Washington Outstanding Resource Waters Nominations

Request to the Washington State Department of Ecology for Designation of the Cascade River, Green River, and Napeequa River as Outstanding Resource Waters Under WAC 173-201A-330(2)

Submitted on June 24, 2021, by:
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OUTSTANDING RESOURCE WATERS OVERVIEW

The Pew Charitable Trusts, American Rivers, American Whitewater, Cascade Forest Conservancy, Trout Unlimited, Washington Wild, and the Wild Salmon Center request that the Washington Department of Ecology (Ecology) designate the Cascade, Green (Mount St. Helens), and Napeequa Rivers as Tier III(A) Outstanding Resource Waters (“ORWs”) under WAC 173-201A-330. We also nominate these rivers, in the alternative, as Tier III(B) ORWs. Maps of the nominated reaches are included as an appendix. We intend for each of the three nominations to stand on its own merits.

These three rivers fulfill several of the regulatory criteria for ORW designation. Under Ecology’s regulations, WAC 173-201A-330(1), one or more of the eligibility requirements below must be met for a water body to be eligible as an ORW:

(a) The water is in a relatively pristine condition (largely absent human sources of degradation) or possesses exceptional water quality, and also occurs in federal and state parks, monuments, preserves, wildlife refuges, wilderness areas, marine sanctuaries, estuarine research reserves, or wild and scenic rivers;

(b) The water has unique aquatic habitat types (for example, peat bogs) that by conventional water quality parameters (such as dissolved oxygen, temperature, or sediment) are not considered high quality, but that are unique and regionally rare examples of their kind;

(c) The water has both high water quality and regionally unique recreational value;

(d) The water is of exceptional statewide ecological significance; or

(e) The water has cold water thermal refuges critical to the long-term protection of aquatic species. For this type of outstanding resource water, the nondegradation protection would apply only to temperature and dissolved oxygen.

A member of the public may submit a written nomination to Ecology with “sufficient information to show how the water body meets the appropriate conditions identified in [the regulation].” WAC 173-201A-330(2). Within 60 days, Ecology must respond with a decision on the nominated water’s eligibility based on the above factors. WAC 173-201A-330(3).

Staff from the groups listed above have reached out to numerous tribal representatives, environmental, conservation, and recreation organizations, state and local elected leaders, watershed associations, and local landowners regarding each of these rivers’ ORW nominations. This initial outreach has resulted in productive conversations, and we look forward to continuing and expanding these conversations as the nomination process continues.
I. CASCADE RIVER

For designation as a Tier III(A) outstanding resource water, we nominate the Cascade River, from the headwaters of its three forks to the boundary between Mt. Baker-Snoqualmie National Forest and Washington State Department of Natural Resources land, including all named and unnamed tributaries, wetlands, and intermittent and perennial streams (collectively “tributaries”) in those reaches. The Cascade River and named tributaries, which are included in this nomination, comprise approximately 149.8 miles of streams. This total does not include unnamed tributaries, wetlands, or intermittent or perennial streams, but these are also included in this nomination.

A. Background

The Wild and Scenic Cascade River flows through one of the most scenic parts of the state: the heart of the North Cascades. It forms from the North, Middle, and South forks of the Cascade River. The North Fork begins at Cascade Pass, the Middle Fork at Middle Cascade Glacier, and the South Fork at South Cascade Lake. The Cascade flows generally northwest, then west, until it joins the Skagit River at the town of Marblemount. The river basin is located entirely in Skagit County.
The Swinomish, Upper Skagit, and Sauk-Suiattle Tribes have historically inhabited the land near the Cascade.¹ The Sauk-Suiattle Tribe fishes, hunts, and gathers food and medicines throughout the area.²

In 1978, Congress designated the Cascade’s entire mainstem and the lower reaches of the North and South Forks as “scenic” as part of the Skagit Wild and Scenic River System.³ The nominated reaches of the Cascade and its tributaries occur entirely within wilderness, National Park, or national forest lands. Of those national forest lands, most are Inventoried Roadless Areas.⁴ Impactful land uses are thus largely restricted in each of these areas.

The nominated reaches of the Cascade have several substantial tributaries, including Sibley Creek, Found Creek, Kindy Creek, Sonny Boy Creek, and others. All of these share the attributes that make the Cascade an outstanding resource water.

The lower reaches of the Cascade flow through private land and state land managed by the Department of Natural Resources. This nomination does not seek designation of this reach as an ORW.

The Cascade River’s Wild and Scenic River designation provides some protection for the mainstem and lower reaches of the North and South Fork, by providing a tool for managing activities within a quarter mile of those reaches’ ordinary high water marks. But it does not protect the undesignated parts of the basin: the Middle Fork or the upper reaches of the North and South Fork, and all tributaries. Moreover, Wild and Scenic status by itself does not provide the same water-quality-based protections as an ORW designation.⁵ With ORW designation, Ecology would grant the nominated reaches of the Cascade and its tributaries the highest level of water quality-based protection under the state Water Pollution Control Act, Ch. 90.48 RCW, and Ecology’s antidegradation program.

B. The Cascade River Meets Several ORW Conditions

Because the nominated reaches of the Cascade and its tributaries are pristine and located in protected areas; have both high water quality and regionally unique recreational value; and

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⁴ Most of the upper mainstem is along FS land that is classified IRA. About half of this land (mainly on the north side of the river) is categorized “IRA, does not allow road construction & reconstruction,” while the other half (on south side) is classified “IRA, allows road construction and reconstruction.”
⁵ A 2018 paper found that nearly three quarters of the miles of assessed wild and scenic rivers, and at least 44 percent of all wild and scenic rivers, are “impaired” under the Clean Water Act. Interagency Wild and Scenic Rivers Coordinating Council, Evaluation of State Water Quality Assessments and the National Wild and Scenic Rivers System (Oct. 2018).
have statewide ecological significance, the Cascade is an excellent candidate for eligibility under ORW conditions (a), (c), and (d) under WAC 173-201A-330(1):

(a) The water is in a relatively pristine condition (largely absent human sources of degradation) or possesses exceptional water quality, and also occurs in federal and state parks, monuments, preserves, wildlife refuges, wilderness areas, marine sanctuaries, estuarine research reserves, or wild and scenic rivers; . . .

(c) The water has both high water quality and regionally unique recreational value; [and]

(d) The water is of exceptional statewide ecological significance.

1. Water Quality and Pristine Condition

The nominated reaches of the Cascade River are pristine, which the regulation defines as “largely absent human sources of degradation.”\(^{6}\) Almost unique among rivers in the Skagit basin, and in contrast to logging impacts on those rivers, “[t]here has been little riparian degradation in the Cascade River.”\(^{7}\) There has also been no known hydromodification in the upper Cascade.\(^{8}\)

There are no permitted point sources or outfalls above the mouth of the Cascade at Marblemount. This indicates a lack of point source pollution, consistent with the protected status of the adjacent lands.\(^{9}\) There are also no nearby mineral rights or other surface rights, nor any hazardous sites.\(^{10}\) The only development near the nominated reaches of the Cascade is Mineral Park Campground. Finally, the Forest Service’s forestry mapping tool shows no timber harvests on national forest land in the Cascade Basin.\(^{11}\)

Limited water quality data is available for the Cascade. Ecology has not issued a 305(b) report as part of a water quality assessment for the river. Nor has Ecology listed the river as impaired or

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\(^{6}\) WAC 173-201A-330(1)(a).


\(^{8}\) Id. at 63.


\(^{11}\) United States Forest Service, Forest Management Map and Data Dashboard, https://www.arcgis.com/apps/webappviewer/index.html?id=100f81e3161d4cf19175e1c3815f7280 (last accessed April 2021). Private and state-owned lands in the vicinity of the non-nominated lower Cascade reaches are reported to be in active timber production. River South II Property, supra.
threatened for any parameter. The lack of any indications of degraded water quality coupled with the pristine condition of the river above the lowest reach suggest that the Cascade has very high water quality.

2. Public Lands and Protected Areas

The nominated reaches of the Cascade River are located entirely within the types of protected areas described in the regulation, WAC 173-201A-330(1)(a). The nominated reaches of the river and its tributaries flow through National Park, wilderness, and national forest lands that are administratively protected as either Inventoried Roadless Areas or administrative withdrawals under the Northwest Forest Plan. Much of the mainstem river is a federally designated Wild and Scenic River.

The Cascade mainstem and the lower reaches of the North and South forks are designated as “scenic” within the federal Wild and Scenic Rivers system. These parts of the river were included, along with the Sauk and Suiattle Rivers, in the Skagit Wild and Scenic River System when it was designated in 1978. Wild and Scenic River status preserves and protects rivers in their “free-flowing condition.” To qualify, rivers must be free-flowing and possess at least one “outstandingly remarkable value” (ORV). The outstandingly remarkable values for the Skagit system are fish, wildlife, and scenic quality.

Along the North Fork, Wild and Scenic designation ends at the boundary of North Cascades National Park. The remainder of the North Fork is in North Cascades National Park. Similarly, for the South Fork, Wild and Scenic designation ends at the boundary of Glacier Peak Wilderness. The remainder of the South Fork, and the entire Middle Fork, are in Glacier Peak Wilderness.

In addition to their Wild and Scenic status, the lower North and South Forks and upper reaches of the mainstem flow through the Mt. Baker-Snoqualmie National Forest. Within the National Forest, most of the lands adjacent to the river are part of the Glacier Peak Roadless Area and the Hidden Lake Roadless Area.

The Cascade tributaries, while lacking Wild and Scenic status, also flow through protected areas. Tributaries of the North Fork are located in North Cascades National Park, and tributaries of the South and Middle Forks are located in Glacier Peak Wilderness. Tributaries of the nominated reaches of the mainstem are located in the Mt. Baker-Snoqualmie National Forest, primarily in

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Inventoried Roadless Areas, in Glacier Peak Wilderness (e.g. Sonny Boy Creek, Kindy Creek), and in North Cascades National Park (most of Marble Creek, and upper reach of Monogram Creek).

Finally, the Cascade’s major tributaries (Sibley, Marble, and Kindy Creeks), its North Fork, and part of its South Fork are protected from hydroelectric development under the Northwest Power and Conservation Council’s (NPCC) fish and wildlife program. The NPCC found that these streams contain “fish and wildlife resources of critical importance to the region.”

| Condition (a). | In addition to being pristine and having exceptional water quality, the nominated reaches of the Cascade River and its tributaries “occur[ ] in federal and state parks, monuments, preserves, wildlife refuges, wilderness areas, marine sanctuaries, estuarine research reserves, or wild and scenic rivers.” Ecology should conclude that the Cascade River and its tributaries are eligible under condition (a). |

3. **Unique recreational value**

In addition to its pristine condition and high water quality, the Cascade River has unique recreational value, particularly for boaters.

The Cascade provides one of the best settings in the state for whitewater kayaking. American Whitewater describes the river:

Located just outside of the North Cascades National Park, the Cascade flows through one of the most beautiful areas in the nation. The Cascade River provides some of the best continuous whitewater in the state. While none of the individual drops on the Cascade are overly difficult, the continuous nature of the run makes it suitable for advanced boaters. A high water run on the Cascade provides one of the best class V big water runs in the state. Lower water runs also give paddlers a great, albeit slower, class IV-V run over countless ledges and through numerous boulder gardens.

In addition to its value to boaters, the Cascade is known as a destination to fish for salmon and steelhead, as well as coastal cutthroat and Dolly Varden.

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16 American Whitewater, Cascade 2, [https://www.americanwhitewater.org/content/River/view/river-detail/2077/main](https://www.americanwhitewater.org/content/River/view/river-detail/2077/main).

4. **Statewide ecological significance**

As the most pristine river in the Skagit Basin and a key river for salmon production, the Cascade River has statewide ecological significance.

Part of the reason for the Skagit Wild and Scenic River system’s “scenic” classification is its value as crucial fish habitat.\(^{18}\) The Skagit designation was the first time an entire river system was protected based on the needs of anadromous fish.\(^{19}\) The Skagit River system “contains essential habitat for anadromous salmonids, including several species that are listed as threatened under the Endangered Species Act.”\(^{20}\) It provides habitat for Chinook, chum, coho, sockeye, and pink salmon.\(^{21}\) Chinook salmon are the primary food source for the endangered Southern Resident orca.\(^{22}\) An American Rivers’ report found that the river “is synonymous with winter steelhead and its watershed contains one of the healthiest and important populations of bull trout in the Western U.S.”\(^{23}\)

However, “like the rest of Puget Sound’s rivers, salmon and steelhead populations in the Skagit River are struggling compared to historic returns.”\(^{24}\) This is because aquatic habitat in the Skagit basin as a whole is degraded, mainly due to forestry activities. The Sauk-Suiattle Tribe observed in a 2016 report: “The forestry practices that constitute the primary land use within the basins over the last 150 years have resulted in the degradation of salmon habitat. Spawning and rearing habitat is being degraded by fine sediment from surface erosion and mass wasting due to timber harvest and access roads.”\(^{25}\)

In contrast to the lower Skagit basin, the Cascade subbasin is relatively pristine. With their protected statuses, the upper Cascade and tributaries have not suffered the negative effects of forestry in recent decades. The Cascade instead has relatively cold water and low turbidity,

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\(^{19}\) Id.


\(^{21}\) Stumpf, *supra*.


\(^{23}\) Stumpf, *supra*.

\(^{24}\) Stumpf, *supra*.

\(^{25}\) Sauk-Suiattle Watershed Report, *supra*, at 205.
making it excellent habitat for salmonids. The river and its small tributaries provide “important spawning and rearing opportunities for anadromous salmonids.”

Numerous species of salmon and steelhead are present in the Cascade and its tributaries, according to the WDFW’s Salmonscape database:

Table 1. Salmonid species presence

<table>
<thead>
<tr>
<th>Species</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Chinook (threatened)</td>
<td>Documented spawning in upper mainstem as far as lower South Fork. (Cascade has a wild, unique spring Chinook stock that regularly returns 200-400 fish.)</td>
</tr>
<tr>
<td>Summer Chinook (threatened)</td>
<td>Spawning in lower mainstem.</td>
</tr>
<tr>
<td>Coho (species of concern)</td>
<td>Rearing and spawning in entire mainstem and tributaries; presence in lower South Fork (and upper SF accessible).</td>
</tr>
<tr>
<td>Fall Chum</td>
<td>Rearing in lowermost reach (rest of mainstem, part of SF accessible).</td>
</tr>
<tr>
<td>Winter Steelhead (threatened)</td>
<td>Spawning in mainstem as far as lower South Fork; presence in tributaries (upper SF accessible).</td>
</tr>
<tr>
<td>Summer Steelhead (threatened)</td>
<td>Spawning in center mainstem (and accessible in upper mainstem); presence in tributaries.</td>
</tr>
<tr>
<td>Sockeye</td>
<td>Presence in lower and center mainstem.</td>
</tr>
<tr>
<td>Pink Salmon (odd year)</td>
<td>Spawning in lower and center mainstem (accessible in upper mainstem and SF).</td>
</tr>
<tr>
<td>Bull Trout (threatened)</td>
<td>Rearing in mainstem; spawning in tributaries and SF.</td>
</tr>
</tbody>
</table>

Resident coastal cutthroat trout are also present in the mainstem and South Fork.

According to the NPCC’s fish and wildlife protected areas program, Sibley and Kindy Creeks contain critical anadromous fish resources, Marble Creek contains critical anadromous and resident fish resources, and the North and South Forks contain critical wildlife resources.

The Cascade and its tributaries also support a rich web of terrestrial species. Priority habitat types include, in addition to riverine habitat, freshwater emergent wetland and freshwater

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forested and shrub wetland. The basin is home to old growth forests, northern spotted owl, and marbled murrelet. Numerous other priority species (endangered species and other species of concern) may occur in the basin, including grizzly bear, lynx, and wolverine.

Table 2. Species of Greatest Conservation Need and Priority Habitat Types

<table>
<thead>
<tr>
<th>Reach</th>
<th>Number of SGCN found in and near reach</th>
<th>Priority habitat types found in and near reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Fork Cascade</td>
<td>15</td>
<td>Freshwater Forested/Shrub Wetland; Riverine</td>
</tr>
<tr>
<td>North Fork Cascade</td>
<td>14</td>
<td>Riverine</td>
</tr>
<tr>
<td>Upper mainstem Cascade</td>
<td>17</td>
<td>Freshwater Emergent Wetland; Freshwater Forested/Shrub Wetland; Riverine</td>
</tr>
<tr>
<td>Irene Creek</td>
<td>10</td>
<td>Freshwater Emergent Wetland</td>
</tr>
<tr>
<td>Found Creek</td>
<td>12</td>
<td>Freshwater Emergent Wetland; Freshwater Forested/Shrub Wetland</td>
</tr>
<tr>
<td>Other upper mainstem Cascade tributaries</td>
<td>13</td>
<td>Freshwater Emergent Wetland; Freshwater Forested/Shrub Wetland</td>
</tr>
</tbody>
</table>

30 Priority Habitats and Species on the Web, supra.
31 Washington Wild, supra.
Condition (d). The Cascade River and its tributaries form a pristine riverine ecosystem within one of the state’s most critical river basins for salmonids. Ecology should find that the Cascade and its tributaries are eligible for ORW designation under condition (d), as a water “of exceptional statewide ecological significance.”

C. Conclusion

The Cascade River and its tributaries are an excellent example of an Outstanding Resource Water, and designation would benefit the state’s people, its economy, its wildlife, and its salmon.
II. GREEN RIVER

We also nominate the Green River near Mount St. Helens as a Tier III(A) outstanding resource water, due to its relatively pristine condition, its occurrence in a National Monument, its high water quality and unique recreational value, and its statewide ecological significance. The nominated reaches include the upper reaches of the Green, from its source to the boundary between Gifford Pinchot National Forest and private lands near the Cowlitz County border. The Green River and named tributaries, which are included in this nomination (most notably Miners Creek and Falls Creek), comprise approximately 44.1 miles of streams. This total does not include unnamed tributaries, wetlands, or intermittent or perennial streams, but these are also included in this nomination.

![Green River scene]

Source: Cascade Forest Conservancy

A. Background

The Green River is located in the Cowlitz River Basin, in the Toutle River subbasin. It originates from snowmelt near Spirit Lake on the northeast side of Mount St. Helens and flows 37 miles before joining with the North Fork Toutle River. The nominated section is located in Skamania and Lewis counties. The river flows through land that originally belonged to the Confederated Bands and Tribes of the Yakama Nation and Cowlitz Indian Tribe.

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33 Little, Matt, Cascade Forest Conservancy, Mining Again Threatens Mount St. Helens Area (May 2018), https://cascadeforest.org/mining-again-threatens-mount-st-helens-area-wild-fish-and-habitat/
The Green, like the rest of the Toutle River system, has been shaped by the 1980 eruption of Mount St. Helens. Partly as a result of that eruption—and partly in spite of it—the area boasts outstanding and nationally significant scientific, geologic, recreational, and scenic resources.\textsuperscript{34}

Much of the upper Green is now located in Mount St. Helens National Volcanic Monument, which the U.S. Forest Service administers. The Forest Service purchased other parcels in the Green River Valley with congressional funding through the Land and Water Conservation Fund (LWCF). These lands had been considered for inclusion in the National Monument when the boundary was originally proposed. That purchase was intended to promote recreation and conservation in the area.\textsuperscript{35}

B. The Green River Meets Several ORW Conditions

The nominated reaches of the Green River and its tributaries are pristine and have exceptional water quality and are located in protected areas. They have both high water quality and regionally unique recreational value. And they have statewide ecological significance. The Department should accordingly find the Green eligible for ORW designation under conditions (a), (c), and (d) of WAC 173-201A-330(1):

\begin{itemize}
  \item[(a)] The water is in a relatively pristine condition (largely absent human sources of degradation) or possesses exceptional water quality, and also occurs in federal and state parks, monuments, preserves, wildlife refuges, wilderness areas, marine sanctuaries, estuarine research reserves, or wild and scenic rivers; . . .
  \item[(c)] The water has both high water quality and regionally unique recreational value; [and]
  \item[(d)] The water is of exceptional statewide ecological significance.
\end{itemize}

1. Pristine Condition

Unique among rivers in the Toutle River subbasin, the Green River was spared the most severe impacts from the 1980 eruption of Mount St. Helens.\textsuperscript{36} While the upper reaches of the Green were greatly affected by the eruption, they are pristine in that they are almost entirely undegraded by humans.

There is no extensive development in the Toutle River subbasin.\(^{37}\) (There is only the small community of Toutle, downstream of the Green-North Fork Toutle confluence.) Data on land cover in the Toutle subbasin show that it is the least impacted by human land uses of any part of the Cowlitz Basin. As of 2016, its land cover was 64 percent forest, 31 percent shrub and herbaceous, and just 3 percent developed, and it had the lowest percentages of impervious surface and agricultural land in the Cowlitz Basin—3 percent and 1 percent, respectively.\(^{38}\)

Federal hydropower system effects are not directly significant in the Toutle River subbasin, although hydropower projects affect anadromous species in the Columbia River, estuary, and near shore.\(^{39}\)

The main source of human impacts to the Green is forestry practices.\(^{40}\) These threats include impacts to sediment supply from timber harvests and forest roads; impacts on runoff from timber harvests and forest roads; historical riparian harvests; and riparian and floodplain impacts from forest roads.\(^{41}\) However, these threats are present mainly on the lower Green River, which flows through private timberland, not the upper reach that is part of this nomination. Most of the nominated reach is in the National Monument, where logging is prohibited. Of the area within the national forest outside of the National Monument, no timber harvests have occurred in over two decades and only a small area was logged in the 1990s.\(^{42}\)

2. **Water Quality**

The Green River’s water quality is among the highest in the Toutle River subbasin. Whereas the majority of the basin has “impaired” runoff conditions—a risk of excess sediment supply—due to immature forest stands and high road densities, the upper Green River watershed is the only one assessed as hydrologically functional and functional for riparian processes.\(^{43}\)

The Green has only one § 303(d) category 5 listing, for temperature at a location just downstream of the nominated reach, between Schultz Creek and Tradedollar Creek. Like most streams in the subbasin, the Green likely has high temperature due to the Mount St. Helens eruption, which caused flows of mud and debris that widened stream channels and removed shading vegetation.\(^{44}\) The river is also listed as category 2 for pH.


\(^{39}\) LCFRB Subbasin Plan, supra, at 12.

\(^{40}\) Watershed Management Plan, supra, at 2-17.

\(^{41}\) LCFRB Subbasin Plan, supra, at 75.

\(^{42}\) USFS Forest Management Map and Data Dashboard, https://www.arcgis.com/apps/webappviewer/index.html?id=100f81e3161d4cf19175e1c3815f7280 (last accessed April 2021). The area was logged extensively in the 1980s, however.

\(^{43}\) LCFRB Subbasin Plan, supra, at 27, 46.

\(^{44}\) LCFRB Subbasin Plan, supra, at 27.
An analysis of older water quality data, as part of a 2012 environmental assessment, found the Green to have had generally high quality, with the exception of copper levels likely caused by past mining. In addition, the Green apparently lacks the high suspended sediment and turbidity present in the North Fork Toutle and mainstem Toutle.

As a further reflection of its high water quality, the Green provides drinking water for over 50,000 residents in the towns of Longview, Kelso, and Castle Rock.

3. Public Lands and Protected Areas

The nominated reach of the Green River begins in Mount St. Helens National Volcanic Monument, flows through Gifford Pinchot National Forest, continues through the National Monument, and re-enters national forest land before entering private land near the border between Lewis and Skamania counties. A large area of national forest land near the Green River is part of an Inventoried Roadless Area (Tumwater Roadless Area).

The nominated portion of the Green River is also protected from hydroelectric development under the Northwest Power and Conservation Council’s (NPCC) fish and wildlife program.

Finally, the Nationwide Rivers Inventory found the nominated portions of the Green River possess outstandingly remarkable natural or cultural values and thus are candidates for Wild and Scenic Rivers status. This finding means federal agencies must seek to avoid or mitigate actions that would adversely affect these reaches.

**Condition (a).** The Green River occurs in protected areas in addition to being relatively pristine. The Department should accordingly find it eligible as an outstanding resource water under condition (a).

4. Unique Recreational Value

The Mount St. Helens area is extremely popular for recreation, drawing 500,000 visitors per year. The Green River in particular is a popular destination for scenic viewing and photography,

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46 LCFRB Subbasin Plan, supra, at 27.
47 Volcano Country Rivers, supra.
50 Volcano Country Rivers, supra.
horseback riding, hiking, hunting, and camping.\textsuperscript{51} The area includes the popular Green River horse camp, Goat Mountain Trail, and the Green River Trail, which leads through the “Valley of the Giants,” four miles of ancient trees that remained standing after the eruption.\textsuperscript{52} In its Nationwide Rivers Inventory, the NPS found the nominated portions of the Green possess “outstandingly remarkable” geologic, historic, recreational, and scenic values.\textsuperscript{53}

The Forest Service purchased much of the national forest area near the upper Green with the Land and Water Conservation Fund (LWCF), with the primary purpose of fostering outdoor recreation.\textsuperscript{54}

\begin{center}
\textbf{Condition (c).} In combination with the Green River’s high water quality, the river’s unique recreational value makes it a strong candidate for eligibility under condition (c).
\end{center}

\textbf{5. Statewide Ecological Significance}

The greater Mount St. Helens area, including the Green River, holds significant scientific and ecological value for the study of landscape recovery after a volcanic eruption. The Forest Service has noted that the river’s “regenerating landscapes can have extremely high levels of habitat diversity.”\textsuperscript{55}

In proposing the upper Green for Wild and Scenic status, a coalition of conservation groups explained:

\begin{quote}
The Green River valley is home to some of the most unique ecological features in the country. Patches of ancient forest that survived the eruption are next to areas that were stripped entirely by the blast and its massive lahars. These recovery areas provide unsurpassed opportunities for scientific interpretation of the effects of the eruption and natural restoration processes. They also provide unique habitats for a host of native species, including northern spotted owl and a growing population of elk.\textsuperscript{56}
\end{quote}

As discussed above, the upper Green is pristine in relation to human sources of degradation, and it is the only subwatershed in the Toutle subbasin identified to have functional hydrologic and riparian processes. State DNR maps show two areas of “known rare plants and nonvascular

\textsuperscript{51} Volcano Country Rivers, \textit{supra}.
\textsuperscript{52} Washington Trails Association, Green River,\texttt{https://www.wta.org/go-hiking/hikes/green-river}.
\textsuperscript{53} National Park Service, Rivers – Washington,\texttt{https://www.nps.gov/subjects/rivers/washington.htm}.
\textsuperscript{56} Volcano Country Rivers, \textit{supra}.
species of high conservation value” next to the upper Green.57 These are the only such areas in the northern part of the Toutle River subbasin.58 They also show significant areas of Type A wetlands and areas subject to inundation along the nominated reaches of the upper Green and its tributaries.

The Green provides vital salmon habitat. According to the Northwest Power and Conservation Council’s fish and wildlife protected areas program, the nominated portion of the Green contains critical anadromous and resident fish resources and critical wildlife resources, while Miners Creek contains critical anadromous and resident fish resources.59

A number of factors have degraded the habitat quality of other rivers in the Toutle subbasin so that historically abundant Chinook, winter steelhead, and coho populations had plummeted as of 2010.60 Those factors include agriculture and forestry, channel modifications, competition with hatchery fish, and the eruption of Mount St. Helens.61 In the North Fork Toutle, the Sediment Retention Structure blocks volitional passage just upstream of the confluence with the Green.62

While these factors have also affected the Green, they have done so to a lesser extent than with the mainstem Toutle and its North and South forks. As Chinook re-establish a population in the basin after the 1980 eruption, the Lower Green is the primary location for spawning fall Chinook in the Toutle River subbasin.63

In addition to Chinook, the Green has important current and potential production for winter steelhead and coho, particularly in the middle reaches between Cascade Creek and Elk Creek. “These reaches were spared the severe impacts from the 1980 eruption that most of the Toutle system experienced.”64 The Green is designated as a wild steelhead gene bank.65

Numerous species of salmon and steelhead are present in the Green and its tributaries according to the WDFW’s Salmonscape database:

58 Id.
60 LCFRB Subbasin Plan, supra, at 4.
61 Id.
63 LCFRB Subbasin Plan, supra, at 14-15. Hatchery production accounts for most fall Chinook returning to the Toutle basin.
64 Watershed Management Plan, supra, at 2-17.
Table 1. Salmonid species presence

<table>
<thead>
<tr>
<th>Species</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Chinook</td>
<td>Presumed present for most of run.</td>
</tr>
<tr>
<td>Fall Chinook</td>
<td>Documented spawning in most of run; presumed present in tributaries.</td>
</tr>
<tr>
<td>Coho</td>
<td>Documented spawning in most of run; documented rearing in tributaries.</td>
</tr>
<tr>
<td>Winter Steelhead</td>
<td>Documented spawning in most of run; documented spawning in Devils Creek and Elk Creek and presence in others.</td>
</tr>
<tr>
<td>Summer Steelhead</td>
<td>Documented presence in most of run.</td>
</tr>
</tbody>
</table>

Although the nominated reaches of the Green include a relatively small portion of the reaches where these salmonids are present, protection of the upstream nominated reaches against degradation will be crucial to preserving those runs and the continued recovery of downstream habitat.

The upper Green also supports terrestrial habitat for a number of high-priority habitat types and species. Priority habitat along the upper Green includes freshwater forested and shrub wetland, freshwater emergent wetland, and riverine habitat. In addition to the salmonids listed above, priority species (endangered species and other species of concern) that may be found in or near the upper Green River include resident coastal cutthroat, cutthroat, Rocky Mountain elk (winter range), northern spotted owl, mule and black-tailed deer, and gray wolf.

Table 2. Species of Greatest Conservation Need and Priority Habitat Types

<table>
<thead>
<tr>
<th>Reach</th>
<th>Number of SGCN found in and near reach</th>
<th>Priority habitat types found in and near reach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Green</td>
<td>6</td>
<td>Freshwater Pond; Freshwater Emergent Wetland; Riverine</td>
</tr>
</tbody>
</table>

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66 LCFRB Subbasin Plan, supra, at 32 & Fig. I-6.
67 LCFRB Subbasin Plan, supra, at 22.
69 Id.
Lower Upper Green (Skamania/Lewis border to Skamania/Cowlitz border)  14  Freshwater Emergent Wetland; Riverine

**Condition (d).** Because of the Green River’s unique ecological features, its value for scientific study of the eruption’s effects and restoration natural processes, its relative pristineness within the Toutle subbasin, and its consequent importance for salmonid populations, Ecology should conclude that the upper Green River and its tributaries are eligible as having “exceptional statewide ecological significance” under condition (d).

**C. Conclusion**

The upper Green River and its tributaries are excellent candidates for designation as outstanding resource waters based on their pristine condition and location in protected areas; their high water quality and unique recreational value; and their statewide ecological significance.
Finally, we nominate the Napeequa River for Tier III(A) ORW designation, based on the river’s pristine condition and adjacency to protected lands, its high water quality and recreational value, and its statewide ecological significance. The Napeequa River system spans 16 miles, connecting glacial fed headwaters to the White River and eventually Lake Wenatchee. The Napeequa River and named tributaries, which are included in this nomination, comprise approximately 35 miles of streams. This total does not include unnamed tributaries, wetlands, or intermittent or perennial streams, but these are also included in this nomination. The nomination excludes the lower 1 mile of the river, which flows through private land.

A. Background

The Napeequa River and its tributaries originate on the east side of the Cascades in the Glacier Peak Wilderness. The river supports iconic wildlife, including salmon, directly and indirectly. Sockeye spawn in the river, and the Napeequa’s cool, clean water is a critical input to the White River and Lake Wenatchee, where other salmon species spawn. Lake Wenatchee’s critical role as
a source of recreation, municipal water, and fish habitat is made possible in part by the Napeequa.

The Napeequa cuts through steep walls of glacier peaks on all sides, creating a narrow valley that remains untouched by development and human activity. Only the land along the last mile is privately owned, with a summer camp and a small number of summer homes. That reach is not included in this nomination. The vast majority of the river falls within Glacier Peak Wilderness. For visitors, the Napeequa offers an increasingly rare opportunity for true wilderness and solitude.

B. The Napeequa River Meets Several ORW Conditions

The Napeequa River has qualities to justify listing as an Outstanding Resources Water (ORW) under WAC 173-201A-330(1) under ORW conditions (a), (c), and (d):

(a) The water is in a relatively pristine condition (largely absent human sources of degradation) or possesses exceptional water quality, and also occurs in federal and state parks, monuments, preserves, wildlife refuges, wilderness areas, marine sanctuaries, estuarine research reserves, or wild and scenic rivers; . . .
(c) The water has both high water quality and regionally unique recreational value; [and]
(d) The water is of exceptional statewide ecological significance.

1. Water Quality and Pristine Condition

Water quality data for the Napeequa River is limited. Monitoring data is not present in Ecology’s EIM database, EPA’s Water Quality Standards database, or the USGS Water Information System. However, adjacent monitoring stations suggest the Napeequa has high water quality. The Napeequa River flows into the White River and provides a significant source of the White River’s flow. The White River was sampled extensively at stations above and below the Napeequa. The White River has high levels of dissolved oxygen and low temperature, both indicators of good water quality and habitat.70 There are no known water quality or quantity issues on the White River, suggesting that its source, the Napeequa, also has excellent water quality.71 The absence of issues on the White River, combined with the wilderness nature of the Napeequa, suggests very high water quality.

In addition, although specific temperature data is lacking, the Napeequa is glacier fed and has a relatively short run from the headwaters to salmon spawning habitat. The river is undeveloped and significantly shaded. It thus likely has cold temperatures that contribute to its habitat value.

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2. **Public Lands and Protected Areas**

The vast majority of the Napeequa River falls within Glacier Peak Wilderness. However, land adjacent to the lowest mile of the river, near the confluence with the White River, is privately owned. There is a summer camp and a handful of private homes adjacent to the river at the confluence. The one-mile portion of the river that flows through this area is not part of this nomination. A small segment of the river flows through the Twin Lakes Roadless Area, between the Glacier Peak Wilderness and private lands. That segment is part of this nomination.

The Forest Service, in its 1990 Wenatchee Forest Plan, noted that the Napeequa is eligible for Wild and Scenic designation for its outstanding scenic and geologic values.

The NPS Nationwide Rivers Inventory found that the Napeequa has outstandingly remarkable natural or cultural values and is therefore a candidate for Wild and Scenic Rivers status.

Finally, the Napeequa’s entire run is protected from hydroelectric development under the Northwest Power and Conservation Council’s (NPCC) fish and wildlife program.

**Condition (a).** The Napeequa River is almost entirely within existing wilderness, minimizing potential use conflicts. Together with the river’s pristineness, Ecology should find that this meets condition (a).

3. **Unique Recreational Value**

The Napeequa River is surrounded by mountain peaks and alpine glaciers on both sides. A handful of trails provide access to the river. The scenery has been described as “Shangri-La” and “outstandingly remarkable.” The Forest Service identifies the Napeequa’s scenery and geologic formations as Outstanding Resource Values. The unique scenery draws hikers and mountain climbers. And because the Napeequa is so remote and inaccessible by road, it sees relatively light use—providing recreational users a rare opportunity for solitude. In its Nationwide Rivers Inventory, the NPS found that the Napeequa possesses “outstandingly remarkable” geologic and scenic values.

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74 Nationwide Rivers Inventory, *supra*.
78 Wenatchee National Forest WSR Analysis, *supra*, at E-16.
The last mile of the Napeequa offers more public access with a campground and road access at the confluence of the White and Napeequa rivers. The extensive fishing opportunities on Lake Wenatchee are also supported by the habitat and high quality water provided by the Napeequa River. The Sockeye that spawn in the Napeequa return through Lake Wenatchee, creating a major recreational fishing opportunity.

**Condition (c).** The Napeequa River has substantial recreational value, providing solitude and scenic and wilderness values. Ecology should find that, together with the river’s high water quality, this meets condition (c).

4. **Statewide Ecological Significance**

White River sockeye, one of the strongest sockeye runs in Washington, spawn in the lower reach of the Napeequa. 80 A number of other species use the river, including spring Chinook, cutthroat trout, rainbow trout, and bull trout. 81 The last 1.5 miles of the river, just before the confluence with the White, are listed as critical habitat for threatened bull trout. 82 The river is also noted as a significant sub-watershed for recovery of endangered spring Chinook. 83 A number of salmon and trout species are present in the Napeequa according to WDFW’s Salmonscape database. Additional species are present in the White River and may also use the lower reaches of the Napeequa at the confluence of the White and Napeequa, including Summer Steelhead.

<table>
<thead>
<tr>
<th>Table 1. Salmonid species presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Chinook (threatened)</td>
</tr>
<tr>
<td>Sockeye</td>
</tr>
<tr>
<td>Bull Trout (threatened)</td>
</tr>
<tr>
<td>Kokanee</td>
</tr>
<tr>
<td>Mountain Whitefish</td>
</tr>
<tr>
<td>Westslope Cutthroat</td>
</tr>
<tr>
<td>Rainbow Trout</td>
</tr>
</tbody>
</table>

81 Id.
According to the Northwest Power and Conservation Council’s fish and wildlife protected areas program, the nominated portion of the Napeequa contains critical anadromous fish resources.\textsuperscript{84}

The remote wilderness nature of the entire river valley likely supports notable species, including spotted owl, mule deer, lynx, black bear, gray wolf, mountain goat, and grizzly bear.\textsuperscript{85} The White River, as measured at sites below and above the Napeequa confluence, registers the highest levels of biomass, benthic activity, and nutrients of all major rivers in the area.\textsuperscript{86} The Napeequa, which feeds the White River, shares and supports the White’s ecological value.

Table 2. Species of Greatest Conservation Need and Priority Habitat Types

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</tr>
</thead>
<tbody>
<tr>
<td>Upper mainstem, until the confluence with Twin lakes Creek.</td>
<td>9</td>
<td>Freshwater Emergent Wetland; Freshwater Forested/Shrub Wetland; Talus Slopes; Cliffs/bluffs.</td>
</tr>
<tr>
<td>Lower mainstem, from the confluence with Twin Lakes Creek to the mouth.</td>
<td>14</td>
<td>Freshwater Forested/Shrub Wetland; Cliffs/bluffs.</td>
</tr>
</tbody>
</table>

The Napeequa is also notable for its geologic history and features. Because the Napeequa is carved through a narrow, rugged canyon, a variety of ecosystems coexist. Glaciers, alpine forests, old-growth forests, meadows, wetlands, and river frontage sit side-by-side. The Napeequa’s headwaters are high in the Cascade Mountains. This glacial river will become more critical over time, as climate change drives water temperatures up throughout the watershed, threatening salmon and other fish that rely on cold water.\textsuperscript{87} The Napeequa will play a critical role in maintaining cool water temperatures in the White River and Lake Wenatchee.

\textsuperscript{84} Northwest Power and Conservation Council, Protected Areas Mapper, https://psmfc.maps.arcgis.com/apps/webappviewer/index.html?id=f4a9bf13f2014b259d63c8eb03e1f7af (last accessed June 2021).


Condition (d). The Napeequa River plays a critical role as a source of cold, clean water for in-stream and downstream salmon and trout, meeting condition (d).

C. Conclusion

The Napeequa River is an excellent candidate for ORW designation based on its pristine condition in a wilderness setting, its high water quality and recreational value for hikers and climbers, and its ecological value as a source of cold water for downstream salmon and trout.
APPENDIX
Appendix to Request to the Washington State Department of Ecology for Designation of the Cascade River, Green River, and Napeequa River as Outstanding Resource Waters Under WAC 173-201A-330(2)
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