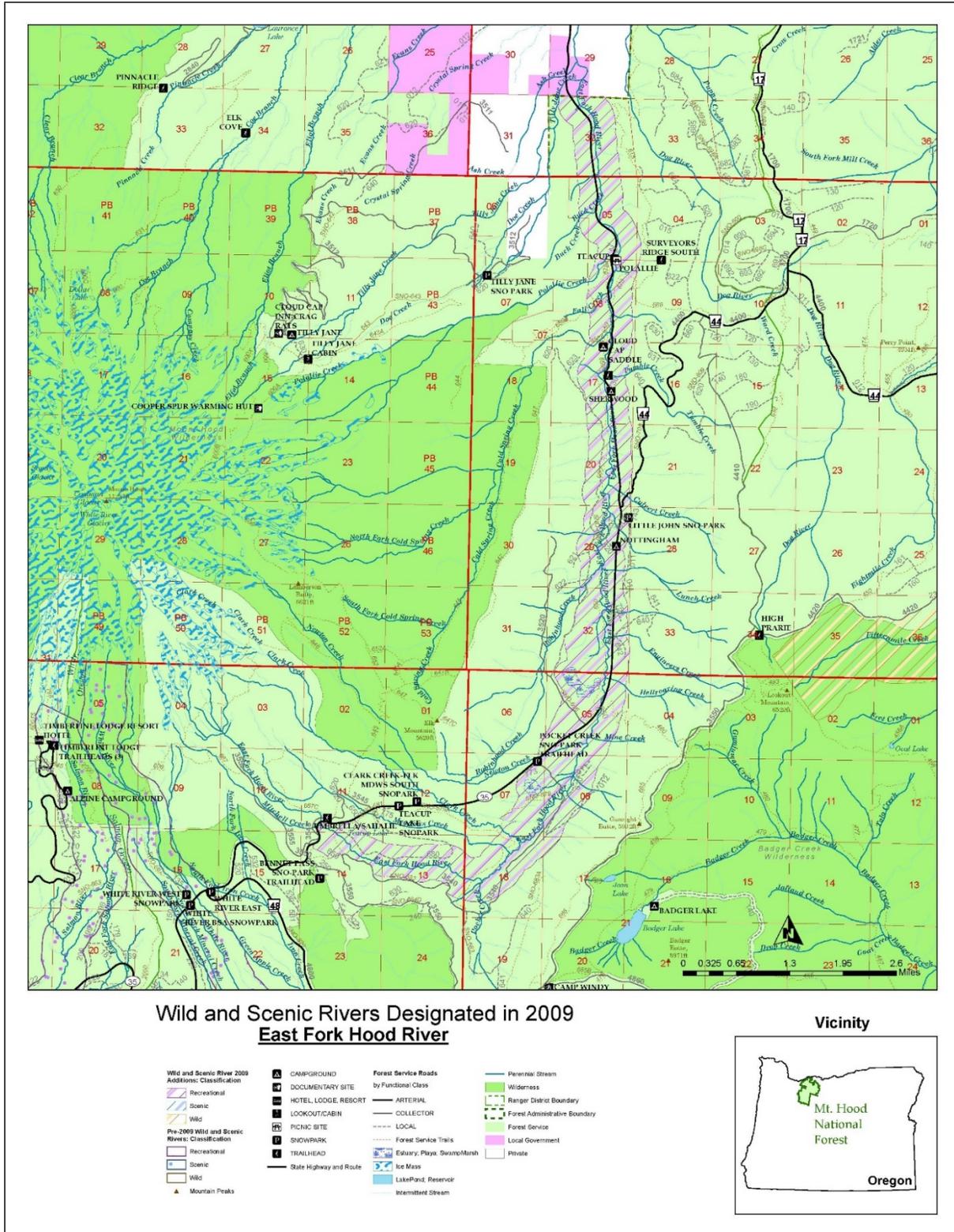


Figure 5. Location of existing infrastructure in the East Fork Hood River WSR corridor

While we acknowledge that there are currently impacts from road infrastructure and maintenance from Highway 35, with the established best management practices and the management processes the free flow and water quality of the East Fork Hood River would not be further degraded in the future.

Overall, many of the existing impacts or trends would continue under the proposed action, but the comprehensive river management plan would add additional protection for hydrology resources, such as user capacity thresholds for recreation, and continuous monitoring and adaptive management that would further protect free flow and water quality characteristics.

Environmental Consequences

Direct and Indirect Effects

Comprehensive River Management Plan

Under the proposed action, a comprehensive river management plan would be adopted and establish programmatic management direction specific to the nine river corridors that would protect their free-flowing condition and water quality. The comprehensive river management plan would put more focus on these nine established wild and scenic river segments through monitoring and adaptive management.

Implementation of the comprehensive river management plan, in coordination with implementation of Section 7 of the Act (which ensures that no future management would impact the free flow conditions of the rivers) as well as implementation of the standards and guidelines for Designated Wild, Scenic, and Recreational Rivers, pages Four-211 through Four-217 of the Forest Plan, as amended by the Northwest Forest Plan (1994), and Resource Management Plan direction for Wild and Scenic Rivers (page 58), riparian reserves (pages 68-74), hydrology (page 79), and soil resources (page 89) in the Northwestern and Coastal Oregon Resource Management Plan (BLM 2016) would further strengthen the management of the river segments and continue to protect the free flow and water quality over time.

User Capacity

The [user capacity analysis](#) (USDA 2019b) determined appropriate levels of visitor use and activities that would not impact the free flow and water quality while maintaining existing recreation opportunities. We estimated that current recreation use in all nine river corridors are substantially lower than their capacities established by the analysis. Therefore, the proposed action would be unlikely to change recreation use in any of the river corridors.

There is the potential over time, should these rivers receive increased recreation pressure, that recreation could impact water quality through increased use in riparian areas and the channels themselves. This could impact water quality parameters such as sedimentation, temperature, and fecal coliform.

The user capacity establishes a framework for monitoring and triggering potential management actions in the river corridors if use approaches these thresholds (see the comprehensive river management plan). Implementation of this management approach, as well as the Forest Plan, Resource Management Plan, Section 7 of the Wild and Scenic Rivers Act, and the Clean Water Act would protect water quality and free flow into the future, if this were to occur.

Final Boundaries

The modified boundaries for each of the rivers outlined in the proposed action would not impact the free flow or water quality of these systems.

We recognize that changing boundaries, specifically narrowing boundaries to balance additions, would allow management that could potentially impact water quality and free flow. However, proposed management actions in these areas would be required to go through site specific environmental analysis and follow the management direction set forth in the Mt. Hood Forest Plan the BLM Resource Management Plan, Section 7 of the Wild and Scenic Rivers Act and the Clean Water Act.

As required by the Wild and Scenic Rivers Act, management actions proposed outside of the final wild and scenic river corridors, but within a geographical area that could still affect the water quality and free flow of a corridor are to be implemented in a way that protects the free flow and water quality in the corridor(s); this would apply to the areas that were removed from the final wild and scenic river corridor. Boundaries were changed along the Collawash River, East Fork Hood River, Fish Creek, Fifteenmile Creek, Middle Fork Hood River, South Fork Clackamas River, and Zigzag River.

Forest Plan Amendment

As noted in the proposed action, several amendments are needed to the current Forest Plan in order to be in compliance with the Wild and Scenic Rivers Act and Omnibus Act.

River segments would either be changed to land management area A-1 (reserved land use allocation) or the B-1 (Wild, Scenic and Recreational River Segments). This specific Forest Plan amendment is programmatic and would, therefore, have no impact to free flow condition or water quality.

These lands are currently managed under Standards and Guidelines for Designated Wild, Scenic, and Recreational Rivers, pages Four-211 through Four-217 and would continue after the plan amendment is finalized. Therefore, no impacts to free flow and waters quality are anticipated.

The standard and guideline from the Forest Plan, B1-076, would be amended to allow over snow travel in the Fifteenmile Creek corridor (outside of designated wilderness) in order to be consistent with the Omnibus Act. This activity is already permitted in this area. Therefore, no impacts to free flow or water quality is anticipated by this change.

Proposed Management Actions

Toilet Installation along the Collawash River

There are several site-specific projects proposed. The first includes the installation of toilet(s) along the Collawash River to addresses fecal contamination where there is evidence of dispersed camping or other concentrated recreation use, in areas without sanitary facilities (see the proposed action section of this assessment).

While water quality in the Collawash River is not impaired for fecal coliform by the State of Oregon, there is anecdotal evidence that dispersed recreation could be having localized water quality issues. This action would ensure protection of water quality from recreation pressure in the corridor.

We anticipate localized short-term minimal impacts to soils, riparian and water quality from toilet(s) construction. There would be permanent soil disturbance in stream side corridors, estimated to be a disturbance footprint of up to a quarter acre per toilet. This could have a minor impact on riparian vegetation, stream temperature and soils. The disturbance could create sediment; however, implementation of Best Management Practice Fac-4. Sanitation Systems (USDA FS 2012) is anticipated to protect water quality to acceptable levels. This best management practice would:

- Use suitable setback distances from water bodies or other sensitive areas when siting toilets;

- Use proper field investigations and soil tests to determine suitable soils for the toilet(s); and,
- Seed disturbed areas after construction.

With the anticipated small disturbance footprint, as well as the use of Fac-4 Sanitation Systems to site the individual toilets, the soils and riparian disturbance to stream shade, water temperature and sedimentation would be minimal.

We anticipate construction of toilets would have a net positive on chemical water quality, as we believe toilet construction greatly reduce human waste issues (fecal coliform) in the corridor.

Interpretive Signs for Historic Features on the South Fork Clackamas River

The second site specific project involves installation of interpretive signs in the South Fork Clackamas River corridor. First, sign(s) installation would impact a very small geographical area. Secondly, the signs would be sited to avoid sensitive aquatic resources such as wetlands, riparian vegetation, and unstable slopes. Finally, all construction disturbance would be seeded to promote ground cover. As such, we anticipate no effects to the free or water quality in the South Fork Clackamas wild and scenic river corridor.

Monitoring Plan

Mt. Hood National Forest

The Mt. Hood monitoring plan was updated in 2016 to be consistent with the 2012 planning rule (see table 7). Under the proposed action, implementation of a comprehensive river management plan monitoring plan would put additional monitoring focus on the nine river corridors. Additional monitoring, focused on water quality, fish, macroinvertebrates, and recreation (see proposed action) would guide adaptive management, if necessary. This monitoring, along with adherence to the Forest Plan Standards and Guidelines for Designated Wild and Scenic Rivers, Section 7 process the Act, and the Clean Water Act would provide adequate protection to the free flow and water quality.

Northwestern and Coastal Oregon BLM

No additional monitoring questions would be added to the Resource Management Plan. All monitoring would continue under the management plan.

Cumulative Effects

The proposed action would not add measurable site specific disturbance (direct or indirect effects) in any of the corridors, therefore we do not anticipate cumulative effects to water quality or free flow from these actions.

There may be some minor ground disturbance in the Collawash River corridor due to adding vault toilets and in the South Fork Clackamas River in the form of installation of interpretive signs.

We anticipate minor ground disturbance that, when added to other activities in the corridors, would not either measurably benefit or degrade water quality related to sediment and temperature or free flow.

However, adding toilets to the Collawash River corridor could potentially improve cumulative effects to water quality since the toilets would reduce the amount of fecal coliform in the river from recreation activity.

Consistency with Relevant Laws, Regulations, and Policy

Land and Resource Management Plans

Mt. Hood National Forest

The Forest Plan (USDA 1990) provides management direction, in the form of standards and guidelines, for soil productivity (page Four-49 through 50), water (Four-53 through 58), riparian areas (Four-59 through 63) and designated wild and scenic rivers (Four-211 through 217). Standards and guidelines were developed to protect watershed and hydrology resources, including free flow and water quality.

The Forest Plan was amended by the “Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl” ([Northwest Forest Plan](#)) in 1994. The Northwest Forest Plan allocations within the majority of the designated wild and scenic river corridors are managed under the Riparian Reserve standards and guidelines, which offer further protections to water quality and free flow over what is provided in the Mt. Hood National Forest Land and Resource Management Plan.

Riparian Reserves include areas along rivers, streams, wetlands, ponds, lakes, and unstable or potentially unstable areas where the conservation of aquatic and riparian-dependent terrestrial resources receive primary emphasis. Riparian Reserves are designed to protect the health of the aquatic system and its dependent species (Forest Service and Bureau of Land Management 1994). The standards and guidelines include the Aquatic Conservation Strategy, which was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems. The strategy also protects salmon and steelhead habitat on federal lands within the range of Pacific Ocean anadromy.

In developing the proposed action, all standards and guidelines related to soils, water, riparian, and wild and scenic rivers were considered in both the Forest Plan (USDA 1990) as well as the Northwest Forest Plan. Over time, all Forest Plan standards and guidelines related to water quality and free flow will be followed in the management of these wild and scenic river corridors. These standards and guidelines were developed to protect Wild and Scenic River outstandingly remarkable values, water quality, and free flow.

Because the proposed action would have no measurable adverse effects to riparian reserves, the project would meet all of the objectives for the Aquatic Conservation Strategy including:

1. Maintaining and restoring the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted.
2. Maintaining and restoring spatial and temporal connectivity within and between watersheds.
3. Maintaining and restoring the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.
4. Maintaining and restoring water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.
5. Maintaining and restoring the sediment regime under which aquatic ecosystems evolved.
6. Maintaining and restoring in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats, and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.

7. Maintaining and restoring the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.
8. Maintaining and restoring the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.
9. Maintaining and restoring habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

Northwestern and Coastal Oregon BLM

The Northwest and Coastal Oregon Resource Management Plan (BLM 2016) provides management direction in the form of management objectives and direction for wild and scenic river management (pages 55-56), riparian reserves (pages 68-74), hydrology (page 79), and soil resources (page 89). This direction was developed to protect watershed and hydrology resources, including free flow and water quality.

Other Relevant Law, Regulation, or Policy

Wild and Scenic Rivers Act

Section 10(b) of the Wild and Scenic Rivers Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free flow, and outstandingly remarkable values). All proposed actions outlined in direct and indirect effects section of this report describe how each action would protect and enhance the free flow and water quality of the associated rivers.

Section 7 directs federal agencies to protect the free-flowing condition and other values of designated rivers. Implementation of Section 7 requires development of rigorous and consistent interagency evaluation procedures to protect river resources. Therefore, any proposed or future project that has the potential to affect the free flow of any of the project river corridors would need to have an evaluation which ensures that free flow is protected to the maximum extent possible.

Clean Water Act

The Clean Water Act provides the structure for regulating pollutant discharges to waters of the United States. The Act's objective is "...to restore and maintain the chemical, physical, and biological integrity of the Nation's waters," and is aimed at controlling point and non-point sources of pollution. The U.S. Environmental Protection Agency (EPA) administers the Act, but many permitting, administrative, and enforcement functions are delegated to State governments. In Oregon, the designated agency for enforcement of the Clean Water Act is the Oregon Department of Environmental Quality. See the River Values Report (USDA 2019a) for further information regarding water quality in project area.

Management of Wild and Scenic Rivers requires our actions to protect water quality. Water quality would be restored or maintained should the Forest Plan standards and guidelines, as well as best management practices, be implemented over time.

Fish and Wildlife

Outstandingly Remarkable Value

Of the nine wild and scenic rivers being analyzed, five rivers have fisheries (or macroinvertebrate) as an outstandingly remarkable value, while two rivers have wildlife as outstandingly remarkable value. River segments with fisheries outstandingly remarkable value include the Collawash River (both segments 1 and 2), Fifteenmile Creek (segments 3 and 4), Fish Creek, and Middle Fork Hood River. The one river segment with macroinvertebrate population as an outstandingly remarkable value is the Zigzag River. River segments with wildlife outstandingly remarkable value include the East Fork Hood River, and Fifteenmile Creek (all 4 segments). The river values for these segments are briefly summarized below, refer to the [River Values Report](#) for more detail.

Collawash River

Fisheries is an outstandingly remarkable value for segments 1 and 2 of the Collawash River. In both Collawash segments, the significance of the vestige wild fish populations, wild fish species diversity, success of the bull trout re-introduction to their historic habitat, and the management of this segment as a wild fish sanctuary is extremely unique regionally.

East Fork Hood River

Wildlife is an outstandingly remarkable value for the East Fork Hood River. The wild and scenic river corridor provides a critical travel (migration) corridor for deer and elk between winter and calving seasons. The corridor also provides habitat for the harlequin duck; this population is one of the largest on the Forest and is situated on the easternmost edge of this species' range in the Pacific Northwest region. The river corridor provides for a contiguous migration corridor for harlequins to travel from their ocean wintering areas to summer nesting habitat. The river corridor provides for a diversity of habitat including large (high and mid-elevation) wetland/meadow complexes, wide floodplain with numerous side channels, and 2 tributary channel valleys that are continually maintained in early seral due to regular glacial outwash events.

Fifteenmile Creek

Fisheries is an outstandingly remarkable value for segments 3 and 4. These lower segments sustains multiple fish species listed as federal or state-listed threatened or sensitive species, including steelhead, redband trout, and highly likely Pacific lamprey. As of fall 2017, all known year round human created barriers to fish passage have been removed up to the middle of segment 4 in Fifteenmile Creek. Fifteenmile Creek steelhead are especially unique because they are one of the few remaining wild runs with little hatchery introgression. There has never been a hatchery stocking program for steelhead in the Fifteenmile Creek basin. The summer steelhead population in Fifteenmile Creek is recognized as both a "core" and "genetic legacy" population for the Middle Columbia evolutionary significant unit (ESU) and are thus a regionally significant stock.

Wildlife is an outstandingly remarkable value for all four segments of Fifteenmile Creek. The diversity of habitat types and highly diverse range of species found in this corridor is unique. There are few areas on the forest or region that transition from subalpine-fir to pine/oak in only 11 miles. The Fifteenmile corridor also provides a high quality critical habitat linkage for deer and elk wintering range to summer (calving/fawning) range. Beaver colonies are present in the watershed, which create even more habitat diversity within the river corridor.

Fish Creek

Fisheries is the outstandingly remarkable value for Fish Creek due to the combination of wild fish species presence and diversity (late-run coho, winter steelhead, spring Chinook), management of this segment as a part of a larger wild fish sanctuary, and the potential for future use by several other declining wild stocks (bull trout, Pacific lamprey). Fisheries habitat within the wild and scenic corridor is moving towards exceptional habitat based on the large-scale road decommissioning that occurred following the 1996 flood events, effectively eliminating access to about 90 percent of the watershed. Few other watersheds in the region have gone from such high levels of road access to almost none within a few decades.

Middle Fork Hood River

The fish population in the wild and scenic river segment of the Middle Fork Hood River are an outstandingly remarkable value because of the regional significance of the existing small population of federally-listed Columbia River bull trout. This is the only natural population of bull trout left on the Mt. Hood National Forest, as well as northwestern Oregon. The heart of spawning and rearing habitat for this bull trout population is Laurence Lake and its two tributaries, which are just above the wild and scenic designation for the Middle Fork Hood River. The wild and scenic river serves as a critical link for this population to the Columbia River, which provides additional adult rearing and foraging habitat, as well as connections to populations in nearby basins.

Zigzag River

Macroinvertebrate is an outstandingly remarkable value. There are only nine populations of the Scott's apatanian caddisfly (*Allomyia scotti*) known in the world, all of which are found on the Mt. Hood National Forest (USDA and USDI 2016). The habitat for this species is present within the Zigzag River.

Environment Consequences

Direct and Indirect Effects

Comprehensive River Management Plan

Of the nine wild and scenic rivers analyzed, four rivers have fisheries, one has macroinvertebrates, and two rivers have wildlife as an outstandingly remarkable value. The additional protection of free-flowing condition and water quality would protect and enhance fisheries habitat requirements for four rivers (Collawash River, Fifteenmile Creek, Fish Creek, and Middle Fork Hood River), as well as wildlife (Harlequin duck) in the East Fork Hood River, and macroinvertebrates (Scott's apatanian caddisfly) in the Zigzag River. All of these species require clean, cold, and well-oxygenated water for basic life history requirements, such as spawning, rearing, or maintenance of food base. The identified user capacity would also protect and enhance wildlife outstandingly remarkable values by limiting disturbance in riparian areas that are generally used by a higher diversity of wildlife species than any other habitat types due to the juxtaposition of abundant food, water, and cover (Forest Plan 1990).

User Capacity

The proposed action identifies appropriate kinds and levels of visitor use that would not impact the outstandingly remarkable values. Pertinent triggers, thresholds, and management actions are identified in cases where fisheries, macroinvertebrate, and wildlife are outstandingly remarkable values, and may be impacted by visitor use.

Any protection to potential habitat or disturbance to fish, macroinvertebrate, or wildlife species listed in the user capacity and monitoring plan, would be in addition to habitat protection currently afforded to species already listed under the Endangered Species Act, National Forest Management Act, Forest Service National policy as stated in Forest Service Manual 2670, and Northwest Forest Plan Riparian Reserve Aquatic Conservation Strategy. In summary, the identified user capacity and monitoring plan maintains or improves fish, macroinvertebrate, and wildlife species and habitat protection due to the increased emphasis on monitoring of specific fish, macroinvertebrate, or wildlife outstandingly remarkable values.

Final Boundaries

No changes to the interim boundaries (a quarter mile from the ordinary high water mark) are proposed for Eagle Creek or South Fork Roaring River. These rivers are within designated wilderness and the existing corridors adequately protect the identified outstandingly remarkable values, which do not include any fish, macroinvertebrate, or wildlife outstandingly remarkable values.

Seven boundaries were modified from the interim proposed boundaries (Collawash River, Fish Creek, East Fork of the Hood River, Fifteenmile Creek, Zigzag River, Middle Fork Hood River and South Fork Clackamas River). All of the seven proposed boundary changes are either neutral (2), or better protect (5) fish, macroinvertebrate, or wildlife outstandingly remarkable values. These boundaries were extended specifically for seven river segments, and potential impacts to these river value, are detailed below:

- **Collawash River:** There are no macroinvertebrate or wildlife outstandingly remarkable values designated in this watershed, but it is expected that protection would increase for the fisheries outstandingly remarkable value by the proposed boundary changes. The widening of the boundary to include the entire headwater watershed area was designed to increase habitat protection to areas that provide high water quality to downstream fish populations and habitat. The narrowing of the boundary in existing wilderness areas would not impact the fisheries values, as habitat protection would be maintained by the current wilderness designation.
- **East Fork Hood River:** There are no fisheries or macroinvertebrate outstandingly remarkable values designated in this watershed, but it is expected that protection would increase for the wildlife (Harlequin duck and big game fawning/calving areas) outstandingly remarkable values by the proposed boundary changes. The boundary on the East Fork Hood River was specifically adjusted to include two large wetlands and meadows that are being used by elk and other wildlife. The proposed adjusted boundary narrowing near the forest boundary continues to protect all stream channel, associated riparian area, and other upland critical habitat elements for seasonal use by Harlequin duck for nesting and rearing young.
- **Fifteenmile Creek:** There are no macroinvertebrate outstandingly remarkable values designated in this watershed, but it is expected that the boundary change would provide additional protection for the fisheries and wildlife (steelhead and wildlife west-east migration corridor) outstandingly remarkable values. The narrowing of the boundary in existing wilderness areas would not impact the fish or wildlife values, as habitat protection would be maintained by the current wilderness designation.
- **Fish Creek:** There are no macroinvertebrate or wildlife values designated in this watershed, but it is expected that protection would increase for the fisheries outstandingly remarkable value by the proposed boundary changes. The widening of the boundary to include the entire headwater watershed area was designed to increase habitat protection to areas that provide high water quality to downstream fish populations and habitat. The narrowing of some parts of the corridor continues

to protect all stream channel, associated riparian area, and other upland critical habitat elements in this largely unroaded and inaccessible watershed.

- **Middle Fork Hood River:** There are no macroinvertebrate resources or wildlife outstandingly remarkable values, and thus there would be neutral effects to these values in this watershed. Fisheries (bull trout) are an outstandingly remarkable value in this segment. The proposed adjusted boundary change continues to protect all stream channel, associated riparian area, and other upland critical habitat elements, and thus would maintain protection for this bull trout population and habitat.
- **South Fork of the Clackamas River:** There are no fish, wildlife, or macroinvertebrate outstandingly remarkable values, and thus the proposed boundary would have neutral effects to these values in this watershed boundary.
- **Zigzag River:** There are no fish or wildlife values designated in this watershed, but the change in proposed boundary would better protect the macroinvertebrate (Scott's apatanian caddisfly) outstandingly remarkable value. The extension of the boundary to include the entire headwater watershed area was designed to increase habitat protection to areas that provide high water quality to downstream macroinvertebrate habitat. The narrowing of the boundary in existing wilderness areas would not impact the macroinvertebrate values, as habitat protection would be maintained by the current wilderness designation.

In summary, the boundaries for five out of the seven rivers that had boundaries modified were specifically modified to benefit fish, macroinvertebrate, or wildlife outstandingly remarkable values. The remaining rivers are either neutral or would maintain (interim boundaries unmodified) existing fish, macroinvertebrate, and wildlife values.

Proposed Management Actions

Post-installation, both proposed management actions would provide beneficial effects to fish and wildlife, as described below.

Toilet Installation along the Collawash River

The installation of toilets on the Collawash River would reduce fecal contamination in river and floodplain areas, reducing impacts to fish and riparian-associated wildlife species. The small area of ground disturbance would be located in already disturbed areas, as well as immediately adjacent to high-use areas that are unlikely to provide habitat for threatened, endangered or sensitive wildlife species.

Interpretive Signs for Historic Features on the South Fork Clackamas River

The proposed interpretive signs would have no direct adverse impact to fish or wildlife habitat or populations on the Mt. Hood National Forest, including any threatened, endangered, or sensitive species. The installation of interpretive signs is likely to have very little, to no, ground disturbance to cause direct effects. Any ground disturbance would be completed during the dry season (generally June 1 – October 15). The information provided by interpretive signs would have beneficial effects by reducing recreational disturbance to Townsend's big-eared bats (*Corynorhinus townsendii*); a Forest Service and BLM Regional sensitive species in Oregon.

Neither projects are in the Zigzag River watershed, that contains Scott's apatanian caddisfly populations, and would have no impact to this outstandingly remarkable value.

Forest Plan Amendment

As noted in the proposed action, an amendment is needed to the current Forest Plan in order to comply with the Wild and Scenic Rivers Act and Omnibus Act. The plan amendments are administrative in nature, and do not change any existing uses. The three plan amendments would therefore maintain existing fish, macroinvertebrate, and wildlife habitat, as well as their current use.

Monitoring Plan

The Mt. Hood Forest Plan monitoring plan was updated in 2016 to be consistent with the 2012 planning rule (36 CFR 219). Question (ii), identified in Appendix A: Proposed Monitoring Plan, would be added to the monitoring plan as part of this proposed action. Under the proposed action, implementation of a comprehensive river management plan monitoring plan would put additional monitoring focus on the six river corridors that contain fisheries, macroinvertebrates, and/or wildlife habitat outstandingly remarkable values. This additional monitoring would guide adaptive management for protection or enhancement of these resources, as necessary.

Cumulative Effects

There are no direct impacts to fish, macroinvertebrates, or wildlife; therefore, no effects can be cumulated. Indirect effects are beneficial.

Consistency with Relevant Laws, Regulations and Policy

There are no fish or wildlife outstandingly remarkable values on BLM administered lands, so the Northwestern and Coastal Oregon Resource Management Plan is not applicable to this resource.

Land and Resource Management Plan

The Forest Plan provides standards and guidelines for management of fish, wildlife, as well as threatened, endangered and sensitive plants and animals. These standard and guidelines are being met through the implementation of proposed management action on the Collawash River, where toilet(s) would be installed along the river to address fecal contamination at specific sites, where there is evidence of dispersed camping or other concentrated recreation use, in areas without sanitary facilities.

- FW-139 Fisheries: Degraded fish habitat shall be improved through rehabilitation, and/or enhancement, project investments and adherence to riparian management direction (see Forestwide Riparian Area and B7 General Riparian Management Area Standards and Guidelines).
- FW-175 TES plants and animals: Habitat for threatened, endangered, and sensitive plants and animals shall be protected and/or improved.

This standard and guideline is consistent with how the interim boundary was changed to encompass as much open meadow habitat as possible to benefit East Fork of the Hood River wildlife (big game) outstandingly remarkable value.

- FW-189 Wildlife: Existing natural meadows/openings shall be maintained.

In developing the proposed action, all standards and guidelines, related to aquatic species, wildlife, water, riparian, and wild and scenic rivers were considered. Therefore, all Forest Plan standards and guidelines were followed and the management recommendations in proposed action would also maintain and protect habitat for aquatic species (fish and macroinvertebrates) and wildlife, as directed by the Wild and Scenic Rivers Act.

In addition, as mentioned above, scenic and recreational segments would be changed to B-1 (Wild, Scenic and Recreational Rivers land use allocation in the Mt. Hood Land and Resource Management Plan). The B1 amendments are administrative in nature, and do not change any existing uses. These lands are currently being managed under the Standards and Guidelines for Designated Wild, Scenic, and Recreational Rivers and would continue after the plan amendment, therefore, fish, macroinvertebrate and wildlife habitat would be maintained.

Other Relevant Law, Regulation, or Policy

Endangered Species Act

The proposed comprehensive river management plan actions would maintain, or in some cases be beneficial, to fish and wildlife species. This includes Endangered Species Act-listed anadromous salmon (coho and Chinook), steelhead, and bull trout that reside on the forest and are listed as threatened under the Endangered Species Act. All of these fish species are also outstandingly remarkable values in the comprehensive river management plan, including the Collawash River (both segments 1 and 2), Fifteenmile Creek (segments 3 and 4), Fish Creek, and Middle Fork Hood River segments.

There are four Endangered Species Act-listed wildlife species that occur, or may potentially occur, on the forest (Northern spotted owl (*Strix occidentalis caurina*), streaked horned lark (*Eremophila alpestris strigata*), gray wolf (*Canis lupus*), and Oregon spotted frog (*Rana pretiosa*). Oregon spotted frog are only found in Camas Prairie (White River watershed), which is outside of the comprehensive river management plan action area. The other three species are not stream or riparian obligates, but may incur some benefit from habitat that would be protected within the river corridors.

The Endangered Species Act is already in place to maintain and conserve Federally-listed species and their critical habitat needs on the Mt. Hood National Forest and BLM lands. The additional protection of nine river corridors, including the riparian area, stream channel, water quality, and natural free flow, is consistent with the Endangered Species Act as both have similar habitat protection purposes.

Wild and Scenic Rivers Act

Section 10(b) of the Wild and Scenic Rivers Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free flow, and outstandingly remarkable values). The direct and indirect effects section describes how each action would protect and enhance the fish and wildlife value of the associated rivers.

Geology

Outstandingly Remarkable Values

Collawash River

Segments 1 and 2 contain a number of very large, active earthflows, representing “textbook” examples that are easily interpreted in the field. Earthflows within segment 1 are only visible from the river, while those in segment 2 are easily observable from Forest Service Road 63. Intense precipitation events lead to increased river flows, and subsequently, the river’s erosive potential. During periods of increased runoff, the river actively cuts into the toe of the earthflows, accelerating their rate of downslope movement. The dynamic relationship between the river and the earthflows results in constant rearrangement of the river channel and is not something found within the region of comparison. Because of this, and the fact that

earthflows of this size are not typically found within the region of comparison, geology is found to be an outstandingly remarkable value.

Middle Fork Hood River

The Parkdale lava flow provides an excellent example of an A'a type of flow which is typified by rough, jagged and cindery surfaces. Geologically young lava flows of this nature are rare in the region and considered a "textbook" example that can be easily studied and interpreted. The juxtaposition of large debris flows, and young lava flows is not found anywhere else within the region of comparison; and for this reason, geology is considered an outstandingly remarkable value.

Environmental Consequences

Direct and Indirect Effects

There would be minimal direct or indirect impacts of the proposed action (toilet installation and interpretative signs) on geologic resources for the nine designated Wild and Scenic Rivers. Adoption of the comprehensive river management plan would provide further protections and enhance the outstandingly remarkable geology values located within the Collawash and Middle Fork Hood Rivers. No user capacity triggers or thresholds were identified for the geology outstandingly remarkable values in the aforementioned river segments because geology would not be affected by visitor use. The final boundary of the Middle Fork Hood River was adjusted to incorporate as much of the Parkdale Lava Beds as possible within the lateral boundary requirements to further protect the geology outstandingly remarkable value from potential future mineral materials development. While neither segment of the Collawash was adjusted for geology outstandingly remarkable value, segment 1 was adjusted for other resources. Additionally, modification of the standard B1-076 for over snow use would have no direct or indirect impacts on the geology outstandingly remarkable values. No monitoring requirements were proposed for the geology outstandingly remarkable value.

Cumulative Effects

There are no recent Forest Service activities within the cumulative effects analysis area that have affected geological resources and there are no foreseeable future actions in the next 5 years apart from this plan. The management actions proposed within the Collawash and Middle Fork Hood River corridors would further protect geologic resources. Since there are no cumulative project effects contributing to these beneficial effects, there are no positive or negative cumulative effects.

Consistency with Relevant Laws, Regulations, and Policy

There are no geology outstandingly remarkable values on BLM administered lands, so the Northwestern and Coastal Oregon Resource Management Plan is not applicable to this resource.

Land and Resource Management Plan

The Forest Plan provides standards and guidelines for managing minerals and energy management and geology within segments of congressionally designated Wild and Scenic Rivers. The following standards and guidelines apply specifically to the proposed action with regard to geology outstandingly remarkable values:

- Minerals and Energy Management: B1-053 through B1-063; and,
- Geology: Forestwide Geology Standards Apply.

In addition to protections provided by the B1 land allocation for designated Wild, Scenic, and Recreational Rivers, the existing B8-Earthflow land use allocation of the Forest Plan applies to both segments of the Collawash river and requires “maintain[ing] hydrologic and physical balances to prevent reactivation or acceleration of large, slow moving earthflow areas” (Forest Plan, page Four-261). Where two land allocations overlap, the more restrictive of the two applies to any management actions. The proposed action is consistent with the Forest Plan standards and guidelines discussed above.

Wild and Scenic Rivers Act

Section 10(b) of the Wild and Scenic Rivers Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free flow, and outstandingly remarkable values). The comprehensive river management plan would protect and enhance the outstandingly remarkable geology values as no modifications or physical activities are proposed to occur in either the earthflows or Parkdale Lava Beds that occur within the wild and scenic boundaries of the Collawash and Middle Fork Hood Rivers, respectively.

Recreation

Outstandingly Remarkable Values

Of the nine wild and scenic rivers analyzed, five rivers were found to have recreation as an outstandingly remarkable value. Those rivers are, Collawash River segment 1, Eagle Creek, East Fork Hood River, Fifteenmile Creek segments 2 and 3, and Zigzag River. Refer to the [River Values Report](#) for a more in depth discussion of the evaluation process and current situation and trends.

Collawash River

Segment 1 of the Collawash River is popular for local use, and can draw advanced recreationalist looking for a high quality and challenging run. What makes segment 1 unique for recreation is the challenge it provides to expert kayakers. This is due primarily to the geology of the area allowing for a change in experience nearly every time it is rafted. The remoteness and challenge of this segment make recreation an outstandingly remarkable value.

Eagle Creek

While this corridor lies entirely in wilderness, the attractions and unique experiences along the river draw a specific use that is not found in many areas throughout the region. Since equestrian trails of this caliber are limited within the region of comparison, people are willing to travel long distances to experience it. For that reason, recreation was found to be an outstandingly remarkable value for this river.

East Fork Hood River

One of the very reasons the East Fork Hood River was designated is for the “...low impact recreation opportunities abound.” This corridor can accommodate many types of recreation and offers a unique experience for kayakers due to its sustained gradient and continuous boulder features, unlike the more common bedrock formations. These traits make this corridor unique when compared to other rivers in the region. For these reasons, recreation is found to be an outstandingly remarkable value for the East Fork Hood River.

Fifteenmile Creek

The Mount Hood National Recreation Area was designated to provide for the protection, preservation, and enhancement of various values in the area, including recreation. The area is quiet, primitive, low road

infrastructure, beautiful, and offers the opportunity for a primitive, yet unique experience for visitors. Segments 2 and 3 overlap with the National Recreation Area designation and recreation along these two segments was found to be an outstandingly remarkable value.

Zigzag River

The Pacific Crest Trail and Timberline Trail are popular attractants to this river corridor, while providing unique recreation opportunities for long distance hiking, and circle-the-mountain hiking opportunities, while the wildflowers and mountain vistas add to the experience of the area. Visitors travel from all over the region to experience the views provided by this area. International hikers or long distance hikers of the Pacific Crest Trail camp next to the river while passing along to their next destination. With such stunning views and hiking opportunities in the corridor, recreation is found to be an outstandingly remarkable value for the Zigzag River.

Environmental Consequences

Direct and Indirect Effects

Comprehensive River Management Plan

Under the proposed action, the comprehensive river management plan would establish programmatic management direction specific to the nine river corridors that would protect their outstandingly remarkable values, free-flowing condition and water quality from threats from recreational use while also maintaining appropriate recreational opportunities. As part of developing a comprehensive river management plan, a user capacity analysis was completed, and indicators and thresholds developed to monitor changes to the existing situation to keep attuned to changes in the ecosystem or social setting. Although the comprehensive river management plan includes specific elements that may have impacts, adopting the plan itself does not have any direct effects.

There would be a potential negative impact to recreation by not adopting the comprehensive river management plan due to the lack of management and monitoring, as well as specific protection measures outlined in the user capacity report. Setting indicators and thresholds for management would ensure that public use in the future would not diminish the outstandingly remarkable values of each of the nine rivers. The Forest Plan does not include any river-specific recreation monitoring, therefore future planning and adaptations to new visitor trends will be difficult to assess.

User Capacity

The user capacity analysis identifies appropriate types and levels of visitor use that would not impact the outstandingly remarkable values while maintaining existing recreation opportunities. Current recreation use estimates in all nine river corridors are substantially lower than the identified capacities. Therefore, the proposed action would be unlikely to affect recreation use in any of the river corridors because current recreational use is not anticipated to be restricted, or otherwise changed.

The comprehensive river management plan establishes a framework for monitoring and triggering potential management actions in the river corridors if visitor use approaches the identified capacities. If capacity thresholds are reached, recreation use could potentially be restricted, or managed differently, which may result in adverse impacts if users are no longer able to recreate on the rivers in the ways, times, and levels they currently do. The proposed action would have potential long-term adverse impacts on recreation if capacity-related management actions were triggered and recreational use of any of the

nine river corridors were restricted; however, because current use is substantially below capacities, implementation of management actions are unlikely to occur in the foreseeable future.

Final Boundaries

The modified boundaries for each of the rivers outlined in the proposed action would benefit the recreation values. Some boundaries were extended specifically for recreation values, for example, the Fifteenmile Creek boundary was extended to include the entirety of the Mount Hood National Recreation Area. By adding further protections for these valuable recreation resources, there would be a long-term positive impact for recreation. Accepting these river corridor boundaries would continue to protect and enhance the recreation-related river values. Eagle Creek and South Fork Roaring River would maintain their interim boundaries which adequately protects the values identified in the area, including the equestrian trail available along Eagle Creek and the reason for its recreation outstandingly remarkable value.

Proposed Management Actions

Toilet Installation along the Collawash River

There may be short-term impacts to recreation from installation of toilets along the river, to address fecal contamination, while the toilet is being installed. Certain areas may be closed off during construction. This action would have a long-term positive impact on recreation because there is currently human waste in and around the river where the general public recreates. The human waste is a negative impact to the recreation experience, therefore installing toilets would only enhance the recreation outstandingly remarkable value along the Collawash.

Interpretive Signs for Historic Features on the South Fork Clackamas River

Short-term impacts may occur due to the installation of interpretive signs. This may cause temporary displacement of recreation users while installation is being complete. Overall, there would be long-term positive impact from this action due to the education provided to the public. Recreationists would still be allowed to recreate in the area, but would be aware of the presence and impacts to Townsend bats and protection of historic resources.

Forest Plan Amendment

As noted in the proposed action, several amendments are needed to the current Forest Plan in order to be consistent with new laws. Wild segments would be changed to the A-1 reserved land use allocation. This specific Forest Plan amendment would have no impact to recreation.

The standard and guideline from the Forest Plan, B1-076, would be amended to allow over snow travel in the Fifteenmile Creek corridor (outside of designated wilderness) in order to be consistent with the Omnibus Act. This addition would have a positive impact to recreation by allowing this use and maintaining the values that were identified with the establishment of the Mount Hood National Recreation Area. There may be short-term negative noise impacts to the adjacent Wilderness while snowmobile use is occurring. These impacts would only occur if users in both areas are recreating at the same time, and this would likely be very infrequent. This plan amendment would further protect the recreation value and be a positive impact to the recreation resource overall. This plan amendment does not authorize changes that have not already been approved by law.

Monitoring Plan

The Mt. Hood monitoring plan was updated in 2016 to be consistent with the 2012 planning rule (36 CFR 219). Question (v), identified in Appendix A: Proposed Monitoring Plan, provides a focus on visitor satisfaction, and would be added to the monitoring plan as part of this proposed action.

Visitor satisfaction is addressed in the National Visitor Use Monitoring surveys, and if there were an unacceptable shift in the satisfaction scores or increases in crowding or conflict, then actions may be taken. Some of the actions may be to develop more trails to disperse visitors, add more gathering places, conduct additional monitoring, or possibly restrict the number of people in dispersed sites.

Cumulative Effects

There are no direct and indirect effects to recreation that can be measured; therefore, no effects can be cumulated.

Consistency with Relevant Laws, Regulations, and Policy

Land and Resource Management Plan

The Forest Plan provides standards and guidelines for recreation management, wilderness and wild and scenic rivers. The Forest Plan addresses many standards and guidelines for recreation. All those were taken into consideration in completing the user capacity report, therefore all Forest Plan standards and guidelines were followed and management recommendations in that document and in this project. The landscape character descriptions outlined in the comprehensive river management plan are consistent with the Forest Plan, as well as the Bureau of Land Management's South Fork Clackamas Waterfalls Extensive Recreation Management Area framework (see Appendix D of the comprehensive river management plan).

The proposed action along the Collawash River to install toilet(s) to address fecal contamination at specific sites, where there is evidence of dispersed camping or other concentrated recreation use, in areas without sanitary facilities, would follow the B1 Forest Plan guidelines.

The standard and guideline from the Forest Plan, B1-076, would be amended to allow over snow travel in the Fifteenmile Creek corridor (outside of designated wilderness) in order to be consistent with the Omnibus Act. This proposed action would enhance the Mount Hood National Recreation Area and would "provide for the protection, preservation, and enhancement of recreational, ecological, scenic, cultural, watershed, and fish and wildlife values." (123 Stat. 991, Public Law 111-11). Forest Service Manual 2370 directs the Forest Service to manage these special designations according to the law that established them.

Other Relevant Law, Regulation, or Policy

Wilderness Act

The Forest Service is required to manage designated wilderness in accordance with the Wilderness Act of 1964. The Wilderness Act directs managers to preserve wilderness character, and mandates that both wildness and naturalness be preserved. The Wilderness Act contains what is known as the "Section 4c prohibited uses," that is, the presence of modern structures, installations, habitations, and use of motor vehicles, motorized equipment, or mechanical transport.

All of the proposed actions associated with this project align with the Wilderness Act.

Wild and Scenic Rivers Act

Section 10(b) of the Wild and Scenic Rivers Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free flow, and outstandingly remarkable values). All proposed actions outlined in direct and indirect effects in the recreation section describe how each action would protect and enhance the recreation value of the associated rivers.

Scenic Resources

Outstandingly Remarkable Values

The nine rivers represent an amazing example of Cascade crest drainages, which highlight both west- and east-side ecosystems. The rivers tumble down from the upper slopes of Mt. Hood and associated mountains and ridgelines. On the western slopes of the Cascade crest, the rivers, such as South Fork Roaring River, are dense with vegetation and lushly forested. To the east, Fifteenmile Creek transitions from glacially influenced floodplains into high desert environments dominated by pine, juniper, and white oak. Combined, the west-east rivers provide a wide range of recreation and scenic opportunities representing an incredible vestige of wild and scenic America. Six of the nine wild and scenic rivers flow through designated wilderness areas. These overlapping designations highlight the remote, primitive, and undeveloped quality of these rivers to the greater landscape, despite their proximity to the urban Portland metropolitan area. Recreation opportunities are enhanced and, in some cases, depend upon the classic Pacific Northwest scenery these rivers provide.

The river corridors lie within diverse landscapes. Few places fail to meet Forest Plan standards for visual quality. Some disturbed or modified areas occur within river corridors, such as Fish Creek, and are described in the [River Value Report](#). Some disturbed areas no longer in use have not been reclaimed.

Scenery was found to be an outstandingly remarkable value for: Middle Fork Hood River, South Fork Clackamas River, and Zigzag River. A summary of the scenery outstandingly remarkable value for each river is in the methodology section above. Scenery is not an outstandingly remarkable value for the following rivers: Collawash River (segments 1 and 2), Eagle Creek, East Fork Hood River, Fifteenmile Creek (all segments), Fish Creek, and South Fork Roaring River. Although these rivers have some unique or interesting scenic values described in the [River Value Report](#), the scenic resources² were not highly memorable, not highly diverse, or uncommon when compared to other rivers within the region of comparison nor found to be rare, unique, or exemplary for the area. Refer to the Landscape Character description for narratives that address specific scenic features and qualities for each of the river segments in draft comprehensive river management plan (available on the [project website](#)). Refer to the [River Value Report](#) for more detail on scenic values and current conditions and trends for each river and river segment.

Middle Fork Hood River

The Middle Fork Hood River flows along the western edge of the Parkdale Lava Beds. This flow provides substantial scenic variety and very rare and unique rock forms. Vegetation patterns and stream characteristics are found in other locations in the region yet are still relatively unique. The views of lava flows and unique rock forms have been found to visually unique within the region of comparison. Views

² Scenic Resource synonymous with Visual Resource (Forest Scenery): The composite of basic terrain geologic features water features vegetative patterns and land use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

and photo attractions are substantial with combination of lava flows, adjacent stream, vegetation, and in places long distance views of the Mt. Hood area. The Middle Fork Hood River originates from several glaciers on the north slope of Mt. Hood. Large deposits of stream and lake sediments at the upper end of the lava flow indicate that the river was once dammed by the lava flow. High-quality flows of this nature are rare for the region and can be considered a “textbook” example which can be easily studied and interpreted. The lava flow provides an excellent example of successional stages taking place in the reestablishment of vegetative cover on the lava flow. The southern, or upper, end of the flow already has trees and other vegetation becoming reestablished. The northern, or lower, end of the flow is still virtually barren. The diversity throughout the lava flow provides a unique display of natural processes in action in one location. The Parkdale Lava Flow contributes significantly to the scenery so that it is considered an outstandingly remarkable value.

South Fork Clackamas River

The river flows through a narrow canyon with large rock outcrops and cliffs, a 100-foot waterfall in the lower part of the segment and old-growth trees along the river add to the visual diversity. Most of the watershed is filled with Pacific silver fir, Douglas fir and western hemlock. This lower section has been designated as an Oregon State Scenic Waterway. Today the river receives some use from the public, although no developed recreation sites currently exist. The South Fork Clackamas waterfalls have been recorded as highly memorable, with exemplary visual features including many photographs found online, in social media, and on other recreational related websites. Pictures of the waterfalls are in the [River Value Report](#). The Oregon City Waterworks facilities, part of the South Fork Water Board, are historically significant in the area, and while man-made, they contribute, rather than detract, from the scenery in the area. The South Fork Clackamas waterfalls were indentified as a Extensive Recreation Management Area under the Northwestern and Coastal Oregon BLM Resource Management Plan.

The scenic resources in South Fork Clackamas River were identified as outstanding, and therefore scenery is an outstandingly remarkable value for this river. The river corridor includes unique and highly memorable views of forested waterfalls. South Fork Clackamas River provides unique views uncommon within the region of comparison, including not only picturesque waterfalls, but also man-made features from the historic Oregon City Waterworks facilities, which contribute to the unique views.

Zigzag River

The Paradise Park area is known for wildflower displays during the summer months, and mountain vista views. The Pacific Crest National Scenic Trail crosses the Zigzag River, where it also overlaps with the historic Timberline Trail. At this crossing, there is a unique opportunity to get a glimpse of Mt. Hood looking up the Zigzag River drainage. This unique experience, along with the seasonal variations of alpine wildflower blooms makes this area highly memorable. There are some waterfalls in the area, including Zigzag Falls, just above the trail crossing the river. The Forest Plan identified substantial scenic values, including geology contributing to scenic diversity of the river, along with the view upriver towards the top of Mt. Hood. The snow brings seasonal variations to the landscape, but this may not be viewed by many in the winter months. The seasonal wildflowers bring color to the landscape during the summer months.

The scenic resources in Zigzag River were identified as outstanding, and therefore the scenery is outstandingly remarkable value for this river. The area has unique and highly memorable views of high alpine mountain views from the river corridor. Zigzag River provides unique views from the Pacific Crest Trail.

Environmental Consequences

Direct and Indirect Effects

Comprehensive River Management Plan

Protecting outstandingly remarkable values, free-flowing condition, and water quality provides protection to scenic quality from threats such as recreational use beyond capacity, and development. The generally high scenic quality of the areas would be maintained or enhanced and views in high use areas should improve. The river corridors would be managed to maintain the visual quality³ objectives established for each river corridor.

Viewsheds⁴ beyond the river corridor would also be managed to protect scenic resources based on distances from identified viewer positions and have established visual quality objectives. B1 land use allocations standards and guidelines allow one lower visual quality objective for recreation or structural facilities. Existing management direction would protect the scenery of the designated rivers since proposed management activities in the future would be designed to meet the visual quality objectives. These visual quality objectives require a high degree of sensitivity and design features for management activities.

BLM administered lands in the South Fork Clackamas River corridor are managed for Visual Resource Management Class I, which provides for natural ecological changes. Future management actions under the comprehensive river management plan would meet Visual Resources Management Class 1 with changes to the characteristic landscape being very low and any management activities changes designed to repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape (BLM 2016 page 94).

User Capacity

Each river corridor would be managed to the recreation capacities identified by the user capacity analysis and should effectively protect desired scenic conditions across the classifications of designated rivers by providing evidence of any trends toward larger numbers of recreationists in specific areas, triggers as described above, and required management actions at specific thresholds. The indicators, triggers, and thresholds for the scenery river value, identified in the user capacity analysis, maintain or enhance scenic quality and scenery outstandingly remarkable values. The capacity analysis identified appropriate types and levels of visitor use that would further protect scenery. Because of the added protection from future increases in recreational use, the proposed action would have a beneficial impact on scenery.

Final Boundaries

Where corridors have been extended to include actual features identified as scenery outstandingly remarkable values, stronger visual protection would be more secure. This applies to the viewsheds of Middle Fork Hood River and South Fork Clackamas River. The Middle Fork Hood River boundary encompasses as much of the lava beds as possible to protect the scenery and geology outstandingly remarkable values. The boundary on South Fork Clackamas incorporates the South Fork Clackamas waterfalls, which are the main scenic element contributing to the scenery outstandingly remarkable value.

³ Visual Quality Objectives (VQO): Categories of acceptable landscape alteration measured in degrees of deviation from the natural appearing landscape

⁴ Viewsheds: The total landscape seen or potentially seen from all or a logical part of a travel route use area or water body

The South Fork Clackamas boundary also includes additional features of the South Fork Water Board infrastructure which are historically significant in the area, and while man-made, they contribute rather than detract from the scenery in the area and captures more BLM lands at the headwaters to better protect water quality and river values, including scenic resources. All scenic resources contributing to the scenery outstandingly remarkable values, are river -dependent and owe their location or existence to the presence of the river, were included within the final boundaries.

Proposed Management Actions

Toilet Installation along the Collawash River

Effects of this action would be beneficial to scenery by addressing sanitation issues which can detract from desired natural appearing⁵ scenery. It is assumed that the design and site locations would consider sustainable recreation design practices and meet the assigned visual quality objectives of retention⁶ in the scenic classification segment and partial retention⁷ in the recreational classification segment, therefore, meeting the land management plan direction for visual resources in the Forest Plan.

Interpretive Signs for Historic Features on the South Fork Clackamas River

It is assumed that the design and site locations for the signs would consider sustainable recreation design practices to repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape. Although the signs may attract some attention, the education to recreationalists provides protection for the outstandingly remarkable values. Overall, the interpretive sites would provide very low changes to the characteristic landscape.

Forest Plan Amendment

The effects of the proposed final boundaries are discussed in the section above. The plan amendment would reflect the proposed final boundaries on the Clackamas River, East Fork Hood River, Fifteenmile Creek, Middle Fork Hood River, or South Fork Clackamas River. The proposed land allocations would have a beneficial impact on scenery. Where land allocations overlap, the visual quality objectives which provide the highest level of visual quality protection predominate.

The proposed amendment for standard and guideline B1-076 for Fifteenmile Creek would not negatively affect scenic resources. Existing snowmobile routes include Forest Service Road 4420 and 2730, and cross-country travel is permitted. Over snow vehicle use could provide a scenery viewing opportunity in the corridor from a viewer position such as a trail within the corridor and a beneficial effect for scenery.

Monitoring Plan

Proposed monitoring questions for maintaining visual quality objectives for the Middle Fork Hood River and South Fork Clackamas River, maintaining outstandingly remarkable values, and monitoring protocols for recreation use numbers should effectively protect desired scenic conditions across the categories of designated rivers by providing evidence of any trends toward larger numbers of recreationists beyond

⁵ Natural Appearing is a descriptive degree of alteration associated with the visual condition of the landscape used as a summary rating for a large land area such as a viewshed corridor. Natural Appearing is defined as an area that appears untouched by man; changes are not visually evident. Generally similar to the Retention visual quality objective.

⁶ Retention Visual Quality Objective – Management activities should not be evident to the casual Forest visitor.

⁷ Partial Retention Visual Quality Objective – Management activities remain visually subordinate to the characteristic landscape

capacities and by requiring management action at specific threshold numbers. Monitoring and management of dispersed recreation and parking should provide better detection of behaviors that cause soil loss and trampled vegetation. Monitoring would better track visually detracting elements.

Cumulative Effects

Past activities have created the existing conditions and trends documented in the River Value Report. In general, the effect to scenery resources from these activities is minimal. The River Value Report notes some management activities that caused a decline in scenic quality in some areas due to vegetation removal or man-made features as noted for Fish Creek and East Fork Hood River. Some man-made facilities contribute, rather than detract, from the scenery in the area such as South Fork Clackamas River. Most of these past activities have formed the current recreation opportunities in the area and most often form the viewing platform and opportunities for viewing scenery.

Ongoing management actions are expected to enhance or maintain scenic resources since they would be designed to meet the visual quality objectives and visual resource standards and guidelines in the Forest Plan. Maintenance and restoration projects are expected to have beneficial effects for scenery by improving the visual condition⁸ and create more resilient landscapes. Vegetation management projects should be designed to meet the visual quality objectives assigned to the river corridors using view positions consistent with those outlined in this analysis.

Cumulative effects to scenery resources are expected to meet the visual quality objectives of the Forest Plan and visual resource management classes of the Northwestern & Coastal Oregon Resource Management Plan. The direct and indirect effects of this proposal and other actions and developments described would add scenic resource benefits within the river corridors.

Consistency with Relevant Laws, Regulations, and Policy

Management Plans

Land and Resource Management Plan

The Forest Plan provides standards and guidelines for visual resource management forest-wide and in land use allocation management prescriptions.

The following table summarizes visual quality objectives by wild and scenic river management area classification from selected viewer positions using the land use allocation and distance zones identified in the Forest Plan table Four-22, page Four-108. See B1 land use allocation standards and guidelines for descriptions of viewer positions for each segment classification. Designated viewsheds apply visual quality objectives to selected acreages which overlap land use allocations (USDA Forest Service 1990, pages Four-110 to Four-112); if designated viewshed visual quality objectives are not consistent with the following visual quality objectives, the visual quality objectives which provide the highest level of visual quality protection predominate.

⁸ Visual Condition: The visual appearance of a landscape described in terms of the degree of alteration of the natural appearing landscape. These terms are normally used as a summary rating for a large land area such as a viewshed corridor. Descriptive degrees of alteration are: Natural Appearing, Slightly Altered, Moderately Altered, or Heavily Altered. Each category is further defined in the Forest Plan glossary.

Table 8. Designated Wild, Scenic, and Recreational River viewsheds and visual quality objectives for land use allocation B1 standards and guidelines and as shown in table Four-22 in the Forest Plan ((USDA Forest Service 1990, page Four-108)

River Segment	Viewer Position (from Forest Plan standards and guidelines B1-021 to B1-027)	Distance Zone from Viewer Position Foreground	Distance Zone from Viewer Position Middleground	Distance Zone from Viewer Position Background
B1 W&S River – Wild Segment (A1 Reserved land use allocation)	River, riverbanks, and trails within the B1 river corridor	Preservation ⁹	Retention	Partial Retention
B1 W&S River – Scenic Segment	River, riverbanks, US and State highways, Forest highways, and roads, trails, and recreation facilities within the B1 river corridor	Retention	Partial Retention	Partial Retention
B1 W&S River – Recreational Segment	River, riverbanks, US and State highways, Forest highways, and roads, trails and recreation facilities within the B1 river corridor	Partial Retention	Partial Retention	Partial Retention

Although the wild segments fall under the A1 land use allocations, the visual quality objective is addressed in the B1 land use allocation standards and guidelines. The only difference between the standards and guidelines are related to regulated timber harvest. As such, the visual quality analysis will be based on the standards and guidelines on pages Four-212 to Four-213.

B1 Designated Wild, Scenic, and Recreational Rivers: Visual Resource Management

All management activities on National Forest System lands shall achieve the following visual quality objectives (B1-021):

- a. The visual quality objective for wild segments shall be Preservation as seen from the river, riverbanks and trails within the B1 river corridor. (B1-022) A visual quality objective of Retention may be allowed for recreation facilities. (B1-023)
- b. The visual quality objective for scenic segments shall be Retention as seen from the river, riverbanks, US and State highways, Forest highways, and roads, trails and recreation facilities within the B1 river corridor. (B1-024) A visual quality objective of Partial Retention may be allowed for structural facilities. (B1-025)
- c. The visual quality objective for recreational segments shall be Partial Retention as seen from the river, riverbanks, US and State highways, Forest highways, and roads, trails, and recreation facilities within the B1 river corridor. (B1-026) Modification¹⁰ may be allowed for structural facilities. (B1-027)
- d. Exceptions to the above visual quality objectives may occur within “designated viewsheds” (see Forestwide Visual Resource Management Standards and Guidelines regarding designated viewshed visual quality objectives). (B1-028)

⁹ Preservation Visual Quality Objective – Ecological changes only

¹⁰ Modification Visual Quality Objective – Management activities may dominate the characteristic landscape but must at the same time follow naturally established form line color and texture It should appear as a natural occurrence when viewed in foreground or middleground.

- e. See Forestwide Visual Resource Management Standards and Guidelines for visual quality objectives prescribed for trails (USDA Forest Service 1990, pages Four-213 - Four-214)

The following table summarizes Forest Plan direction for each of the nine designated river segments based on the visual quality objectives by wild and scenic river classification from selected viewer positions using the land use allocations and distance zones identified in the Forest Plan table Four-22, page Four-108. See B1 Standards and Guidelines for descriptions of viewer positions for each segment classification.

Table 9. Designated Wild, Scenic, and Recreational River viewsheds and visual quality objectives based on land use allocation B1 standards and guidelines

River	Segment (Wild, Scenic or Recreational)	Scenery ORV (Yes or No)	Viewer Position (from Forest Plan standards and guidelines B1-021 to B1-027)	Visual Quality Objective – Foreground	Visual Quality Objective – Middleground	Visual Quality Objective – Background
Collawash River	Scenic	No	River, Collawash Road (Forest Service Road 6300), Farm Creek Road (Forest Service Road) 6340, Campgrounds and day use sites	Retention	Partial Retention	Partial Retention
Collawash River	Recreational	No	River, Collawash Road (Forest Service Road) 6300, Forest Service Road 6370, Mansfield Creek Road 4688, Trail 559	Partial Retention	Partial Retention	Partial Retention
Eagle Creek	Wild	No	Creek, Eagle Creek Trail 501	Preservation	Retention	Partial Retention
East Fork Hood River	Recreational	No	River, Highway 35, Coopers Spur Road (Forest Service Road 3510), Teacup Lake Road (S350), Trails, Campgrounds, day use sites, and trailheads	Partial Retention	Partial Retention	Partial Retention
Fifteenmile Creek Segment 1	Wild	No	Creek, Fret Creek Trail 456A	Preservation	Retention	Partial Retention
Fifteenmile Creek Segment 2	Scenic	No	Creek, Forest Service Road 2730, Trail Fret Creek Trail 456A, Fifteenmile Creek Trail 456, Cedar Creek Trail 457, Campground and Trailhead	Retention	Partial Retention	Partial Retention
Fifteenmile Creek Segment 3	Wild	No	Creek, Fifteenmile Creek Trail 456, Cedar Creek Trail 457, Underhill Trail 683	Preservation	Retention	Partial Retention
Fifteenmile Creek Segment 4	Scenic	No	Creek, Forest Service Road 4421	Retention	Partial Retention	Partial Retention
Fish Creek	Recreational	No	Creek, Fish Creek Road (Forest Service Road) 5400, Campgrounds and day use sites	Partial Retention	Partial Retention	Partial Retention

Comprehensive River Management Plan for Nine Wild and Scenic Rivers Environmental Assessment

River	Segment (Wild, Scenic or Recreational)	Scenery ORV (Yes or No)	Viewer Position (from Forest Plan standards and guidelines B1-021 to B1-027)	Visual Quality Objective – Foreground	Visual Quality Objective – Middleground	Visual Quality Objective – Background
Middle Fork Hood River	Scenic	Yes	River, riverbanks, NFSR (Forest Service Road 1610)	Retention	Partial Retention	Partial Retention
South Fork Clackamas River	Wild	Yes	River, Hillock Burn/Memaloose Road (Forest Service Road) 4500, Hillockburn Trail 516	Preservation	Retention	Partial Retention
South Fork Roaring River	Wild	No	River, Serene Lake Trail 512	Preservation	Retention	Partial Retention
Zigzag River	Wild	Yes	River, Pacific Crest Trail, Timberline Trail 2000, Paradise Park Trail 778, Paradise Park Loop Trail 757	Preservation	Retention	Partial Retention

Distance Zones: Foreground = Zero to 1/2 mile from viewpoint, Middleground = 1/2 mile to 5 miles from viewpoint, Background = Beyond 5 miles from viewpoint

Northwestern & Coastal Oregon Resource Management Plan

This management direction is applicable to South Fork Clackamas River (wild classification) on BLM lands in Township 4 South, Range 4 and 5 East, Sections 30 and 32 and Range 4 East, Section 12.

Congressionally Reserved Lands and National Conservation Lands

Management Objectives

- Conserve, protect, and restore the identified outstanding cultural, ecological, and scientific values of National Conservation Lands and other congressionally designated lands.
- Protect and enhance the free-flowing condition, water quality, and outstandingly remarkable values of eligible, suitable, and designated Wild and Scenic River corridors.

Management Direction

- Conduct management actions, including but not limited to fuels treatments, invasive species management, riparian or wildlife habitat improvements, forest management, and trail construction, in Wild and Scenic River corridors only if consistent with designated or tentative classifications and if any reductions in outstandingly remarkable values would be temporary and outstandingly remarkable values would be protected or enhanced over the long-term. (USDI Bureau of Land Management 2016, pages 55-56)

Visual Resource Management

Management Objectives

- Protect scenic values on public lands where visual resources are an issue or where high-value visual resources exist.
- Prohibit activities that would disrupt the existing character of the landscape in Visual Resource Management Class I areas.

Management Direction

- Only allow activities that are found to meet visual management objectives using the Visual Resource Contrast Rating system.
- Visual Resource Management Class I includes—Wilderness Areas; Wilderness Study Areas; and Designated and suitable Wild and Scenic Rivers that are classified as Wild.

Manage Visual Resource Management Class I areas in accordance with natural ecological changes. Prohibit activities that would lower the Visual Resources Inventory class of Visual Resource Management Class I areas. The level of change to the characteristic landscape will be very low and will not attract attention. Changes will repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape. (USDI Bureau of Land Management 2016, pages 93-94).

Consistency with Management Plans

The proposed action would be consistent with Forest Plan components for visual resource management and has been designed to meet the preservation, retention, and partial retention visual quality objectives assigned to the project area by the Forest Plan in the short-term and long-term. The proposed action would be consistent with Resource Management Plan components for visual resource management and has been designed to meet the Visual Resource Management Class 1 assigned to the South Fork Clackamas River by the Resource Management Plan in the short-term and long-term. No negative

cumulative effects to scenic resources are expected in the long-term. There are no irreversible or irretrievable commitments related to scenic resources from the proposed action.

Other Relevant Law, Regulation, or Policy

Wild and Scenic Rivers Act

The proposed action protects and enhances the scenery outstandingly remarkable values identified for Middle Fork Hood River, South Fork Clackamas River, and Zigzag River. The comprehensive river management plan describes the existing conditions and trends for the scenic resource and outstandingly remarkable value. The user capacity report outlines monitoring, triggers, and thresholds for protecting the scenery outstandingly remarkable values. Programmatic direction provides for the protection and enhancement of scenic resources within all the river corridors through the visual quality objectives, visual resource management classes, and standards and guidelines for visual management. The proposed action is consistent with provisions and requirements for scenic resources outlined in the Wild and Scenic Rivers Act.

Historic and Prehistoric Resources

Treaty Rights and Ceded Lands

Fifteenmile Creek, East Fork Hood River and the Middle Fork Hood River all fall within the lands ceded to the United States by the Confederated Tribes of Warm Springs under the 1855 Treaty with the Tribes of Middle Oregon. Under Article I of the Treaty, the Tribes reserved their right to the hunt, fish, gather roots and berries, erect suitable houses for curing the same, and pasture stock on these usual and accustomed lands and unclaimed lands held in common with other citizens. These river segments are also part of the usual and accustomed lands of the Confederated Tribes of the Grand Ronde Community of Oregon. A number of ethnographic studies documents continued Tribal use of these areas, however, in a 2017 meeting between Tribal representatives and the Forest Service, the Forest Service was asked to not highlight documented traditional use areas or archaeological sites associated with pre European contact lifeways as outstandingly remarkable values.

Eagle Creek, South Fork Roaring River, Fish Creek, Collawash River, and South Fork Clackamas River are located within an area ceded to the Federal government through several of the seven ratified treaties of western Oregon. These lands include ancestral and ceded lands of Confederated Tribes of the Grand Ronde Community and the Confederated Tribes of Siletz Indians, and usual and accustomed lands of the Confederated Tribes of the Warm Springs Reservation of Oregon. Like the eastern rivers, a number of ethnographic studies documents continued Tribal use of these areas, however, the Forest Service was asked to not highlight traditional use areas or archaeological sites associated with precontact lifeways as outstandingly remarkable values.

Outstandingly Remarkable Values

Of the nine wild and scenic rivers being analyzed two, South Fork Clackamas River and Fifteenmile Creek, contain cultural resources meeting the criteria for an outstandingly remarkable value.

South Fork Clackamas River

In 1913, the young cities of Oregon City and West Linn suffered a serious outbreak of typhoid from an increasingly polluted Willamette River; their sole source of water at the time. The incident spurred Oregon City's leaders to appoint a "Pure Mountain Water League" and directed it to locate a safer source of drinking water.

The League settled on the pristine South Fork of the Clackamas River in the Cascade foothills. A South Fork Water Board was created to carry out this ambitious project. By the fall of 1915, the new water district had managed to lay 26 miles of 18-inch pipe from a site at the confluence of Memaloose Creek and the South Fork Clackamas all the way to Oregon City and West Linn. The new pipeline began to carry municipal water on October 7, 1915. The infrastructure was expanded in the 1930s with help one of Franklin Roosevelt's New Deal recovery programs, and improvements were made again in the 1950s. The system was used until it was decommissioned in 1985. The buildings of the waterworks compound, located at the confluence of the main stem and South Fork Clackamas River, were razed in the 1990s. However, the network of roads, tunnels, plank walkways, log bridges and old pipeline that made up the bulk of the waterworks infrastructure were left in place, slowly fading into the green rainforest of the South Fork canyon. These resources have since become home to important species in the area and weekend explorers from around the region.

In September 2020, the Riverside Fire prevented a comprehensive evaluation of the waterworks, however, the existing record, the integrity of the remaining elements, the rare and unique nature of the resource, along with its significance in the early twentieth century development of Oregon City, all suggest it meets the criteria of an outstandingly remarkable value for South Fork Clackamas River.

Fifteenmile Creek

The Dufur to Lookout Mountain Trail played a prominent role in the early history and settlement of the communities east of the Cascades. Fifteenmile Creek and its headwaters were integral to this history. The drainage was first documented as Nansene Creek prior to the large immigration waves of the mid nineteenth century, and archaeological evidence suggests the headwaters and travel corridor have been in use for more than 2,000 years. In 1852, the first permanent settlers arrived in the Fifteenmile Creek drainage, homesteading near the current site of Dufur. These settlers engaged in stock raising, and by 1872, the Dufur brothers and others were grazing large herds of sheep and other livestock along this travel corridor and at High Prairie, near the Headwaters of Fifteenmile Creek. This was only possible because of the many seeps and streams feeding these upland meadows and Fifteenmile Creek itself.

Sometime prior to 1884, the section of trail up to section 20 of township 2 south, range 11 east was converted to wagon road. Enoch B. Dufur purchased land in this section in 1890. By the late nineteenth century, several hundred homesteaders called Fifteenmile Valley home, and the town of Dufur was well established. Several small sawmills operated along the upper extent of Fifteenmile Creek during this period to support the new community, the trail and waterway essential to their operation.

In 1893, the upper extent of Fifteenmile Creek became part of the Cascade Range Reserve. The reserve was created in part to protect the sensitive headwaters of the many creeks in the region from overgrazing. Shepherders actively opposed creation of the Reserve; however, by 1895, all legal avenues were exhausted. The Forestry Division of the General Land Office began active management of the land that year, with J.B. Senecal as the first Ranger of the northeastern reach of the Reserve based out of Dufur.

Fire prevention was the first priority of the new Forest administrators. The first fire lookout on the eastern side of the Forest was constructed on Lookout Mountain; this was only possible because of the well-established trail and ample water supply found at the headwaters of Fifteenmile Creek. The peak is located at an elevation of 6,540 feet along a long north-south trending ridge, with High Prairie only 300 feet lower. The vantage point is considered one of the best in Oregon, with a commanding view of ten Cascade Range Peaks. An extensive and well-maintained trail system was considered vital. Existing trails were improved and linked to allow easy access to every drainage. Sometime prior to 1901, the Dufur to Lookout Mountain Trail was extended to the southwest, over Bennett Pass, to link with the Barlow Road

near Summit Creek. This would become an important cutoff from the Barlow Road, linking the communities from the east and west.

In 1905, administration of Forest lands passed to the Department of Agriculture and newly created Forest Service. J.B. Senecal became the first Ranger of the Barlow District of the Oregon National Forest. Over the next few years, Senecal would spend a great deal of time constructing a cabin at High Prairie, making improvements to the lookout, stringing communications line throughout the Forest, and improving the Dufur to Lookout Mountain Trail. J.B. Senecal is likely the namesake of Senecal Springs, part of the headwaters of Fifteenmile Creek.

Within a decade recreational use of the trail increased greatly. To the east, the trail provided a grand view of eastern Oregon and the Blue Mountains. The unobstructed view of Mt. Hood, several miles to the west, was considered the best on the Forest. Planning was under way for the Mt. Hood Loop Highway during this period, and the Lookout Mountain Trail was a strong candidate for improvement as this scenic travel route. An alternate route prevailed, however, efforts to convert the trail to a road persisted.

In 1933, Roy T. Johnson and a crew of sixty men were charged with creation of the Bennett Pass Road. This road followed the trail alignment from High Prairie to the Barlow Road in the west, and Fifteenmile Campground in the east. The men camped at High Prairie, using the cabin built nearly three decades earlier by Senecal as a main office.

In segment 1 of Fifteenmile Creek approximately 1.4 miles of the Bennett Pass Road still exists as Forest Service Road 4420, maintained but still with a native surface. The original alignment of the Dufur to Lookout Mountain Trail parallels the road in this area, a few meters down slope. Remains of the original communication lines laid out by J.B. Senecal also persist. Within segment 1, the site's integrity of location, setting, design, materials, workmanship, feeling and association remain largely undisturbed. This site was significant in the early administration of the Forest and is strongly associated with J.B. Senecal, the area's first, and perhaps most important Ranger.

The trail is associated with nearly every activity occurring in the drainage including grazing, timber harvest, recreation, and Forest Service administration. Fifteenmile Creek played a prominent role in each. For these reasons, the Dufur to Lookout Mountain Trail is considered eligible for inclusion in, the National Register of Historic Places. This cultural resource meets the criteria of an outstandingly remarkable value for segment 1 of Fifteenmile Creek.

Environmental Consequences

Direct and Indirect Effects

Comprehensive River Management Plan

General adoption of the comprehensive river management plan, the proposed final boundaries and land use allocations, and the monitoring plan may all be considered an administrative undertaking. These changes in management direction on lands in and around wild and scenic river corridors due to boundary changes and other reallocations of management areas would have no negative effects on cultural resources since cultural resource laws and regulations apply equally to all management areas on National Forest System and BLM administered land. The measures outlined in the management plan, primarily limiting user capacity and resource monitoring, would protect and enhance the integrity of the cultural resources identified as outstandingly remarkable values.

User Capacity

The interdisciplinary team completed a user capacity analysis to establish a framework for monitoring and triggers of potential management actions in the wild and scenic river if use approaches a capacity threshold. If that point were to be reached, recreation use could potentially be restricted or managed differently. In a few instances, recreation sites and trails are located in the vicinity of cultural resources, including the Dufur to Lookout Mountain Trail and tunnels associated with the Oregon City Waterworks. Restricting or limiting activities in these areas would generally diminish disturbance to cultural resources, preventing observable impacts to site integrity, and protecting those qualities that contribute to a cultural resource's eligibility for listing on National Register of Historic Place.

Final Boundaries

The boundary adjustment in Fifteenmile Creek would preserve the 11.4 mile National Register eligible segment of the Dufur to Lookout Mountain Trail. The boundary on South Fork Clackamas River was adjusted to incorporate the linear features of the Oregon City Waterworks infrastructure, and thus to protect the historic outstandingly remarkable value. In both instances, these resources would benefit from management as an outstanding remarkable value. Integrity of location, setting, feeling, and association would be preserved and enhanced.

Forest Plan Amendment

Wild segments would be changed to the A-1 reserved land use allocation. As mentioned under general consideration of the comprehensive river management plan, boundary changes and other reallocations of management areas would have no negative effects on cultural resources since cultural resource laws and regulations apply equally to all management areas on the Mt. Hood National Forest.

The standard and guideline from the Forest Plan, B1-076, would be amended to allow over snow travel in the Fifteenmile Creek corridor (outside of designated wilderness) in order to be consistent with the Omnibus Act. Under the 2004 Programmatic Agreement, over snow travel is generally considered exempt from case-by-case review under the National Historic Preservation Act because the action has no potential to cause effects to cultural resources, so long as the action does not involve ground disturbance or create noise which may potentially affect historic properties. Site integrity would be preserved.

Proposed Management Actions

For proposed site specific management actions (toilet installation and interpretive signs) where ground disturbance would occur a pedestrian archaeological survey would be completed following the methodology and standards outlined in the current Mt Hood National Forest Cultural Resource Inventory Plan (Burtchard and Keeler 1994). This survey will include monitoring of previously recorded archaeological sites within or adjacent to areas of proposed ground disturbance. Any identified archaeological sites would be avoided during all project activities to prevent any direct or indirect effects to site integrity. All documentation and data related to this field work would be incorporated into a Cultural Resource Inventory Report and would be submitted to Oregon State Historic Preservation Office for review and concurrence. This analysis, as well as the formal Section 106 report, would be completed by an archaeologist meeting the Secretary of the Interior's¹¹ qualification standards as required by Federal

¹¹ Sections 106 and 112 of the National Historic Preservation Act and their implementing regulation §36CFR800.2(a)(1), require agencies responsible for protecting historic properties to ensure that all actions taken by their employees or contractors meet professional standards as determined by the Secretary of the Interior.

and Oregon state laws. Therefore, the proposed site specific management actions would have no negative effect on cultural resources.

Interpretative signs would enhance visitor experience and appreciation for the historic outstanding remarkable value of the Oregon City-West Linn Waterworks and related Townsend bat health. An informed public generally contributes to preservation of historic properties.

Monitoring Plan

The proposed monitoring plan is consistent with current cultural resource management practices, and would ensure proper mitigation measures are taken to preserve site integrity if a threshold is reached. The monitoring plan would aid in early identification and prevention of observable impacts to site integrity, and protection of those qualities that contribute to resource eligibility for listing on National Register of Historic Place. This is a beneficial impact to cultural resources identified as outstandingly remarkable values.

In other resource areas, monitoring may reveal a threshold has been reached, and management action is needed. In such an instance, depending on the proposed action, additional site-specific analyze may be conducted, and additional review completed under National Historic Preservation Act.

Cumulative Effects

Cultural resources, particularly archaeological sites, are nonrenewable in nature. Any portion of a site damaged or removed diminishes its cultural and scientific value permanently. Lost portions can never be replaced, therefore, all effects to cultural resources are consider cumulative.

Cultural resources are generally avoided for all federal undertakings resulting in no measurable cumulative effects from project activities. Direct effects to cultural resources generally result from deliberate or inadvertent ground disturbance within an archaeological site. Indirect impacts typically result from erosion, bioturbation, or changes in vegetation composition and density. Both are characterized under the National Historic Preservation Act as an adverse effect to cultural resources. A review of existing inventories found no instance of measurable past adverse effects to known cultural resources within the proposed wild and scenic river boundaries. All components and actions proposed under the comprehensive river management plan are consistent with existing laws, management plans, and programmatic agreements governing cultural resources. Because this project would have no effect on cultural resources eligible for the National Register of Historic Places and none of the projects considered for potential cumulative effects, affected cultural resources, there would be no cumulative effects to cultural resources as a result of implementing the proposed action

Consistency with Relevant Laws, Regulations, and Policy

Management Plans

Mt. Hood National Forest

The Mt. Hood National Forest Land and Resource Management Plan (Forest Plan) provides standards and guidelines for management of cultural resources. The proposed action is consistent with Forest Plan goals to protect important cultural resources:

- FW-598, FW-600, FW-610, FW-602 and FW-606 For this and future projects within the management area, cultural resource inventories have and would continue to be conducted in compliance with the 2004 Programmatic Agreement during project planning stages.

- FS-608 Field survey results would continue to be fully documented according to current Oregon State Oregon State Historic Preservation Office standards.
- FW-609, FW-610 The potential effects to cultural resources from the current and future proposed actions have and would continue to be assessed.
- FW-612 Cultural resources potentially affected by the proposed actions were and would continue to be evaluated for inclusion on the National Register of Historic Places.
- FW-626 All records and documents concerning cultural resources for this and future projects within these management areas would be kept on file at the Supervisors Office, Mt. Hood National Forest.

Northwest and Coastal Oregon BLM

The Northwest and Coastal Oregon Resource Management Plan (BLM 2016) provides management direction, in the form of Management Objectives and Direction for Wild and Scenic River Management (pages 55-56) and cultural resources (pages 76-77). The plan aims to preserve and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations. That plan also aims to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration or potential conflict with other resources by ensuring that all authorizations for land and resource use comply with Section 106 of the National Historic Preservation Act. The proposed action is consistent with the objectives and direction outline in the Northwestern and Coastal Oregon Resource Management Plan because the comprehensive river management plan would adhere to the management direction for cultural resources, including evaluating all documented cultural resources for National Register of Historic Places eligibility (BLM 2016 page 76). Places determined to be listed or eligible for listing would be protected through avoidance or other protection measures.

Other Relevant Law, Regulation, or Policy

The regulatory framework that mandates consideration of the effects of proposed undertakings on cultural resources is wide-ranging. The National Environmental Policy Act requires agencies to analyze the effects of their proposed actions on sociocultural elements of the environment. A number of other laws drive Forest Service and Bureau of Land Management decision making related to cultural resources. These include the Archaeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act of 1990, Executive Order 13007 (Indian Sacred Sites), and the American Indian Religious Freedom Act of 1978. The primary laws and agreements applicable to this undertaking are listed below.

National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966 (amended in 1976, 1980, and 1992) is the principal legislation that governs the treatment of cultural resources during project planning and implementation. Implementing regulations that clarify and expand upon the National Historic Preservation Act include 36 CFR 800 (Protection of Historic Properties), 36 CFR 63 (Determination of Eligibility to the National Register of Historic Places), and 36 CFR 296 (Protection of Archaeological Resources). All ensure the Federal government takes into account the effects of any proposed undertaking on cultural resources included in or eligible for inclusion in the National Register.

Programmatic Agreement

The Pacific Northwest Region (Region Six) of the Forest Service, the Advisory Council on Historic Preservation and Oregon State Historic Preservation Office entered into a programmatic agreement regarding the management of cultural resources on National Forest system lands in 2004. The 2004

Programmatic Agreement outlines specific procedures for the identification, evaluation, and protection of cultural resources during undertakings involving the Forest Service. It also establishes the process that Oregon State Historic Preservation Office utilizes to review proposed Forest Service actions for National Historic Preservation Act compliance.

Wild and Scenic Rivers Act

Section 10(b) of the Wild and Scenic Rivers Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free flow, and outstandingly remarkable values). The proposed action, outlined in the environmental consequences section above, describes how each activity would protect and enhance cultural (historic and prehistoric) values of the associated rivers.

Botany

Outstandingly Remarkable Values

Eagle Creek, South Fork Roaring River, and Collawash River

Cold water corydalis (*Corydalis aquae-gelidae*) is a botany outstandingly remarkable value for Eagle Creek, South Fork Roaring River, and Collawash River (upper segment also known as segment 1). These wild and scenic rivers were determined to have high-quality habitat for cold water corydalis. Cold water corydalis is a sensitive species on the Region 6 Regional Forester Special Status Species List (February 25, 2019) and a Category A species on the Survey and Manage list (December 2003 list). Survey and Manage Category A species are considered rare, and all known sites must be managed (Record of Decision 2001).

The west side of the Mt. Hood National Forest (Clackamas River and Zigzag Ranger Districts) and the Gifford Pinchot National Forest comprise the geographic epicenter for cold water corydalis in Region 6 of the Forest Service (Pacific Northwest). The vast majority of documented cold water corydalis sites occur on these two national forests (over 300 Element Occurrences) with 10 on the Willamette National Forest and one or two outlier occurrences on the Rogue-Siskiyou National Forest in southwestern Oregon (NRIS TESP-IS database; Montgomery *et al.* 2017; Oregon Flora Project Atlas). Element occurrences are documented known sites and are mapped in the Forest Service's rare species database as either polygons or points. There is some overlap in the data because some element occurrence polygons contain a substantial number of element occurrence points that were entered years later after the polygons had been drawn in an effort to more precisely map and monitor subpopulations; so coming up with an exact number of element occurrences for cold water corydalis on the Mt. Hood National Forest is less than straightforward, requiring some interpretation of the data. Details about cold water corydalis habitat (such as seral stage, stand age, stand composition) in these three wild and scenic rivers on the west side of the Mt. Hood National Forest can be found in the [River Values Report](#). All three wild and scenic rivers contain high-quality habitat (cold water, favorable stream gradients with likely formation of gravel bars, and older forest) for cold water corydalis.

Cold water corydalis grows along streams of many sizes, from headwater seeps to large rivers (Goldenberg and Zobel 1999). Community composition ordinations indicate that cold water corydalis occurrence is correlated with dense western hemlock/Douglas-fir canopies at lower elevations and with Pacific silver fir and Sitka alder canopies at higher elevations; conversely, occurrence is less likely in forests with less dense canopies found on larger rivers (such as stands dominated by western red cedar or red alder) (Goldenberg and Zobel 1999). Percent canopy cover appears to strongly affect the occurrence

of cold water corydalis with its abundance significantly reduced in areas that have been clear-cut (Goldenberg and Zobel 1999). The species seems best suited to habitats in which a high, partial canopy allows sufficient light for growth and reproduction, but hinders the establishment of competing vegetation (Montgomery *et al.* 2017). Cold water corydalis can be found in late-successional riparian forest, mostly in areas not recently subjected to catastrophic floods (Goldenberg and Zobel 1999). Cold water corydalis requires cold water (less than 14 degrees Celsius), a stream gradient less than 4 percent, and tends to be associated with older forest—though older forest may or may not be as critical for cold water corydalis as stream temperature and gradient.

East Fork Hood River

Violet suksdorfia (*Suksdorfia violacea*) is a botany outstandingly remarkable value for the East Fork Hood River on the Hood River Ranger District. Violet suksdorfia is a sensitive species on the Region 6 Regional Forester Special Status Species List (February 25, 2019) in Oregon only. Violet suksdorfia is not listed as a sensitive species in Washington. Unlike cold water corydalis, violet suksdorfia is not a Survey and Manage species.

Violet suksdorfia has a very limited distribution in Region 6 of the Forest Service (Pacific Northwest) with only six element occurrences (documented sites) in Oregon: two are reported in the Columbia River Gorge National Scenic Area, three on the east side of the Mt. Hood National Forest, and one on the Wallowa-Whitman National Forest (NRIS TESP-IS database, Oregon Flora Project Atlas). In Washington, violet suksdorfia is reported as having been found on the Okanogan-Wenatchee and Colville National Forests (NatureServe 2014, USFS-BLM 2011, and CPNWH 2013 in Glavich 2018), but these occurrences for some reason are not documented in the rare plants database.

Violet suksdorfia occurs in shady, damp to wet mossy areas in east-side ponderosa pine/Douglas-fir stands on steep, rocky slopes; in rock crevices; on cliffs; and in riparian areas (Glavich 2018). The species has also been found growing in creek-side sand (Glavich 2018). The substrate composition at known sites for this species reportedly varies from basalt to granite to limestone (Glavich 2018). In the East Fork Hood River corridor, violet suksdorfia can be found growing on a steep basalt formation called Pete's Pile, a popular local rock climbing area. More sites for violet suksdorfia may occur in the East Fork Hood River corridor, in other nearby tributaries that flow into the Columbia River, and in the Columbia River Gorge itself that remain to be discovered with further botanical exploration since steep basalt outcrops abound in the greater Columbia River Gorge area.

Environmental Consequences

Direct and Indirect Effects

Comprehensive River Management Plan

Adoption of the comprehensive river management plan would help protect and enhance botany outstandingly remarkable values: cold water corydalis habitat in Eagle Creek, South Fork Roaring River, and Collawash River (the upper segment known as segment 1); and violet suksdorfia in East Fork Hood River. Additionally, adoption of the comprehensive river management plan would help ensure that native plant communities and healthy functioning forest ecosystems are maintained in all of the designated wild and scenic river segments.

The comprehensive river management plan would help protect and maintain cold water corydalis habitat by regulating management activities (timber harvest and road construction) and recreational use (such as

number of visitors and activities) in Eagle Creek, South Fork Roaring River, Collawash River, and East Fork Hood River.

The comprehensive river management plan would help protect and enhance violet suksdorfia by regulating recreational use (specifically, the number of climbers and climbing practices) in the East Fork Hood River.

User Capacity

Adoption of the comprehensive river management plan would ensure that monitoring is conducted to assess if ground disturbance caused by visitors may be leading to degradation cold water corydalis habitat, that may create growing space opportunities for invasive plants to colonize and establish, or if invasive plant propagules (seed, stolons, rhizomes, and stem and root fragments) are being introduced by recreationists or pets. Adoption of the comprehensive river management plan would ensure that management action is taken, if the determined degradation threshold is reached, and that any degradation is remedied through rehabilitation, education, or reducing the number of visitors allowed to recreate in the designated wild and scenic rivers.

For violet suksdorfia, monitoring would focus on the impacts of climbers at Pete's Pile, a steep basalt wall where violet suksdorfia grows on ledges and in cracks and crevices. Adoption of the comprehensive river management plan would ensure that monitoring is conducted to assess impacts to violet suksdorfia and other vegetation in the area at Pete's Pile, and vicinity, that may be degraded by climbers. Adoption of the comprehensive river management plan would ensure that measures are taken to educate climbers about violet suksdorfia, and the development of a climbing management plan would address strategies for human waste management, resource protection, and erosion control.

Final Boundaries

The upper boundary was extended to include more of the East Fork of the Collawash River upslope between Mansfield Mountain and Collawash Mountain, in part, because this upper section is likely to contain high-quality habitat for cold water corydalis. The proposed boundary adjustments for the Collawash wild and scenic river (segment 1) would better protect and maintain habitat for cold water corydalis, as well as native riparian plant communities that support this rare (Region 6 sensitive and Survey and Manage) species.

For the East Fork Hood River, boundary changes were made to protect and enhance the recreational and wildlife outstandingly remarkable values identified for the wild and scenic river. Boundary adjustments did not affect violet suksdorfia, the botany outstandingly remarkable value since Pete's Pile is well within the wild and scenic river segment.

Proposed Management Actions

Toilet Installation along the Collawash River

Installation of a toilet facility or facilities along heavily used stretches of the Collawash River would help protect and maintain water quality, which in turn, helps maintain high-quality habitat for cold water corydalis, the botany outstandingly remarkable values. Cold water corydalis requires not only cold water and but clean water (free of excess nitrogen, algal blooms, and contamination by bacteria such as E. coli). The impacts of installing the toilet facility (loss of native vegetation and habitat) would be offset by the benefit of protecting water quality in the river.

Interpretive Signs for Historic Features on the South Fork Clackamas River

This wild and scenic river corridor does not have a botany outstandingly remarkable value, so there is no impact. Also, the signs would be installed near the water work infrastructure, which is far enough away from the river's bank that there is no effect on river related or river dependent botanical species or suitable habitat.

Forest Plan Amendment

There would be no effect of the proposed Forest Plan amendment to allow continued snowmobile use in the Fifteenmile Creek wild and scenic river on native plant communities. Snowmobile use is unlikely to transport and spread invasive plant propagules.

The Forest Plan amendment to change of the land use allocations to A1 for wild segments and B1 for scenic and recreational segments would have a beneficial impact to the botany outstandingly remarkable values and native vegetation as described previously in the analysis of the final boundaries.

Monitoring Plan

A monitoring plan has been included with the comprehensive river management plan that contains to monitor the effects of management actions and visitor use. The monitoring plan would help guide future decisions regarding wild and scenic river segments to help ensure that habitat for cold water corydalis and violet suksdorfia are protected and enhanced. The monitoring plan provides indicators, triggers, and thresholds for determining if degradation of botany outstandingly remarkable values may be occurring and specifies management actions to remedy degradation.

Cumulative Effects

Based on the analysis in this environmental assessment, there are no cumulative effects to the botany outstandingly remarkable values (cold water corydalis and violet suksdorfia) or to native plant communities with the adoption and implementation of a comprehensive river management plan for the wild and scenic rivers. Given the immeasurable direct and indirect effects associated with these actions, there are no cumulative effects to the botany resource for this project.

Consistency with Relevant Laws, Regulations, and Policy

There are no botany outstandingly remarkable values on BLM administered lands, so the Northwestern and Coastal Oregon Resource Management Plan is not applicable to this resource.

Mt. Hood Land and Resource Management Plan (Forest Plan)

The Forest Plan provides standards and guidelines for protecting wild and scenic rivers and the rare botanical species (botany outstandingly remarkable values) dependent on them, as well as the native plant communities within them. The protection of native plant communities and rare species – the botany outstandingly remarkable values cold water corydalis and violet suksdorfia – help wild and scenic rivers maintain their biological diversity and resilience to disturbance (human activities, invasion by non-native plants) and change (climate change). The Forest Plan lists 49 species of sensitive plants, but neither cold water corydalis nor violet suksdorfia is among them. The reason for their omission in the plan is that these two species were not added to the Region 6 regional forester special status species lists, which are periodically updated every few years, until after 1990, the year the Forest Plan was published.

The Forest Plan addresses what management activities are permissible or prohibited in wild and scenic rivers depending on their classification as wild, scenic, or recreational. The wild sections of river courses receive the greatest protection from management activities. For example, standards and guidelines B1-038

and B1-039 prohibit regulated timber harvest (harvest occurring on a rotational basis) and B1-071 and B1-072 prohibit road construction in river segments designated as wild (Eagle Creek and South Fork Roaring River). A lower level of protection is provided by a scenic classification (Collawash River and Middle Fork Hood River). For example, standards and guidelines B1-040 and B1-041 allow for regulated timber harvest and B1-073 and B1-074 allow for road construction in scenic river segments. A recreational classification (segment 2 of the Collawash River and the East Fork Hood River) allows for the most development (page Four – 14, Forest Plan, 1990). The regulation of management activities provided by the various standards and guidelines would help protect and enhance the botany outstandingly remarkable values, which may be sensitive or vulnerable to such activities.

Two of the relevant standards and guidelines include the following.

- Standard and guideline B1-001 stipulates that all management activities in the river corridors shall protect and/or enhance the identified outstandingly remarkable values (FSH 1909.12, Chapter 8, 7/87).
- Standard and guideline FW-501 recognizes the threat of invasive species by stipulating that non-native species should not be introduced in wild and scenic river corridors.

The above forest wide and B1 standards and guidelines in the Forest Plan (1990) either permit or prohibit management activities such as timber harvest and road construction in wild and scenic rivers on the national forest. The proposed comprehensive river management plan for the wild and scenic rivers is consistent with the forest-wide and B1 standards and guidelines specified in the Forest Plan. Its adoption and implementation would protect and/or enhance the botany outstandingly remarkable values cold water corydalis and violet suksdorfia in the wild and scenic rivers where these two species occur.

In addition to being a sensitive species on the Region 6 Regional Forester Special Status Species List (February 25, 019), cold water corydalis is a Survey and Manage Category A species on the Survey and Manage List (December 2003). All known sites of Survey and Manage Category A species must be managed (protected) (ROD 2001). The comprehensive river management plan is fully consistent with this standard since cold water corydalis is a botany outstandingly remarkable value and is protected under the Wild and Scenic Rivers Act as outlined throughout this section.

Other Relevant Law, Regulation, or Policy

Wild and Scenic Rivers Act (1968)

Cold water corydalis is considered an outstandingly remarkable value in Eagle Creek, South Fork Roaring River, and Collawash River (segment 1 or the upper segment). Violet suksdorfia is considered an outstandingly remarkable value in the East Fork Hood River.

None of the ground- or habitat-disturbing activities proposed in the comprehensive river management plan (installation of a public toilet facility on the Collawash River and posting of interpretive signs on the South Fork Clackamas River) would degrade the botany outstandingly remarkable value (cold water corydalis) for these two rivers. The boundary change for segment 1 of the Collawash River would also protect the botany outstandingly remarkable value (cold water corydalis) for that wild and scenic river. Installation of a public toilet would protect water quality (one of the three wild and scenic river-related values) on the Clackamas River; and posting signs to alert visitors to the presence of a Region 6 sensitive species, the Townsend's big-eared bat (Region 6 Regional Forest Special Status Species List, February 25, 2019), would help protect bats and their habitat (tunnels) in the South Fork Clackamas River wild and scenic river. Regulation of rock climbing activities at Pete's Pile in the East Fork Hood River wild and

scenic river would help maintain and protect the botany outstandingly remarkable value violet suksdorfia. The proposed comprehensive river management plan is consistent with Section 10(a) of the Wild and Scenic Rivers Act (1968).

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

- Oregon Department of Environmental Quality
- Oregon Department of Transportation
- Oregon Fish and Wildlife Department
- Oregon Department of Parks and Recreation
- Oregon Water Resources Department
- National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- Natural Resource Conservation Service
- U.S. Army Corps of Engineers
- Wasco County
- City of Dufur
- State Historic Preservation Office
- Federal Highway Administration

Tribes

- Confederated Tribes of Warm Springs
- Confederated Tribes of Grand Ronde
- Confederated Tribes of Siletz Indians

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Appendix A: Proposed Monitoring Plan

Table 10. Monitoring plan (Italicized monitoring questions are part of the current monitoring plans for Mt. Hood National Forest or Northwestern Oregon District of BLM)

River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Water Quality, Fish, Botany	All	<p><i>Have Best Management Practices (BMPs) been implemented and are they effective at managing water quality consistent with the Clean Water Act?</i></p> <p>Are recreation sites adding sedimentation to the wild and scenic river? If yes, is the sedimentation negatively impacting the water quality?</p>	Number of sites associated with trails, take-outs, boat ramps, parking lots, campgrounds, and roads that show evidence of erosion and delivery to the river or a tributary to the river	Observation of rilling and gullies at recreation areas	0 sites	<p>Designate and direct visitors to sustainable facilities, routes, and river access points.</p> <p>Close and rehabilitate un-sustainable facilities, routes, and river access points.</p> <p>Construct sustainable facilities, routes, and river access points if needed, and where appropriate</p>	Annually for all rivers located outside of wilderness. The frequency of monitoring will increase with noticeable increase in use. The rivers located entirely within designated wilderness and currently see little use. Water quality monitoring, therefore, will be commensurate with apparent use; as use increases, monitoring frequency will also increase.

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Water Quality	All	<p><i>Have BMPs been implemented and are they effective at managing water quality consistent with the Clean Water Act?</i></p> <p>Is the segment of Wild and Scenic River that is on the Oregon Department of Environmental Quality (ODEQ) 303(d) list classified as impaired (Category 5)?</p>	A designated Wild and Scenic river segment is included on the ODEQ's 303(d) list.	A pollutant has been identified by ODEQ to be impairing water quality on a segment of designated Wild and Scenic River.	The segment is listed as Category 5 and requires a TMDL (total maximum daily load) for the defined pollutant.	Development of a Water Quality Restoration Plan that qualifies ODEQ requirements for meeting the TMDL for the defined pollutant.	As determined in coordination with ODEQ in the signed Water Quality Restoration Plan.
Water Quality	Collawash River Segment 2	Are there potential impacts to water quality from human waste in segment 2 of Collawash River?	Multiple numbers of human waste deposits (obvious shallow burial holes included) and/or direct conduits from fecal source to surface water body	Recent (within 1 year) evidence of dispersed camping or other concentrated recreation use, in areas without sanitary facilities	Multiple piles of unburied human waste observed (per site visit)	More frequent monitoring; informational signage with education on "pack it out" and defecating away from surface water; "pack it out" requirements; fix the cause of contamination; and provide sanitary facilities where possible	Annually. The frequency of monitoring will increase with noticeable increase in recreation use.

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Water Quality, Fish	Fifteenmile Creek Segments 3 and 4	Is there preexisting management, landscape features, or range improvements that control or draw livestock away from over utilizing stream sections?	Livestock in the stream and disrupting redds (spawning nests), with primary concerns during Steelhead spawning season. Number of sites associated with livestock use that show evidence of erosion and/or sediment delivery to the river or a tributary to the river	Evidence of livestock over utilizing or damaging stream features. Maintain minimum impact.	Evidence of cattle lingering in water bodies un-managed	Period of use during the gazing season on the Friend Unit is August 16 to September 30. Permittee controls livestock movement during season of use to minimize impact of stream sites utilizing management tools listed on the annual operating instruction plan to protect outstanding values.	Site monitoring using range monitoring methods under the ranger permit.
Botany	Collawash River Segment 1, Eagle Creek, South Fork Roaring River	<i>Are known populations of invasive species continuing to spread? Are new infestations occurring?</i> Is use having an impact on vegetation along riverbanks of the designated wild and scenic river?	Human disturbance and degradation along riverbanks and gravel bars (e.g., trampling of vegetation, creation of informal trails, presence of invasive plants)	Observable (noticeable) increase in disturbances	An observable increase in human disturbance, noted between visits, every 3 to 5 years, that raises concerns	Survey a representative sample of river stretch within the segment. Map areas where disturbance is observed using GPS. If disturbance is observed, educate with signage, rehabilitate disturbance, or consider reducing the number of visitors allowed to recreate in the area	Monitor visitor impacts periodically (every 3 to 5 years) by surveying a representative sample of river stretches within the segment.

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Botany	East Fork Hood River	Are climbing activities negatively impacting the violet suksdorfia at Pete's Pile?	Impacts to vegetation (vascular plants, bryophytes, and lichens) on the climbing wall and at the base of the climbing wall from climbers (Bryophytes = mosses and liverworts)	Evidence of vegetation (vascular plants, bryophytes, and lichens) dislodged from cracks, ledges, and crevices at climbing areas onto ground below	No plant material dislodged from cracks, ledges, and crevices at climbing area	Install interpretative signs to educate climbers about the rarity of violet suksdorfia and potential impacts from recreational activities. Continue fostering partnerships with the local climbing community. Develop a climbing management plan that addresses strategies for human waste management, resource protection and erosion control. This management plan will also address the unauthorized (social) trail.	Monitor Pete's Pile and other popular climbing areas on an annual basis to assess impacts to violet suksdorfia.

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Fish	Collawash River Segments 1 and 2, Fifteenmile Creek Segments 3 and 4	Are we maintaining or enhancing quality aquatic habitat for threatened and endangered species within the Collawash River, Fifteenmile Creek, and Fish Creek wild and scenic river corridors?	People walking or cooling off in the stream and disrupting redds (spawning nests), with primary concern in late summer and fall (mid-August to November except in Fifteenmile Creek being early spring through Mid-July) during steelhead salmon and bull trout spawning season	Observation of people in the stream during late summer or fall, especially on gravel and cobble substrate	No more than 2 groups of people observed walking instream or disturbing stream substrate in areas that are < 3% gradient that are easily accessible via road	Information posted or signed. Forest Service personnel visits. Identify key spawning areas, and block access to direct use from these reaches	Monitoring of habitat qualities that includes current annual coordination with Oregon Department of Fish & Wildlife, U.S. Fish & Wildlife and Confederated Tribes of Warm Springs
Fish	Middle Fork Hood River, Collawash River Segments 1 and 2, Fifteenmile Creek Segments 3 and 4, Fish Creek	<i>Are Standards and Guidelines effective in maintaining or enhancing aquatic habitat complexity?</i>	Salmonid habitat	Evidence of reduction or degradation of stream habitat and water quality that supports salmonids	No increase in stream temperature. Maintenance of large wood cover and spawning gravel	Plan and implement actions that would improve habitat conditions	Monitoring of habitat qualities that includes current annual coordination with Middle Fork Irrigation District, Oregon Department of Fish & Wildlife, U.S. Fish & Wildlife and Oregon Department of Environmental Quality.

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Historic	Fifteenmile Creek Segment 1, South Fork Clackamas River	<p><i>Are significant (National Register eligible) historic properties being maintained, stabilized, and repaired according to historic preservation standards? (Forest Service)</i></p> <p><i>Are the outstandingly remarkable values of designated Wild and Scenic river corridors (including those classified as Wild, Scenic, or Recreational) being maintained? (BLM)</i></p>	Impacts to eligible cultural resources. Site integrity	Impact to integrity of historic properties (elements of integrity include location, setting, design, materials, workmanship, feeling, association)	One or more incidence of impact to integrity	Develop mitigation measures to preserve site integrity. Consult with State Historic Preservation Office concerning mitigation measures if an adverse effect determination is reached	<p>Annual site condition assessment (<i>Forest Service</i>)</p> <p>Evaluate 100 percent of BLM-authorized activities that have the potential to affect the outstandingly remarkable values of wild and scenic river corridors. This will be completed annually initially, and then changed to an interval to once every 3 years if 3 consecutive years of monitoring show 100 percent compliance. (<i>BLM</i>)</p>

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Macro-invertebrate	Zigzag	Are recreational social trails in and around the stream impacting macroinvertebrates within the Zigzag River wild and scenic river corridor? <i>Are Standards and Guidelines effective in maintaining or enhancing aquatic habitat complexity?</i>	Applies to only small springs and tributaries above elevation 3,500 feet. Social trails paralleling spring or dispersed camping or fire rings near springs and spring fed tributaries. People walking in springs or tributary crossing evidence	Evidence of people using the springs for collecting water. Degraded or reduction in instream moss and vegetation	These springs are in steep and unstable areas and nearly inaccessible to hikers. Hikers and campers accessing these areas instream will create small landslides and debris flows in unstable and steep streams. No more than one new trail, campfire, or spring crossing reported in one year	Rehabilitate and close unauthorized trails and campfire rings Information posted or signed to explain sensitive endemic species use and impacts caused by social trails.	Annual site inspections and field visits to monitor for new unauthorized trails, campsites, and roads while staff is performing normal field work.

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Recreation	Collawash River Segment 1, Eagle Creek, East Fork Hood River, Fifteenmile Creek Segments 2 and 3, Zigzag River	<i>Are people having a high level of satisfaction during their visit to the Mt. Hood National Forest?</i>	People at one time Visitor satisfaction	Observed increase or crowding at parking areas or pullouts greater than 4 times per season outside holidays Unacceptable shift in satisfaction score (from satisfied to not satisfied), or increase in crowding or conflict measured in National Visitor Use Monitoring	Not to exceeded 80 percent of the assigned river capacity greater than 2 times per season outside holidays	Trail development to disperse visitors. More group campground gathering places. Consider restrictions on number of people in each dispersed site Increase site-specific monitoring if use increase is observed.	Site monitoring annually while staff performing work assignments. National Visitor Use Monitoring occurs every 5 years and informs satisfaction levels on a forest-wide scale.
Recreation	Eagle Creek, Fifteen Mile Creek Segments 2 and 3, Zigzag River	<i>Are the physical/biological, managerial and social settings of each Wilderness Resource Spectrum (WRS) maintained consistent with the standards for wilderness management?</i>	Encounters per day	Increases noted in group sizes or requests for group permits Increases in impacts based on recreation site or solitude monitoring	Encounters with other groups shall be limited to no more than 10 groups per day during 80 percent of the primary recreational use season	Conduct additional visitor use monitoring	Wilderness monitoring protocols

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Scenery	Middle Fork Hood River, South Fork Clackamas River, Zigzag River	<p>Are we maintaining the visual quality objectives recommended for the Middle Fork Hood River and South Fork Clackamas River wild and scenic river corridors? (Forest Service)</p> <p><i>Are the outstandingly remarkable values of designated Wild and Scenic river corridors (including those classified as Wild, Scenic, or Recreational) being maintained? (BLM)</i></p>	Activities or modifications which alter landform, vegetation, water, or character within the viewshed as seen from the river and high use areas	Visitor use activities with evidence of erosion, soil compaction, exposed soils, or damaged vegetation, such as trampling, lack of ground cover or damaged trees	1 site that does not meet visual resource management plan direction and visual quality objectives	<p>Designate and direct visitors to sustainable facilities, routes, and river access points.</p> <p>Close and rehabilitate un-sustainable facilities, routes, and river access points.</p> <p>Construct sustainable facilities, routes, and river access points if needed, and where appropriate</p>	<p>Site inspections and field visits as part of normal Forest Service administrative duties. (<i>Forest Service</i>)</p> <p>Evaluate 100 percent of BLM-authorized activities that have the potential to affect the outstandingly remarkable values of wild and scenic river corridors. This will be completed annually initially, and then changed to an interval to once every 3 years if 3 consecutive years of monitoring show 100 percent compliance. (<i>BLM</i>)</p>
Wildlife	East Fork Hood River	<p><i>What is the trend for early-seral habitat needed for deer and elk persistence?</i></p> <p>What is the trend for habitat needed for the Harlequin duck in the East Fork Hood River wild and scenic river corridor?</p>	Wildlife disturbance, specifically Harlequin duck nesting and migration in stream and floodplain, and big game calving, fawning, and foraging habitat	Evidence of new unauthorized dispersed camping sites or user made trails and roads in the corridor	No new (<1) unauthorized dispersed campsites, trails, or roads within the entire river corridor	Restore disturbed area and close it to future use in same year discovered	Annual site inspections and field visits to monitor for new unauthorized trails, campsites, and roads while staff is performing normal work assignments.

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River Value	Applicable River(s)	Monitoring Question	Indicator	Trigger	Threshold	Management Actions, if threshold reached	Sampling Procedure and Frequency
Wildlife	Fifteenmile Creek All Segments	Are we effectively maintaining or enhancing wildlife habitat in the Fifteenmile Creek wild and scenic river corridor?	Wildlife disturbance and habitat loss	Evidence of new unauthorized dispersed camping sites or user made trails and roads in the corridor	No new (<1) unauthorized dispersed campsites, trails, or roads within the entire river corridor	Restore disturbed area and close it to future use in same year discovered	Annual site inspections and field visits to monitor for new unauthorized trails, campsites, and roads while staff is performing normal work assignments.