

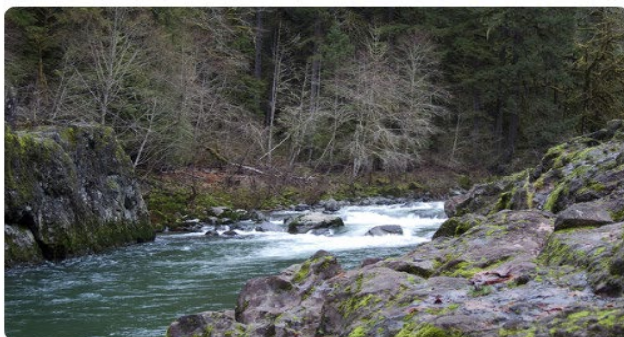


United States Department of Agriculture



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Elkhorn Creek Wild and Scenic River Comprehensive Management Plan Final Environmental Assessment



Elkhorn Creek (Photos taken November 2013)



Forest Service
Willamette National Forest
Detroit Ranger District



Bureau of Land Management
Northwest Oregon District
Cascades Field Office

September 2023

Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan
Final Environmental Assessment

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Introduction

Congress designated a 6.4-mile segment of Elkhorn Creek as a national wild and scenic river in the Omnibus Parks and Public Lands Management Act of 1996, hereafter referred to as the Omnibus Act (Public Law 104-333, section 1023, November 12, 1996). The Bureau of Land Management and Forest Service determined that minor modifications to the wild and scenic river corridor boundaries were necessary to protect the outstandingly remarkable values and incorporate additional acres of the watershed. Elkhorn Creek Wild and Scenic River includes approximately 7 miles of Elkhorn Creek, including approximately 3.8 miles managed by the Detroit Ranger District of the Willamette National Forest and approximately 3.2 miles managed by the Cascades Field Office of the Bureau of Land Management.

Federal agencies charged with the administration of the National Wild and Scenic Rivers System are required to prepare a comprehensive river management 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 the river was designated. It 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 this wild and scenic river corridor, both a comprehensive river management plan and this environmental assessment are needed. The comprehensive river management plan is required by the Wild and Scenic Rivers Act, while this environmental assessment is required by the National Environmental Policy Act. During the planning process, the two documents work together.

Comprehensive River Management Plan: Contains the river boundaries, river values, management direction including desired conditions, and determines types and amounts of uses (visitor capacity, and monitoring plan).

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

The Forest Service is the lead agency in the preparation of the comprehensive river management plan and associated documents, and the Bureau of Land Management is the cooperating agency. This environmental assessment has been prepared to determine whether the effects of the proposed action (adoption and implementation of the comprehensive river management plan) may be significant enough to prepare an environmental impact statement and to fulfill agency policy and direction to comply with the National Environmental Policy Act 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. The following analysis has identified no direct effects from the proposed action but has identified indirect effects from additional monitoring items and proposed future management actions. This analysis has identified cumulative effects from reasonably foreseeable actions.

Background

Wild and Scenic Rivers Act

In 1968, Congress passed the [Wild and Scenic Rivers Act](#) (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 41 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 outstandingly remarkable 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(a) 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 the Act.

Following the designation of the Elkhorn Creek as a wild and scenic river, 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 comprehensive river management 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 the 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.

Rivers designated by the Act are classified as wild, recreational, or scenic (section 2(b)). 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.

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The Omnibus Act classified two river segments within Elkhorn Creek, a wild segment and a scenic segment, based on the level of development within the river corridor (see table 1).

Table 1. Description and Classification of wild, scenic, and recreational river segments

Segment	Description	Miles	Classification	Administering Agency
1	Forest Service boundary on the common section line between Sections 12 and 13 Township 9 South, Range 4 East to its confluence with Buck Creek (T9S, R3E, Section 1)	6.4	Wild	Forest Service and Bureau of Land Management
2	Buck Creek to that point where the segment leaves federal ownership along the Bureau of Land Management boundary in Section 1, Township 9 South, Range 3 East	0.6	Scenic	Bureau of Land Management

The Elkhorn Creek Wild and Scenic River segments and the interim corridor are managed as directed by the Wild and Scenic Rivers Act of 1968. These designated segments are displayed in figure 1 below.

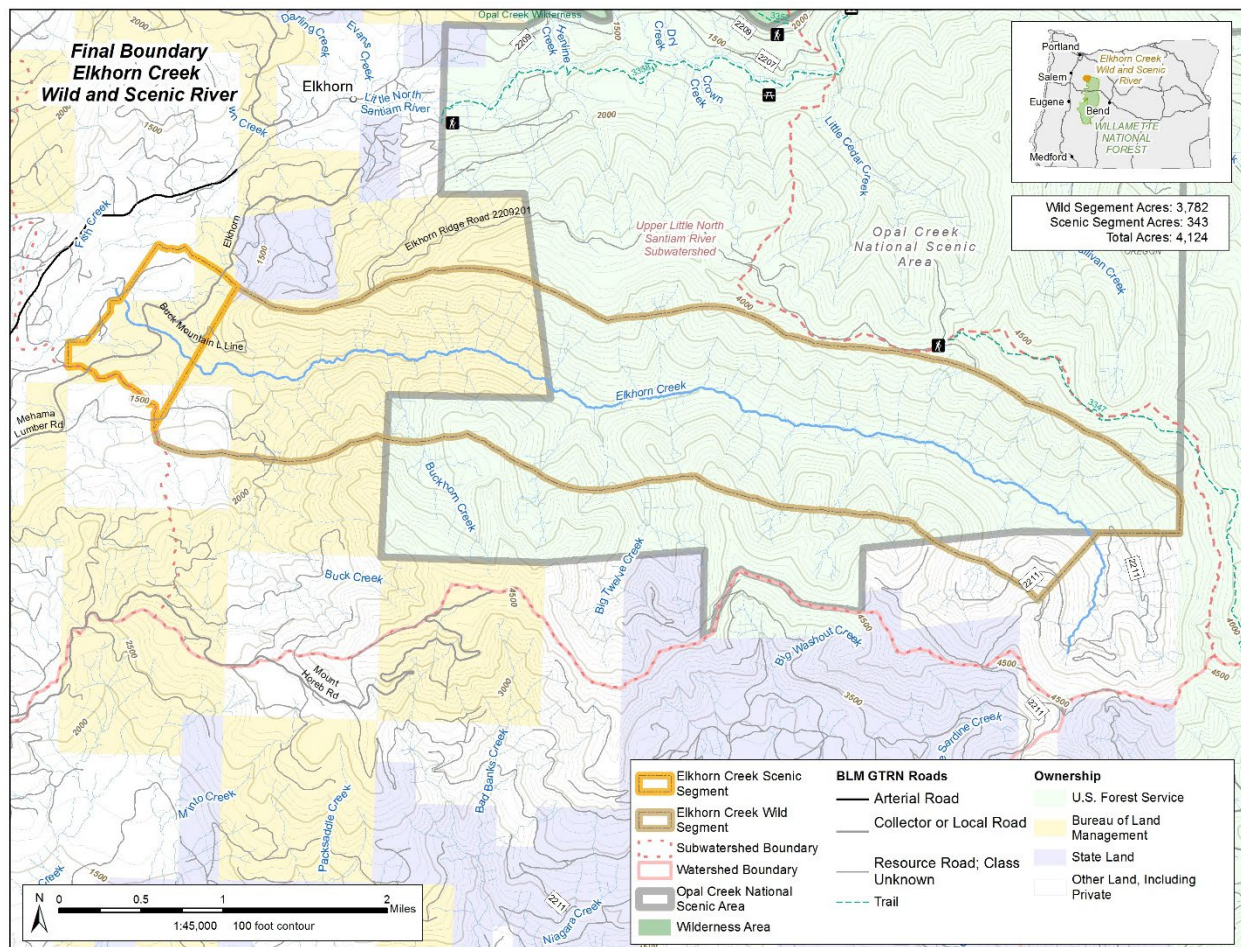


Figure 1. Map of vicinity and proposed final Elkhorn Creek Wild and Scenic River boundaries.

Outstandingly Remarkable Values

Wild and scenic rivers designated by the Act possess outstandingly remarkable values that may include one or more of the following: “scenic, recreational, geologic, fish and wildlife, historic, cultural or other

similar values” (section 1(b)). To be assessed as outstandingly remarkable, a value must be river related, river dependent, and a unique, rare, or exemplary feature that is significant at a comparative regional or national scale. The outstandingly remarkable values for Elkhorn Creek were evaluated as described in the [Proposed Outstandingly Remarkable Values](#) section.

Management Direction

Relevant management direction in the [Willamette Land and Resource Management Plan](#) of 1990, as amended (U.S. Department of Agriculture, Forest Service, Forest Plan 1990), the Bureau of Land Management [Northwestern and Coastal Oregon Record of Decision and Resource Management Plan](#) of 2016 (U.S. Department of Interior, Bureau of Land Management (BLM) 2016), and the Northwest Forest Plan of 1994 (USDA, Forest Service 1994) applicable to the proposal have been incorporated into the direction provided by the Elkhorn Creek Comprehensive River Management Plan (USDA Forest Service 2022c).

Other Supporting Documentation

Documentation and analysis that supports and expands on the information contained in this environmental assessment and comprehensive river management plan includes:

- The River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021)
- The Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2022b)
- The User Capacity Analysis: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2022a)

These documents may be accessed through the [project webpage](#) and in the project record.

Purpose and Need for the Proposal

The Act mandates that agencies with jurisdiction over designated wild and scenic rivers complete comprehensive river management plans to provide for the protection and enhancement of the designated segments’ river values (16 U.S. Code 1274(d)).

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 Elkhorn Creek Wild and Scenic River was designated (free-flowing condition, water quality, and outstandingly remarkable values) and to identify potential agency management actions needed to protect these values on federally managed lands within the wild and scenic river corridor. Another purpose of this proposal is to establish visitor use capacities and 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 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 primary purpose of the comprehensive river management plan is to protect and enhance the outstandingly remarkable values, water quality, and free-flowing characteristics of the designated wild and scenic river 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 Elkhorn Creek can support while protecting river values;
- inform future management actions within the designated river corridor; and,
- develop a monitoring strategy to maintain desired conditions.

Decision to be Made

Based on the analysis contained in this environmental assessment, the Forest Service will determine whether to adopt the Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan, which would require a programmatic forest plan amendment to adopt the final proposed boundaries for the Elkhorn Creek Wild and Scenic River. The Bureau of Land Management will similarly be using this environmental assessment to determine whether they would adopt the comprehensive river management plan including boundary modifications, although no amendments to the Bureau of Land Management Northwestern and Coastal Oregon Record of Decision and Resource Management Plan are necessary.

The comprehensive river management plan does not propose ground disturbing management activities. The plan recommends inventory activities to inform the baseline condition and recommends monitoring that should occur to determine what potential impacts are occurring over time. The plan identifies potential future management actions that could be considered to maintain and enhance water quality, free flow, or the scenery and fisheries outstandingly remarkable values. If managers determine that action is needed to maintain or enhance these values, additional environmental review may be required at that time.

The comprehensive river management plan consists of an adaptive management framework focused on natural recovery of processes and conditions. This monitoring framework would assess the changed condition and post-fire recovery scenarios following the Beachie Creek Fire in 2020 and any other impacts that may occur over time. The monitoring plan identifies potential future management actions that could be triggered by monitoring thresholds being met and could be considered to protect and enhance the values for which Elkhorn Creek was designated.

Alternatives, Including the Proposed Action

Alternative Development

The existing management conditions were described in the River Values Report: Elkhorn Creek Wild and Scenic River and the Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2021 and 2022b; available on the [project website](#)). The analysis contained in these documents compares, as needed, the effects of continuing existing management to the effects of the decisions that would be made by implementing the direction in the comprehensive river management plan. The River Values Report: Elkhorn Creek Wild and Scenic River evaluated conditions and river values at the time that Congress designated Elkhorn Creek as a wild and scenic river and updated these conditions and values to represent the present condition. The Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report documents the new baseline after the Beachie Creek Fire impacted the wild and scenic river corridor.

The river values report and the changed conditions report provide the baseline management and resource conditions for Elkhorn Creek; therefore, this project meets the requirements for having a no-action

alternative included in the analysis (36 Code of Federal Regulations (CFR) 220.7(b)(2)(ii)). The Bureau of Land Management 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” (Bureau of Land Management National Environmental Policy Act Handbook H-1790-1, page 51; U.S. Department of the Interior, Bureau of Land Management 2008).

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 demonstrated in the alternatives, including the Proposed Action section of this environmental assessment, there are no unresolved resource concerns associated with this project. For that reason, no other action alternatives were developed or analyzed for this project. The proposed action is described and fully analyzed in this environmental assessment.

No Action

The no-action alternative provides a baseline for assessing the effects of other alternatives. Under this alternative, no changes would be made to the interim corridor boundaries, which would be submitted to Congress as the final detailed corridor boundaries. See the River Values Report: Elkhorn Creek Wild and Scenic River, and the Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2021 and 2022b) for a full description of the baseline conditions pre- and post-fire in the river corridor. Under the no-action alternative, the corridor boundaries would be located 0.5 mile from the banks of each side of the river. This interim corridor width is defined by the designating legislation (Public Law 104-333, section 1023, November 12, 1996).

Standards and guidelines from the existing forest plan direction as amended would continue to apply. No programmatic amendment would be implemented for the forest plan; therefore, the final land allocation for the Elkhorn Creek Wild and Scenic River corridor would not be added to the forest plan. There would be no change to the land allocation along the current river corridor. All existing allocations under the forest plan, as amended, would remain in effect as well as the interim wild and scenic boundary from the 2004 amendment. No comprehensive river management plan would be adopted, and the area would continue under the interim direction of the forest plan. Administration of Elkhorn Creek would not be in compliance with the Act.

The Bureau of Land Management administered portion of Elkhorn Creek would continue to be managed under direction provided in the Northwestern and Coastal Oregon Record of Decision and Resource Management Plan. Visitor capacity analysis is still required and was conducted but a final visitor capacity would not be established through adoption of the comprehensive river management plan. Monitoring would consist of data already being collected for other purposes.

Any management actions within the corridor would be in accordance with relevant law, regulation, policy, and plan direction and would require site-specific analysis under the National Environmental Policy Act, Endangered Species Act, and other federal laws. Management actions within the bed or banks of the river would require compliance with section 7(a) of the Wild and Scenic Rivers Act.

The Forest Service and Bureau of Land Management would continue to manage the river without a comprehensive river management plan and would be out of compliance with the Wild and Scenic Rivers Act (section 3(d)(1) and associated agency directives (Forest Service Manual 2354.32 and Bureau of Land Management Manual 6400).

Proposed Action

The proposed action is to adopt the Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan and final boundary for the river corridor based on the requirements in the Wild and Scenic Rivers Act. Relevant content contained in the comprehensive river management plan (USDA Forest Service 2022c) and supporting documents¹ includes:

- a description of the existing resource conditions including a detailed description of the river values (USDA Forest Service 2021 and 2022b);
- desired conditions for protecting river values;
- a determination of visitor use capacities (USDA Forest Service 2022a);
- descriptions of consistent and inconsistent uses within the corridor;
- instream flow and water quality requirements;
- management actions to protect and enhance river values;
- identification of regulatory authorities of other governmental agencies that assist in protecting river values; and
- a monitoring strategy to maintain desired conditions.

The proposed action analyzed in this environmental assessment includes only those actions that change existing management practices. This includes establishing the outstandingly remarkable values, establishing visitor capacities, identifying potential future management actions and parameters to protect and enhance river values, adopting a monitoring strategy, and establishing final boundaries. This alternative also proposes a programmatic amendment² to the forest plan to modify the boundary of the Elkhorn Creek Wild and Scenic River. This modification would apply to the management area encompassing the wild segment of the designated Elkhorn Creek corridor on National Forest System lands, to reflect the final adopted river boundary.

Outstandingly Remarkable Values

Outstandingly remarkable values were identified for each of the designated segments using a set of evaluation criteria and public involvement, which are described in the [River Values Report: Elkhorn Creek Wild and Scenic River](#) (USDA Forest Service 2021). A planning team prepared this river values assessment to evaluate the outstandingly remarkable values and assess water quality and free-flow condition. After the Beachie Creek Fire burned over the river corridor in 2020, the team prepared a changed conditions report assessing post-fire changed conditions and changes to river values. They found that Elkhorn Creek possesses outstandingly remarkable values for scenery and fisheries, as shown in table 2 below. The outstandingly remarkable values for Elkhorn Creek include scenery in the wild segment and fisheries in both the wild and scenic segments.

For a description of free flow, water quality, and outstandingly remarkable values, refer to the Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan (USDA Forest Service 2022c), the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021), and the Elkhorn

¹ Supporting documents include the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021), Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2022b), and User Capacity Analysis: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2022a).

² A programmatic amendment changes the Willamette Land and Resource Management Plan for the duration of the plan whereas a site-specific amendment arises from the need to take a specific action to meet a forest plan goal or a desired condition and only applies to that project or activity.

Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2022b), which may be accessed via the [project webpage](#).

Table 2. Summary of outstandingly remarkable values for all river segments

River Value	Wild Segment	Scenic Segment
Scenery	Yes	No
Recreation	No	No
Geology	No	No
Fisheries	Yes	Yes
Wildlife ¹	No	No
Cultural Resources	No	No

1–See Changed Conditions Report for a more detailed description and rationale for change to proposed wildlife outstandingly remarkable value due to the Beachie Creek Fire.

Wild and Scenic River Boundaries

The Act requires that each federally administered river in the National Wild and Scenic Rivers System have legally established boundaries. The designating legislation states that the boundaries for Elkhorn 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” (Public Law 104-333, section 1023, November 12, 1996).

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

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.

The designating legislation established interim river corridor boundaries for Elkhorn Creek of 0.5 mile on each side of the creek as measured from the ordinary high-water marks. The planning team determined that the interim boundaries with some minor modifications serve to protect and enhance the outstandingly remarkable values. The proposed final boundaries would modify the interim boundaries to include additional National Forest System land in the upper reaches of the watershed for additional protection of fish species and habitat as well as water quality. Other minor modifications would adjust the boundaries slightly to follow the ridgeline, where feasible, and incorporate additional acres of the watershed. Due to more accurate modern geographic information system data³ since the river was designated, the total length of the river from the termini identified in the designating legislation has been updated from 6.4 miles to 7.0 miles. The changes made from the interim boundaries to the proposed final boundaries are shown in figure 2. The final river mileages are shown in table 3 and the acreages by land ownership are shown in table 4.

³ Modern U.S. Geological Survey National Hydrography Dataset Flowline data and Lidar incorporate the best data currently available and show the river mileage from the designated termini to include 7.0 miles, which accounts for more meandering in the channel than the historical measurement of 6.4 miles between termini.

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Table 3. River miles by land ownership for Elkhorn Creek

Ownership	River Miles in Scenic Classification	River Miles in Wild Classification	Total River Miles
Bureau of Land Management	0.6	2.6	3.2
Forest Service	0	3.8	3.8
Total	0.6	6.4	7.0

Table 4. Land Ownership within Wild and Scenic River Corridor

Land Ownership	Scenic Segment (acres)	Wild Segment (acres)	Total Acres
National Forest System	0	2,475	2,475
Bureau of Land Management	230	1,082	1,312
Private	93	240	334
State	0	4	4
Total	323	3,801	4,124

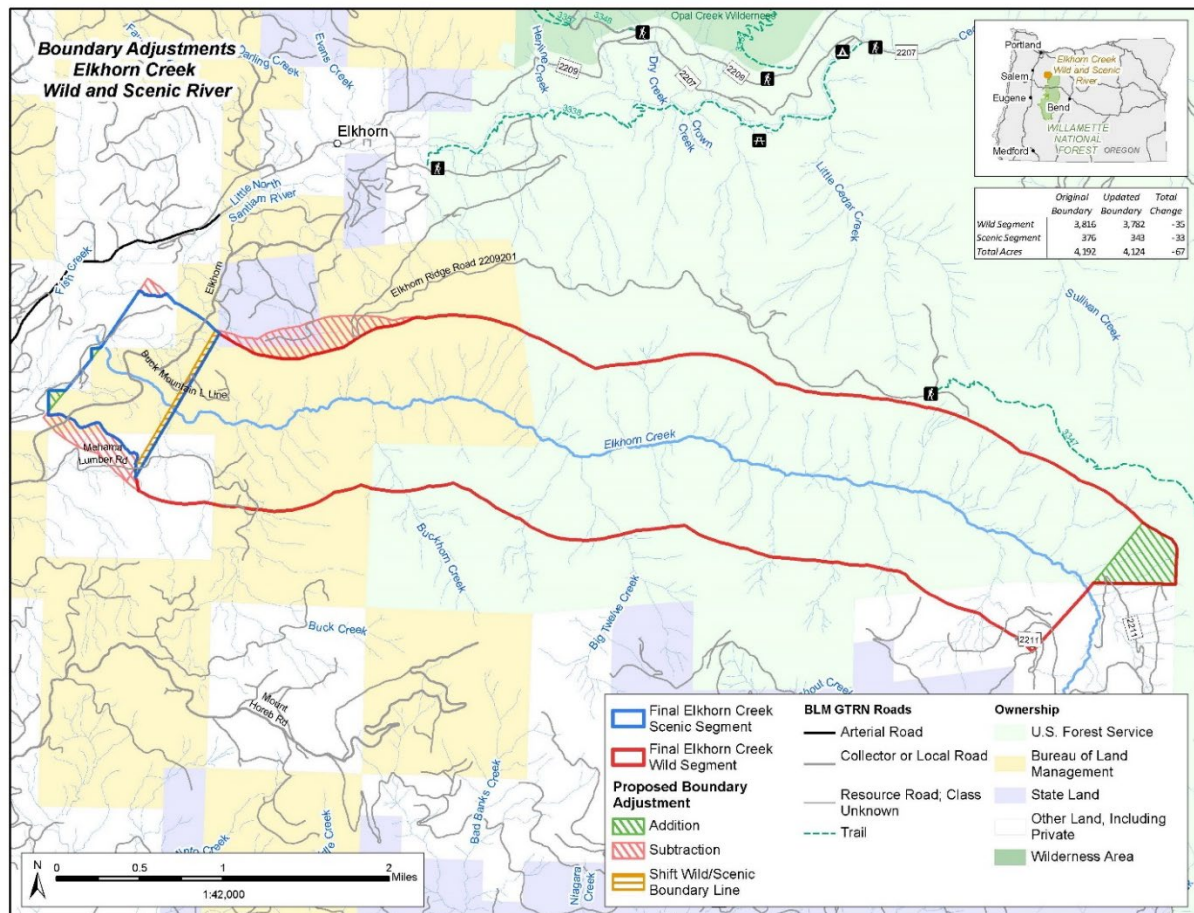


Figure 2. Elkhorn Creek Wild and Scenic River boundary adjustments

Visitor Use Management and Capacity

The Wild and Scenic Rivers Act directs that river-administering agencies manage visitor use to protect the free-flowing conditions, water quality, and outstandingly remarkable values of designated rivers. Specifically, section 3(d)(1) of the Act directs that the agencies address user capacities. A visitor use

management strategy has been developed as a component of the planning process for the comprehensive river management plan (USDA Forest Service 2022a). The proposed plan addresses the need for visitor management, proposes visitor capacities, and outlines the proposed management strategy, monitoring, and potential management actions that could be implemented to protect river values.

To determine visitor capacities for Elkhorn Creek, the Forest Service and Bureau of Land Management followed the nine-step process outlined by the Interagency Wild and Scenic River Coordinating Council, [Steps to Address User Capacities for Wild and Scenic Rivers](#) (Interagency Wild and Scenic River Coordinating Council 2018). Table 5 summarizes the detailed information provided in the comprehensive river management plan and in the User Capacity Analysis: Elkhorn Creek Wild and Scenic River located on the project webpage (USDA Forest Service 2022a).

Currently, very limited recreational activities are pursued in the river corridor due to difficult access and steep terrain. Activities that could be accommodated in any segment include hiking, backpacking (very limited), wading or water play, challenging kayaking, fishing, and hunting. Uses that cannot be accommodated in any segment due to terrain, policy, or lack of use-specific designated trails include off-road vehicle driving, horseback riding, and mountain bike riding. While overnight camping could occur in both segments, the terrain is extremely limited for this type of use.

Table 5. User capacity for each segment of Elkhorn Creek

Segment	Measure	Existing Use	Estimated Capacity	Justification
Wild	People per day	Non-existent to very low. Estimate one to two groups every 5 years	15 people per day	Primitive recreation opportunity spectrum, primitive recreation setting characteristics, very low intensity zone ¹ , fewer than 6 encounters, up to 3 people in a group
Scenic	People per day	Very low: most use occurs on Elkhorn Road bridge	28 people per day	Back country recreation setting characteristics; up to 7 encounters, up to 4 people in a group (lowest back country group size and encounters)

1—A low intensity zone is an area that provides opportunities for the most primitive recreational experiences.

Future Management Actions

Section 10(a) of the Wild and Scenic Rivers Act requires that river-administering agencies protect and enhance the designated segments' river values. In general, the Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan takes a primarily passive approach to management, to allow the river corridor to recover naturally from the Beachie Creek Fire with minimal intervention from management actions, unless thresholds are reached triggering specific actions to protect and enhance outstandingly remarkable values. This approach fits with the current forest plan direction for wild and scenic river management, and it will be followed for the wild section of the river. The Bureau of Land Management is planning to add large woody debris to the scenic section of the river to improve fish habitat and hydrology.

Historically, the river corridor experienced minimal management and intervention before the Beachie Creek Fire. By prioritizing natural recovery within the wild section of the river, the Elkhorn Creek Wild and Scenic River corridor will provide an understanding of reference conditions and natural regeneration as a comparison for post-fire recovery on surrounding lands while protecting and enhancing river values.

This approach would protect and enhance outstandingly remarkable values by allowing natural processes to continue to dominate in a landscape largely unmodified by management activities, consistent with desired conditions. This will allow recovery to occur naturally, which can already be observed as new vegetation establishes within the corridor two years following the fire (figure 3). The corridor has a high

probability of natural recovery due to optimal local growing conditions including a year-long growing season, high precipitation rates throughout much of the year, and rapid growth rates of diverse native shrub, herb, lichen, moss, conifer, and hardwood species. It is a biophysically diverse area with potential to recover to again be among the highest biomass terrestrial ecosystems in the world.

Although the Beachie Creek Fire was historic, it was not historically unprecedented fire (Reilly et al 2021; Reilly et al. 2022)). While it will take at least 200 years to reach old-growth forest conditions, the area is likely to recover naturally with some changes and natural adaptation due to increased fire frequency and changing climate (Busby et al. 2020; Tepley et al. 2014). Overstory shade will increase naturally over time, first with riparian hardwood tree regeneration including alder and willow, followed by upland conifer regeneration. Hardwoods are likely to return first throughout the corridor, providing shade, soil stabilization, wildlife habitat, and contributing to the scenic value. Conifers may change from historical conditions but are likely to recover without management intervention.

Within the corridor, standing and down snags created by the fire pose low risk to human health and safety, structures, or communities, as the area is rugged and remote, with limited or no access above the bridge that crosses the scenic segment. While some post-fire hazard tree removal has already been completed along Elkhorn Road near the bridge, broader fuels treatment and hazard tree removal farther from roads will not help the forest to achieve management objectives or desired conditions and are not expected to protect or enhance the outstandingly remarkable values.

The Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan includes some potential future management actions if thresholds are reached to ensure that river values are protected and enhanced into the future (USDA Forest Service 2022c, pages 28-29). Potential future management actions include adding large woody debris structures in the scenic segment to enhance fish habitat (with any associated equipment use and revegetation needed following activities), planting in the scenic segment if native trees and shrub species fail to regenerate successfully post-fire, identifying and treating invasive plants, routine road and bridge maintenance, potential future decommissioning of Forest Road 2211 and other spur roads, and visitor use management if capacities are exceeded or impacts to outstandingly remarkable values are identified. The potential management actions would require additional site-specific analysis under the National Environmental Policy Act, Endangered Species Act, and other federal laws. Management actions within the bed or banks of the river would require compliance with section 7(a) of the Wild and Scenic Rivers Act.

Monitoring Plan

The Wild and Scenic Rivers Act, and the Forest Service and Bureau of Land Management Manuals instruct the river-administering agencies to develop a monitoring strategy which will ensure that desired conditions are maintained or that management activities are adapted accordingly (section 3(d)(1), Forest Service Manual 2300, Bureau of Land Management Manual 6400). Monitoring is essential to protecting river values. The objective of the monitoring plan, located on pages 29-32 of the Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan (USDA Forest Service 2022c), is to protect Elkhorn Creek's free-flowing condition, water quality and quantity, outstandingly remarkable values, and to address visitor use. Monitoring data will help the agencies understand post-fire recovery and determine if management actions are necessary to protect river values from degradation.



Figure 3. Natural vegetation regeneration May 2022 in the corridor near the bridge

Forest Plan Amendment

The forest plan provides management direction for designated wild and scenic river corridors, as well as those wild and scenic rivers that are being studied or have been found to be eligible for listing. The forest plan states: “These management standards and guidelines apply to a designated river until a river management plan is approved...” (forest plan, pages 4-29). The management goal for wild segments is to “preserve its essentially primitive character and outstandingly remarkable values; maintain and improve the quality of water which enters the river; maintain and improve fish and wildlife habitat; provide opportunities for river-oriented recreation which are dependent on free-flowing conditions of the river consistent with the primitive character of its surroundings; and comply with all standards for wild rivers as specified in Forest Service Handbook 1909.12, chapter 8 (1987)” (forest plan, pages 4-144). Relevant desired conditions, standards, and guidelines are listed in appendix A of the comprehensive river management plan.

On April 3, 2000, the forest plan map of record was updated to include the creation of Management Area 6a for Elkhorn Creek Wild and Scenic River. The applicable management direction for Management Area 6a can be found in the comprehensive river management plan. This management direction applies to the portions of the designated Elkhorn Creek Wild and Scenic River on National Forest System lands. Additionally, the Opal Creek Scenic Recreation Area Management Plan further amended the forest plan in 2002 and provides additional desired conditions, standards, and guidelines for the wild segment of Elkhorn Creek on National Forest System lands.

We are proposing to modify the interim boundaries identified for the Elkhorn Creek Wild and Scenic River Management Area to adopt final boundaries. Modifying the management area requires a programmatic forest plan amendment, which would be applied specifically to the Forest Service portion of the Elkhorn Creek Wild and Scenic Rivers project area. The interim wild and scenic river boundaries would be adjusted and finalized, amending Management Area 6a to encompass the river corridor included in the final boundaries for the Elkhorn Creek Wild and Scenic River. The proposed action reflects this programmatic amendment of Management Area 6a and meets the requirements of the 2012 Planning Rule (36 CFR 219) substantive provisions as described in further detail in the Evaluation of the Forest Plan Amendment section of this environmental assessment.

Alternatives Considered but Eliminated from Detailed Study

Boundary Alternatives

The river administering agencies considered both the existing interim boundaries and several possible modifications to the Elkhorn Creek Wild and Scenic River corridor that were suggested and examined by agency staff. Reasons these alternatives were eliminated from detailed analysis are summarized below.

Refinement of the interim boundaries utilized an interdisciplinary team approach and applied a multiple step process. Boundary refinement ideas were first developed by staff in April 2022 and were revisited by the team during spring and summer 2022. During this analysis, the team attempted to validate which specific river value(s) were being protected by each proposed adjustment. Some alternatives were suggested to consider inclusion of additional tributaries south of the river. The team considered the degree to which each adjustment provided additional protection for the river values, beyond the protection offered by existing land designations and the interim boundaries.

As a rule, the team did not adjust the wild and scenic river boundaries onto lands where the river values of free-flow, water quality, scenery, and fisheries were otherwise protected by existing management designations, or where extending the boundary would not provide additional protection for these values. For example, boundary expansions that were outside the scenic viewshed (which is narrow within the river gorge) and that did not directly protect or enhance fisheries, water quality, or free flow were not considered further.

The southern tributaries were outside the scenic viewshed from the river, and the team determined that state laws sufficiently protect fish, water quality, and free flow in these tributaries. The team decided to eliminate these other boundary alternatives from detailed analysis because they would not provide any additional protection to river-dependent, outstandingly remarkable values, and the effects were anticipated to be substantially similar to the effects of the proposed action alternative.

Evaluation of the Forest Plan Amendment

As discussed previously in this environmental assessment, the Forest Service has identified a need to amend the 1990 Willamette Land and Resource Management Plan to adopt and implement the Elkhorn Creek Comprehensive River Management Plan by amending Management Area 6a to encompass the final boundaries of the Elkhorn Creek Wild and Scenic River.

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 this river; establishing the final river corridor boundaries and the visitor use capacities; and to identify potential agency

management actions needed to protect these values on federally managed lands within the wild and scenic river corridor.

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

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, specifically the wild and scenic river designations on the national forest. All future projects and activities must be consistent with the amended forest 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)(i) – 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 219.9(a)(1) and (a)(2) – The plan must include plan components, including standards and guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity. The plan must include plan components, including standards or guidelines, to maintain or restore the diversity of ecosystems and habitat types throughout the plan area. In doing so, the plan must include plan components to maintain or restore:

- (i) Key characteristics associated with terrestrial and aquatic ecosystem types;
- (ii) Rare aquatic and terrestrial plant and animal communities; and
- (iii) The diversity of native tree species similar to that existing in the plan area.

36 CFR 219.9(b)(1) – The responsible official shall determine whether or not the plan components required by 36 CFR 219.9(a) provide the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species. Additional species-specific plan components must be included in the plan to provide such ecological conditions in the plan area if plan components required by 36 CFR 219.9(a) are insufficient to provide such ecological conditions.

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.

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

The amendment is modest in scope because it finalizes what Congress has already legislated. The forest service-managed portion of the project areas been managed since 2000 by the Management Area 6a amendment and the 2002 Opal Creek Scenic Recreation Area amendment. The interim wild and scenic river boundaries would be adjusted and finalized, amending Management Area 6a to encompass the river corridor included in the final boundaries for the Elkhorn Creek Wild and Scenic River.

Substantive Requirements

The resource-specific analyses in the Environmental Impacts of the Proposed Action section of this environmental assessment and in the project record provide more detail and analysis on the proposed forest plan amendment and the following substantive requirements.

36 CFR section 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. Designated rivers must be managed to protect water quality. After implementation of the plan amendment proposed under the proposed action, the forest plan would continue to provide the necessary components, mainly in the standards and guidelines, for the protection of soil, water, and riparian resources, wild and scenic rivers, and overall watershed function to meet the substantive requirement listed above.

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

The ecological integrity of the riparian area was considered in the development of the proposed final boundaries. The interactions between ecosystem elements (including water, climate, plant communities, wildlife and fisheries) occur within a natural setting.

Standards and guidelines in the forest plan protect the ecological integrity within the river corridor and meet the substantive requirement listed above. In addition, the Opal Creek Scenic Recreational Area designation would not change and would continue to overlap with the final Elkhorn Creek Wild and Scenic River land use allocation. Existing standards and guidelines that provide for the maintenance of ecological integrity would not change in protection of the free-flowing character, water quality, and outstandingly remarkable values.

36 CFR section 219.9(a)(1) and (a)(2) – to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore their structure, function, composition, and connectivity. In doing so, the plan must include plan components to maintain or restore key characteristics associated with terrestrial and aquatic ecosystem types, rare aquatic and terrestrial plant and animal communities, and the diversity of native tree species.

The ecological integrity of the terrestrial and aquatic ecosystem and watershed of Elkhorn Creek was considered in the development of the proposed final boundaries. The interactions between ecosystem

elements (including water, climate, plant communities, wildlife and fisheries) occur within a natural setting.

Standards and guidelines in the forest plan protect the ecological integrity within the river corridor and meet the substantive requirement listed above. In addition, the Opal Creek Scenic Recreational Area designation would not change and would continue to overlap with the final Elkhorn Creek Wild and Scenic River land use allocation. The forest plan, as amended by the Northwest Forest Plan of 1994, includes 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 anadromous fish.

Existing standards and guidelines that provide for the maintenance of ecological integrity would not change in protection of the terrestrial and aquatic ecosystem, the rare aquatic and terrestrial plant and animal communities, and the diversity of native plant species. The proposed management actions identified in the comprehensive river management plan include activities that would allow for native tree plantings and large woody debris replacement in the river channel. The proposed action would maintain and restore the ecological integrity of the Elkhorn Creek terrestrial and aquatic ecosystems and watershed.

36 CFR 219.9(b)(1) – The responsible official shall determine whether or not the plan components required by 36 CFR 219.9(a) provide the ecological conditions necessary to contribute to the recovery of federally listed threatened and endangered species. Additional species-specific plan components must be included in the plan to provide such ecological conditions in the plan area if plan components required by 36 CFR 219.9(a) are insufficient to provide such ecological conditions.

Implementation of the proposed forest plan amendment would provide the necessary components to meet this substantive requirement, primarily in the framework for potential future management actions and monitoring, that would provide further protection of the fisheries outstandingly remarkable value. The federally listed fish species in Elkhorn Creek would benefit from the proposed action in that further monitoring will guide in the decision of future management, specifically management that maintains the largely roadless, non-fragmented habitat conditions of the area and encourages stream habitat restoration.

The existing forest plan direction would continue to provide additional protection for water quality, fisheries, and threatened and endangered species. Under the proposed action, additional monitoring would guide adaptive management for the protection or enhancement of these resources, as necessary. Indicators and thresholds in the comprehensive river management plan have been identified that would inform future management actions necessary to maintain quality fish habitat necessary to contribute to the recovery of federally listed threatened and endangered species.

36 CFR section 219.10(a)(1) – Integrated resource management for multiple use shall consider: 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 Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan is to protect and enhance the values for which Elkhorn Creek was designated (free-flowing condition, water quality, and outstandingly remarkable values). Fisheries is an outstandingly remarkable value for both segments, and scenery is an outstandingly remarkable value for the wild segment. No additional resources are considered outstandingly remarkable values in the post-Beachie Creek Fire conditions.

The implementation of the proposed forest plan amendment would provide the necessary components to meet this substantive requirement, primarily in the framework for potential future management actions and monitoring, that would provide further protection of the outstandingly remarkable values.

The existing forest plan standards and guidelines would continue to provide additional protection for water quality, fisheries, scenery, vegetation, and recreation settings and opportunities.

The proposed action provides for protection of aesthetic values within the river corridors. This is accomplished in the comprehensive river management plan through: visual resource management identified through visual quality objectives; baseline condition descriptions that address specific scenic features and qualities of the wild river segment; and protection and enhancement of the scenery outstandingly remarkable value identified for the wild segment. Monitoring is intended to identify the condition of the scenery river value in the wild segment along with monitoring thresholds for indicators that would threaten to degrade scenic quality, such as spread of invasive species.

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

Sustainable recreation was considered in the development of the Elkhorn Creek proposed final boundaries. Implementation of the proposed forest plan amendment would provide sustainable opportunities for solitude and primitive recreation in a wild setting. Visitor use within the designated segments is very low due to difficult access and steep topography; most use has occurred in the scenic segment near the Elkhorn Road bridge. Inaccessibility and steep terrain are key elements of the recreation experience, primarily in the scenic segment, that meet the above substantive criteria.

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

Modifying the forest plan Management Area 6a land use allocation with the final wild and scenic river corridor boundary protects and enhances the rivers values for which Elkhorn Creek was designated, in compliance with the Wild and Scenic Rivers Act. In addition to free flow and water quality, outstandingly remarkable values were determined post Beachie Creek Fire by a planning team using the process discussed in the [River Values Report: Elkhorn Creek Wild and Scenic River](#), completed in 2021 (USDA Forest Service 2021).

Environmental Impacts of the Proposed Action and the No-Action Alternative

This analysis of environmental impacts does not include a full 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 the Elkhorn Creek associated with this analysis, refer to the River Values Report or to the specific resource specialist reports posted on the [project webpage](#).

The Beachie Creek Fire significantly impacted the Elkhorn Creek Wild and Scenic River corridor and changed the outstandingly remarkable values in the short- and long-term. For further descriptions on the changed conditions resulting from the Beachie Creek Fire, see the Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2022b), which may be accessed

via the project webpage. Existing conditions were based on post-Beachie Creek Fire conditions; these conditions were used as a baseline to inform the following resource analyses. The elements of the affected environment that are unchanged are not repeated in this environmental assessment.

Methodology

Information on resource-specific methodology, species lists considered for this analysis (wildlife, botany and fisheries), regulatory framework, and references cited can be found in the project record and is available within the resource specialist reports available on the [project webpage](#). This section summarizes the environmental impacts of the proposed action and the no-action alternative. 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 projects considered in the cumulative effects analysis include post fire recovery projects, especially replacement of large woody debris jams that were burned during the Beachie Creek Fire. The following analysis also discloses consistency with relevant law, regulation, and policy, including the forest plan for each resource area.

Issues

This section identifies the issues associated with the proposed action and summarizes the potential impacts of the proposed action when compared to taking no action. The Bureau of Land Management National Environmental Policy Act Handbook identifies an issue as, “a point of disagreement, debate, or dispute with a proposed action based on some anticipated environmental effect...an issue has a cause and-effect relationship with the proposed action or alternatives; is within the scope of the analysis; has not been decided by law, regulation, or previous decision; and is amenable to scientific analysis rather than conjecture.” The Forest Service National Environmental Policy Act Handbook further describes an issue as a cause-effect relationship relating actions under consideration to effects. Internal deliberation, public scoping, tribal consultation, and resource analyses were conducted to identify potential issues.

The Elkhorn Creek Comprehensive River Management Plan consists of a planning framework for future proposed management activities with a purpose to protect and enhance the values for which Elkhorn Creek was designated. The proposed action (adoption and implementation of the comprehensive river management plan) would establish a monitoring plan to identify changed conditions to Elkhorn Creek’s river values and affected resources along with identification of any management actions necessary to address resource concerns over time.

As such, there are no ground disturbing activities associated with the comprehensive river management plan planning framework and monitoring plan, only potential future ground disturbing management actions based on monitoring thresholds that would require further environmental analysis. The cause-effect relationship of the adoption and implementation of the plan would result in potential indirect effects and no direct effects.

Anticipated positive indirect effects would include the additional protection provided to these resources by boundary refinement, establishing visitor capacities, and conducting inventory and monitoring activities to determine future management activities to protect the outstandingly remarkable values. Resource analyses found that the proposed forest plan amendment would be an administrative action to adopt the final boundaries and would have no effect on the resources. Resource reports have been posted to the project webpage for public review and are included in the project record.

The development of issue statements was driven by impacts from the Beachie Creek Fire. The following issues have been identified for detailed analysis to determine the potential for significance:

1. How would adoption and implementation of the comprehensive river management plan affect stream temperature?
2. How would adoption and implementation of the comprehensive river management plan affect post-fire vegetation recovery?
3. How would user capacity affect recreation in the wild and scenic river corridor?

Potential environmental effects resulting from the proposed action were considered for several resource areas including hydrology and soils, recreation, scenery, wildlife, botany, and fisheries. Analyses for these resource areas found that implementation of the proposed action would have positive effects related to the congressional designation of this area as a wild and scenic river corridor.

The planning team determined that the proposed action does not have the potential to cause direct, indirect, or cumulative effects to cultural resources because no ground disturbing activities are being proposed. Maintenance of current plan direction in the forest plan and the Bureau of Land Management's resource management plan, along with existing cultural resource laws and regulations, offer cultural resource protections. There are no potential effects of the no-action alternative to cultural resources since the adoption and implementation of a comprehensive river management plan does not offer additional protections beyond cultural resource laws. Further, Elkhorn Creek was not nominated for a historic or pre-contact cultural resource outstandingly remarkable river value, which is supported by the background research conducted for this analysis.

Based on Bureau of Land Management and Forest Service research on lands within the river corridor, no previously recorded archaeological sites or isolated artifact finds are known to be within or adjacent to the project area. Due to changed conditions from the Beachie Creek Fire, if future actions are proposed, the entire Elkhorn Creek Wild and Scenic River corridor would be considered for cultural inventory based on a predictive model. Refer to the [Cultural Resources Specialist Report](#) for further information on the legal requirements and programmatic agreements, which the Bureau of Land Management Northwest Oregon District and the Willamette National Forest must comply with for cultural resources.

The effects of the proposed action on hydrology and soils, recreation, scenery, wildlife, botany, and fisheries resources are described in the following sections. Potential effects on threatened, endangered, and sensitive species and their habitat are addressed under each of the issues identified for wildlife, botany, and fisheries.

There may be potential for future beneficial indirect effects when proposed management activities are implemented to maintain the wild and scenic river values for which the rivers were designated, but any ground disturbing activity will require future environmental review and analysis of effects. Future potential consultation with the United States Fish and Wildlife Service and the National Marine Fisheries Service would occur if future management actions would result in potential effects to threatened, endangered, and sensitive species in the project area.

Hydrology and Soils

Environmental Consequences

Direct and Indirect Effects of No Action

Under the no-action alternative, current management of the Elkhorn Creek Wild and Scenic River would continue. No comprehensive river management plan would be adopted and management would not comply with the Wild and Scenic Rivers Act. The existing forest plan would continue to provide sufficient direction to protect and enhance the scenery and fisheries outstandingly remarkable values for the wild segment and the fisheries outstandingly remarkable value in the scenic segment.

The interim wild and scenic river corridor would remain in place along the designated segment of Elkhorn Creek. The provisions of the Wild and Scenic Rivers Act apply within the interim boundaries, including the wild and scenic river classifications provided by Congress. The Bureau of Land Management administered river segments are classified as wild and scenic, and the Forest Service administered river segment is classified as wild; wild and scenic river classifications describe conditions at the time of designation and agencies are required to maintain these characteristics.

Agency policy in Forest Service Manual 2350 and Bureau of Land Management Manual 6400 would continue to prescribe direction for a range of activities in wild river corridors, and this guidance would be followed for all management decisions in the project area. The river corridors are conducive to primitive recreation opportunities and outstanding natural scenery.

There would be no monitoring plan in place for the project area. The agencies would not specify monitoring protocols, indicators, triggers, or thresholds to measure trends indicating any degradation to resources from visitor use. In practice, this means that the agencies would have limited abilities to identify and adaptively manage for changes to current conditions. Broader-scale programmatic monitoring (as specified in the forest plan, and the Northwestern and Coastal Oregon Record of Decision and Resource Management Plan) may draw data from the project area, but these monitoring protocols would not be focused on the outstandingly remarkable river values, resources, and landscapes of Elkhorn Creek.

Under the no-action alternative, Management Area 6a would not be amended to reflect the final Elkhorn Creek Wild and Scenic River boundaries and the comprehensive river management plan would not be adopted or implemented. The forest would not be compliance with the Wild and Scenic Rivers Act. The existing forest plan management direction for Management Area 6a and Opal Creek Scenic Recreation Area would continue to apply to Elkhorn Creek.

Direct and Indirect Effects of Proposed Action

This section discloses the environmental impacts of the proposed action on soils, geology, and hydrology.

The proposed action to implement and adopt the Elkhorn Creek Comprehensive River Management Plan and final boundaries will allow for the recovery of stream conditions and stream temperatures through natural processes unless monitoring indicates that thresholds have been reached and management actions have been triggered (Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan, pages 28-29).

Stream temperature increases in Elkhorn Creek, as well as stream channel impacts, and overall effects of the Beachie Creek Fire on watershed conditions would be addressed through future proposed management actions that are triggered by monitoring indicators and thresholds. Under the proposed action, a comprehensive river management plan would be adopted and would establish a monitoring plan

specific to the river corridor to protect the free-flowing condition and water quality. This would put more focus on the wild and scenic river segments through monitoring and adaptive management.

Channel impacts that can affect stream temperature are often tied to watershed impacts that affect streams. Stream temperatures in Elkhorn Creek are linked to vegetative re-growth after the fire. Watershed impacts post-fire include landslides and debris flows, and any other impacts that affect channel width, depth, sedimentation rates, and large wood recruitment. Stream temperatures are also linked to post-fire impacts that affect stream flow amounts and recovery timing.

These impacts are tied to recovery of the ecosystem and riparian areas along Elkhorn Creek, and also to post-fire watershed recovery. Factors that affect the areas of recovery within a watershed and recovery timeframes would be considered as part of the monitoring protocol for the comprehensive river management plan in determining impacts to stream temperature recovery in Elkhorn Creek.

Soils and Geology

Implementation of the Elkhorn Creek Comprehensive River Management Plan will have little direct effect on soil and geologic resources in the Elkhorn Creek watershed because the plan will emphasize natural recovery of the watershed. There are no ground disturbing management activities included in the proposed action.

Geology in this area is not an outstandingly remarkable value for Elkhorn Creek. However, geologic processes, in general, have not been immediately affected by the fire but may have an impact on water quality. There is an increased post-fire potential in the short-term for mass-wasting events, including slumps, earthflows, debris flows, cliff failures, and rockslides. Mass-wasting events could alter the flow rates and patterns as well as increase sedimentation and debris flows within Elkhorn Creek, although these natural events would not be considered to change the free-flowing condition of the creek. (Free flow, in the context of wild and scenic rivers, could only be altered if there were a diversion, impoundment, straightening, or some other manufactured modification to the waterway.)

Over the long-term, the potential for mass-wasting events may increase in frequency compared to pre-fire conditions. These effects are most likely to occur within the first year or two after a fire, but fire-related debris flows can occur up to several decades after a fire, up until the point where trees re-establish. Debris flows have a high ability to transport large boulders and woody debris downslope, and tend to occur in steeper drainages like Elkhorn Creek, where they can deeply scour channels. They can influence downstream tributaries by depositing vast amounts of sediment that can be transported downstream further by tributaries. This sediment can widen channels and allow more sunlight to raise water temperatures.

Slope stability in steeper areas, such as those that occur in Elkhorn Creek, is linked to stabilizing tree roots. As roots decay, slopes can become destabilized, especially during large precipitation events that lead to mass slope failures that affect downhill stream channels. These slope failures can occur a decade or two after fire and can lead to partial channel blockages, thus altering the flow from natural conditions.

A notable increase in small slumps or debris flows may be expected in the Elkhorn Creek watershed within 10-15 years of the Beachie Creek Fire. This is the time it takes for the roots of larger trees that have been killed by fire to decay. Roots provide structure to steeper forest soils by binding soil and rock together. Once these roots have decayed, unstable conditions may prevail in the steeper parts of the watershed that can lead to slope failure. This effect can be widespread depending on burn severity and slope conditions. Given that Elkhorn Creek has a steep drainage and burned at a high severity, it is likely that there will be these types of slope failures. Some of these failures could travel downslope and introduce sediment to waterways.

Water Quality and Free Flow

Under the proposed action, the comprehensive river management plan would be adopted, which includes a monitoring plan specific to the river corridor that would protect the free-flowing condition and water quality. The plan would focus more on the established wild and scenic river segment through monitoring and adaptive management.

Implementation of the comprehensive river management plan, in coordination with implementation of section 7(a) of the Act (which ensures that no future management would impact the free-flowing condition of the river) as well as implementation of the direction in the forest plan, as amended by the Northwest Forest Plan (1994), and the direction in the Northwestern and Coastal Oregon Record of Decision and Resource Management Plan for Wild and Scenic Rivers (page 55-56), riparian reserves (pages 68-74), hydrology (page 79), and soil resources (page 89) (BLM 2016) would further strengthen the management of the river segment and continue to protect and enhance Elkhorn Creek's free-flowing condition and water quality over time.

Adoption and implementation of the comprehensive river management plan would encourage natural ecological recovery of the burned area, intervening with management actions only if thresholds are reached. The biggest post-fire change for water quality for the Elkhorn Creek drainage is a dramatic increase in 7-day average maximum stream temperatures in lower Elkhorn Creek. The cause of higher stream temperatures was loss of tall forest canopy that provided shade for the stream. Fire severity was moderate to high near the stream over much of its length resulting in substantial loss of tree canopy and stream shade. The loss of tree canopy has led to a major change in the microclimate near the channel that will continue for decades.

Proposed future management actions in the comprehensive river management plan, such as tree planting in areas lacking conifer and other vegetation regeneration, would help improve water quality conditions in the short-term by expediting canopy cover development (Comfort 2005). The combination of natural vegetation regeneration development and canopy cover enhancement with riparian plantings where appropriate would promote improvements in water quality compatible with the Act.

Future proposed management actions in the comprehensive river management plan to increase large woody debris would have similar positive indirect effects to Elkhorn Creek's channel morphology and free-flowing condition as natural recruitment. The addition of large woody debris would reduce stream flows, allow for sorting and retention of spawning gravel, protection for aquatic species from high velocity waters, and create scouring pools (Beechie 1997, McHenry 2007). These processes and conditions would improve habitat and benefit the fisheries outstandingly remarkable value.

Under the proposed action, implementation of a comprehensive river management plan's monitoring plan would put additional monitoring focus on the river corridor. Additional monitoring, focused on water quality, fish, macroinvertebrates, and recreation would guide adaptive management. This monitoring, along with adherence to the forest plan, the Bureau of Land Management Resource Management Plan, section 7(a) of the Wild and Scenic Rivers Act, and the Clean Water Act would provide adequate protection for the Elkhorn Creek Wild and Scenic River's free-flowing condition and water quality.

Hydrology

Water yields in the first several years post-fire will likely increase because of the loss of tree canopy and soil water repellency. Peak flow increases that lead to flooding in Elkhorn Creek may occur. There is a possibility of large peak flows depending on precipitation amounts and duration. The risk of peak flow increases will diminish over several years as soil water repellency decreases, and as water infiltration increases into soil as vegetation recovers in the watershed.

Channel Morphology

Under the comprehensive river management plan, channel conditions would be influenced by a post-fire sediment pulse (brief increase in sediment supply) that has been observed in the lower sections of Elkhorn Creek. As sediment moves through the stream system, stream banks can become destabilized in some areas causing bank erosion and channel widening, with a possible increase in stream temperature. As near stream riparian vegetation begins to recover, after a few years, this vegetation can help to moderate the rate of channel widening in areas vulnerable to erosion along the channel system.

The sources of large wood will be relatively short-lived, as trees on slopes will decompose after a decade or so, and new vegetative growth will take many more decades to reach sizes that are useful for large wood in the channel. Due to the severity of the Beachie Creek Fire, it appears that few existing trees will survive in the watershed, reducing the potential for future large wood inputs in the channel. Usually, large conifer species like Douglas-fir are most desirable for contributing to large wood in streams. If alder come back along channels, they are less desirable as a source of large wood. Because of the transitory nature of natural wood loading and the anticipated reduction in large wood input, potential future management actions that increase large woody debris jams would lead to greater channel and habitat complexity in the channel.

Riparian Areas

Under implementation of the comprehensive river management plan, riparian tree species are likely to recover in a few years and help to stabilize and shade the channel. As sunlight reaches stream banks and wetter areas in the fire area, grasses and sedges, willows, and hopefully red alder will grow and provide stability and shade to the channel. At this stage in watershed post-fire recovery, it is not clear what the plant succession will be in the riparian areas in the burned watershed.

Monitoring indicators in the comprehensive river management plan's monitoring plan will evaluate the rate of recovery in the watershed. As identified in the comprehensive river management plan, riparian areas found to be lacking natural regeneration would benefit from the potential future planting management action. This would speed up expedite canopy development for shade and would provide long-term large wood recruitment potential (Beechie 2000, Comfort 2005).

As riparian species, such as alder, recover in the system after a decade or two, these species will begin to provide critical shade to the channel, providing a moderating influence on the levels of direct sunlight that would reach the channel. This will eventually reduce the rate of stream warming in the stream channel.

Watershed Condition

As natural recovery occurs under the comprehensive river management plan, watershed condition may need to be re-evaluated by staff from the Willamette National Forest and the Bureau of Land Management. Goals would be to maintain and enhance outstanding remarkable values in the watershed considering effects to aquatic biota, riparian and wetland condition, water quality and quantity conditions, road and trail condition, and soil conditions, which were all adversely impacted by the fire. Under the comprehensive river management plan, these variables are expected to recover as vegetation recovers in the watershed; however, improvements, in many cases, would take decades or more. The adaptive management framework in the comprehensive river management plan's monitoring plan will provide the tools necessary to evaluate changes in watershed condition.

Cumulative Impacts

Past, present, and reasonably foreseeable cumulative impacts include impacts from upper watershed roads and roads management, timber harvest and salvage on private lands in the corridor, large woody debris placements in the channel, hardwood and shrub plantings, and hazard tree removal along roadways. The

cumulative effects from these actions will be minor and positive. Large woody debris replacement could result in short-term indirect effects to hydrology and soils during construction, such as turbidity and soil displacement. However, this future foreseeable action would require site-specific environmental review in compliance with existing management direction in the forest plan and the Bureau of Land Management resource management plan along with compliance with section 7(a) of the Act.

Consistency with Relevant Laws, Regulations, and Policy

Land and Resource Management Plans

Willamette National Forest

The forest plan (USDA Forest Service 1990) provides management direction in the form of standards and guidelines for soil and water quality, and designated wild and scenic rivers for the wild classification. Standards and guidelines were developed to protect watershed and hydrology resources, including the free-flowing condition and water quality. The Opal Creek Scenic Recreation Area water quality standard for no impoundments is consistent with the proposed action because the Act requires that no impoundments may exist in the watercourse of a designated wild and scenic river, to protect the free-flowing condition of the watercourse.

The Northwest Forest Plan was amended in 1994 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](#)”, which includes the “[Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl](#)” (USDA Forest Service 1994). The Northwest Forest Plan allocations within most of the designated wild and scenic river corridor are managed under the Riparian Reserve standards and guidelines, which offer additional protections to water quality and free flow over what is provided in the forest plan for the Willamette National Forest. The standards and guidelines include the Aquatic Conservation Strategy, which was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems.

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 Forest Service 1990) and the Northwest Forest Plan (USDA Forest Service 1994). Over time, all forest plan standards and guidelines related to water quality and free-flowing condition will be followed in the management of the wild and scenic river corridor. These standards and guidelines were developed to protect wild and scenic river outstandingly remarkable values, water quality, and free-flowing condition. Because the proposed action would have no measurable adverse effects to riparian reserves, the project would meet all the objectives for the Aquatic Conservation Strategy.

Northwestern and Coastal Oregon Bureau of Land Management

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). The management directives include protecting and enhancing the free-flowing condition, water quality, and the outstandingly remarkable values of eligible, suitable and designated wild and scenic river corridors. The comprehensive river management plan proposed action, inclusive of natural recovery and management actions triggered by monitoring indicators and thresholds, is intended to improve aquatic habitat and water quality, consistent with the resource management plan direction.

Other Relevant Law, Regulation, or Policy

Wild and Scenic Rivers Act

Section 10(b) of the Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free-flowing condition, and outstandingly remarkable values). The proposed action outlined in the Direct and Indirect Effects section of Hydrology and Soils describes how the proposed action would protect and enhance the free-flowing condition and water quality Elkhorn Creek.

Section 7(a) of the Act directs federal agencies to protect the free-flowing condition and other values of designated rivers by evaluating proposed water resources projects within, above, and below designated wild and scenic rivers. Implementation of section 7(a) 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-flowing condition, water quality, or outstandingly remarkable values of the Elkhorn Creek Wild and Scenic River would need to have an evaluation to ensure that its river values are protected.

Clean Water Act

The Clean Water Act provides the structure for regulating pollutant discharges to waters of the United States. The Clean Water 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 administers the Clean Water 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: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021) for further information regarding water quality in the project area.

Management of wild and scenic rivers requires that the actions of the river-administering agencies 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.

Recreation

Environmental Consequences

Direct and Indirect Effects of No Action

Under the no-action alternative, there would be no user capacity analysis and no comprehensive river management plan in place for the project area. Visitor use and visitor impacts on scenery and the recreation setting would not be consistently monitored. The agencies would not establish specific indicators, triggers, thresholds, or monitoring protocols to respond to trends in resource conditions as they relate to visitor use, besides existing management direction in the Northwestern and Coastal Oregon Record of Decision and Resource Management Plan and the forest plan. Management actions in response to changes in visitor use impacts would not be consistently identified or implemented.

Under this alternative, there would be no capacity determination for the wild and scenic river corridor, and no visitor use monitoring specific to the area. In the short-term, due to low visitor use in the corridor, there would likely be no effects to recreation opportunities or other resources. However, should circumstances change in the long-term, for example, as a result of the development of user-created trails to gain access, promotion of the area through social media, or changes in land ownership, increased use

could occur. This could lead to higher encounter levels, loss of opportunities for solitude, increased camping, and impacts to other resources from erosion and vegetation loss.

Because there would be no user capacity set, and no thresholds and indicators to monitor use, if visitor use increases, the desired conditions described in the Forest Service recreation opportunity spectrum and Bureau of Land Management recreation setting characteristics guidelines may not be met. Likely impacts could include increased encounters, expansion of parking areas, social trail and campsite development, vegetation loss, increased erosion, and a decrease in water quality.

Direct and Indirect Effects of Proposed Action

User Capacity

The Elkhorn Creek Comprehensive River Management Plan incorporates a user capacity analysis that was completed for both the wild and scenic segments of Elkhorn Creek (User Capacity Analysis: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2022a)). This analysis examines baseline use, defines monitoring protocols, provides guidance for visitor use management, and outlines potential limitations to recreational use. It also provides for the protection and enhancement of desired conditions and the outstandingly remarkable values for which the river was designated.

The user capacity analysis findings of the current conditions demonstrate that visitor use is very low due to lack of trails, difficult access, and steep topography. Future recreation trends are projected to be similar to current use for the previously stated reasons. Due to the Beachie Creek Fire in 2020, there are additional access challenges due to standing and fallen dead trees. These projected recreation trends are anticipated to have negligible impacts to the river corridor.

The Elkhorn Creek Comprehensive River Management Plan identified different user capacities for the different river designations one capacity for the wild segment and one for the scenic segment. These are located in table 5 of this document and are explained in detail in the User Capacity Analysis: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2022a). These capacity numbers were estimated using Forest Service and Bureau of Land Management's management plans, desired conditions, current and expected impacts to outstandingly remarkable values, recreation opportunity spectrum, and recreation setting characteristics. Additionally, the comprehensive river management plan defines a monitoring plan and protocols, as well as indicators, thresholds, and potential management actions if thresholds are exceeded.

There are no direct effects of the proposed action.

The indirect effect of the proposed action would be the adoption of the comprehensive river management plan, the user capacity analysis, and the implementation of systemic monitoring. This beneficial effect would provide information on how the river corridor is recovering from the Beachie Creek Fire and the amount of public use it is receiving. This monitoring plan would have the potential to trigger management actions if the identified thresholds are reached.

The establishment of estimated user capacities was designed to protect outstandingly remarkable values and will likely have no effect, as current use is substantially below capacity thresholds and management actions are unlikely to occur in the wild segment.

Management actions are likely to occur in the scenic segment as the Bureau of Land Management has identified reasonably foreseeable actions such as replacement of large woody debris in the stream. Unless there is a major change in use patterns, the proposed action is unlikely to affect recreation use in the corridor, as no management restrictions would be required.

If the public begins to use this area more frequently, and if capacity thresholds are reached, recreation use could potentially be restricted, or managed differently, which may result in adverse impacts to some recreation opportunities. The proposed action would have potential long-term impacts on recreation access if capacity-related management actions were triggered and recreational use of the corridor was restricted.

For example, to preserve desired recreation conditions, use restrictions could be implemented that could adversely impact the public's opportunities to spontaneously visit portions of the wild and scenic river corridor by having daily limits on the number of people or groups that are allowed access, or limiting the size of groups that can recreate in the area. Use restrictions could limit dispersed camping opportunities or require users to camp in designated campsites. Any management action that limits the number of users in the area for resource protection has the potential to displace users to other areas. This displacement could result in increased use at adjacent or nearby Forest Service, Bureau of Land Management, or state lands, which could result in increased user impacts in those areas.

Cumulative Impacts

The mechanical replacement of large woody debris in the Bureau of Land Management administered scenic segment of the river could have short-term cumulative impacts to recreation, as it would restrict public access during project implementation and the post-project restoration of impacts to riparian zones from heavy machinery. The long-term effect of the placement of large woody debris would be the potential improvement of fish habitat, which may increase public fishing pressure. This in turn could result in increased social trails and trampling of vegetation.

Kayaking has been identified as an activity that can be accommodated in any segment of the river and the placement of large woody debris may inhibit this use throughout the scenic segment. For future proposed invasive species treatments potential short-term indirect effects to recreation could include displacement of recreational users during and directly after treatments. These impacts are minor and beneficial to the river corridor in the long-term.

Consistency with Relevant Laws, Regulations, and Policy

Land and Resource Management Plans

Willamette National Forest

The forest plan provides standards and guidelines for recreation management and wild and scenic rivers along with standards outlined in the Opal Creek Scenic Recreation Area Management Plan. The standards in the Opal Creek Scenic Recreation Area Management Plan apply to the wild segment of the Elkhorn Creek Wild and Scenic River managed by the Forest Service. The proposed action is consistent with Standard MA-2c-03 in that recreation use in the corridor that is overlapped by the Opal Creek Scenic Recreation Area has been low to non-existent.

The user capacity proposed for this river segment is more than current or past use, but was prepared using the recreation opportunity spectrum, analysis of potential impacts to outstandingly remarkable values, and Opal Creek guidance. The proposed action is consistent with Opal Creek Scenic Recreation Area Management Plan standard MA-2c-05 in that the capacity analysis includes potential management actions should desired conditions not be met, including education, engineering, and enforcement. The potential management actions align with the management actions listed in this standard.

The Forest Service-managed portion of the Elkhorn Creek Wild and Scenic River falls in the very low intensity zone of the Opal Creek Scenic Recreation Area. The Opal Creek Scenic Recreation Plan

guidance outlines management for this zone including providing opportunities for the most primitive recreational experiences. The proposed action is consistent with this guidance in that determination of a user capacity and monitoring plan would ensure that recreation use would remain low and that opportunities to experience solitude would be continued.

Recreation Opportunity Spectrum

The Forest Service uses the recreation opportunity spectrum to classify and describe a range of recreation opportunities available. The recreational settings are described on a continuum ranging from primitive to urban (Recreation Opportunity Spectrum Handbook VRI-H-8410 [U. S. Department of Interior, Bureau of Land Management 1986] and Forest Service Manual 2310 – Sustainable Recreation Planning [USDA Forest Service 2020]).

A recreation opportunity spectrum setting is defined as the combination of physical, biological, social, and managerial conditions that give value to a place. By combining variations in these conditions, it is possible to provide a diversity of recreational settings for visitors to enjoy. The recreation opportunity spectrum classification for the Forest Service-administered portion of the Elkhorn Creek Wild and Scenic River is primitive.

In a primitive recreation opportunity spectrum setting, the area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human induced restrictions and controls. Motorized use within the area is not permitted. There is an extremely high probability of experiencing isolation from the sights and sounds of humans.

The area is characterized by independence, closeness to nature, tranquility, and self-reliance through the application of outdoor skills in an environment that offers a high degree of challenge and risk. Typically, users will experience six or fewer encounters with other parties on trails, and fewer than three parties will be visible from camping sites (Forest Service Manual 2310 – Sustainable Recreation Planning [USDA Forest Service 2020]). The proposed action would be consistent with this guidance, particularly by setting a capacity for each segment that aligns with the correct setting or characteristic.

The forest plan addresses many standards and guidelines for recreation. All those were taken into consideration during preparation of the user capacity report, therefore all forest plan standards and guidelines, and management recommendations in that document, and in this project, were followed.

Regarding the forest-wide recreation standard FW-001, the proposed action is consistent with the standard because the determination of a user capacity for the river corridor would not change the dispersed recreation opportunities available forest-wide. Regarding standard FW-0015, the proposed action is consistent with the standard because the determination of a user capacity for the river corridor would not change the recreation opportunity spectrum opportunities available forest-wide, and the capacity levels identified are consistent with the recreation opportunity spectrum guidance for the primitive class. Regarding standard FW-017, the capacity analysis includes potential management actions should desired conditions not be met, including education, engineering, and enforcement, which align with the management actions listed in this standard.

Northwestern and Coastal Oregon Record of Decision and Resource Management Plan

The Northwest and Coastal Oregon Resource Management Plan (U.S. Department of the Interior, Bureau of Land Management 2016) provides recreation management direction regarding congressionally reserved lands and national conservation lands land allocation. The Bureau of Land Management administered portion of the river has been designated as an extensive recreation management area. An extensive

recreation management area is an administrative unit that requires specific management consideration to address recreation use, demand, or recreation and visitor services program investments. The proposed action would be consistent with the extensive recreation management area direction in that the user capacity for the area was prepared to align with the desired condition for the area.

Other resource management plan direction consists of the need to prioritize public access to Bureau of Land Management administered lands that have high recreational potential. The proposed action would be consistent with this direction as the Elkhorn Creek Wild and Scenic River corridor does not have high recreational potential and no restrictions on public access would be considered unless thresholds detailed in the proposed action are reached.

Further resource management plan direction promotes the use of recreation management tools if monitoring indicates characteristics are not being protected, resource damage is occurring, or user conflicts need to be addressed. The proposed action would be consistent with this direction as no restrictions are proposed unless thresholds detailed in the proposed action are reached. The monitoring detailed in the proposed action would allow for recreation management tools to be employed should social or resource conditions be impaired.

Recreation Setting Characteristics

The Bureau of Land Management uses recreation setting characteristics to describe the visitor activities, experience, and settings within recreation management areas, with classifications ranging from primitive to urban (Recreation Opportunity Spectrum Handbook VRI-H-8410 [U. S. Department of Interior, Bureau of Land Management 1986]). The recreation area frameworks for the Salem District (U.S. Department of the Interior, Bureau of Land Management 2016a) classified the Bureau of Land Management portion of the Elkhorn Creek Wild and Scenic River as “middle country.”

As a result of analyzing the area for development of the Elkhorn Creek Comprehensive River Management Plan, the Bureau of Land Management administered scenic river segment has been reclassified to “back country” and the Bureau of Land Management administered portion of the wild segment was reclassified as “primitive.”

In areas classified as back country, there may be as many as seven to 15 encounters on travel routes, with four to five people per group. In an area classified as primitive, there may be fewer than six encounters on travel routes, with three or fewer people per group. However, this guidance can be adapted to local situations.

The proposed action would be consistent with this guidance. Determining capacity would not interfere with the benefits prescribed for this area. The capacity number uses the recreation setting characteristics guidance for encounters.

Other Relevant Law, Regulation, or Policy

Wild and Scenic Rivers Act

Section 10(b) of the Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free-flowing condition, and outstandingly remarkable values). The proposed action outlined in Direct and Indirect Effects in the Recreation Section describe how the adoption and implementation of the comprehensive river management plan would protect and enhance the recreation value of the Elkhorn Creek Wild and Scenic River. Section 3(d)(1) of the Act directs managers to determine user capacities on designated rivers. The proposed action is consistent with this direction. The no-action alternative would not be consistent because no user capacity would be set.

Scenery

The wild segment of Elkhorn Creek is managed by the Forest Service and the Bureau of Land Management, and the scenic segment is managed by the Bureau of Land Management. Scenery is an outstandingly remarkable value for the wild segment only. The wild and scenic river corridor begins at the forest boundary within the Opal Creek National Scenic Area and extends west onto Bureau of Land Management land. There are scattered parcels of private land in the upper and lower segments of the wild and scenic river corridor.

Much of the wild segment is unreachable due to the steep declines of the river corridor and its banks. Elkhorn Road accesses the parts of the stream in the lower scenic segment, providing access to private lands and recreational use areas. This area provides a range of land uses, including recreation and harvesting of nontraditional forest products, along with educational and research opportunities.

The Beachie Creek Fire created a substantial variation in the pattern, color, and texture of the scenic resource within the river corridor; however, fire is a natural part of the environmental processes in this region. The scenery in the wild segment would still offer visitors the opportunity to observe a landscape that appears untouched by modern management processes as it recovers from the fire over time.

Adoption and implementation of the comprehensive river management plan is unlikely to increase the current patterns of use. The remote location, rugged terrain, and lack of accessibility in the wild segment—along with impacts from the Beachie Creek Fire—continue to keep visitor use low.

These following issues pertain to specific effects to the scenic resource that have been identified for detailed analysis:

Will the proposed action have any impact on the scenic resource in the project area? Will the scenic resource retain the appearance of a wild environment where natural processes dominate, and human intervention is not noticeable?

If recovery lags behind desired goals, will active management be required to maintain and enhance the scenic resource? Will the work underway or finished work be noticeable to the casual recreational visitor?

Assumptions include the following:

- No new trails will be developed in the wild or scenic segments.
- The Forest Service and Bureau of Land Management preference will be not to intervene in the recovery of the scenic resource in the wild segment.
- A limited number of user-created trails may exist in the area of the Elkhorn Road Bridge; these will not be maintained and are likely to decrease as the forest recovers from the recent fire.

Environmental Consequences

Direct and Indirect Effects of No Action

With the no-action alternative there would be lower levels of monitoring and protection for the natural appearing scenery, particularly in the scenic segment, for the duration of federal oversight of these lands.

The Forest Service-administered portion of the wild segment is within the Opal Creek Scenic Recreation Area, which has similar high scenic objectives and guidance to those proposed in the comprehensive river management plan to protect the watercourse. The Bureau of Land Management administered portion of the wild segment is classified as Visual Resource Management Class I, the most protective class for visual

resources. The Bureau of Land Management administered scenic segment is classified as Visual Resource Management Class II.

The scenery in both segments may receive less monitoring of impacts; this may have a more visible impact in the scenic segment, which is open to greater recreational use and may have lower scenic protections.

Direct and Indirect Effects of Proposed Action

As described in the scenery report for the changed condition analysis, scenery is an outstandingly remarkable value in the baseline condition of the wild segment because of “the visual interplay of vegetation, water and geology; the constrained, dramatic views created by the geology, specifically in the lower reaches of the creek; and the opportunity to see an undisturbed, natural landscape for an extended length of the wild segment.”

Similar high-quality scenery exists in the scenic segment of Elkhorn Creek but does not rise to the level of an outstandingly remarkable value. Scenery in this area is impacted by the existence of developed areas in this segment. While high quality, the scenery is not considered a regional exemplar, like scenery in the wild segment.

The area burned by the Beachie Creek Fire continues to impact scenic resources in both segments. However, the standard for the outstandingly remarkable value in the wild segment is the ability to observe a landscape dominated by natural processes. Fire is a natural part of the forest life cycle, and the current condition, while very different in appearance from pre-fire conditions, offers the opportunity to see a landscape recover from a stand-replacing fire (all the trees were burned to the ground).

Surveys of the project area indicate a high level of vegetative recovery in the corridor already, which would indicate that vegetative components of the scenery in both the wild and scenic segments will recover. The recovery could be disrupted by another stand-replacing fire similar to the Beachie Creek Fire within a short timeframe. Vegetative recovery will also filter runoff into the river and stabilize soils, thereby reducing sedimentation and maintaining water quality. This will contribute to both the reflected light and flowing water elements of the scenic resource. A strong regrowth of native vegetation will also reduce opportunities for invasive and interfering vegetation to gain a foothold in the corridor.

Existing recreational use is low throughout the scenic segment and almost non-existent in the wild segment. It is anticipated that use will remain low while resources begin to recover, lessening the chance for user-created trails to proliferate.

No ground disturbing project or intervention is proposed in the comprehensive river management plan. Management direction will prioritize the post-fire recovery of the corridor by natural processes. As such, the plan does not propose ground disturbing activities. However, the comprehensive river management plan’s monitoring plan may identify the need for potential future actions intended to maintain and enhance the outstandingly remarkable values.

The comprehensive river management plan will increase monitoring activities to maintain or enhance the pristine appearance of the scenic resources. Therefore, the indirect impacts of the plan will be nominal. In the event of future weed encroachment, Willamette National Forest and the Bureau of Land Management will rely on existing weed management direction.

Cumulative Impacts

The past, present and reasonably foreseeable cumulative effects will be limited by the low recreational use in the area and multiple existing, overlapping management plans that prioritize an unmanaged scenic appearance that is dependent on natural processes.

There is a reasonably foreseeable action on the Bureau of Land Management administered scenic segment to replace the large woody debris jams that were burned during the Beachie Creek Fire. Construction of log jams in the scenic segment would bring the sights, sounds and smells of construction and equipment to this segment. Log jams would be constructed and secured to appear naturally occurring. Future projects will require supplemental site-specific environmental review and must comply with section 7(a) of the Act. Existing management direction in the forest plan, the Northwestern and Coastal Oregon Record of Decision and Resource Management Plan, and requirements under section 7(a) of the Act include mitigation and best management practices to minimize or eliminate potential construction impacts on the shoreline and restore scenic resources in the riparian area.

Other ongoing actions might include future fires; sedimentation of the watercourse from loose soils post-fire that would impact water clarity and the quality of sunlight reflecting off water; and a proliferation of user-created trails in the river corridor. Scenic quality could also be impacted by an increase in invasive and interfering vegetation post-fire.

The creation and implementation of the comprehensive river management plan will have nominal cumulative effects when combined with other activities because any future management actions would be secondary to the natural process of recovery, and they would be potentially limited in scope. They will only be implemented if necessary to protect and enhance outstandingly remarkable values, free-flowing condition, and water quality. The effects of this management guidance are likely to curtail potential adverse effects within the corridor by increasing monitoring efforts.

Consistency with Relevant Laws, Regulations, and Policy

Management Plans

Willamette National Forest

Forest-wide standards and guidelines for visual resource management are included in the forest plan and in land use allocation management prescriptions outlined in the Management Area 6a guidance and the Opal Creek Scenic Recreation Area Management Plan. The comprehensive river management plan guidance for the wild segment is well aligned with the Management Area 6a guidance. The Opal Creek Scenic Recreation Area standards apply to the wild section of the Elkhorn Creek Wild and Scenic River managed by the Forest Service.

The proposed action is consistent with the desired condition for maintaining the naturally evolving appearance of the scenic recreation area in that the comprehensive river management plan allows for natural recovery of the river corridor, particularly in the wild segment where management activities would be avoided to promote a natural unmanaged appearance.

The proposed action is consistent with the standards outlined in the Opal Creek Scenic Recreation Area Management Plan because the vegetation management standard and the scenery standard in the comprehensive river management plan would protect and enhance the scenery outstandingly remarkable value. This value includes the visual impact of water movement through the corridor, old-growth stands of trees, and the desire for a natural unmanaged appearance. The proposed action is consistent with Opal Creek Standard MA-2c-15 in that the wild segment would have a primitive setting typical of a very low

intensity zone and high scenic quality as described in the Opal Creek Scenic Recreation Area Management Plan.

Northwestern and Coastal Oregon Resource Management Plan

The following Visual Resource Management Class I management direction is applicable to the Bureau of Land Management administered portion of the wild portion of Elkhorn Creek:

Manage Visual Resource Management Class I areas in accordance with natural ecological changes. Prohibit activities that would lower the visual resources inventory class of 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 (BLM 2016, pages 93-94).

The following Visual Resource Management Class II management direction is applicable to the Bureau of Land Management administered scenic segment of the Elkhorn Creek Wild and Scenic River:

Manage Visual Resource Management Class II areas for low levels of change to the characteristic landscape. Management activities will be seen but will not attract the attention of the casual observer. Changes will repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape (BLM 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 the Northwestern and Coastal Oregon Resource Management Plan direction for visual resource management and has been designed to meet the Visual Resource Management Class I and Class II objectives in the short-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 value identified for the wild segment of Elkhorn Creek. 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 value. Programmatic direction provides for the protection and enhancement of scenic resources within the river corridor through the visual quality objectives, visual resource management classes, and standards and guidelines for visual resource management. The proposed action is consistent with provisions and requirements for scenic resources outlined in the Act.

Wildlife

Methodology

Wildlife species are addressed in several different categories: threatened and endangered species, Bureau of Land Management state director sensitive species, Forest Service Pacific Northwest regional forester sensitive species, management indicator species, and migratory birds. To determine which species could

occur within the analysis area, species occurrence records from the Interagency Special Status-Sensitive Species Program and other databases were reviewed, and the habitat requirements of species were compared with habitat present within the analysis area prior to the Beachie Creek Fire.

As discussed below, the project area was highly impacted by the Beachie Creek Fire. This analysis assumes that, in time, a diversity of wildlife could return to the analysis area for at least a part of their life history (for instance, foraging only) until recovery, when full use could occur (for instance, nesting, rearing young).

There are species currently using the area, but surveys have not been conducted to determine current species diversity. See table 2 in the Wildlife Specialist Report available online at the [project webpage](#) for wildlife species considered for this analysis and the likelihood of them having been present or having suitable habitat prior to the Beachie Creek Fire, with the assumption, as noted above, that many could reestablish within the project area over time.

Environmental Consequences

Direct and Indirect Effects of No Action

Under the no-action alternative, continuation of the current management of Elkhorn Creek would occur, no comprehensive river management plan would be adopted, and management would not comply with the Wild and Scenic River Act. Interim management, such as visitor capacity control, would continue as needed but would not be guided by plan direction specific to the Elkhorn Creek Wild and Scenic River corridor.

Elkhorn Creek would continue to support populations of and habitat for threatened, endangered, and sensitive species. Existing management direction, such as the Endangered Species Act, would continue to protect listed species. For Forest Service Pacific Northwest regional forester sensitive species and Bureau of Land Management special status species, existing Forest Service policy 2670.32 (USDA Forest Service 2011) and Bureau of Land Management Manual 6840 (U.S. Department of the Interior, Bureau of Land Management 2008a) would continue to direct management, which currently aims to avoid or minimize impacts to these species whose viability has been identified as a concern. Furthermore, critical habitat for listed species and other significant populations would continue to be managed under existing policies. Overall, the no-action alternative would have no impact on fish and wildlife because species would continue to be protected by existing laws and policy.

Direct and Indirect Effects of Proposed Action

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 ecological system outstandingly remarkable values may be impacted by visitor use. Visitor use has the potential to cause erosion and sedimentation. These processes can degrade water quality and aquatic habitats. Over time, establishing user capacity thresholds might afford additional protections due to less impact from recreational use.

Currently, very limited recreational activities are pursued in the river corridor due to difficult access and steep terrain. If recreation were to increase, the identified user capacity would protect and enhance wildlife. The ecological system's outstanding remarkable values would be protected from disturbance in riparian areas that are generally used by a higher diversity of wildlife species than any other habitat types. This is due to abundant food, water, and cover.

The comprehensive river management plan lays out desired conditions, standards, guidelines, objectives, and management approaches for Elkhorn Creek Wild and Scenic River values and other resources and uses occurring in the area. This management direction is to ensure that the river's outstandingly remarkable values, including biological habitat and populations, are protected or enhanced.

No direct or indirect effects to wildlife will occur, as there are no ground disturbing management actions proposed at this time. When management actions are proposed, effects will be analyzed. Nonetheless, wildlife will benefit in the long-term from the adoption and implementation of the comprehensive river management plan as it will guide in the decision of future management, specifically management that maintains the largely roadless, non-fragmented habitat conditions of the area.

Protection of free-flowing condition and water quality would protect and enhance aquatic habitat requirements, as well as wildlife and macroinvertebrates. All these species require clean, cold, and well-oxygenated water to survive; they need this water to spawn, rear young, and find food.

In summary, the water quality guidance can provide a long-term benefit to regionally important populations and special status species. As a result, comprehensive river management plan guidance could result in the protection and future enhancement of the diversity of species and ensure diverse and contiguous habitat.

Although a lot of habitat was lost as a result of the Beachie Creek Fire, the Elkhorn Creek Wild and Scenic River corridor still contains many important features that wildlife need. The plan primarily allows for natural succession to take place, but also allows for future management such as non-native invasive plant treatments or potential future plantings, if conditions warrant. Although the goal is for natural regeneration, outside forces, including additional fires in the area and increased recreational usage, could impede natural reforestation or introduce invasive species. The plan ensures that the wild and scenic river is managed in a way that benefits wildlife into the future.

Under the proposed action, implementation of a comprehensive river management monitoring plan would put additional monitoring focus on the fisheries and scenic outstandingly remarkable values. This additional monitoring would guide adaptive management for protection or enhancement of these resources, as necessary.

Indicators and thresholds have been identified that would result in management actions to maintain quality fish and wildlife habitat. For example, the current condition of Elkhorn Creek indicates free flowing systems with good water quality (refer to the River Values Report for Elkhorn Creek Wild and Scenic River and the Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report [USDA Forest Service 2021 and 2022b] located in the project record).

However, the creek is vulnerable to landslides even though there are few roads within the watershed; an increase in use of the area could result in shoreline and streambank erosion, leading to sedimentation and water quality degradation. The focus of the monitoring plan on such potential impacts will allow for a timely response to limit impacts to wildlife.

Cumulative Impacts

There are no direct impacts to fish and wildlife. If monitoring indicated there were changes in visitor use, then changed conditions would occur, which would then trigger non-ground disturbing activity or ground disturbing activity that would require subsequent site-specific analysis. Future foreseeable effects could occur from implementation of comprehensive invasive species management actions on Bureau of Land Management administered lands and future removal of some hazard trees and planting of hardwoods and shrubs.

However, the cumulative effects from these actions are expected to be minor and positive. Invasive plant treatment could reduce competition for native vegetation and the planting of hardwood trees and shrubs could increase plant species of those associations overall improving habitat for wildlife (BLM 2018). Large woody debris replacement could result in some disturbance to wildlife but existing plans for threatened and endangered species would ensure impacts are short-term and compliant with existing management direction. Therefore, cumulative effects from these actions would be minor and positive.

Consistency with Relevant Laws, Regulations, and Policy

Management Plans

Willamette 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. The Opal Creek Scenic Recreation Area also includes a wildlife desired condition to allow wildlife populations to flourish relatively undisturbed by human activities. The comprehensive river management plan guidance for the wild segment to prioritize natural recovery is aligned with this direction. These standards and guidelines are being met through the implementation of the comprehensive river management plan's monitoring plan and adaptive management. In developing the proposed action, all standards and guidelines, related to aquatic species, wildlife, water, riparian areas, and wild and scenic rivers were considered. Therefore, all forest plan standards and guidelines were followed and the proposed future management actions for wildlife would also maintain and protect habitat for aquatic species (fish and macroinvertebrates) and wildlife, as directed by the Act.

Northwestern and Coastal Oregon Resource Management Plan

The proposed action would be consistent with the resource management plan management objectives and direction for fisheries and wildlife applicable to the Bureau of Land Management administered portion of the wild segment and the scenic segment of Elkhorn Creek (Northwestern and Coastal Oregon and Resource Management Plan, pages 78, 95-102).

Other Relevant Law, Regulation, or Policy

Endangered Species Act

The comprehensive river management plan actions would maintain, or, in some cases, be beneficial to fish and wildlife species by prioritizing natural recovery to occur within the river corridor where sufficient and prescribing management actions if thresholds are reached.

The Endangered Species Act is already in place to maintain and conserve federally-listed species and their critical habitat needs on the Willamette National Forest and Bureau of Land Management lands. The additional protection of the Elkhorn Creek river corridor, 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 Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free-flowing condition, and outstandingly remarkable values). The Wildlife Direct and Indirect Effects Section describes how adoption and implementation of the comprehensive river management plan would protect and enhance the wildlife habitat of the associated river.

Botany

Methodology

Plant species are addressed in several different categories: threatened and endangered species, Bureau of Land Management state director sensitive species, and Forest Service Pacific Northwest regional forester sensitive species. To determine which species could occur within the analysis area, species occurrence records from the Interagency Special Status-Sensitive Species Program and other databases were reviewed.

The habitat requirements of species potentially present were compared with the habitat present within the analysis area prior to the Beachie Creek Fire. As discussed below, the project area was highly impacted by the Beachie Creek Fire. This analysis assumes that, in time, a diversity of plants could return to the analysis area. There are many factors that could determine presence of plants in the project area now and into the future including but not limited to: presence of seeds, seed viability, soil stability, changes in soil chemistry, and future seed dispersal.

There may be plant species of concern currently present in the area, but surveys have not been conducted to determine current species diversity. See table 1 in the Botany Specialist Report available on the [project webpage](#) for plant species considered for this analysis and the likelihood of them having been present or having suitable habitat prior to the Beachie Creek Fire, with the assumption, as noted above, that they could reestablish within the project area over time.

Environmental Consequences

Direct and Indirect Effects of No Action

Elkhorn Creek would continue to support populations of and habitat for threatened, endangered, and sensitive plant species. Existing management direction, such as the Endangered Species Act, would continue to protect listed species. For Forest Service Pacific Northwest regional forester sensitive species and Bureau of Land Management special status species, existing Forest Service policy 2670 and Bureau of Land Management Manual 6840 would continue to direct management, which currently aims to avoid or minimize impacts to these species whose viability has been identified as a concern. Overall, the no-action alternative would have no impact on botanical species because they would continue to be protected by existing laws and policy.

Elkhorn Creek would also support nearly pristine examples of the temperate rainforest ecosystems because steep slopes and unstable soils will limit disturbance by making access, development, and timber operations exceedingly challenging.

Direct and Indirect Effects of Proposed Action

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 outstandingly remarkable values may be impacted by visitor use. Visitor use has the potential to cause erosion and sedimentation. These processes can impact botanical and ecological resources by encouraging the spread of non-native invasive species.

Establishing capacity thresholds might afford additional protections, over time, due to less impact from recreational use. However, there is not enough existing information regarding the effects, if any, of current river corridor use on species or habitats to know for certain. The identified user capacity would protect and enhance ecological systems and suitable habitat for botanical species. This would be done by

limiting disturbance that would lead to non-native invasive species invasion and the reduction of contiguous habitat for native vegetation.

The comprehensive river management plan lays out desired conditions, standards, guidelines, objectives, and management approaches for Elkhorn Creek Wild and Scenic River values and other resources and uses occurring in the area. This management direction is to ensure that the river's outstandingly remarkable values, including botanical resources, are protected, or enhanced.

No direct or indirect effects to botanical resources will occur as there are no ground disturbing management actions proposed at this time. When management actions are proposed, effects will be analyzed. Botanical resources will benefit in the long-term from the adoption and implementation of the plan as it will guide future management, specifically management that would remove non-native invasive plant species if they were to become established.

Although habitat was lost as a result of the Beachie Creek Fire, the Elkhorn Creek Wild and Scenic River corridor still contains botanical resources. The comprehensive river management plan allows for natural succession to take place, but also allows for future management, such as potential future non-native invasive plant treatments or plantings, if conditions warrant. Although the goal is for natural regeneration, outside forces, including additional fires in the area and increased recreational usage, which may introduce new invasive species, could impede natural reforestation. The plan ensures that the wild and scenic river corridor is managed in a way that benefits botanical resources.

Protection of free-flowing condition and water quality would protect and enhance adjacent riparian habitat and aquatic dependent botanical species including liverworts and mosses. Comprehensive river management plan guidance will result in the protection and enhancement of the diversity of species as well and ensure diverse and contiguous habitat; all of which would benefit botanical resources.

Under the proposed action, implementation of a monitoring plan would put additional monitoring focus on the outstandingly remarkable values. Indicators and thresholds have been identified that would result in management actions to maintain botanical resources.

Cumulative Impacts

There are no direct impacts to botanical resources. If monitoring indicates an increase in visitor use, there may be a changed condition resulting in indirect effects to botanical species. Monitoring would also identify the need for future management actions and the need for additional analysis. Future foreseeable effects could occur if comprehensive invasive plant removal actions are implemented on Bureau of Land Management administered lands, or by future potential removal of some hazard trees and planting of hardwoods and shrubs. However, the cumulative effects from these actions would be minor and positive. Invasive plant treatment could reduce competition and the planting of hardwood trees and shrubs could increase plant species of those associations. Large woody debris replacement could result in some damage to botanical resources, but this action would be mitigated for threatened, endangered, and sensitive plant species. Cumulative effects from these actions would be minor and positive.

Consistency with Relevant Laws, Regulations, and Policy

Management Plans

Willamette National Forest

The forest plan provides standards and guidelines for protecting wild and scenic rivers as well as the rare plants and native plant communities within them. The protection of native plant communities helps wild and scenic rivers maintain their biological diversity and resilience to disturbance (such as human

activities, invasion by non-native plants) and change (such as climate change). The forest plan identifies management direction for rare plants and fungi as well as management objectives and direction for invasive species. The Opal Creek Scenic Recreation Area includes a desired condition for plant communities to contribute to biological diversity at a landscape and regional scale along with vegetation management guidelines.

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. The regulation of management activities provided by the various standards and guidelines would help protect and enhance the botanical resources, which may be sensitive or vulnerable to such activities. Implementation and adoption of the comprehensive river management plan's monitoring plan is consistent with this management direction in that it would establish further monitoring of invasive species encroachment and assess whether there is need for future proposed management actions to address the concern. The Forest Service and the Bureau of Land Management both have invasive species management plans in place that would continue to provide protection.

Northwestern and Coastal Oregon Resource Management Plan

The proposed action would be consistent with the resource management plan management objectives and direction for botanical resources applicable to the Bureau of Land Management administered portion of the wild segment and the scenic segment of Elkhorn Creek (Northwestern and Coastal Oregon and Resource Management Plan, pages 86-88).

Other Relevant Law, Regulation, or Policy

Endangered Species Act

The comprehensive river management plan actions would maintain, or in some cases be beneficial to, botanical species by allowing prioritizing recovery within the river corridor, providing further monitoring of botanical species and invasive species encroachment, and directing potential management actions if monitoring indicates that intervention is required.

The Endangered Species Act is already in place to maintain and conserve federally-listed species and their critical habitat needs on the Willamette National Forest and Bureau of Land Management Cascades Field Office-administered lands. The additional protection of Elkhorn Creek as a wild and scenic river, with the Act's mandate to protect and enhance water quality, free-flowing condition, and outstandingly remarkable values in the river and its immediate environment, is consistent with the Endangered Species Act, as both Acts have similar habitat protection purposes.

Wild and Scenic Rivers Act

The comprehensive river management plan is consistent with section 10(a) of the Act.

Fisheries

The affected environment for fisheries is summarized in the River Values Report and revised per the effects from the Beachie Creek Fire in the Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2022b).

The fisheries of Elkhorn Creek are an outstandingly remarkable value within the wild and scenic segments. Elkhorn Creek provides valuable habitat for Endangered Species Act listed species in the Santiam Basin and provides a critical refugia for these species in both the Little North Santiam River

watershed and the Santiam Basin. Elkhorn Creek is a regionally important producer of resident and anadromous fish species.

A portion of the wild segment and the entire scenic segment are critical habitat for Endangered Species Act listed spring Chinook salmon and steelhead trout in addition to several Bureau of Land Management and Forest Service sensitive species including Pacific lamprey and coastal cutthroat trout. Introduced, non-endangered coho salmon also utilize lower Elkhorn Creek. There is a high diversity of species relative to the native fish assemblage (variety and abundance) for the area. Additionally, Elkhorn Creek flows almost immediately into the Little North Santiam River, which supports a wild steelhead trout fishery.

The Beachie Creek Fire burned 98 percent of the Little North Santiam watersheds, with stand-replacing fire encompassing almost the entirety of the Elkhorn Creek drainage, including the wild and scenic river corridor (USDA Forest Service 2020).

Water quality is a major post-fire concern as elevated erosion rates and stream flows can negatively affect aquatic species and their habitats. Specifically, critical habitat for Upper Willamette River Chinook and steelhead is at risk of degradation with increased fine sediment and reduced stream shading post-fire. Increased habitat degradation along with juvenile and sub-adult mortality of Chinook salmon is possible due to accelerated sedimentation, loss of stream shade and large wood, and potential accelerated channel erosion (USDA Forest Service 2020). Post-fire observations from 2021 report active bank erosion and consumption of a large portion of instream woody debris with some woody debris accumulations remaining (Parker 2022).

A temperature spike was recorded during 2021 monitoring exceeding 80 degrees Fahrenheit (see [Hydrology and Soils section](#)). It is presumed that fish populations are still present in Elkhorn Creek albeit at lower numbers and with reduced habitat quality. Shifts in species distribution have likely occurred and will continue to occur as the creek responds to high flows and potential landslides or debris flows. Specifically, freshwater lamprey species may benefit in the short and medium term because they prefer warming temperatures and utilize fine sediments along stream margins and pool tail-outs during their juvenile burrowing life stage.

In the long-term, habitat is expected to slowly stabilize as riparian and upland vegetation reestablishes, sediment input declines, and risk of debris slides recedes (see [Hydrology and Soils section](#) and the hydrology report located on the [project webpage](#)). Riparian vegetation is expected to recover over time, increasing shade and reducing water temperature. Hardwood riparian trees and shrubs have the potential to recover rapidly (Halofsky and Hibbs 2009). Conifer woody debris may increase in the short-term, as the remaining dead trees fall into the creek. It will likely take many decades for trees of sufficient size to grow and be recruited as instream woody debris (see [Hydrology and Soils section](#) and the hydrology report located on the [project webpage](#)).

The recent climate change vulnerability assessment (PNW GTR-1001) conducted by the Forest Service's Pacific Northwest Research Station describes future climate trends on the Willamette National Forest relevant to Elkhorn Creek (Halofsky et al. 2022). In summary, one of the biggest vulnerabilities that may affect watersheds, such as Elkhorn Creek and its river values, is anticipated shifts in precipitation from snow to rain. This shift in precipitation type influences streamflow with peak flows occurring earlier in spring and prolonged low flows during the summer affecting habitat connectivity and water quality across a gradient from the headwaters to the coast.

It is possible that warmer air temperature will raise water temperature with the potential to cross thermal thresholds that could cause mortality of fish and other species. In addition, in prolonged low flow periods,

habitat requirements for both fresh water and anadromous fish species may not be met at different life cycle stages (migrating, spawning, redds, residents, and so forth), putting individuals and species at risk. This project is consistent with the adaption strategies or “options” outlined in the climate change vulnerability assessment (Halofsky et al. 2022). For example, directing the addition of wood to streams to improve hydrologic connectivity in floodplains and increase water storage capacity when monitoring indicates that conditions warrant such actions.

Methodology

Fish species are addressed in several different categories: threatened and endangered species, Bureau of Land Management state director sensitive species and Forest Service Pacific Northwest regional forester sensitive species. To determine which species could occur within the analysis area, species occurrence records from the Interagency Special Status-Sensitive Species Program and other databases were reviewed and the habitat requirements of species were compared with habitat present within the analysis area prior to the Beachie Creek Fire. Research findings, historical data, survey records, as well as observations and discussions with other biologists were utilized.

This analysis assumes that the species that were present prior to the fire are still present, albeit populations numbers have likely changed (see the Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report [USDA, Forest Service 2022b]). There are many factors that could determine species presence and abundance in the project area now and into the future including: water quality, fish habitat, potential flooding, and debris flows (see [Hydrology and Soils section](#)). See table 1 in the Fisheries Specialist Report available online at the [project webpage](#) for a full list of the fish species considered for this analysis.

Environmental Consequences

Direct and Indirect Effects of No Action

Under the no-action alternative, the current management of the Elkhorn Creek Wild and Scenic River would continue, no comprehensive river management plan would be adopted, and management would not comply with the Act.

Elkhorn Creek would continue to support populations of and habitat for threatened, endangered, and sensitive species. Existing management direction, such as the Northwest Forest Plan and the Endangered Species Act, would continue to protect listed species. For Forest Service Pacific Northwest regional forester sensitive species and Bureau of Land Management special status species, existing Forest Service policy 2670.32 and Bureau of Land Management Manual section 6840 would continue to direct management, which currently aims to avoid or minimize impacts to these species whose viability has been identified as a concern.

Furthermore, critical habitat for listed species and other significant populations would continue to be managed under existing policies. Overall, the no-action alternative would have no impact on fish because species would continue to be protected by existing laws and policy. Long term, the recovery of aquatic systems would be somewhat compromised without additions of large woody debris and tree planting. Fish habitat would be slower to recover and the potential for increased risk of water quality via climate change would persist (Halofsky et al. 2022).

Direct and Indirect Effects of Proposed Action

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 ecological resources may be impacted by visitor use. Visitor use has the potential to cause

erosion and sedimentation. These processes can degrade water quality and aquatic habitats. Over time, establishing capacity thresholds might afford additional protections due to less impact from recreational use. Currently, very limited recreational activities are pursued in the river corridor due to difficult access and steep terrain. If recreation were to increase, the identified user capacity would protect the fisheries outstanding remarkable value and the entire ecological system by limiting disturbance in riparian areas.

The comprehensive river management plan lays out desired conditions for the Elkhorn Creek Wild and Scenic River's values as well as desired conditions for other resources and uses occurring in the wild and scenic river corridor. This management direction is to ensure that the river's outstandingly remarkable values, including biological habitat and populations are protected or enhanced.

No direct effects to fisheries will occur as there are no ground disturbing management actions proposed at this time. When management actions are proposed, site-specific effects would be analyzed. A beneficial indirect effect is that fisheries will benefit in the long-term from the adoption and implementation of this plan. This is because the plan will guide future management, specifically management that maintains the largely roadless, non-fragmented habitat conditions of the area and encourages stream habitat restoration.

Protection of free-flowing condition and water quality would protect and enhance aquatic habitats, as well as the fish, wildlife and macroinvertebrates that depend upon these habitats. Species within this watershed require clean, cold, and well-oxygenated water for basic life history requirements, such as spawning, rearing, or maintenance of food base. The guidance specific to water quality can provide a long-term benefit to regionally important populations and special status species. As a result, comprehensive river management plan guidance could result in the protection and future enhancement of the diversity of species and ensure diverse and contiguous habitat.

Although fish habitat and water quality were severely impacted by the Beachie Creek Fire, the Elkhorn Creek Wild and Scenic River corridor still contains many important features that aquatic species need. The plan allows for natural succession to take place, but also allows for future management, such as large woody debris placement, non-native invasive plant treatments or potential future plantings, if conditions warrant. Although the goal is for natural regeneration, outside forces, such as additional fires and increased usage, may impede natural reforestation or introduce invasive species. The combination of natural regeneration and action where necessary ensures that the area is moving in the right direction into the future.

Under the proposed action, implementation of a comprehensive river management monitoring plan would put additional monitoring focus on the fisheries outstandingly remarkable value. This additional monitoring would guide adaptive management for protection or enhancement of related resources, as necessary. Indicators and thresholds have been identified that would inform future management actions necessary to maintain quality fish habitat (see Elkhorn Creek Comprehensive River Management Plan, pages 28-29; USDA Forest Service 2022c).

Cumulative Impacts

The cumulative effects analysis area includes the 6th field drainage (6th level hydrologic unit boundary (HUC 6)), which encompasses the wild and scenic river corridor. Effects of past actions in the analysis area are reflected in the current condition of aquatic analysis indicators and affected environment. Present and ongoing actions that may contribute to cumulative effects include activities on both federal land and lands of other ownership.

If monitoring indicates an increase in visitor use or if vegetative recovery is stalled, there may be a changed condition resulting in indirect effects to fisheries. Monitoring would identify the need for future

management actions and the need for additional analysis. Future foreseeable effects could occur from the implementation of an invasive species removal project and future large woody debris placement on Bureau of Land Management administered lands, as well as future hazard tree removal along the Elkhorn Road and Elkhorn Ridge Road on Forest Service-administered lands (USDA Forest Service 2020b). Any potential cumulative effects from these actions would be adverse but minor in the short-term and beneficial in the long-term.

On lands of other ownership, planned and ongoing actions include vegetation management, fire suppression, state and county highway projects and maintenance, and private land development. Given the scale of this project and the lack of information on lands of other ownership, the type and extent of impacts are difficult to quantify. However, state and local regulations will provide some protections for aquatic species, water quality, and stream and riparian habitats. As an example, requirements of the Oregon Forest Practice Administrative Rules and Forest Practices Act (Oregon Department of Forestry 2023) would minimize impacts to water quality and incorporate buffer strips on fish bearing streams. Lands of other ownership would continue to provide some habitat for aquatic wildlife species including invertebrates and fish.

Consistency with Relevant Laws, Regulations, and Policy

Management Plans

Willamette National Forest

The forest plan provides standards and guidelines for management of fish and wildlife applicable to this project which are being met through the implementation of the comprehensive river management plan's monitoring plan and adaptive management. In developing the proposed action, all standards and guidelines related to aquatic species, wildlife, water, riparian areas, and wild and scenic rivers were considered. Proposed future management actions for the fisheries outstandingly remarkable value would also maintain and protect habitat for aquatic species (fish and macroinvertebrates) and wildlife, as directed by the Act.

The forest plan was amended in 1994 by the [Northwest Forest Plan](#) (USDA Forest Service 1994). The Northwest Forest Plan allocations within most of the designated wild and scenic river corridor 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 forest plan (USDA Forest Service 1990). The standards and guidelines of the Northwest Forest Plan 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 anadromous fish.

In developing the proposed action, all standards and guidelines related to soils, water, riparian, and wild and scenic rivers were considered from the Willamette Land and Resource Management Plan and the Northwest Forest Plan. All standards and guidelines in both forest plans related to water quality and free flow will be followed in the management of the wild and scenic river corridor. 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 the objectives of the Aquatic Conservation Strategy.

Northwestern and Coastal Oregon Resource Management Plan

The proposed action would be consistent with the resource management plan management objectives and direction for fisheries and wildlife applicable to the Bureau of Land Management administered portion of

the wild segment and the scenic segment of Elkhorn Creek (Northwestern and Coastal Oregon and Resource Management Plan, pages 78, 95-102).

Other Relevant Laws, Regulations, and Policy

Endangered Species Act

The comprehensive river management plan would maintain, or in some cases be beneficial, to fish species. This includes Endangered Species Act listed spring Chinook salmon and steelhead trout in addition to several Bureau of Land Management and Forest Service sensitive species including Pacific lamprey and coastal cutthroat trout. Elkhorn Creek is a regionally important producer of resident and anadromous fish species. A portion of the wild segment, and the entire scenic segment, is critical habitat for the listed spring Chinook salmon and steelhead trout. Introduced, non-endangered coho salmon also utilize lower Elkhorn Creek.

The Endangered Species Act is already in place to maintain and conserve federally-listed species and their critical habitat needs on the Willamette National Forest and Bureau of Land Management lands. The additional protection of Elkhorn Creek as a wild and scenic river, with the Wild and Scenic River Act's mandate to protect and enhance water quality, free-flowing condition, and outstandingly remarkable values in the river and its immediate environment, is consistent with the Endangered Species Act, as both acts have similar habitat protection purposes.

Wild and Scenic Rivers Act

Section 10(b) of the Act requires that the administering agency protect and enhance the values for which the river was designated (water quality, free-flowing condition, and outstandingly remarkable values). The Fisheries Direct and Indirect Effects Section describes how the comprehensive river management plan would protect and enhance the fisheries value of Elkhorn Creek

Tribal Consultation

For much of human history, American Indians were the only people to occupy and use the lands through which Elkhorn Creek flows. Indigenous use of the Willamette National Forest and the surrounding area began with the earliest human occupation of the Western Hemisphere and persists to the present day with traditional use of public lands spanning many generations.

The western Cascades includes important river drainages, such as the Clackamas, Molalla, Santiam, McKenzie and the Umpqua, that are rich in archaeological and historic resources. The archaeological record of the western Cascades includes historic era sites associated with logging and mining as well as pre-contact sites representing human occupation over the past 10,000 years. The region of comparison for this project encompasses the homelands of the Kalapuya and Molalla people as well as the Chinook. Archaeological and historic sites within the region of comparison share similarities. Common pre-contact site types in the Cascade Region include lithic scatters and tool source quarries; riverbanks and adjacent foothills in the vicinity of Elkhorn Creek were utilized extensively pre-contact.

The Klamath people have ancestral ties to the Willamette Forest with aboriginal lands located in the Middle Fork District where the Klamath Trail passed through the area. Due to recent agency communications with the Klamath Tribes regarding tribal consultation, consultation is limited to projects that may impact these aboriginal lands. Therefore, tribal consultation for the Elkhorn Creek Comprehensive River Management Plan project is directed towards three federally recognized Tribes including the Confederated Tribes of Siletz Indians of Oregon, the Confederated Tribes of the Grand Ronde Community of Oregon, and the Confederated Tribes of the Warm Springs Reservation of Oregon.

The federal government has a trust responsibility to federally recognized Tribes that arises from the United States' unique legal and political relationship with Tribes. It is a legally enforceable fiduciary obligation on the part of the United States to protect Tribal treaty rights, lands, assets, and resources, as well as a duty to carry out the mandates of federal law with respect to all federally recognized Tribes. This responsibility requires the federal government to consider the best interests of the Tribes in its dealings with them and when taking actions that may affect them.

In meeting these responsibilities, Forest Service and Bureau of Land Management managers consult with federally recognized Tribes as sovereign entities when proposed policies or management actions may affect their interests. However, treaty rights encompass more than an ability to gather, hunt, or fish; tribal stewardship on national forests and other federally administered lands is key to restoring, sustaining, and protecting the integrity of lands and resources, vital to indigenous peoples' lifeways. In partnership with the Forest Service and Bureau of Land Management, Tribes contribute traditional ecological knowledge, technical expertise, and funding to restore and manage the long-term ecological health and resilience of these public lands.

The Willamette National Forest and the Bureau of Land Management Northwest Oregon District initiated consultation with the Confederated Tribes of Siletz, the Confederated Tribes of Grand Ronde, and the Confederated Tribes of Warm Springs. Letters were sent to these three tribes on August 25 and August 26, 2021, requesting input on the development of the comprehensive river management plan during the project's pre-scoping effort on the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021). The Confederated Tribes of Warm Springs commented with a request to keep them informed of the project's progress to ensure that section 106 of the National Historic Preservation Act is being addressed.

Consultation letters to announce the availability of the draft environmental assessment, draft finding of no significant impact, draft comprehensive management plans, and supporting documents were sent to the three tribes on May 10, 2023. No formal comments were received from any of the three tribes in response to these emails and letters. Also, the Bureau of Land Management's district manager, Dennis Teitzel, district archaeologist and tribal liaison, Britt Betenson, and Cascades field office manager, Amanda Hoffman, met for an annual meeting with the Confederated Tribes of the Grand Ronde on May 11, 2023. During this meeting, this project was briefly discussed along with other wild and scenic river-related projects; there were not specific comments related to the Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan expressed during the meeting.

Agencies or Persons Consulted

Pre-Scoping Period

The agencies conducted a 30-day pre-scoping comment period from August 30 to October 1, 2021, requesting comments on the River Values Report for Elkhorn Creek Wild and Scenic River. Specifically, the public was asked to provide feedback on the following questions:

1. Are there additional river-related natural, cultural, and recreational resources that are rare, unique or exemplary within the designated segments of Elkhorn Creek?
2. What observations or concerns do you have about the baseline conditions (pre-fire) within the river corridor that may be impacting these river values?
3. What concerns about the Beachie Creek Fire do you think are the most important to be incorporated into the environmental assessment and comprehensive river management plan?

The Willamette National Forest and the Bureau of Land Management Cascades Field Office share management responsibilities with the Oregon Department of Environmental Quality, the Oregon Water Resource Department, the Oregon Department of Fish and Wildlife, the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the State Historic Preservation Office, and tribal governments. The request for comments was distributed using mailing lists from both the Bureau of Land Management Cascades Field Office and the Willamette National Forest. In total, the agencies sent outreach materials to three Tribes, two federal agencies, ten state agencies, and several individuals on mailing lists. To support the COVID-19 public health and safety measures being undertaken at the time of pre-scoping, the Willamette National Forest and Bureau of Land Management offices received comments submitted via email, directly to the Forest Service's Comment Analysis and Response Application (CARA) web comment form, and through written comments.

The agencies received responses from the Oregon Department of Fish and Wildlife, Oregon Wild, and one individual. One tribal consultation response was received from the Confederated Tribes of Warm Springs requesting to stay informed about the project's progress. This information was incorporated into the planning team's current condition inventories, outstandingly remarkable value determinations, the draft environmental assessment and this final environmental assessment.

The following is a summary of recommendations received in the pre-scoping comments:

Question 1 – Additional Outstandingly Remarkable Values

An individual submitted comments stating that the photographs in the River Values Report were sufficient to convince them that scenery should be an “outstandingly remarkable value” for both the wild and scenic segments of the Elkhorn Creek Wild and Scenic River corridor. Further, the individual stated that the bridge on Elkhorn Road serves as a viewing platform of the creek, both upstream and downstream and is the only vantage point from which most people will see the creek. The finding from the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021) states:

The scenic resources of the scenic segment, though high-quality, are not outstandingly remarkable. Within the region of comparison, there are several segments of the Middle Fork of Hood River, Molalla River, and the North Fork Middle Fork, Willamette River with scenic outstandingly remarkable values. These rivers travel through similar terrain between the mountains and the Willamette Basin; and were formed by similar geological processes.

Viewing platforms are not part of the evaluation criteria, and this was discussed in the baseline conditions.

Oregon Wild proposed that vegetation and geology be added to the list of outstandingly remarkable values because the baseline conditions for the scenery outstandingly remarkable value discussion mentions bedrock and old-growth, and these characteristics are also important to fisheries and wildlife values, although geology and vegetation should be separately identified in order to be properly conserved. At the comprehensive river management plan staff workshop held April 28-30, 2020, the planning team comprised of specialists representing the Willamette National Forest and the Bureau of Land Management Cascades Field Office discussed and evaluated an ecosystem outstandingly remarkable value, considering the pristine character and remoteness of the ecosystem.

A full set of evaluation criteria were not developed because it was determined that the pristine ecosystem was not river-related or river dependent for Elkhorn Creek, nor was it rare, unique or exemplary within the region of comparison. The same was determined true for old-growth; it was not river-related or river-dependent. The commenter did not offer any further explanation for how vegetation meets the definition of an outstandingly remarkable value.

Geology was considered as an outstandingly remarkable value, and the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021) stated the following:

The canyon and rock features may provide beautiful scenery that draws people to the river; however, Elkhorn Creek does not have any geologic values that are unique or rare within the region of comparison. The formation of canyons through Miocene-aged deposits and the formations exposed within the canyon are widespread within the region. The presence of the dramatic inner gorge may be an interesting feature of the river for recreational users but would not be considered by experts to be an outstandingly remarkable feature in the region of comparison.

The commenter did not suggest why geology meets the evaluation criteria.

Water quality and free-flowing condition are intrinsic river values and given the same statutory protections under the Wild and Scenic River Act as outstandingly remarkable values. Similar to outstandingly remarkable values, water quality and free-flowing condition must be protected or enhanced after designation. Both values are described in detail in the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021).

Question 2 – Information on Baseline Conditions

The Oregon Department of Fish and Wildlife submitted comments that were requested to be incorporated into the baseline conditions in the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021). This information included how most of the large wood pieces were still functioning as of spring 2020 in the scenic segment downstream from the Elkhorn Road bridge. They also stated that native mountain whitefish likely occur seasonally in this creek, and it is possible there may be western brook lamprey in some of the smaller tributaries and the headwaters of Elkhorn Creek. The department also identified impacts to fisheries resources from the Beachie Creek Fire that may be significant in the short-term. Some post-fire impacts identified by the commentor as being likely to occur included higher summer maximum temperatures based on stream aspect (east-west), higher solar inputs, and an increase in wood inputs into the stream in the short-term. This information and these impacts were considered in the [fisheries analysis](#) and Fisheries Specialist Report available via the [project webpage](#).

Much of the information in the Oregon Wild letter was considered outside the scope of the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021), which focuses on the baseline conditions at the time of designation (pre-Beachie Creek Fire). Oregon Wild requested that the management plan and River Values Report recognize wildfire as a natural process and the significant ecological values of natural disturbance and natural recovery, including retention of all large woody material on-site. The information and references in the letter were considered in this effects analysis and are aligned with the proposed goal of the comprehensive river management plan for primarily natural recovery to occur.

Other Comments

Other comments stated the importance of the lack of access and remoteness to protect mollusks and amphibians that are sensitive to human disturbance. The classification of each segment determined at the time of designation must be maintained by the river administering agencies. In the Wild and Scenic River Act, wild rivers are defined as: “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.” And scenic rivers are defined as: “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.” As such, the remoteness and inaccessibility of the

wild segment will remain in perpetuity. The nearby recreation area and wilderness (both are permanent designations) also contribute to the remoteness of the area.

Out of Scope Comments

Pre-scoping comments that were considered out of scope of this project included concerns about the following: high soil burn severity, changes to the fire closure area, development of a new watershed assessment, vegetation and fuels treatments including salvage, danger tree removal, and other fire recovery actions. Any applicable recommendations from the watershed assessment were considered and incorporated into the comprehensive river management plan, as appropriate. Any proposed management actions, including vegetation and fuels treatments, would require site-specific environmental analysis. The analysis would need to consider how the actions would protect and enhance the river values (water quality, free-flowing condition, and outstandingly remarkable values).

Scoping and Comment Period

The Elkhorn Creek Wild and Scenic River Comprehensive River Management Plan project was first published to the Willamette National Forest Schedule of Proposed Actions on October 1, 2021. The project was identified on the Cascades Field Office's National Environmental Policy Act Register on August 5, 2021.

The Willamette National Forest and the Bureau of Land Management Cascades Field Office notified the project mailing list of the combined scoping and comment period for this project beginning on May 23, 2023, and ending on June 23, 2023. The Forest Service and Bureau of Land Management solicited public and tribal comments on the draft environmental assessment, the draft comprehensive river management plan, associated specialist reports, and the draft finding of no significant impact. The combined scoping and comment period spanned 30 days. A legal notice announcing the opportunity to comment was published in the Register Guard on May 23, 2023. The public was invited to submit comments via email, mail, or directly through the Forest Service's project website (<https://www.fs.usda.gov/project/?project=60604>).

One comment letter was received from a non-governmental organization, which commented on nine topics, although the commenter stated that they generally supported most of the comprehensive river management plan. Table 6 below provides responses to concern statements and indicates what actions were taken to address the concern.

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Table 6. Comment summary by resource

Number	Resource	Issue and Concern	Response	Action
1	Authority	The wild and scenic river designation overlaps the Opal Creek Scenic Recreation Area designation. The environmental assessment and comprehensive river management plan should be clear that when there is conflict or question, the more protective of the two prevails.	<p>The Omnibus Parks and Public Lands Management Act of 1996 (Public Law 104-333, section 1023, November 12, 1996) designated 6.4 miles of Elkhorn Creek from the Willamette National Forest boundary to the point where the segment leaves federal ownership along the Bureau of Land Management boundary as a wild and scenic river (see figure 2). Elkhorn Creek flows through the Opal Creek Scenic Recreation Area on the Willamette National Forest, which was designated as part of the same act in 1996 (section 1023(c)). The purpose of the scenic recreation area is to “protect and provide for the enhancement of the natural, scenic, recreational, historic, and cultural resources of the area in the vicinity of Opal Creek.”</p> <p>It is standard practice that when two or more management areas overlap, as in the case of the Opal Creek Scenic Recreation Area and the wild and scenic river designations, the more stringent management guidance that offers the greatest protection for a resource is followed.</p>	A clarification was made in the Management Plans and Agency Policy section of the comprehensive river management plan on page 20, which states, “In the case where management guidance may overlap or conflict, the more stringent management guidance that offers the greatest protection for resource(s) is followed.
2	Wildlife	The wildlife outstandingly remarkable value should not be dropped.	<p>Per the guidance provided by the Wild and Scenic Rivers Act, the designated outstandingly remarkable values would be preserved along with their “immediate environments.” This implies that outstandingly remarkable values would need to be evaluated in their current condition. When originally assessed during preparation of the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021), wildlife was originally considered to be an outstandingly remarkable value. However, the Beachie Creek Fire caused the loss of all unique riparian and mid-late seral habitat. Additionally, the riparian habitat loss caused the loss of associated endemic mollusk species. These unique habitats and species are no longer found in Elkhorn Creek and thus, are not a part of the “immediate environment” that could be considered as an outstandingly remarkable value. After the fire, the wildlife value in Elkhorn Creek is not rare, unique, or exemplary at a comparative regional or national scale. Although the site may one day host these unique habitats and species again, this is not guaranteed. Outstandingly remarkable values may be re-evaluated in the future if significant changes to the environment occur.</p>	No further action required. More information may be found in the Elkhorn Creek Wild and Scenic River Changed Conditions Post-Fire Summary Report (USDA Forest Service 2022b) that may be accessed via the project website.

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Number	Resource	Issue and Concern	Response	Action
3	Botany	Botany should be an outstandingly remarkable value.	<p>Elkhorn Creek is not unique within the botany region of comparison. There are no apparent river-related resource values related to vegetation or rare species. Upon evaluation, as documented in the River Values Report: Elkhorn Creek Wild and Scenic River (pages 34-35; USDA Forest Service 2021), the botanical resource values described in the designated segment of Elkhorn Creek do not rise to the stated criteria and are not exemplary. Therefore, botany is not an outstandingly remarkable value for Elkhorn Creek.</p> <p>Elkhorn Creek does support populations of and habitat for threatened, endangered, and sensitive plant species. Existing management direction, such as the Endangered Species Act, would continue to protect listed species, even if botany is not designated as an outstandingly remarkable value. For Forest Service Pacific Northwest regional forester sensitive species and Bureau of Land Management special status species, existing Forest Service policy 2670 and Bureau of Land Management Manual 6840 would continue to direct management, which currently aims to avoid or minimize impacts to these species whose viability has been identified as a concern.</p> <p>The commenter did not provide further details on why botany should be added as an outstandingly remarkable value, therefore, there the planning team was not given new information to change their previous determination.</p>	No additional actions are required. For more information on the botany resource, see the botany section of this environmental assessment (pages 36-38).
4	Climate	Climate refugia should also be included given the role Elkhorn Creek will play in the coming century.	<p>The predicted impacts of climate change on the project area are discussed in the climate change section of the comprehensive river management plan.</p> <p>Although the project area may provide some carbon sequestration services, this is a difficult outcome to predict. While the Forest Service and the Bureau of Land Management aim to manage for healthy forests through the implementation of the comprehensive river management plan, the exact role the project area will serve regarding climate refugia cannot be predicted because it is not currently feasible to quantify the indirect effects of individual or multiple projects on global climate change. Therefore, determining the effects of this project on global climate change cannot be made at any scale.</p>	No additional action required.
5	Water Resources	Water quality should be added as an outstandingly remarkable values given intensive logging of nearby private lands and the value of safeguarding water quality for the entirety of the watershed.	Water quality and free-flowing condition are intrinsic river values and given the same statutory protections under the Wild and Scenic Rivers Act as outstandingly remarkable values. Like outstandingly remarkable values, water quality and free-flowing condition must be protected or enhanced after designation. Both values are described in detail in the River Values Report: Elkhorn Creek Wild and Scenic River (USDA Forest Service 2021).	No additional action required.

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Number	Resource	Issue and Concern	Response	Action
6	Scenery	<p>The lower recreational segment should be designated as a scenic outstandingly remarkable value.</p> <p>The surrounding landscape of private lands is likely to continue to have a substantial amount of logging marring the adjacent scenery in the region and making the intact and natural river corridor an important scenic value in contrast to the managed logging landscapes adjacent. It is inextricably linked to the scenic values of the upper segment. The plan notes several other comparable river segments with the same type of views in Oregon, but those views are different, and don't have the unique fire effects found in Elkhorn Creek nor adjacent visuals. As the plan notes: "Some elements of the geology will be more visible and views up into the segment will be longer." The following statement regarding the upper segment also applies to the lower: "The scenery would still offer the visitor the opportunity to observe a landscape that appears untouched by modern management processes as it recovers from the fire over time."</p>	<p>Scenery is an outstandingly remarkable value in the wild segment of the Elkhorn Creek Wild and Scenic River. Although there is not a "lower recreational segment" discussed in this environmental assessment or associated documents, we believe that the "lower recreational segment" the commenter discusses is included in the scenic segment of Elkhorn Creek.</p> <p>The scenic segment flows through high, narrow canyons with constrained views of any lands outside the river corridor. It is primarily accessed and viewed from the bridge crossing Elkhorn Creek on Elkhorn Road. Scenery here contains high-quality scenic elements that vary seasonally due to the interplay of light and rushing water.</p> <p>The scenic segment of Elkhorn Creek showcases exemplary scenic elements, combined with an uninterrupted setting. Distracting views of more modified landscapes are not possible in the lower section, but distant views of mountains still frame the view at the top of the corridor. From the bridge, and even walking up the river corridor from the bridge, the scenery would appear as to be the same as before European settlement to the casual observer.</p> <p>The scenic resources of the scenic segment, though high-quality, are not outstandingly remarkable. To be assessed as outstandingly remarkable, a river-related value must be a unique, rare, or exemplary feature that is significant at a comparative regional or national scale. Dictionary definitions of the words "unique" and "rare" indicate that such a value would be one that is a conspicuous example from among several similar values that are themselves uncommon or extraordinary.</p> <p>Within the region of comparison (see figure 4 in the River Values Report: Elkhorn Creek Wild and Scenic River [USDA Forest Service 2021]), there are several segments of the Middle Fork of Hood River, Molalla River, and the North Fork Middle Fork, Willamette River with scenic outstandingly remarkable values. These rivers travel through similar terrain between the mountains and the Willamette Basin; and were formed by similar geological processes. Although the scenery in the scenic segment of Elkhorn Creek was determined to have exemplary features, these are not rare or unique within the region of comparison. Therefore, scenery was not determined to be an outstandingly remarkable value in this area.</p>	No additional action required.

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Number	Resource	Issue and Concern	Response	Action
7	Mining	The mining withdrawal should apply to the full wild corridor, not just 0.25 mile.	The area included in the mineral withdrawal was determined in accordance with the designating legislation for the Opal Creek Scenic Recreation Area (Public Law 104-333 section 1023(d)(7)(ii)) and the Wild and Scenic Rivers Act (section 9(a)(iii)). Changes to the area of mineral withdrawal as a result of wild and scenic river designation are not at the discretion of the river-administering agencies (Wild and Scenic Rivers Act section 9(a)).	This topic is addressed in the Lands and Special Uses: Mineral Rights section of the comprehensive river management plan (page 17). No additional actions are required.
8	Botany	In the EA, page 29, in the Framework for Future Development section the EA states, "While it will take at least 200 years to reach old-growth forest conditions,...". While it may take a long time, old-growth characteristics and old-growth status will take less than 200 years. After 80 years we hope to see old-growth characteristics and after 120 years we would hope to see a functioning old-growth forest.	<p>Old-growth forests are dynamic systems distinguished by old trees and related structural attributes. Old-growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics, which may include tree size, accumulations of large dead woody material, number of canopy layers, species composition, and ecosystem function (USDA Forest Service 2023).</p> <p>The Northwest Forest Plan classifies forests based on an old-growth structure index using two age thresholds: greater than 80 years and greater than 200 years. These ages represent when forests in this region commonly attain the stand structure associated with late-successional forests (greater than 80 years) and old-growth forests (greater than 200 years) (Davis et al. 2022).</p> <p>Although these definitions were used in this environmental assessment, a universal definition of either old-growth or mature forests is difficult to create because tree age, size, and carbon storage capacity differ dramatically across old-growth and mature forest types depending on species, local ecosystems, site conditions, and more. Despite these challenges, a common understanding of which forests are old-growth or mature, and the extent of these forests on lands managed by the Bureau of Land Management and Forest Service, is the foundation for assessing the status, condition, and restoration needs to mitigate the effects of climate change (USDA Forest Service 2023).</p>	No additional action required.

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Number	Resource	Issue and Concern	Response	Action
9	Boundary	Change to corridor boundary: We support the proposed addition. However, we suggest altering which acres are dropped. We recommend moving the subtraction to be the private lands on the south side of the river adjacent to Bureau of Land Management lands. These lands are less likely to support the outstandingly remarkable values than the Bureau of Land Management lands proposed to be dropped on the north side of the river given that private lands tend to be managed much more aggressively and would not be able to contribute to the outstandingly remarkable values as well as the Bureau of Land Management lands would.	<p>The Wild and Scenic Rivers Act section 3(b) requires the administering agency to establish detailed river corridor boundaries with an average of not more than 320 acres per river mile and to prepare a comprehensive river management plan for those areas. The Elkhorn Creek Wild and Scenic River's designating legislation (Public Law 104-333 section 1023(h)(B)) further states that notwithstanding section 3(b) of the Wild and Scenic Rivers Act, the lateral boundaries of both the wild and scenic river area along Elkhorn 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.</p> <p>The final boundaries modify the interim boundaries to include additional National Forest System land in the upper reaches of the watershed for additional protection of fish species and habitat as well as water quality. Other minor modifications adjust the boundaries slightly to follow the ridge line and incorporate additional acres within the watershed. The final boundaries average approximately 589 acres per river mile. Outstandingly remarkable values vary by segment and were determined through an interdisciplinary analysis process.</p> <p>The map provided on the project website titled "20230309ElkhornBoundaryBdyCompare.pdf" shows the adjustments made to create the final boundaries. These adjustments included the addition of Forest Service lands on the eastern boundary and the subtraction of private, state, and Bureau of Land Management (BLM) managed lands on the western end of the project area. These adjustments remove some of the private lands on the south side of the river as the commenter suggests, although there were no BLM lands added to the final boundary on the northern side of the river. The planning team determined that the final boundaries would best protect and enhance the outstandingly remarkable values of Elkhorn Creek.</p>	No additional action required.

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