

4. CUMULATIVE IMPACTS

Chapter 4 assesses the potential for the Project, in combination with other current and reasonably foreseeable future actions (RFFAs) to contribute to cumulative impacts on each of the resources analyzed in Chapter 3.

4.1. ANALYSIS OF CUMULATIVE IMPACTS

Under NEPA, cumulative impacts result from the incremental effects of a project when added to other past, present, and RFFAs. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time, regardless of who undertakes them. The analysis of cumulative impacts helps decision-makers and the public know whether there are incremental changes to a given resource which could, if left unmitigated, reach significant proportions.

HISTORIC CONTEXT AND PAST ACTIONS

Human occupation in the Northwest is believed to have begun following the retreat of glacial ice across the landscape in the Late Pleistocene period. Archaeological sites identified in this region indicate that early precontact culture (before European settlement) was highly mobile and relied heavily upon large game. Between 12,000 years to 7,000 years ago, socio-economies appear to have changed to a foraging strategy that included smaller inland game, aquatic animals, and a variety of plants. Sites from this period are typically encountered on high marine and river terraces. After 5,000 BP, populations appear to become larger and more complex as groups utilized a wider range of resources, including salmon and shellfish, land mammals, and plant resources such as berries, roots, and bulbs (Aqua Terra 2019).

The API is in an area that was traditionally utilized by several Indian groups and bands. At White Salmon, the Chilluckittequaws were known as the Wooksockwilliacums, who were comprised of several bands whom roughly extended from 10 miles below The Dalles west to the White Salmon River. The Chilluckittequaws at Hood River were called Smock-shops by Lewis and Clark and generally lived on the Columbia River. The Columbia River, White Salmon River, and Hood River and their tributaries were fished; and, a variety of plants, vegetables, berries, and nuts were gathered from the shoreline and adjacent uplands by tribes who generally practiced a seasonal round of resource procurement. Generally, family groups would winter in large villages along major waterways and would move to higher elevations during the summer (Aqua Terra 2019).

Several ethnographic villages and place names were recorded within, and in the vicinity of, the API by early ethnographers. Lewis and Clark recorded a number of encampments along the Columbia River with villages at the confluence of the John Day River (near Maryhill Museum), on Miller Island (at the confluence of the Deschutes River), at Celilo Falls, Ten and Five Mile Rapids, and multiple spots along the Bonneville Pool including Fort Rock and the Bad Place. During their travels in October 1805, Lewis and Clark reported observing 14 Indian houses “scattered” on the north bank of the Columbia River above the mouth of the White Salmon River, and in April 1806, on their way back upriver, Lewis and Clark reported a large village consisting of approximately 20 houses spread over several miles (Aqua Terra 2019).

White settlement in the region began with the migration west on the Oregon Trail during the early-1800s, which led to the eventual incorporation of the City of White Salmon in 1907 and the City of Hood River in 1895. White settlement led to the eventual removal of several Indian groups and bands in the region onto designated reservations. Multiple treaties were signed in 1855 between the U.S. government and four federally-recognized tribes with ties to the Columbia River that ceded millions of acres of their lands in the region to the U.S (CRITFC 2020a).

By the 1840s, fur trading, the main industry in the Klickitat area, was in decline and the economic engine that drove the region’s development turned to permanent land settlement and land claims. Industry in the area changed as fur trading was replaced mainly by timber and wheat ranching, as well as fruit orchards, and salmon fishing (Mt. Adams Chamber of Commerce 2019). In the early 1900s, rail service was added along the north and south banks of the Columbia River, allowing farmers and loggers to transport their goods to domestic and international markets. The Hood River Bridge was constructed in 1924 to connect the cities of White Salmon and Hood River, and the vertical lift span was added in 1938 following construction of the Bonneville Dam. The Port purchased the bridge in 1950 and since that time has completed numerous repairs and upgrades to the structure. Supported by rising ownership in the personal automobile in the 1950s and 1960s, SR 14 in Washington and I-84 in Oregon were constructed to provide east-west connections through the Columbia River Gorge.

Since the 1980s, downturns in the logging industry have impacted the economy in Klickitat County, requiring the county to focus on other industries, including sheep and cattle raising, wheat, orchards, viticulture, recreational tourism, and industrial development (Becker 2016). The traditional economy in Skamania County, established in 1854, was salmon harvesting. With the development of industrial canning technology in the 1870s, fishers were able to take vast quantities of salmon to export domestically and internationally. As transportation down the river improved with the canals and locks, logging and milling became profitable and surpassed salmon harvesting as the dominate economic activity in the county. The fishing industry ultimately suffered from over-fishing and from the construction of the Bonneville Dam in the 1930s (Wilma 2006). In addition, dam building along the Columbia River lead to the inundation of numerous traditional tribal fishing grounds behind the dams; taking away the rights of tribes to fish at their usual and accustomed places that were reserved to them by the aforementioned treaties signed in 1855 (CRITFC 2019). Logging and forest products in Washington state have experienced a long, slow decline beginning in the 1930s. In the last years of the twentieth century, the economy shifted away from logging, and tourism became the dominant industry in Skamania County. In Hood River County, beginning in the late 1800s, apple orchards were successfully established and became a significant contributor to the local and regional economy. After a killing freeze struck the orchards in 1919, many farmers converted their apple orchards to pear orchards, and the area is now one of the world’s highest producers of Anjou pears (Hood River County Chamber of Commerce 2019).

Since the 1940s and 1950s, the Port of Klickitat and Port of Hood River have made substantial investments in waterfront development. The Port of Hood River undertook three substantial fill projects along the waterfront to support development of the Hood River Marina and Port Marina Park, to create additional land for light industrial and commercial businesses, and to support the growing recreational and tourism industries in the area. Beginning in the 1990s, the Port of Hood River began focusing on light industrial and recreational development along the Columbia River waterfront. Waterfront parcels continue to be improved and marketed to private developers for light industrial, commercial, and recreational uses (Port of Hood River 2014). These investments continue today at the Bingen Point Business Park, Hood River Marina and Port Marina Park, and the Port Wasco Business Park.

Development within the Columbia River Gorge has also been shaped by the creation of the CRGNSA. In an effort to achieve balanced growth and protect the unique natural and cultural history of the Columbia River Gorge, the CRGNSA was designated by the U.S. Congress and the CRGNSA Act signed into law in 1986. The CRGNSA Act mandates the protection and enhancement of scenic, cultural, natural, and recreational resources within the Columbia River Gorge, spanning 85 miles and 292,500 acres on both sides of the Columbia River.

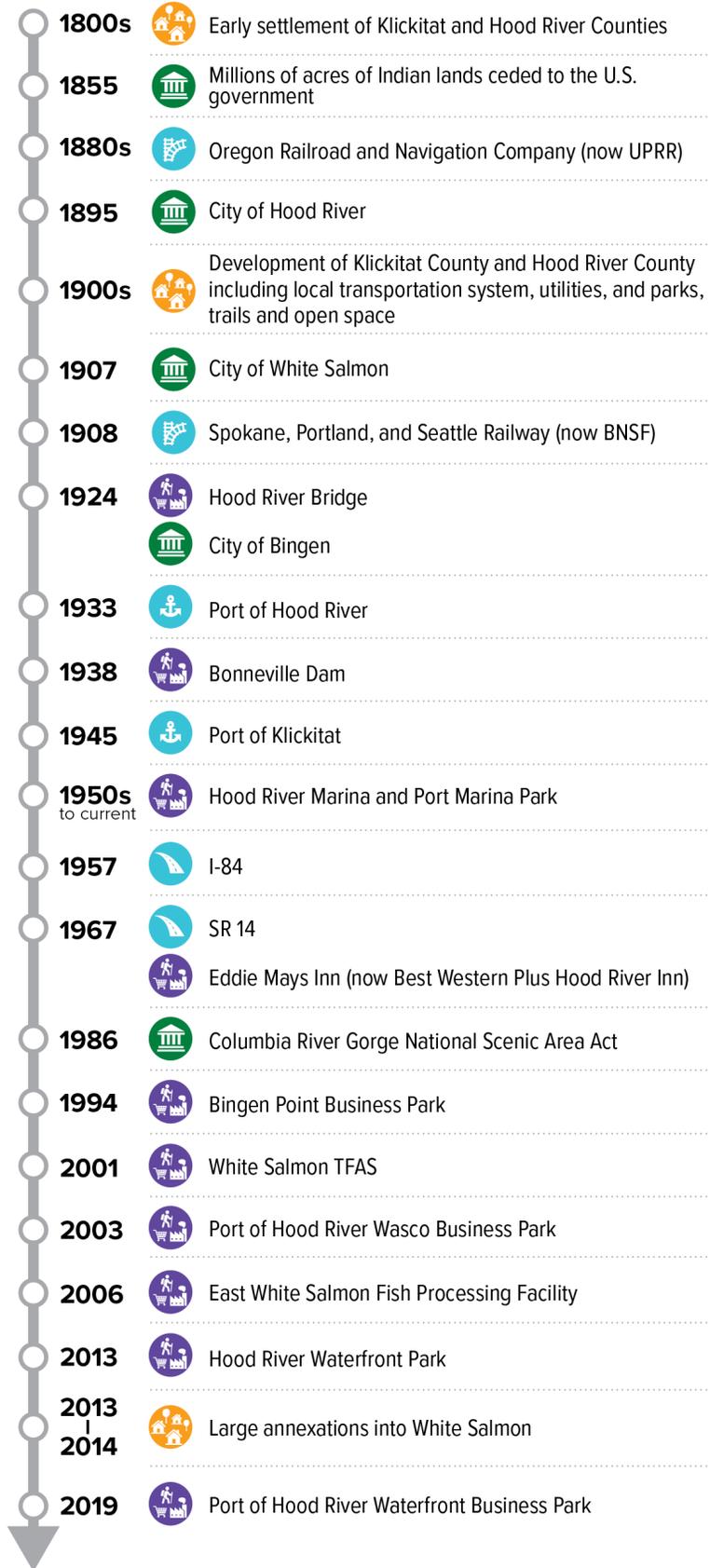
Exhibit 4-1 further illustrates some of the past actions that have shaped the historic context of the API.

OTHER CURRENT AND REASONABLY FORESEEABLE FUTURE ACTIONS

Current actions in the API include the ongoing maintenance of utilities, local and regional transportation systems, and the Columbia River navigation channel.

Exhibit 4-2 identifies projects that comprise other current and RFFAs within the API that could affect environmental and community resources. These actions include public and private development/redevelopment (commercial, residential, recreational, and industrial) and infrastructure projects.

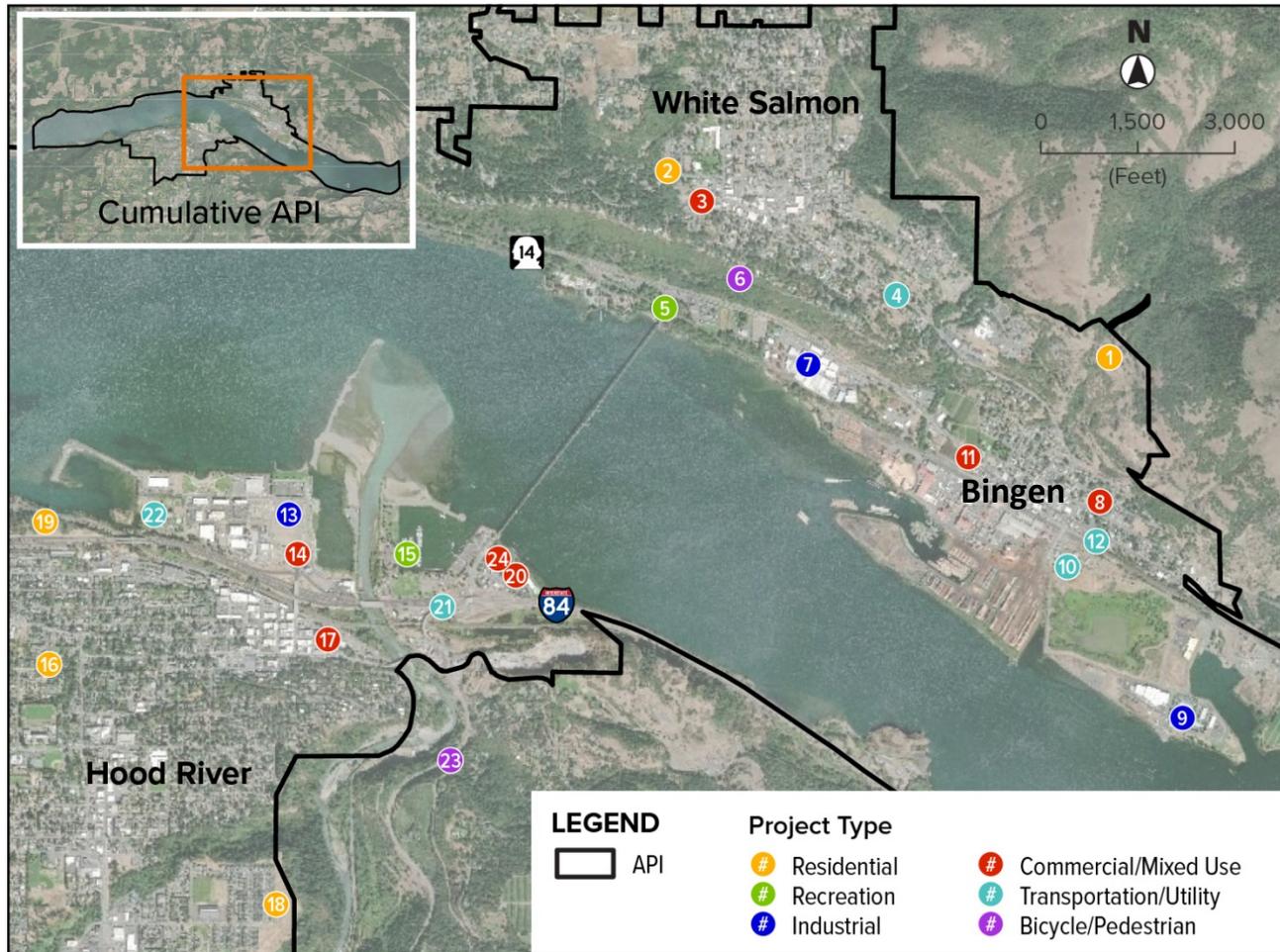
Exhibit 4-1. Timeline of Past Actions in the API



Key

- Neighborhood and community development
- Commercial, industrial and recreational development
- Jurisdiction establishment
- Regional transportation system development
 - Port facility
 - Freight rail line
 - Highway

Exhibit 4-2. Current and Reasonably Foreseeable Future Actions



City of White Salmon

- 1 Dry Creek Planned Unit Development (69 lots)
- 2 SixS Planned Unit Development (40 lots)
- 3 Three Mixed-Use Buildings
- 4 Highway 141 Paving and Water Line Improvements (from NW Garfield Avenue in White Salmon to SR 14 in Bingen)
- 5 Bridge Park
- 6 Bicycle and Pedestrian Corridor (connecting central White Salmon with the Columbia River, via Highway 141 and N. Dock Grade Road)

City of Bingen/Klickitat County

- 7 Underwood Fruit Company Building Replacement
- 8 The Society Hotel
- 9 Bingen Point Business Park Build Out
- 10 Bingen Wastewater Treatment Plant Improvements
- 11 Potential Hotel and Subdivision Development
- 12 Bingen Point Access (roundabout and BNSF undercrossing near SR 14 and Elm Street)

City of Hood River/Port of Hood River/Hood River County

- 13 Light Industrial Subdivision (7 lots)
- 14 Commercial Site Development
- 15 Port of Hood River Marina Capital Improvements and Marina Master Plan Update
- 16 Multi-Family Residential Development (30 dwelling units)
- 17 Mixed-Use Development (commercial development and 40 dwelling units)
- 18 Sieverkropp Subdivision (50 lots)
- 19 Morrison Park Subdivision (65 lots)
- 20 Best Western Hood River Inn – Gorge Room Expansion
- 21 I-84 Exits 63 and 64 Interchange Improvements
- 22 Hood River Wastewater Treatment Plant Upgrades
- 23 Future Pedestrian and Bicycle Trail (from Hood River to Parkdale, along the Hood River)
- 24 New Hotel (80 units – Marketplace building will be demolished and the site will be redeveloped)

4.2. RESULTS OF CUMULATIVE IMPACTS ANALYSIS

AIR QUALITY AND GREENHOUSE GASES

The air quality conditions in the API reflect the developed nature of the API, including residential, commercial, and industrial development and associated vehicular traffic. However, the API is located in an attainment area for all criteria pollutants as identified in the Clean Air Act. GHG emissions generally occur from human activities revolving around transportation, electricity generation, industry, and commercial and residential uses. As the API has been developed over time, GHG emissions generated in the API have increased.

Planned growth and development in the API is expected to cumulatively increase traffic and associated vehicular emissions, as well as cumulative increases in emissions from businesses, homes, and industrial sites. While the replacement bridge would marginally increase traffic capacity by providing wider, safer traffic lanes, none of the build alternatives are expected to induce growth or substantially change transportation demand or traffic patterns in the region. Because traffic patterns would remain similar, the build alternatives would not result in long-term impacts on air quality during operation of the replacement bridge. In addition, U.S. EPA regulations for vehicle engines and fuels are expected to cause MSAT emissions to decline substantially over the next several decades. The Project would not be anticipated to result in negative impacts on air quality under either of the build alternatives; therefore, it would not contribute to cumulative impacts on air quality and no mitigation for cumulative impacts is warranted.

The Project would contribute to minor cumulative impacts to GHG emissions as a result of bridge material production, construction, and yearly routine maintenance. GHG emissions that are not offset would have minor contributions to long-term atmospheric impacts that contribute to climate change. Impacts would be partially offset by Project-specific design features. Each of the build alternatives would provide a shared use path, introducing a non-motorized travel option across the Columbia River and thereby potentially reducing GHG emissions from vehicular trips. The Project would be expected to improve traffic flow on the bridge and at the roundabout at the SR 14 intersection; and construction of the Project would prevent the eventual closure of the existing bridge at the end of its operational life, thus preventing an increase in out of direction travel to cross the Columbia River if there would no longer be a direct, cross-river transportation connection at this location. However, the increase in out of direction travel associated with the closure of the bridge under the No Action Alternative would be offset with projected increases in emissions standards and vehicle fleet mix. As Project GHG emissions from construction of the build alternatives would be minor and be partially offset by design features, no mitigation for cumulative impacts to GHG emissions is warranted.

ENERGY

Increased growth and development have led to the current energy consumption within the API. Transportation accounts for a major portion of the energy consumed in Washington and Oregon. Petroleum (e.g., gasoline, diesel fuel, jet fuel) was the predominant source of transportation energy consumption in Washington and Oregon in 2016, at approximately 98 percent in both states (EIA 2019).

The construction and operation of current projects and RFFAs would increase energy consumption within the API from increased vehicle-miles traveled, vehicle delays, electricity generation, and operation of industrial, commercial, and residential uses, as well as outside of the API from the manufacturing of construction materials and the transport of materials to construction sites. Increases in energy consumption from vehicle-miles traveled are anticipated to be minor as U.S. EPA's national control programs are projected to improve fuel economy and produce cleaner fuels, resulting in lower overall energy consumption from vehicles. The Project and all current projects and RFFAs would be subject to federal, state, and local energy conservation measures.

The direct energy consumption analysis in the Energy Technical Report (Appendix D) reflects future land use, employment, and growth and, therefore, includes cumulative impacts to energy consumption. Operational energy consumption from the replacement bridge (63 mmBtu) would be similar to the existing bridge (50 mmBtu), in addition to the one-time energy requirements of the construction process (959,841 mmBtu); therefore, the Project would have a minimal contribution to cumulative impacts on energy resources. As this contribution is expected to be minor, no mitigation for cumulative impacts is warranted.

FISH AND WILDLIFE

Fish and wildlife conditions in the API reflect the developed nature of the Columbia River and surrounding upland areas. Habitat loss through dam construction, forest practices, and urbanization over the past century have contributed to the degradation of habitat that supports fish and wildlife species in the API. The construction of 11 hydroelectric dams on the Columbia River and 4 dams on the Snake River limit anadromous fish migration and impact resident fish habitat in the API. These dams create impoundments that reduce flow rates, allow settling of sediments, and control water level elevations as compared to historical free-flowing conditions of the river. The controlled release of water from the dams and the removal of upland vegetation contribute to increased water temperatures that impact the water quality and the aquatic environment in the API. For this reason, baseline aquatic habitat conditions within the API are degraded from their natural condition. However, the aquatic habitats within the API do provide suitable habitat for a variety of aquatic species including salmon, steelhead, bull trout, Pacific Eulachon, and North American green sturgeon, as well as a variety of other native and non-native aquatic species.

Upland development also impacts the quantity and quality of terrestrial habitat and wildlife conditions. Development over time within the API has led to terrestrial habitats that consist primarily of either unvegetated impervious areas, managed landscaped areas, or natural habitats which have been fragmented by development and infrastructure. These habitats provide limited habitat function for terrestrial wildlife species. However, some of the forested habitats on the Washington side of the river do provide potentially suitable habitat for terrestrial and avian species, including sensitive species such as western gray squirrel, Washington ground squirrel, California mountain kingsnake, bald eagle, peregrine falcon, Vaux's swift, and western grebe.

Over time, the API is likely to continue to see further development (Exhibit 4-2) that may result in reduction in fish and wildlife habitat as a result of the projected regional growth. The Project would directly impact fish and wildlife through construction and operation of the replacement bridge. Potential impacts to fish and wildlife associated with the Project would include temporary impacts associated with water quality, terrestrial and underwater noise, and temporary habitat disturbance during construction; permanent impacts to terrestrial and aquatic habitats associated with the replacement structures; and beneficial impacts to water quality associated with improvements in stormwater treatment.

Project impacts to fish and wildlife resources would be minimized through compliance with federal, state, and local regulatory requirements; however, the Project could contribute to cumulative adverse impacts to these resources. Most future projects that could adversely affect fish and wildlife would be required to secure permits from federal, state, and local jurisdictions which require that impacts to fish and wildlife habitat be avoided and minimized. Federal permit review requires consultation under the Magnuson-Stevens Act and ESA, which require the implementation of impact avoidance and minimization measures in order to further minimize potential impacts to federally-listed threatened and endangered species and habitats. Compensatory mitigation potentially including restoration would also be required to document achievement of no-net-loss of function consistent with regulatory requirements.

The Project and other current projects and RFFAs would increase the amount of impervious surface area within the API, which could increase the quantity of stormwater runoff to the Columbia River and potentially impact aquatic organisms. All projects would be subject to stormwater regulations; therefore, risks of runoff to the Columbia River would be greatly diminished. Some projects, such as the replacement bridge, would have a net benefit on water quality in the Columbia River by providing stormwater containment and treatment, as well as spill prevention mechanisms where they currently do not exist in the API. While the Project would contribute to incremental cumulative impacts on fish and wildlife resources, the Project, other current projects, and RFFAs would be required to avoid, minimize, and mitigate for impacts to achieve no net loss of fish and wildlife resources. In addition, projects would not be constructed simultaneously, helping to spread potential impacts over time. As such, the Project would have only a minimal contribution to cumulative impacts to fish and wildlife resources and no mitigation for cumulative impacts is warranted.

GEOLOGY AND SOILS

The geologic and soil conditions in the API are a result of prehistoric geologic movement that created the Cascade Mountains and Columbia River Gorge. The soils on the Washington side of the existing bridge are silt loams. These soils are moderately deep and well drained, although when wet they have a slow infiltration rate. Runoff potential is moderate. The soils on the Oregon side are composed of xerofluvents. These soils are generally well drained and permeable.

Current projects and RFFAs could increase the potential for erosion and contribution of sediments to the Columbia River and surrounding areas. The build alternatives would likely have minimal contributions to erosion and sedimentation. The Project, taken together with current projects and RFFAs, would represent a larger potential for erosion and contribution of sediments to the Columbia River and surrounding areas than any of the projects by themselves. These projects, however, would not be constructed simultaneously and any negative impacts would not occur at the same time. In addition, the replacement bridge would be able to better withstand geologic and natural events than the existing bridge. With the implementation of appropriate erosion and sediment control measures and adhering to seismic design standards, the individual impacts of each project could be minimized, and the overall cumulative impacts would be reduced; therefore, no mitigation for cumulative impacts is warranted.

HAZARDOUS MATERIALS

Increased development in the API over time and past industrial development within the API has resulted in the presence of hazardous materials and site contamination. Information obtained from the Southwest Washington RTC identified potential hazardous material located around the former City of Bingen and City of White Salmon docks, which are located on the submerged portions of the Vanguard Nursery property and the White Salmon TFAS. Potential hazardous materials may have resulted from activities associated with the use of these docks in the late 1800s (RTC 2003). In addition to upland sites that have the potential to include hazardous material contamination, the hazardous material conditions in the API are also influenced by the U.S. Navy transport of dismantled nuclear reactor compartments via barge on the Columbia River from Bremerton, Washington (downriver of the API) to the Port of Benton (upriver of the API).

The Project along with other current projects and RFFAs could alter hazardous conditions over time through development and ground disturbing activities that could expose existing contaminated materials. Only minor impacts are anticipated, however, which would be mitigated for through the proper handling and disposal of any hazardous materials during construction. For construction of the Project and other current projects and RFFAs, spill prevention plans would be required to account for unforeseen spills. Removal of the existing bridge and associated equipment, as well as demolition and construction associated with other current projects and RFFAs, may present issues of lead-based paint and/or asbestos exposure. This would be mitigated by pre-removal surveys and assessments and, if necessary, implementation of a hazardous materials containment plan in accordance with regulatory requirements. A potential beneficial impact of the build alternatives, and other current projects and RFFAs, is the removal of hazardous materials that could exist, thus reducing future adverse impacts to human health and the environment. This removal could prevent potential migration of hazardous materials through soil and groundwater over time. In addition, the concrete deck of the build alternatives would prevent vehicle spills from discharging directly into the Columbia River, which occurs with the steel-grated deck of the existing bridge. Therefore, the Project would contribute to a cumulative benefit to hazardous materials conditions in the API; no mitigation for cumulative impacts is warranted.

HISTORIC RESOURCES, ARCHAEOLOGICAL RESOURCES, AND TRADITIONAL CULTURAL PROPERTIES

The APE for cultural resources is wholly located within the cumulative API and includes portions of both Washington and Oregon around the existing bridge. The present cultural resource conditions in the API are a result of the early human history described in Section 4.1, Analysis of Cumulative Impacts, and the subsequent modern development that has altered or may have removed some historic and cultural sites and resources over time. The majority of the APE and API has undergone a high level of ground disturbance from past development.

Archaeological investigations of the area have discovered precontact cultural materials in the APE, as the location is within the traditional territory of several tribal groups and bands. Several other precontact archaeological sites have been recorded within a 1-mile radius of the bridge. In the Washington portion of the APE, these previously recorded cultural resources include precontact archaeological sites and an ethnographic village. In the Oregon portion of the APE, fewer precontact sites have been previously recorded which is likely a result of environmental and historic anthropogenic actions. Of the previously recorded precontact and historic sites, many are located along Hood River and in upland areas adjacent to the APE. In addition, the White Salmon TFAS and the East White Salmon Fish Processing Facility (addressed in the Treaty Fishing Rights section below) are important cultural sites located on the northern bank of the Columbia River near the existing bridge.

As the region develops, changes in the cultural setting and potential impacts on cultural resources may occur. The build alternatives would support the surrounding population growth that may alter cultural resource sites and settings within the region. Because population growth in the region has been relatively modest, significant impacts to cultural resources are not expected. The pace of growth in the region may allow for continued cooperation with tribes and agencies on measures to protect important cultural sites and characteristics.

As development continues in the API, historic resources are likely to be altered and removed as a result of other current projects and RFFAs. Ten historic resources that are listed or are potentially eligible to list on the NRHP are located within the APE. Each build alternative would have no effect on one historic resource, no adverse effects on eight historic resources, and an adverse effect associated with the removal of the existing bridge; therefore, the Project would contribute to adverse cumulative impacts to historic resources. In compliance with Section 106 of the NHPA, FHWA, ODOT and the Port will prepare a mitigation plan to resolve the adverse effects associated with removing the existing bridge. The Oregon SHPO, Washington State DAHP, tribes, Section 106 consulting parties, and public will have an opportunity to provide input on the draft mitigation plan. The final mitigation plan will be published as part of the Programmatic Agreement in the combined Final EIS/ROD.

Apart from the existing bridge, Alternative EC-2 would also impact a small portion of the White Salmon TFAS and Alternative EC-3 would impact a small portion of the East White Salmon Fish Processing Facility. These impacts are associated with construction and right-of-way acquisition and are further described in the Treaty Fishing Rights section below and Chapter 3.5. Impacts are not anticipated to affect the use of the sites. Construction of the build alternatives would generate temporary noise and visual impacts within and beyond the APE that may disturb Native American cultural and ceremonial practices at TCPs within and near the APE.

Under Alternative EC-2, documented archaeological sites would be avoided by the bridge and connecting roadway alignment; however, associated bridge infrastructure could have adverse impacts to an archaeological site (precontact lithic scatter) that has been evaluated and recorded as eligible for listing on the NRHP. The bridge and connecting roadway alignment for Alternative EC-3 and associated bridge infrastructure would likely adversely impact this archaeological site. Based on the results of archaeological surveys identifying these sites, additional investigations are planned for the Project. Further findings will be summarized in the combined Final EIS/ROD.

Current projects and RFFAs, as well as either of the build alternatives, could encounter unknown archaeological resources during ground disturbance and have the potential to contribute to a cumulative impact on archaeological resources. Many of the current projects and RFFAs would include some level of ground disturbance and/or grading for construction. The build alternatives added to other development activities would result in an incremental increase in the risk of encountering or disturbing archaeological resources. However, an Inadvertent Discovery Plan would be prepared for the Project and likely be required for current projects and RFFAs that include ground disturbance, which would identify measures to address any archaeological resources encountered during construction to minimize impacts to these resources.

As mentioned above, Alternative EC-2 could have adverse impacts to an archaeological site and Alternative EC-3 would likely adversely impact this site. Additional investigations are planned for the Project that would delineate site boundaries so impacts can be more specifically evaluated. If a finding of adverse impacts to any archaeological sites are confirmed, then a mitigation plan to resolve adverse impacts associated with the build alternatives will be reported in the combined Final EIS/ROD. Oregon SHPO, Washington State DAHP, and the tribes will be consulted with on the preparation of the mitigation plan. No other current projects and RFFAs have been identified in the vicinity of this site besides Bridge Park; it is unknown if any adverse impacts to archaeological resources would result from this park's development.

LAND USE

The developed areas of the API contain a variety of land uses consisting of residential, commercial, recreational, industrial, and governmental uses, primarily in the cities of White Salmon, Bingen, and Hood River. The existing bridge has existed for over 90 years and development has oriented around this access. As such, land uses on both sides of the river have become dependent on this access for customers, employees, freight, and tourism. The City of Hood River has a higher concentration of existing development within the immediate vicinity of the existing Hood River Bridge than the other jurisdictions. Based on a review of aerial photography, historically, land uses surrounding the existing bridge landings were agricultural in nature. In the 1950s, the City of Hood River side began to develop with more commercial and transportation uses when the I-84 interchange was constructed. Since that time, both sides of the Columbia River have continued to develop with an increasing amount of commercial development and supporting infrastructure.

The replacement bridge would enhance conditions for existing and future land uses by accommodating additional modes of travel between states, increasing access, and improving the movement of goods and services throughout the region. Various projects are planned throughout the API that would continue to urbanize lands in accordance with city and county comprehensive plans. The majority of RFFAs identified within the API are within designated Urban Areas, as development outside Urban Areas is limited by the CRGNSA Management Plan. The conversion of approximately 2.8 acres under Alternative EC-2 and 3.4 acres under Alternative EC-3 represents a conversion of approximately 0.06 percent and 0.07 percent, respectively, of the approximately 4,600 acres of land within the API, which is negligible in the context of the other anticipated land use changes expected with the current projects and RFFAs. Neither of the build alternatives would be expected to cause induced growth in the area. Therefore, the Project would not contribute to cumulative impacts on land uses and development, and no mitigation for cumulative impacts is warranted. Due to the enhanced conditions under the Project, such as improvements to the movement of goods and services and improved pedestrian and bicycle connectivity from the shared use path, the replacement bridge would have a cumulative benefit to land use conditions within the API.

NOISE

The API contains a variety of existing land uses that contribute to the noise environment. The Oregon side of the API has a higher concentration of development within the immediate vicinity of the existing Hood River Bridge than the Washington side. Traffic noise from the existing bridge, SR 14, and I-84, including the hum generated by vehicles crossing the steel grated deck of the existing bridge, are the dominant noise sources in the area, with minor contributions from aircraft and trains along both Washington and Oregon shores. The primary noise receptors are the users of facilities adjacent to the bridge landings on the Washington and Oregon sides, as well as river users. Over time, land use changes, population growth, and increased traffic volumes are likely to occur, which would increase noise levels in the API. The primary noise receptors are the users of facilities adjacent to the bridge landings as well as river users.

Construction activities from the Project and other RFFAs would generate noise during the construction period, which would be temporary in nature, and would be required to meet noise control standards. It is unlikely that other RFFAs near the bridge would be constructed simultaneously, therefore, Project construction noise would unlikely be adding to construction noise from RFFAs. Therefore, the Project construction noise would not likely be a cumulative impact.

A noise analysis was performed for the Project comparing existing roadway noise conditions to predicted roadway noise levels, which accounts for changes in population and employment for the area through 2045. The noise analysis was based on transportation demand forecasting modeling that generates projected traffic volumes and includes the impacts of unmet demand on the transportation system from future population growth, housing, and land use changes. Modeled noise levels for 2045 near the Project are projected to be within 3 dBA of existing noise levels. Three dBA is generally considered the smallest change in sound level that a human can detect. As the amount of noise increase is projected to be negligible under the Project and future conditions in the area, no mitigation for cumulative noise impacts is warranted.

SOCIAL, ECONOMIC, AND ENVIRONMENTAL JUSTICE

The cities of White Salmon, Bingen, and Hood River are economically and socially diverse communities. The local and regional economies within the API were built on agricultural and forest product industries which continue to be a focus of economic growth along with a recent rise in recreational, tourism, service-oriented, and manufacturing sectors. Social diversity within the cities of White Salmon, Bingen, and Hood River include higher concentrations of racial minorities, Hispanic or Latino minorities, low-income households, limited English proficient households, no vehicle households, elderly and children, and disabled residents than the corresponding county averages. In the cities of White Salmon and Bingen, more households depend on Social Security when compared to Washington state as a whole. The City of Bingen's median household incomes are higher than neighboring City of White Salmon and are on par with Klickitat County, and all three geographic areas have substantially lower median household incomes than the state. The proportion of the City of Hood River household incomes that depend on Social Security are lower than Hood River County and Oregon. The City of Hood River median household incomes are lower than Hood River County and lower than the state median.

The economies of Klickitat County and Hood River County can largely be viewed as an integrated regional economy. Although both counties have industrial and commercial enterprises, the region provides a bi-state workforce and access to complimentary businesses that strengthen each county's economy. The Hood River Bridge provides the only direct transportation connection between the cities of White Salmon and Bingen, Washington, and Hood River, Oregon. As a result, the communities and businesses on both sides of the Columbia River have access to a greater number of services, retail businesses, industrial operations, recreation and tourism activities, a shared workforce, and access to alternate routes via

I-84, SR 14, and OR 35, which are particularly important in emergency situations. There is a significant amount of interstate freight transport between Hood River County and Klickitat County via the Hood River Bridge for interrelated industries. For example, logging trucks connect the wood-related industries on either side of the river, and fruit haulers cross over from the growers in the Hood River Valley to the packing and storage facilities at the Underwood Fruit & Warehouse in Bingen. The economic growth experienced in the region has occurred with the bridge playing a key role connecting the economies on both sides of the river.

Further deterioration of the existing bridge could occur, resulting in more restrictive weight limits which could impact interstate truck travel. Deterioration of the existing bridge could also lead to an increase in bridge tolling due to increased maintenance costs. There are a variety of current projects underway and RFFAs in the vicinity of the bridge, including residential, recreational, industrial, environmental, commercial/mixed-use, transportation/utility and bicycle/pedestrian focused projects. These projects would likely benefit community populations through increased efficiencies in facility operations, development of new community hubs, and overall improvements to the API with concern to community livability.

Historical trends in population and community growth would be expected to continue until the existing Hood River Bridge reaches the end of its operational life. At that time, the bridge would be closed to all cross river vehicular traffic. All services that residents seek on opposite sides of the river would require substantial detours resulting in additional time to reach certain destinations and increased costs (e.g., fuel, automobile maintenance). The nearest bridges would require a 40-mile one-way detour for a trip that was previously 1 mile. Vehicles would travel 22 miles to 24 miles one-way and out-of-distance to cross the Columbia River at Cascade Locks (Bridge of the Gods) or The Dalles Bridge (US 197). Access, for residents of both counties, to community resources, such as places of worship, healthcare providers, and public services would be impacted. Native Americans, especially those traveling cross-river to access treaty fishing sites, would need to cross the Columbia River at The Dalles or Cascade Locks. These detours could have a substantial impact on their travel depending on where their trips originate. Cumulative impacts to treaty fishing sites is addressed below in the Treaty Fishing Rights section.

Populations and businesses on the Oregon side would still have connections to I-84 – the only nearby interstate highway. However, local Washington communities would need to travel over 20 miles to alternate bridge crossings of the Columbia River to reach I-84. In addition, it would be assumed that some Washington residents could substitute City of Hood River services with those found in the City of The Dalles, which would be about half the distance of traveling to the City of Hood River via alternate bridges.

The eventual closure of the Hood River Bridge would reduce the employment pool that currently supports industry and business on both sides of the Columbia River in the API. Moreover, the existing bridge closure could dampen opportunities for future economic growth in the region, particularly on the Washington side, due to the loss of this transportation link. In a worst-case scenario, White Salmon and Bingen could experience severe economic changes. These cities would lose direct connection to the only interstate in the area (I-84). As a result, tourists and recreationists coming to Hood River would not be able to cross over to Washington; freight would need to travel 20 miles up or down SR 14 before it could access I-84; new business may be deterred and locate in other areas with better interstate highway access; and White Salmon and Bingen could be bypassed altogether if regional traffic crosses the Columbia River at The Dalles or Cascade Locks bridges. The loss of business activity and jobs would lead to fewer tax revenues being collected. The most substantial being sales tax and business and occupation tax revenues in Washington and business income tax revenues in Oregon.

Direct economic impacts of both build alternatives would include acquisition and conversion of private property to public right-of-way, which is exempt from property taxes. In addition, Alternative EC-3 would also displace businesses, as described in the Land Use Technical Report (Appendix I). If displaced businesses relocate outside of local jurisdictions or choose not to reopen, this would reduce local tax revenues. Changes in parking availability, noise, visual conditions, or access could also impact economic conditions under each of the build alternatives.

Community connectivity would be enhanced through the creation of a new shared use path included in the build alternatives, which would provide a new mode of travel for river crossing as well as the additional benefit of new views of the Columbia River Gorge and enhanced recreational opportunities. The addition of bicycle and pedestrian facilities would create a non-motorized travel option for river crossing, benefiting low-income populations, households without vehicles, and children, and it would provide accessible facilities for the disabled. Improved pedestrian access can positively impact the convenience, visibility, and desirability of surrounding residential and commercial properties and patronage of nearby retail businesses. Additional pedestrian activity could create a synergy of business owners and employees being more interested in relocating where there is convenient pedestrian access to the replacement bridge, which could lead to more dense and mixed land uses around the Klickitat County and Hood River County communities and related increased economic activity.

The build alternatives would provide an improved regional connection between the Klickitat County and Hood River County communities without the width or weight restrictions that currently hinder or divert some freight shipments to other Columbia River crossings, potentially benefiting existing and future industrial and commercial businesses in the area. The replacement bridge would provide wider lanes and a shoulder in each direction for motor vehicles, providing more comfortable travel conditions for drivers and pull-over areas for disabled vehicles. Travel times for transit service providers using the bridge could be expected to improve, potentially benefitting transit-dependent households. The shared use path would increase opportunities for pedestrian and bicyclists to cross the river, which could draw more recreation and tourism business to the cities of White Salmon, Bingen, and Hood River.

In order to finance a replacement bridge, increased bridge tolls would need to be considered. It is likely that any changes to the tolling rates and/or system, including making the system entirely electronic, could introduce barriers and have a disproportionate burden on low-income bridge users. Although the final toll rates and bridge ownership are unknown at this time, four build alternative toll scenarios were developed for the Project and are included in the Social and Economic Technical Report (Appendix M).

As the primary cross-river connector between communities for employees, consumers, trade, and recreationalists, the replacement bridge would support other current projects and RFFAs as well as enhance community cohesion. Through implementation of the mitigation measures described in the Social and Economic Technical Report (Appendix M), including measures to mitigate the impacts of tolling on low-income populations, the Project would not be anticipated to contribute to cumulative impacts on social elements, including population and community growth, or environmental justice populations. Furthermore, creation of a new shared use path would improve pedestrian access and community connectivity, thus contributing to a cumulative benefit on social and environmental justice conditions in the API. Therefore, no mitigation for cumulative impacts to social and environmental justice conditions is warranted.

The replacement bridge, as well as other planned transportation and development projects, would be expected to benefit the regional economy, including job creation and increased spending for other developments. Construction employment would rise substantially as the replacement bridge is constructed. Although this employment increase would be of limited duration, no other planned capital improvement project in the region is as large as the Project. It is anticipated that there would be a short-term cumulative impact on the available labor force, the need to import specialty labor into the region, the potential for other projects to be delayed due to a lack of available labor, and the resultant strain on regional resources to accommodate the imported labor pool.

To reduce the cumulative impact of imported construction workers on available housing resources, the Port could consider requiring the contractor to submit a worker staffing and accommodation plan as either part of their bid proposal or as one of their early submittals after award of contract. No other mitigation to address cumulative impacts to economic conditions is warranted.

PARK AND RECREATION FACILITIES

Recreation-based activities are a substantial component of the regional economy. In general, park and recreation facilities in the API are associated with the Columbia River. The emergence of water-based recreational sports (windsurfing, kayaking, kiteboarding, etc.) have contributed to a shift in the regional economy from lumber and timber industries to tourism and recreation. The establishment of the CRGNSA also played a major role in the preservation of the region's natural resources for economic and recreation purposes. Over the last decade, the Port has developed numerous waterfront sites for recreation that have contributed to the growth of the recreation and tourism industry.

Park and recreation facilities could be affected by actions in the API that result in property acquisitions, access changes, or changes to the setting such as noise, water or air quality, or visual impacts. However, recreation amenities and conditions in the API would likely be enhanced in the reasonably foreseeable future with or without the proposed Project through several planned improvements included in the current projects and RFFAs. These include the development of Bridge Park in the City of White Salmon, Phase 2 of the Waterfront Park in the City of Hood River, and the development of Confluence Business Park in the City of Hood River. In addition, bicycle and pedestrian improvements, such as the construction/extension of other trails in the API (e.g., the Historic Columbia River Highway trail) could improve connectivity and access to park and recreation facilities in the region. Likewise, the Project would be anticipated to improve non-motorized access to park and recreation facilities via the new shared use path with minimal adverse impacts on these facilities. Thus, the Project would contribute to a cumulative benefit to park and recreation facilities; therefore, no mitigation for cumulative impacts is warranted.

TRANSPORTATION

The existing Hood River Bridge provides an essential transportation link between Oregon and Washington, connecting the communities of White Salmon, Bingen, and Hood River. The transportation conditions in the API are a result of steady growth in the region over the last several decades. The existing (2018) average daily traffic for the bridge is approximately 16,500. The bridge has experienced relatively stable traffic growth over the last 15 years. From 2002 to 2017, annual bridge volumes increased from approximately 3 million to 4.4 million annual trips, an average annual linear growth rate of 2.9 percent. In addition to vehicle traffic, the bridge impacts commercial and recreational traffic on the Columbia River. The vertical lift span to the bridge was added in 1938 following an increase in commercial river traffic and the downstream construction of the Bonneville Dam. In 2017, there were 3,435 upbound vessel trips and 3,518 downbound vessel trips, which more than doubled from 2008 (USACE 2017).

Projected traffic volumes in the API would be expected to increase regardless of whether the bridge is replaced or not. Current projects and RFFAs, including new housing, commercial, and industrial development, would contribute to anticipated population growth, which would in turn increase traffic volumes in the API. Roadway projects in the area typically use a common set of future traffic volumes and incorporate RFFAs to analyze the future traffic conditions; thus, the traffic analysis for this Project considers the cumulative impacts of multiple projects in the API. Each build alternative would benefit future transportation conditions. For example, the increased speed limits for the replacement bridge would decrease travel time for motor vehicles. Response times for emergency responders would be expected to improve with wider lanes and shoulders, allowing vehicles to safely pull off on the bridge to make way for emergency response vehicles. Existing heavy vehicle restrictions would be eliminated, allowing for more direct travel and travel time savings for some freight vehicles that are currently prohibited from using the current bridge.

Marine vessels traveling on the Columbia River in the future would likely be similar in type and quantity as existing vessels being used today. During Project construction, vessel navigation would be temporarily affected during construction of the replacement bridge and the removal of the existing bridge; however, vessel passage would be maintained. In the long-term vessel passage under the replacement bridge would improve as a result of a much wider clearance that would resolve the navigation hazards. The vertical clearance of the replacement bridge would be reduced; however, all vessels currently traveling past the Hood River Bridge today would be able to either travel under the replacement bridge or adjust the vessel in order to pass under the bridge.

The replacement bridge would also offer a new shared use path for people who want to walk or bicycle between Oregon and Washington, connecting to existing infrastructure on both sides of the river. Overall, the Project would benefit vehicle, marine, and pedestrian and bicycle travel across the river and would contribute to cumulative transportation benefits for the region. No mitigation for cumulative impacts is warranted.

TREATY FISHING RIGHTS

Tribal fishing communities have been present in the Columbia River Gorge since time immemorial. Fishing, hunting, and gathering were and continue to be central practices of their culture. Specifically, fishing for salmon, steelhead, lamprey, sturgeon, and other species has been a focus of their presence along the Columbia River. Fish caught in the Columbia River provide sustenance and ceremonial resources that were and continue to be of great importance to indigenous tribes on the river (CRITFC 2014). In 1855, a number of tribes with ties to the Columbia River entered into multiple treaties with the U.S. government; becoming four federally-recognized tribes while ceding millions of acres of their lands to the U.S. The tribes reserved lands that now constitute their reservations, as well as the rights to fish at their usual and accustomed places and the rights to hunt, gather, and graze. This included both on and off their reservations, with those rights continuing to the present. The four tribes with those reserved rights are commonly referred to as the Columbia River treaty tribes and include the Warm Springs, the CTUIR, the Yakama Nation, and the Nez Perce Tribe (CRITFC 2020a).

Beginning in 1923, the USACE surveyed the Columbia River and recommended numerous dams to provide navigation, hydropower, flood control, and irrigation (Wilma 2006). A consequence of the subsequent dam building on the Columbia River was that traditional tribal fishing grounds along the Columbia River were inundated behind the dams and fish populations were severely impacted (CTUIR 2019). To account for the tribal fishing grounds that were inundated, the U.S. Congress set out to provide various sites along the river within what is now known as Zone 6; a 147-mile stretch of the river between the Bonneville and McNary dams reserved exclusively for commercial fishing by the Columbia River treaty tribes (CTUIR 2020b). In addition to the fishing sites, fish processing facilities were established along the Columbia River to process and sell fish in a safe and clean environment (USACE 2013). Three treaty fishing sites and one fish processing facility are

located near the existing bridge, including the White Salmon TFAS (bordering the existing bridge to the west), East White Salmon Fish Processing Facility (roughly 0.25 mile east of the existing bridge), Underwood In-Lieu site (roughly 1.5 miles west of the existing bridge), and Stanley Rock TFAS (roughly 1.5 miles east of the existing bridge) (CTUIR 2020c). Another fishing site, owned by the Nez Perce Tribe, is located roughly 1.25 miles west of the existing bridge near the Underwood In-Lieu site adjacent to the White Salmon River.

The four fishing sites and fish processing facility would experience different degrees of direct and/or indirect impacts from the Project that may contribute to cumulative effects. Due to the proximity of the replacement bridge alternatives to the White Salmon TFAS, especially under Alternative EC-2, impacts to this site would be the greatest compared to the other sites. The White Salmon TFAS is a roughly 10-acre site that includes camping areas, a fish cleaning station, floating dock and boat ramp, net repair and storage facilities, and parking. The site also includes a structure for ceremonial activities. Tribal fishers reside at the White Salmon TFAS year-round, with over-lapping short-term and long-term stays at the site.

Construction related impacts of the Project in combination with other current projects and RFFAs would temporarily include increased noise levels. The Project, other current projects, and RFFAs would likely be constructed at different times, possibly with some overlap, so noise impacts would likely occur over time and vary by construction activity types and location. Apart from Bridge Park, proposed under the existing bridge next to the White Salmon TFAS, no other current projects and RFFAs have been identified in the vicinity of the White Salmon TFAS. Increased noise from construction would be heard at the East White Salmon Fish Processing Facility, especially under Alternative EC-3, but would not impact the functionality of the site. Due to the Project and other current projects and RFFAs being concentrated near the existing bridge and the other three fishing sites (Stanley Rock TFAS, Underwood In-Lieu, and the Nez Perce Tribe property) being located in more rural locations along the shoreline, construction noise is not expected to significantly impact these sites.

Construction-related activities would also result in increased particulate matter in the form of fugitive dust, as well as exhaust emissions from material delivery trucks, construction equipment, workers' private vehicles. Any construction work performed would be required to take precautions limiting fugitive dust emissions to not to create a nuisance, as well as limit vehicle emissions. Dust and exhaust emissions from construction projects would be short-term in duration and likely occur at different times and locations. All projects would be required to comply with local and state standards that regulate air, dust, and noise impacts and stipulations to minimize the adverse effects.

The construction of projects near or along vehicle routes that tribal fishers take to sites could result in temporary traffic congestion and delays, as well as minor detours to get around construction areas. While vehicle access to fishing sites and the process facility may be impacted by construction, access would be required to be maintained for construction of the Project and other current projects and RFFAs. As mentioned, projects would likely be constructed at different times, limiting access impacts. Long-term, as the API continues to develop, tribal fishers may experience increased congestion and delays in reaching sites; however, roads would have to meet certain mobility standards and road improvement projects would be planned accordingly to address congestion overtime. The Project would require in-water construction; some of the other current projects and RFFAs would be located near shorelines but would not involve in-water construction. River access to/from the fishing sites would be maintained throughout the duration of construction of the Project with some limitations for safe navigation around construction barges, equipment, and activities. These limitations would not significantly impact fishing vessel navigation to these sites or contribute to cumulative effects on river access to the fishing sites.

Based on the information presented above, cumulative impacts from construction noise, dust, emissions, and vehicle and vessel access from the Project and other current projects and RFFAs to the fishing sites and processing facility are expected to be minor and no mitigation is warranted.

Potential impacts to fish species and habitat from the Project near the fishing sites would be mitigated through compliance with federal, state, and local regulatory ordinances, including employing BMPs prior to and during construction, and by securing permits that require no net loss of fish resources (Section 3.17, Fish and Wildlife). No other in-water projects that could impact fish species or habitats are occurring under current projects or RFFAs.

The Project, in combination with other current projects and RFFAs would contribute to increased impervious surfaces and stormwater runoff potential, which could have a cumulative impact to water quality and aquatic organisms near the fishing sites. Risks of runoff to the river would be greatly diminished by compliance with stormwater regulations and some projects, such as the replacement bridge, may benefit water quality in the Columbia River by providing stormwater containment and treatment, as well as spill prevention mechanisms, where they currently do not exist.

Based on the information presented above, cumulative impacts to fish species and habitat, as well as water quality near the fishing sites from the Project and other current projects and RFFAs are expected to be minor due to mitigation and compliance with regulations; no mitigation is warranted.

Alternative EC-2 would require permanent easements on/over a submerged portion of the White Salmon TFAS parcel for the placement of a bridge pier and overhead bridge deck. Alternative EC-3 would require a permanent easement for highway improvements along SR 14 (Section 3.5, Treaty Fishing Rights). While these easements would not impact the functionality of the sites, they would constitute an encroachment of right-of-way uses on tribal land. Based on the type and location of the other current projects and RFFAs, no other easements or property acquisitions on the treaty fishing sites or processing facility are expected.

Future development near the existing bridge would include pedestrian and bicycle transportation improvements that would increase pedestrian and bicycle access for tribal fishers traveling to sites. However, increased development and densification of uses near the White Salmon TFAS, such as the shared use path on the replacement bridge or Bridge Park on the parcel directly east of the White Salmon TFAS, would increase visibility of this fishing site that may lead to unauthorized access by non-tribal members. A decrease in privacy for ceremonial activities and residents of the site could also occur. These impacts would be mitigated by providing increased signage and fencing or other barriers to this site to reduce unauthorized access, as well as providing screening of the site on the replacement bridge near the shoreline (Section 3.5, Treaty Fishing Rights).

VEGETATION AND WETLANDS

The vegetation and wetland conditions in the API are varied based on the range of current and historical uses that occupy the land. As the API has developed over time, vegetation and wetlands have been reduced and altered, as well as become fragmented. On the Washington side, the shoreline area surrounding the existing bridge landing and extending east through Bingen is largely characterized by commercial and industrial development. The shoreline areas further east and west of the bridge location are primarily vacant, but the vegetation and wetland conditions in these areas have been impacted by the development of SR 14 and the BNSF Railway line. A terraced bank rises from the Columbia River to an elevation of approximately 600 feet. The area north of SR 14 and to the top of the bank is more densely vegetated. The south side of the API is a highly developed urban area. Vegetation is sparse and consists mostly of non-native and ornamental species, with scattered native species.

Dams on the Columbia River constructed to generate hydro-electricity and to control water flow have reduced the presence of wetlands in the API. Construction of the Bonneville Dam and resulting Bonneville Pool behind the dam have flooded historic wetlands, and very few – if any – wetlands were created by the flooding in the API. In addition, the construction of the BNSF Railway and regional highway system, urbanization, and agricultural activities have further impacted wetlands locally and regionally.

Cumulative impacts to vegetation, including shoreline riparian habitat vegetation, and wetlands could result from the Project and other current projects and RFFAs that disturb existing vegetation and wetlands. The Project's contribution to cumulative impacts on vegetation and wetlands would likely be minimal due to the presence of existing development and the existing disturbed nature of the vegetation and wetland communities in the areas directly and indirectly affected by the Project. In addition, the Project and other future development would need to comply with local, state, and/or federal regulations that require protection of wetlands and riparian habitats, thereby minimizing the Project's and other future development's contribution to cumulative impacts to these environments. Impacts would also be minimized through landscape planting standards and the replanting of native vegetation. As such, the Project would only have a minimal contribution to cumulative impacts, and no mitigation for cumulative impacts is warranted.

VISUAL RESOURCES

The visual resources in the API have been shaped by the natural landscapes of the river and mountains, as well as historic industrial working waterfronts on the Washington and Oregon sides of the Columbia River. The mountains on either side of the Columbia River offer expansive views of the Columbia River Gorge, but also define the limits from which the existing Hood River Bridge can be seen. The river and natural elements of the Columbia River Gorge, such as land form and vegetation, are the dominant visual features for most views in the AVE; however, the existing bridge and urban areas of White Salmon, Bingen, and Hood River can be prominent dependent on where the viewer is located in the Columbia River Gorge compared to these urban areas. The green color of the existing bridges steel components helps the bridge blend in visually with the vegetation along the northern shore of the river. The gray concrete piers, structure, and straight lines are consistent with the structures and land uses in the urban areas.

New development anticipated in the API would increase the intensity of uses but is unlikely to result in dramatic changes to the overall visual character of the AVE as CRGNSA and local land use regulations would regulate future land use changes and maintain visual quality in the API. Development would likely continue within the designated Urban Areas at a similar pace, and land use and development in the surrounding areas would continue to be constrained in both intensity and appearance by the CRGNSA Management Plan.

Because the replacement bridge would be of a comparable scale and form of the existing bridge, and materials and architectural detail would be designed so that the bridge is harmonious with the landscape, the Project would not adversely alter landscape views toward the bridge. The Project would not be anticipated to contribute to cumulative impacts on visual quality within the AVE. No mitigation for cumulative impacts is warranted.

WATERWAYS AND WATER QUALITY

The waterways and water quality conditions in the API are a result of increased development on and adjacent to the portion of the Columbia River in the API. The existing Hood River Bridge crosses the main stem of the Columbia River at river mile 169.8. The Oregon side of the river has been heavily modified through marina construction, armoring of the river bank, and construction of beaches and jetties, and retains little if any natural riparian habitat. Since the publishing of the Draft EIS, Ecology, and Oregon DEQ, through their partnership with EPA Region 10, have made efforts to improve water quality for the segment of the Columbia River within the API.

All current projects and RFFAs near the Columbia River, as well as the Project, could increase turbidity and present spill hazards during construction. Each project would contribute minor impacts but taken together they would cumulatively contribute to greater potential impacts on the Columbia River than any of them by themselves. The Project and future development would also increase impervious surfaces in the area, which would increase the quantity of stormwater runoff. The build alternatives, other projects, and RFFAs would be subject to water quality regulations. Compliance with applicable regulations and permits obtained for each project would reduce the risk of water quality degradation during construction. Moreover, the Project would benefit water quality in the long term by containing and treating stormwater and potential spills prior to reaching the Columbia River. As such, the Project would not contribute to adverse cumulative impacts to waterways and water quality; no mitigation for cumulative impacts is warranted.

Additional detail on cumulative impacts is provided in the Cumulative Impacts Technical Report (Appendix C).

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5. PUBLIC INVOLVEMENT, AGENCY COORDINATION, AND TRIBAL CONSULTATION

Chapter 5 provides a summary of public outreach, tribal consultation, and agency coordination activities that have occurred since the Project began, specifically focusing on activities conducted to prepare the Draft EIS and the Supplemental Draft EIS.

BACKGROUND

Since its inception in 1999, planning and development of the build alternatives for the Project have included an active public involvement component as well as agency coordination and tribal consultation. Early planning efforts were guided by a unique collaborative partnership between the FHWA and three advisory committees that included citizens representing varying interests, local elected officials and government employees, and state and federal resource and regulatory agency representatives. Various outreach methods were utilized to collect meaningful information, including public meetings, opinion surveys, stakeholder interviews, media releases, and a Project-based website.

FHWA, WSDOT, ODOT, and Southwest Washington RTC served as the lead agencies for the Draft EIS. As the Draft EIS was being developed, the Project team sought input from the public and local, state, and federal agencies with an interest in the Project. FHWA also initiated tribal consultation consistent with Section 106 of the NHPA and Executive Order 13175 Consultation and Coordination with Indian Tribal Governments.

In 2010, the Bridge TS&L Study for the Project was initiated. The TS&L Study included meetings with a bi-state committee of elected officials and agency staff, a design workshop with stakeholders, several focus groups, and a public open house. Through the study, completed in 2011, a fixed-span, concrete segmental box girder bridge type was identified as the recommended bridge type.

All these activities have fostered joint planning and decision-making throughout the Project to develop design concepts and arrive at a Preliminary Preferred Alternative, which was evaluated in the Draft EIS and refined in the Bridge TS&L Study. Previous public and agency involvement efforts have been instrumental in informing the public involvement and agency and tribal coordination undertaken for the Supplemental Draft EIS.

OUTREACH DURING THE DRAFT EIS

Agency Coordination

Various activities were undertaken to comply with NEPA during the preparation of the Draft EIS. The Federal NEPA lead agency for the Draft EIS was FHWA and cooperating agencies included the USCG, WSDOT, ODOT, and Southwest Washington RTC. An NOI to prepare an EIS for the Project was published in the Federal Register and local newspapers on February 27, 2001. Agencies and the public had an opportunity to identify issues and concerns during a 30-day scoping period and at scoping meetings held during this period.

As a bi-state transportation project, the Project invoked both the Washington NEPA/SEPA /404 Merger and the Oregon Collaborative Environmental and Transportation Agreement to Streamline (CETAS). Both processes were intended to streamline the environmental review process. Committees that comprise federal and state agencies were established to implement these processes. For the Washington NEPA/SEPA/404 Merger process, the then Signatory Advisory Committee (SAC) included representatives from FHWA, USACE, U.S. EPA, USFWS, NOAA Fisheries, WSDOT, WDFW, and Ecology. For the Oregon CETAS process, the committee included the same federal agencies and ODOT, Oregon DEQ, ODFW, Oregon Department of Land Conservation and Development, Oregon DSL, and Oregon SHPO.

Concurrence from the SAC and CETAS agencies on the purpose and need statement and criteria used for selecting the building alternatives was requested and obtained during the alternative identification phase of the Project. Copies of the Purpose and Need statement and Criteria for Alternatives Selection were provided to the agencies. Presentations were made to both groups.

Concurrence on the range of alternatives to evaluate in the Draft EIS was also provided by the SAC and CETAS. Further coordination with these two groups occurred as part of the Draft EIS development and review. All agencies, tribes, and the public had an opportunity to review and comment on the Draft EIS. Substantive comments received on the Draft EIS will be addressed in the Final EIS.

Tribal Consultation

The FHWA initiated tribal consultation for the Draft EIS consistent with Section 106 of the NHPA and with Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments) in December 2000. Consultation letters were sent to four federally-recognized tribes including the Yakama Nation, the Warm Springs, the CTUIR, and the Nez Perce Tribe, requesting information that might be helpful in addressing project impacts on cultural sites and treaty fishing sites in the Project area. Several actions were taken by the Project team and FHWA to gain input and involve the tribes in decisions about the Project, including sending Project newsletters and coordinating through WSDOT and ODOT tribal liaisons.

The Project team worked with the WSDOT Central Region’s tribal liaison to share Project information with and gather input from the Yakama Nation. Project team members met on-site with the Yakama tribal liaison in March 2002, who then met in-person with the Southwest Region tribal coordinator. Yakama tribal representatives from the Cultural Program and Fish and Wildlife Program conducted a field inspection visit in May 2002.

A representative from the BIA attended two or more of the coordination meetings with the Resource and Regulatory Committee.

Public Involvement

A variety of activities were used to involve the public in the Project during the Draft EIS, summarized in Exhibit 5-1 below.

Exhibit 5-1. Draft EIS Public Involvement Activities

Public Involvement Activity	Summary
Advisory Committee Meeting Process	<p>Three committees helped guide the study.</p> <p>Local Advisory Committee: composed of local citizens representing business, environmental, ethnic and other civic groups or constituents. This group reviewed and discussed technical work from the perspective of community leaders with a broad understanding of regional needs. This committee provided recommendations to the Steering Committee regarding the nature of the bridge crossing needs and a link to the Management Team.</p> <p>Steering Committee: composed of elected officials or high-level managers from participating agencies and senior agency staff, including WSDOT and ODOT senior management staff, Southwest Washington Regional Transportation Commission representatives, port commissioners or senior staff, county commissioners, mayors, and county engineers. This committee reviewed information from the Local Advisory Committee, resolved issues where there was an impasse, provided liaison to their respective constituents, received recommendations, and deliberated prior to making final recommendations to the Management Team.</p> <p>Resource Regulatory Committee: composed of staff of state and federal resource and regulatory agencies with an interest and role in assessing the environmental impacts of the Project. This group met periodically to comment on and provide advice about how best to address technical and regulatory issues.</p>

Public Involvement Activity	Summary
Public Meetings	<p>Five public meetings were conducted to inform and involve citizens in the Project.</p> <p>October 2000: Participants reviewed background information about the Project and provided comments on issues related to the study, as well as those related to specific corridors identified for further study.</p> <p>March 8, 2001: This meeting was part of the NEPA scoping process initiated in February 2001. Participants reviewed a preliminary assessment of corridors and types of facilities identified for further study, as well as the criteria used for the initial evaluation.</p> <p>October 11, 2001: Participants reviewed and commented on location and alignment concepts and evaluation methods, received updates of the process, and completed a questionnaire identifying which alternatives should be evaluated in greater detail.</p> <p>February 28, 2002: Participants reviewed and commented on bridge design concepts for the alternatives and participated in a question and answer session with the Project team.</p> <p>May 15, 2003: Participants reviewed a preliminary evaluation of alternatives being evaluated as part of a Draft EIS and a summary of the schedule and process for the Draft EIS.</p>
Stakeholder Interviews	<p>Approximately 25 stakeholder interviews were conducted with a variety of community leaders and interest group representatives. Interviewees were asked to identify key issues, potential evaluation criteria, and comments about specific preliminary crossing corridors.</p>
Project Newsletters	<p>Regular newsletters were used to inform the public of Project status and developments throughout the process. These newsletters included information ranging from the background of the project, Draft EIS process, possible impacts associated with potential corridor crossings, evaluation and screening criteria, tolling information, and results of past public involvement activities and upcoming public involvement activities.</p>
Community Questionnaire	<p>A community questionnaire was developed at the outset of the Project to identify important issues and criteria for evaluating crossing corridors and alternatives. Questionnaires were included in the first Project newsletter, which was distributed as an insert in local newspapers with a circulation of approximately 9,000 people. The questionnaire also was made available on the Project web site and in a variety of community meeting places in Oregon and Washington.</p>
Media Releases	<p>Media notices to local newspapers and radio stations were used to inform the public about the status of the Project and invite them to attend in public and advisory committee meetings.</p>
Community Group Presentations	<p>Presentations were made by Project staff to the Klickitat County Board of County Commissioners, White Salmon Rotary, Columbia River Gorge Windsurfing Association, Hood River Rotary, CRGC, and Skamania County and Klickitat County Transportation Policy committees.</p>
Additional Scoping Comments	<p>A variety of comments were provided by the public via e-mail, mail, and telephone during the scoping phase of the Project.</p>
Website	<p>A web site has been developed and maintained for the Project. Documents, such as technical reports, meeting minutes, and comment summaries of the NEPA scoping meeting/open house and other public meetings were included on the web site.</p>

OUTREACH DURING THE SUPPLEMENTAL DRAFT EIS

Agency Coordination

FHWA, ODOT, and the Port are joint lead agencies for the Supplemental Draft EIS. Numerous agencies and tribes were invited by letter to participate as cooperating or participating agencies/tribes. Both cooperating and participating agencies/tribes have the opportunity to review and comment on Project milestones and activities. The Agency Coordination Plan developed for the Project defines how FHWA, ODOT, and the Port will communicate about the Project with cooperating and participating agencies/tribes during the preparation of the Supplemental Draft EIS and combined Final EIS/ROD.

Lead, cooperating, and participating agencies/tribes and their individual responsibilities are summarized below.

Lead Agencies

FHWA is acting as the lead agency for the NEPA process with the Port and ODOT serving as joint lead agencies. FHWA is leading the EIS as the bridge connects to the Oregon and Washington state highway systems and is included in the National Highway System. The Port is acting as a joint lead as they own the bridge and have received state funding through the Oregon State Legislature for this environmental review phase of the Project. The Port shares in the responsibilities to prepare the Supplemental Draft EIS and Final EIS. ODOT is also acting as a joint lead as they are providing oversight, environmental reviews, and liaison staff for the EIS review process. The responsibilities of the lead agencies are highlighted in Exhibit 5-2.

Exhibit 5-2. Lead Agencies and Responsibilities

Lead Agency	Responsibilities
FHWA	<ul style="list-style-type: none"> • Manage the NEPA coordination process • Prepare the Supplemental Draft EIS and the Final EIS • Prepare technical work products • Provide opportunity for public and cooperating/participating agency involvement
The Port	
ODOT	

Cooperating Agencies

Cooperating agencies are any federal or state agency that has jurisdiction by law or special expertise with respect to any environmental impact involved in the Project. Cooperating agencies consult with the lead agencies on required technical studies, conduct joint field reviews, and express their agency views on subjects within their jurisdiction or expertise. Cooperating agencies for the Project and their responsibilities are listed in Exhibit 5-3.

Exhibit 5-3. Cooperating Agencies and Responsibilities

Cooperating Agency	Responsibilities
USACE	<ul style="list-style-type: none"> • Clean Water Act, Section 404 Permit • Rivers and Harbors Act, Section 408 Navigation Permit
U.S. BIA	<ul style="list-style-type: none"> • Federal-Tribal Trust
USCG	<ul style="list-style-type: none"> • Rivers and Harbors Act, Section 9 Bridge Permit
WSDOT	<ul style="list-style-type: none"> • Technical reviews of select environmental resources • Design review of Project elements in Washington State • Coordination with ODOT, FHWA, and Washington State DAHP • SEPA analysis on WSDOT actions associated with bridge

Participating Agencies and Tribes

Participating agencies are any federal, tribal, state, regional, and local agencies that have an interest in the Project. Participating agencies for the Project and their responsibilities are listed in Exhibit 5-4

Exhibit 5-4. Participating Agencies/Tribes and Responsibilities

Participating Agency	Responsibilities
City of Hood River	• Regional and local transportation, local land use, and local permits
City of White Salmon	• Regional and local transportation, local land use, and local permits
CRGC	• CRGNSA Management Plan
Yakama Nation	• Government-to-government consultation • Section 106 NHPA
CTSI	• Government-to-government consultation • Section 106 NHPA
CTUIR	• Government-to-government consultation • Section 106 NHPA
Warm Springs	• Government-to-government consultation • Section 106 NHPA
Cowlitz Indian Tribe	• Government-to-government consultation • Section 106 NHPA
Hood River County	• Regional and local transportation and local land use
Klickitat County	• Regional and local transportation and local land use
NOAA Fisheries	• Federal ESA • Magnuson-Stevens Act • Marine Mammal Protection Act
NPS	• NHPA • Section 6(f) of the LWCF Act
Nez Perce Tribe	• Government-to-government consultation • Section 106 NHPA
Oregon DSL	• Oregon Removal/Fill Act • Easement for State-Owned Waterway
OPRD	• Federal and state recreation grant programs
Oregon SHPO	• Section 106 NHPA
Oregon State Marine Board	• Recreational waters coordination
Skamania County	• Regional and local transportation and local land use
Southwest Washington RTC	• Regional transportation
Grand Ronde	• Government-to-government consultation • Section 106 NHPA
U.S. EPA	• EIS review
USFWS	• Federal ESA • Fish and Wildlife Coordination Act • MBTA
USFS	• CRGNSA
Washington State DAHP	• Section 106 NHPA
WDFW	• Hydraulic Project Approval
Washington State Recreation and Conservation Office	• Federal and state recreation grant programs

Tribal Consultation

FHWA is conducting government-to-government tribal consultation in coordination with ODOT who has been programmatically delegated authority for Section 106 compliance and consultation. ODOT will continue consultation with the previously consulted four Columbia River treaty tribes (the Yakama Nation, the Warm Springs, the CTUIR, and the Nez Perce Tribe) as well the Cowlitz Indian Tribe, CTSI, and the Confederated Tribes of the Grand Ronde Community of Oregon. In addition, consultation on treaty fishing rights on the Columbia River and the White Salmon TFAS, East White Salmon Fish Processing Facility, Underwood In-Lieu site, and Stanley Rock TFAS has been undertaken by ODOT and FHWA with the Columbia River treaty tribes.

Consultation activities conducted to date include:

- » Re-initiation of government-to-government consultation (August 23, 2019)
- » Environmental methodology memoranda provided to each tribe for review and comment (August 23, 2019)
- » The Project was introduced at regularly scheduled meetings with the Warm Springs, CTUIR, Nez Perce Tribe, CTSI, and Grand Ronde held during summer and fall 2019; in-person meetings were suspended in March 2020 due to the COVID-19 pandemic; virtual meetings will continue with the tribes throughout the remainder of the project with in-person meetings resuming when tribes and agencies authorize
- » Presentations to the CTUIR Cultural Resources Committee (January 21, 2020) and Fish and Wildlife Commission (February 25, 2020)
- » Coordination with the Yakama Nation, Warm Springs, and Nez Perce Tribe to prepare ethnographic studies to describe their respective tribes' culture and customs that pertain to this area of the Columbia River Gorge
- » Archaeological survey report, testing plan, and responses to tribal comments on the environmental methodology memoranda provided to each tribe for review and comment (June 11, 2020)
- » Meeting with the maintenance manager for CRITFC at the White Salmon TFAS for a site tour and information session (July 10, 2020)
- » Monthly Project updates from the Port sent to key elected tribal leaders

To further understand the background and current use of the White Salmon TFAS, East White Salmon Fish Processing Facility, Underwood In-Lieu site, and Stanley Rock TFAS, coordination with the U.S. BIA and CRITFC has also been undertaken by the Project team. The U.S. DOI owns these treaty fishing and processing sites; the BIA is the delegated administrative agency for these lands; and CRITFC is contracted to provide operational management and maintenance of all the Columbia River TFASs as well as in-lieu fishing sites.

Consultation with the tribes has provided key background information about the importance and use of tribal fishing sites and fisheries, as well as concerns about the impacts from the Project to these resources. The activity of fishing and the fisheries that live in and migrate the Columbia River have an integrated, commercial and subsistence importance to the four Columbia River treaty tribes, as well as a ceremonial and religious importance tied to the continuity of tribal culture. Salmon, in particular, have been an integral part of tribal religion, culture, and physical sustenance. Salmon are one of the traditional "First Foods" that are honored at tribal ceremonies (CRITFC 2020e). Salmon and their waters they are contribute to a sense of place; fishing for salmon is just as integral an aspect of tribal culture as consuming or selling it. The activity of fishing helps establish tribal members appreciation for the land, the water, and the fish within these waters, and the annual salmon harvest allows the transfer of these values from generation to generation (CRITFC 2020f). Ceremonial fishing occurs predominately during the spring to provide fish for specific ceremonial purposes or events. Subsistence fishing includes fishing for family or personal consumption and can also be used to barter with other federally-recognized tribes. Fisheries are managed with the intent to have some subsistence fisheries open year-round. Commercial fishing is deeply rooted in tribal cultures as well as providing economic benefits to tribal fishers. Commercial fisheries occur in the fall, winter, summer, and occasionally in mid-to-late spring with most fish that are commercially-harvested by the tribes are caught using gill nets (CRITFC 2014).

From the consultation that has occurred to date, concerns are generally focused around construction impacts to the White Salmon TFAS. These concerns include noise impacts at the site and to in-water fishers, limited road and vessel access, turbidity and under-water noise, night fishing and safety concerns regarding in-water construction materials, sediment build-up, construction debris drifting to the site, and in-water work potentially overlapping with ceremonial and subsistence fishing seasons. Long-term concerns from the Project included permanent easements on the site from the placement of a bridge pier and the overhead bridge deck, garbage being thrown off the new shared use path and drifting to the site, as well as increased visibility of the site from non-tribal members using the shared use path that could lead to unauthorized access of the site and/or decrease privacy for residents, ceremonial activities, and general use of the site. In addition, the existing bridge piers near the site are utilized to tie up boats and gill nets.

Consultation with the tribes are ongoing, including discussions regarding potential impacts to tribal fishing sites, access to the river, fishing activities from the shoreline and in the river, and fisheries. Future in-person consultation between the Project team and the tribes has been delayed indefinitely due to the current COVID-19 pandemic. Tribes have been particularly impacted by the COVID-19 pandemic, which has resulted in tribal government shut-downs and limited access for members to tribal committees. Alternative methods to solicit input from tribes and tribal fishers are being planned as direct contact will not likely be possible while the pandemic continues. These methods include virtual meetings with tribes individually and collectively, as well as engaging tribal fishers directly (non-contact) by placing signage and renderings at tribal fishing sites and requesting feedback. Ultimately, the Project team, specifically the Port, seeks to continue consultation through and beyond the NEPA process and replacement bridge construction to develop a long-term relationship with the tribes. Pertaining to consultation specific to Section 106 compliance, efforts include resumption of FHWA/ODOT meetings with tribes, tribal review and comments on Section 106 documents, tribal research on TCPs in the APE, and future meetings between the Project team and tribes to discuss any necessary mitigation measures.

Public Involvement

Public involvement and community input have been integral to the environmental review of the Project. Public involvement since the re-launch of the Project in 2018 has focused on sharing information about the build alternatives, validating the range of alternatives and the Preliminary Preferred Alternative previously identified in the Draft EIS, gathering meaningful input from stakeholders and environmental justice communities, and informing the Project design. Summaries of these outreach efforts are listed below.

Project Website

The Port has developed and maintained a Project website throughout the duration of the Supplement Draft EIS process. The website provides information on the Project background, bridge history, ways to be involved, EIS Working Group, Project contact information, and Project timeline. The web site can be found at: <https://portofhoodriver.com/bridge/bridge-replacement-project/>.

Stakeholder Interviews

September 18-25, 2018: Before re-launching the Project to complete the NEPA process, members of the Project team interviewed 24 local community members from Washington and Oregon in the Mid-Columbia River Gorge. Community members interviewed represented local and regional government, industry, transit, freight shippers, social services, recreation, small businesses, and emergency responders. The purpose of these interviews was to inform the public engagement process for moving the Project forward. The objectives of the interviews were to:

- » Understand the range of perspectives that exist related to designing and replacing the bridge
- » Identify specific issues of concern or opportunity related to stakeholder engagement and decision-making during the NEPA phase
- » Learn about and accommodate concerns and expectations where possible
- » Identify communities of interest and other key stakeholders the public engagement process needs to reach.

In all the interviews, there was universal agreement on the need to replace the bridge, the close connection between communities on each side of the Columbia River, and the shared regional economy. In about half of the interviews, participants expressed familiarity with elements of the Preferred Alternative (Alternative EC-2) identified in the Draft EIS and TS&L Study. Regardless of the knowledge level, there was concurrence that the Preferred Alternative should be the launch point for the next phase rather than re-opening the alternative development process. Several people said such elements such as the bridge type, location, and bicycle and pedestrian access should be validated before proceeding to ensure conditions and assumptions had not changed.

Community Meeting

December 10, 2018: A community meeting was held to publicly relaunch the Project. The event was intended for all community members interested in the Project or who may be affected by the Project. In total, 56 people attended the meeting. Staff members used display boards, an aerial map, a fact sheet (in English and Spanish), flip charts, and paper survey forms (in English and Spanish) to engage in conversation and solicit input. A short presentation provided an overview of the Project and was followed by a question and answer session. A Spanish speaker attended to translate information as needed. The meeting was advertised through various outlets, including local newspapers, social media, email distribution, and a Project website.

Themes of comments recorded by staff at the community meeting included:

- » Excitement and sense of urgency to move forward
- » Good support for the corridor, alternatives, and selection of Preferred Alternative
- » Focusing on funding a replacement bridge right now
- » Future needs - two vehicle lanes may not be enough considering freight trucks may use a new crossing more often and the potential need for emergency evacuation

Participants also expressed concerns with the following aspects of the Project:

- » Removal of the existing bridge and loss of an historic resource
- » Too much bridge lighting and loss of night sky
- » Environmental impacts
- » Size of structure
- » Toll rates and previous uses of toll revenue



Community members provided input on the Project at the December 2018 meeting.

Survey

December 10, 2018 – January 31, 2019: A 15-question survey was made available online and in paper format in both English and Spanish and was advertised through various mediums. In total, 572 people completed the full questionnaire. Of the completed questionnaires, 40 percent of the respondents stated that they utilized the existing bridge daily, while 34 percent responded as using the bridge weekly. Traveling to recreational or social activities, running errands, visiting family and friends, and traveling to and from work were identified as the main reasons for crossing the existing bridge. Roughly 70 percent of respondents ‘strongly agree’ or ‘agree’ that the Preferred Alternative (Alternative EC-2) was the preferred solution for further study and design refinements.

Environmental Justice Community Outreach Events

January 10, 2019: Project team members attended a Latinos en Acción meeting to diversify outreach activities for the Project and to specifically reach Spanish-speakers in the community. Latinos en Acción is a Hood River-based community group that meets monthly at The Next Door Inc. The Project team outlined the key Project elements, including schedule and the steps required to plan for the replacement bridge. In total, 15 community members attended this meeting. Attendees’ questions ranged from the safety of the replacement bridge design, pedestrian and bicycle access, tolls, and where and when to provide further feedback and questions.

September 11, 2019: Project team members partnered with The Next Door Inc. and Washington Gorge Action Programs to host a focus group to solicit feedback from community members about the Project’s process, design, bicycle and pedestrian facilities, and potential toll structures. The focus group was held at the Washington Gorge Action Programs meeting room in the City of Bingen. Lower income and/or Spanish-speaking community members were recruited to participate in the focus group session. The focus group was facilitated in English and Spanish and Project team members were available to discuss the Project and answer questions from session participants with Spanish support from the staff of The Next Door Inc. Attendees’ responses regarding the shared use path indicated that they would use this facility to recreate, see the river, and take photos. All those in attendance said they would use the path for work trips, especially if the toll was free. Attendees mentioned that, due to multiple trips per day across the bridge, tolling can become expensive. Some mentioned using combined trips and/or avoiding the bridge because of toll costs.



Focus group members discussed the Project’s design, shared use path, and issues related to bridge tolling.

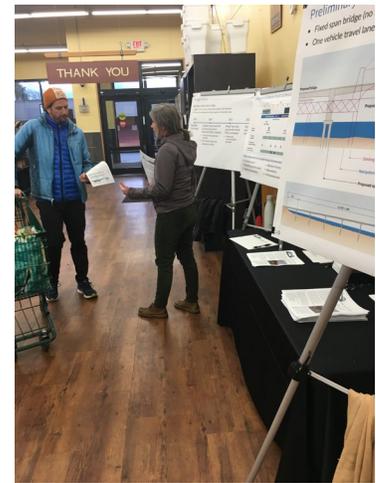
Tabling Events

January 12, 2019: Two tabling events were held in the City of White Salmon and the City of Hood River to introduce and enhance community member awareness to the Project and to drive participation in the survey. The event in the City of White Salmon was held at the Harvest Market and at the Walmart in the City of Hood River. At the events, Project team members hosted informational tables and were on hand to distribute Project fact sheets and surveys, discuss the Project with interested community members, and direct participants to the online survey to provide additional feedback. Three Project boards were displayed at the events and English and Spanish versions of the Project fact sheet and survey were available.

From the brief interactions with community members, the overall level of interest in the Project is high, and many stressed the importance of the bridge to their daily lives and livelihoods. Verbal comments generally included a confirmation that the Project is needed, concern regarding future tolling and funding, and positive response to wider travel lanes and the addition of bike and pedestrian access. Several community members indicated they were concerned that tolls and/or taxes would increase.

September 7, 2019: Two tabling events at the Bingen Huckleberry Festival and at the Hood River Farmers Market were held to solicit feedback on how community members would utilize pedestrian and bicycle facilities on the replacement bridge and how a potential toll increase would impact community members. Notification of the tabling events was made via the Port, Hood River Farmers Market, and Huckleberry Festival social media accounts. Display boards with Project information were displayed and Project team members were on-hand to discuss the Project with interested community members and to direct participants to fill out comment cards to provide additional feedback. Project information was provided in English and Spanish.

Given the style and location of the tabling events, interaction with community members was fairly in-depth, as they were generally interested in discussing the Project and verbally voicing their input on the shared use path and design concepts. The overall level of interest in the Project is high, and many expressed a desire to see the Project move forward to design and construction. Verbal comments generally included a positive response to the Project and the addition of a shared use path, and concerns regarding the timeline of the Project, future tolling and funding. A total of 75 survey/comment forms were collected during the two events. The shared use path survey indicated that most respondents (80 percent) would use the shared use path as both a cyclist and a pedestrian. When asked “Why would you use the shared use path?” the top response was to get to recreation or social activities, following by visiting family and friends, and to run errands or get to medical appointments. General comments on the comment forms addressed the need for accessibility, wind protection for pedestrians/cyclists, limiting light pollution from the bridge, and connections to pedestrian/bicycle trails on both the Oregon and Washington sides.



Tabling events helped inform community members about the Project.

EIS Working Group Meetings

November 8, 2018, February 21, 2019, May 23, 2019, September 12, 2019: The EIS Working Group is a discussion body that helps the Project team conducting the environmental review. The EIS Working Group consists of various governmental and transportation-related agencies and was established to provide a feedback loop to the Project team. These EIS Working Group meetings are hosted by the Port, open to the public, and are advertised on the Project website. Using the available “Translate” tool, the site is available in many languages, including Spanish. EIS Working Group members provide guidance and information to the Project team on key inputs to the analysis and recommendations as the Supplemental Draft EIS is developed.



*Photo source: Hood River News
The EIS Working Group provides key input for the environmental review.*

Supplemental Draft EIS Public Comment Period and Hearing

A 45-day public comment period will be provided upon the public release of the Supplemental Draft EIS to allow for formal comments in writing regarding the design solutions presented in the alternatives, environmental analysis, and identification of a Preferred Alternative. During the public comment period, a public hearing will be held to provide an opportunity for members of the public to provide formal comments orally or in writing. The hearing will be open to all community members and Project team members will provide display boards, aerial maps, fact sheets (English and Spanish), and other material to inform the conversation and solicit input. Project team members will give a presentation providing an overview of the Project and an opportunity for one-on-one question and answer discussions. The hearing and comment period will be advertised through various outlets, including the Project website, email distribution, social media, local newspapers, and the *Federal Register*.

6. SECTION 4(f) ANALYSIS

6.1. INTRODUCTION

Section 4(f) of the U.S. DOT Act of 1966 established a requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites during the development of transportation projects. Park and recreation facilities qualify as Section 4(f) properties when they are publicly owned, open to the public during normal hours of operation, serve recreation activities as a major purpose, and are of national, state, or local significance (e.g., are included in a local master plan). Historic properties must be of national, state, or local significance and listed or eligible for listing on the NRHP to qualify as Section 4(f) properties.

In order for a project to meet the thresholds of a Section 4(f) use of property, it must meet the definition of a “use” in 23 CFR 774.17. A use of Section 4(f) property occurs when land is permanently incorporated into a transportation facility, when there is a temporary occupancy of land that is adverse for preservation purposes, or when there is a constructive use of Section 4(f) property. Constructive uses do not involve incorporation of land of a Section 4(f) property but involve proximity (indirect) impacts that are so great in magnitude that they impair the protected activities, features, or attributes of the Section 4(f) property (23 CFR 774.15).

Section 4(f), codified in 49 U.S.C. §303 and 23 U.S.C. §138, applies to projects that receive funding from or require approval by an agency of the U.S. DOT and is implemented by the FHWA or the Federal Transit Administration (FTA) through the regulation 23 CFR 774. Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife or waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- » There is no prudent and feasible alternative to using that land; and
- » The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use

A detailed analysis demonstrating the above requirements is not required when a transportation use of a Section 4(f) property is *de minimis*. For public parks, recreation areas, or wildlife and waterfowl refuges, that means the use, including measures to minimize harm, such as any avoidance, minimization, mitigation, or enhancement measures, does not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f). For historic sites, a *de minimis* impact is one that results in a determination of "no adverse effect" or "no historic properties affected" under Section 106 of the NHPA.

Likewise, a detailed Section 4(f) evaluation is not required to document a determination that a project would not result in a constructive use.

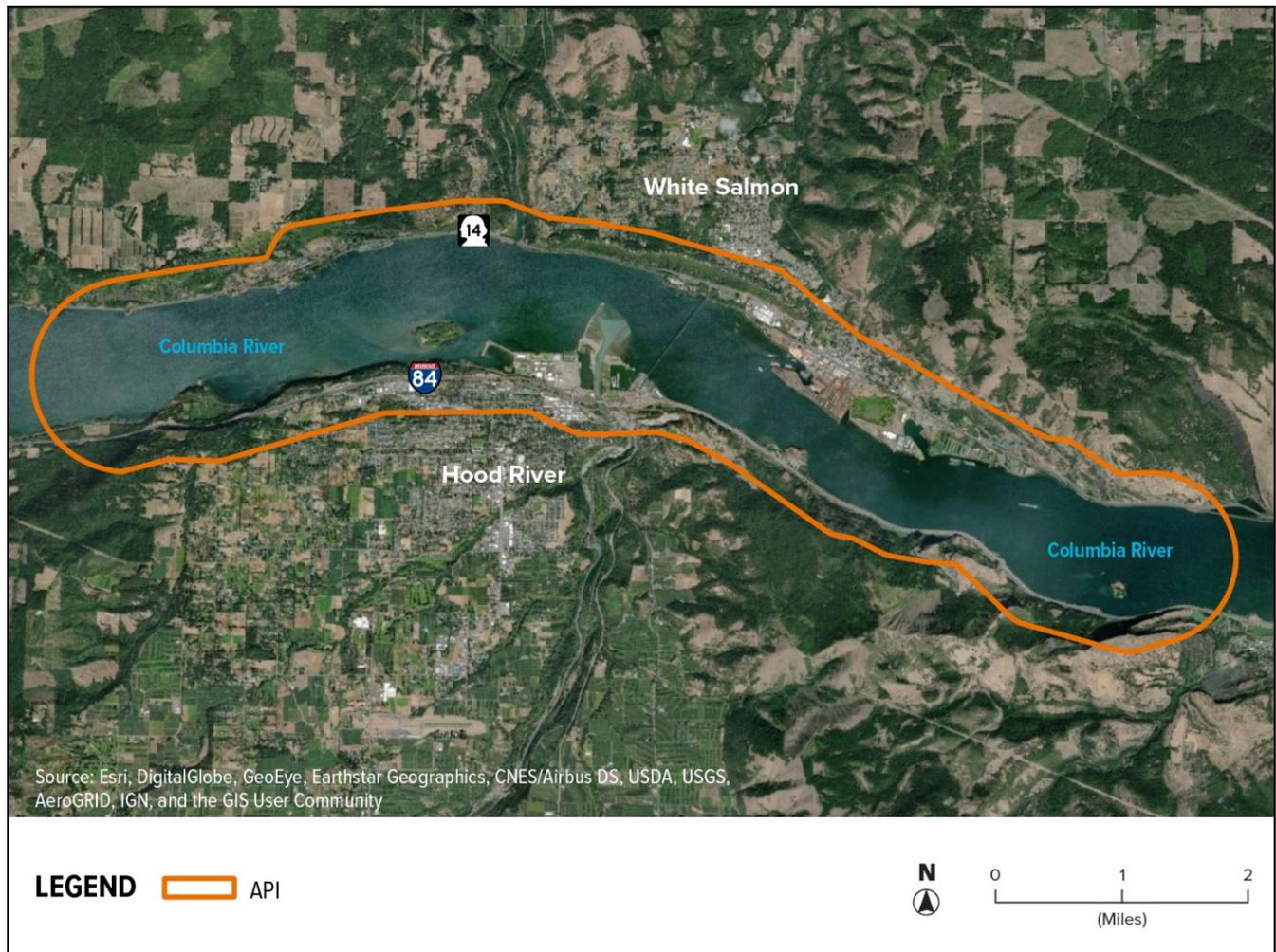
This chapter summarizes the Project’s impacts on properties that are protected under Section 4(f) for which impacts have been identified. Details on other Section 4(f) properties in the Section 4(f) API can be found in the Supplemental Draft EIS, in the Historic Resources Technical Report (Appendix H) and the Park and Recreation Technical Report (Appendix K). A complete project description is provided in Chapter 1, Purpose and Need for Proposed Action, and the project alternatives are detailed in Chapter 2, Alternatives.

6.2. METHODOLOGY

AREA OF POTENTIAL IMPACT

The API for the Section 4(f) analysis is shown below in Exhibit 6-1. The Section 4(f) API encompasses an area approximately 4 miles upstream and downstream of the bridge and ¼-mile north of SR-14 on the Washington side and ¼-mile south of I-84 on the Oregon side to capture park and recreation resources associated with the Columbia River. This API encompasses the area anticipated for direct and indirect impacts to Section 4(f) resources resulting from the Project – encompassing both the Park and Recreation API and the Historic Resources APE.

Exhibit 6-1. Section 4(f) API



REGULATIONS, STANDARDS, AND GUIDELINES

The federal, state, and local regulations, standards, and guidelines that apply to the Project are listed below. The primary change to the practice of evaluating Section 4(f) properties for potential impacts since the Draft EIS results from the joint regulation (23 CFR 774) issued by FHWA and the FTA (and later amended to include Federal Railroad Administration) that updated implementation of Section 4(f), including a provision for *de minimis* impacts.

- » Section 4(f) of the U.S. DOT Act of 1966
- » Section 106 of the NHPA of 1966
- » 23 CFR 774 Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f)) (Revised 2018)
- » FHWA Technical Advisory T 6640.8A: Guidance for Preparing and Processing Environmental and Section 4(f) Documents (1987)
- » FHWA: Section 4(f) Policy Paper (2012)

SOURCES OF EXISTING DATA

Since publication of the Draft EIS there have been some land use changes in the API, including the planning and development of additional publicly owned park and recreation facilities such as the City of Hood River's Waterfront Park (Phase I completed in 2008) and conceptual plans developed in 2018 for "Bridge Park" on Klickitat County-owned land in White Salmon. The list of park and recreation facilities protected under Section 4(f) relies on existing data sources and data collected for the Park and Recreation Technical Report.

The list of historic sites protected under Section 4(f) rely on existing data sources and data collected for the Historic Resources Technical Report.

DATA COLLECTION OR DEVELOPMENT

In addition to the existing data available (described above), data collection and development occurred in collaboration with project partners, agencies, organizations, and project team engineers. See the Historic Resources Technical Report and the Park and Recreation Technical Report for additional details on data collection and development.

IMPACT ANALYSIS TECHNIQUES

Construction Impacts

The analysis of construction impacts on publicly owned park and recreation facilities in the Parks and Recreation Technical Report and on historic resources in the Historic Resources Technical Report were used to determine whether temporary occupancy of any Section 4(f) properties constitutes a use under Section 4(f). Documentation of Section 4(f) temporary occupancy was prepared in accordance with ODOT and FHWA guidance.

Direct Impacts

The analysis of direct impacts on publicly owned park and recreation facilities in the Parks and Recreation Technical Report and on historic resources in the Historic Resources Technical Report were used to determine whether a use would occur under Section 4(f). For those resources with relatively minor impacts, the Section 4(f) *de minimis* determinations were prepared based on ODOT's Section 4(f) *de minimis* impact determination template. The public will have the opportunity to comment on the proposed *de minimis* impact determinations as part of the public hearing and comment period for the Project's Supplemental Draft EIS. The project will obtain written concurrence by the official(s) with jurisdiction for the *de minimis* impact and temporary occupancy determinations. Section 4(f) *de minimis* impact determinations will require the signature of the FHWA—Oregon Division administrator.

Indirect Impacts

The analysis of indirect impacts (proximity impacts) on publicly owned park and recreation facilities in the Parks and Recreation Technical Report and on historic resources in the Historic Resources Technical Report was used to determine whether a constructive use would occur under Section 4(f).

AGENCY COORDINATION

Concurrence on Section 4(f) findings will be obtained from the official with jurisdiction over those resources that would experience a use.

6.3. USE OF SECTION 4(f) PROPERTIES

HISTORIC SITES

As demonstrated in the Historic Resources Technical Report (Appendix H), there are eight historic sites that qualify for protection under Section 4(f). The following section summarizes the use analysis for historic resources that qualify as Section 4(f) properties.

Hood River – White Salmon Bridge

Description of Section 4(f) Resource

The existing Hood River Bridge is a 4,418-foot-long steel truss toll bridge completed in 1924 and substantially modified in 1938. The bridge's center span is a 262-foot riveted steel Pennsylvania-Petit through-truss vertical lift main span, which is a historic modification of the bridge's original center fixed-span to address higher water elevations in the Bonneville Pool (Burrow et al. 2013:94) resulting from dam construction. The steel grate bridge deck provides two narrow travel lanes but no sidewalks or bikeways. The tollbooth, completed in 1965, is located at the bridge's Oregon entrance.

The Hood River Bridge is eligible for the NRHP under Criteria A and C. Under Criterion A, the bridge has statewide significance in the area of transportation as the second oldest Columbia River vehicle crossing between Oregon and Washington and for its association with private bridge development and operation during the early twentieth century. The bridge also has local significance under Criterion C in the area of engineering for the design of its central span, which embodies the distinctive

characteristics of the vertical-lift Pennsylvania-Petit steel through-truss. The period of significance for Criterion A begins in 1924, when the bridge opened, and ends in 1950, when the Oregon Washington Bridge Company, a private entity, transferred ownership and operations of the bridge to the Port, a public entity. The period of significance under Criterion C is 1938, when the bridge was substantially modified by incorporation of the distinctive vertical-lift span.

The bridge retains all aspects of historic integrity: location, design, setting, materials, workmanship, feeling, and association. Although the original bridge was substantially modified in 1938, the purpose of the design modifications was to accommodate higher river levels caused by the pool behind the new Bonneville Dam and the proliferation of larger vessels. The modifications do not diminish the integrity of design but contribute to its significance under Criterion A by conveying the evolution of the bridge in response to historic events. The distinctive vertical-lift span remains in place and reflects the 1938 design, thereby supporting integrity of design under Criterion C.

In accordance with 23 CFR 774.11(e), to qualify for protection as a Section 4(f) property, historic sites must: (1) be of national, state, or local significance and (2) must be on or eligible for listing on the NRHP. The Washington DAHP and the Oregon SHPO have concurred that the existing Hood River Bridge is eligible for listing on the NRHP in the final Section 106 Determination of Eligibility (Appendix H, Historic Resources Technical Report) requiring the bridge be protected as a Section 4(f) property. Historic bridges are eligible for a programmatic Section 4(f) evaluation under 23 CFR 774.11(e); a programmatic determination is being prepared and will be finalized and approved by FHWA prior to issuing the Final EIS.

Section 4(f) Finding and Mitigation

The build alternatives, Alternatives EC-2 and EC-3, would result in the deconstruction and removal of the existing Hood River Bridge after construction of the replacement bridge is complete and all vehicular traffic is rerouted off the existing bridge. Section 4(f) applies to historic transportation facilities when adversely affected by transportation projects. If an action will impair the historic integrity of the bridge either by rehabilitation or demolition, it is considered a use of the historic bridge under Section 4(f) per 23 CFR 774. Consequently, the Project constitutes a Section 4(f) use of the Hood River Bridge under 23 CFR 774. A programmatic determination will be prepared and will be finalized and approved by FHWA prior to issuing the Final EIS.

A mitigation plan will be prepared to address the Project's Section 4(f) use of the Hood River Bridge. Potential mitigation measures will be developed in consultation with the FHWA, ODOT, the Port, and the Project's consulting parties. In addition, the public will have an opportunity to review and comment on mitigation measures during the public review period of the Supplemental Draft EIS. Upon consideration of input, FHWA, ODOT, and the Port will develop a mitigation plan as part of the Project's Programmatic Agreement, which will be published in the combined Final EIS and ROD.

Columbia River Highway National Historic Landmark District

Description of Section 4(f) Resource

The Columbia River Highway's Hood River Loops, a contributing feature of the Columbia River Highway NHL District, lie to the south and east of the Project along the basalt cliffs of the Columbia River Gorge. In 2000, the Secretary of the Interior designated the Columbia River Highway, including the Hood River Loops, as an NHL. Construction of the Columbia River Highway occurred between 1913 and 1922 and the route is notable for the views it provides of waterfalls and streams, fruit orchards, and the Columbia River and for its design features that include multiple bridges, masonry guard walls, and wood guard fences. The Columbia River Highway is significant under NHL Criterion 1 for its exemplary highway design in Twentieth Century America. It is also significant under NHL Criterion 4 for the contributions to the fields of civil engineering and landscape architecture made by its designer, Samuel C. Lancaster, and for being the first scenic highway in the U.S. Today, the remaining pieces of highway in the NHL district, including the Hood River Loops, retain much of their original character. Historically, the Hood River Loops had views of the Hood River Bridge, but these views have been altered or have diminished gradually over the years as vegetation has



The Hood River Bridge, looking south from White Salmon, WA



The Columbia River Highway's Hood River Loops, looking east

grown up along the roadside and as development of other infrastructure and industrial uses have changed the view toward the bridge and its surroundings.

Section 4(f) Finding and Mitigation

The Hood River Loops section of the Columbia River Highway NHL District is not adjacent to the Project improvements and would not be either temporarily occupied or permanently incorporated into the new transportation facility (Project). The Project would not, therefore, result in a use or temporary occupancy of the Hood River Loops under Section 4(f).

A constructive use under Section 4(f) occurs when the proximity impacts of a project (indirect impacts) result in substantial impairment to the property's activities, features, or attributes that qualify the property for protection under Section 4(f). Alternatives EC-2 and EC-3 would result in temporary and permanent, proximity impacts to the Hood River Loops. Replacement of the Hood River Bridge would permanently alter the view of the bridge from the Hood River Loops. Temporary changes would consist of the visual intrusion and construction-related noise and atmospheric impacts from equipment and temporary structures. Short-term noise levels for construction activities are expected to range from approximately 70 dBA to 100 dBA and possible increased traffic. As demonstrated by the following responses to the criteria in 23 CFR 774.15(f) below, these temporary and permanent impacts do not rise to the level of a Section 4(f) constructive use:

1. *Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the proposed action, on a site listed on or eligible for the National Register, results in an agreement of "no historic properties affected" or "no adverse effect;"*

Finding: As documented in the Historic Resources Technical Report, the Section 106 finding for the Project for the Hood River Loops is "no historic properties affected."

2. *For projected noise levels:*

- i. *The impact of projected traffic noise levels of the proposed highway project on a noise-sensitive activity do not exceed the FHWA noise abatement criteria as contained in Table 1 in part 772 of this chapter; or*
- ii. *The projected operational noise levels of the proposed transit or railroad project do not exceed the noise impact criteria for a Section 4(f) activity in the FTA guidelines for transit noise and vibration impact assessment or the moderate impact criteria in the FRA guidelines for high-speed transportation noise and vibration impact assessment;*

Finding: Table 1 in part 772 sets NAC for different activity categories. The Hood River Loops would be considered activity category E (developed lands that are not sensitive to highway traffic noise) with a maximum noise level of 72 dBA. The Project's Noise Technical Report modeled traffic noise in the No Action and build alternatives and found that noise levels would not exceed 65 dBA at any receiver including receivers closer to the Project than the Hood River Loops. Therefore, the Hood River Loops would be expected to experience noise levels less than for the maximum experienced by receiver locations. The Project is not a transit or railroad project.

3. *The projected noise levels exceed the relevant threshold in paragraph (f)(2) of this section because of high existing noise, but the increase in the projected noise levels if the proposed project is constructed, when compared with the projected noise levels if the project is not built, is barely perceptible (3 dBA or less);*

Finding: As discussed above, the Project's noise impact on the Hood River Loops would not exceed relevant thresholds in paragraph (f)(2).

4. *There are proximity impacts to a Section 4(f) property, but a governmental agency's right-of-way acquisition or adoption of project location, or the Administration's approval of a final environmental document, established the location for the proposed transportation project before the designation, establishment, or change in the significance of the property. However, if it is reasonably foreseeable that a property would qualify as eligible for the National Register prior to the start of construction, then the property should be treated as a historic site for the purposes of this section; or*
5. *Overall (combined) proximity impacts caused by a proposed project do not substantially impair the activities, features, or attributes that qualify a property for protection under Section 4(f);*

Finding: The Hood River Loops were designated as a historically significant resource prior to the initiation of the Project. The Section 106 Finding of Effect discusses both temporary and permanent proximity impacts to the Hood River Loops resulting from the Project consisting of visual intrusion and construction related noise and replacement of the Hood

River Bridge and concludes with a finding of “no historic properties adversely affected” for the Hood River Loops for the following reasons. First, the construction of the Hood River Loops was not necessarily historically associated with construction of the Hood River Bridge. Second, the roadway connecting the Hood River Loops with the bridge has been significantly altered due to modern road realignments, thus reducing their physical relationship to one another. Third, views from the Hood River Loops to the bridge are intermittent due to the weaving layout of the roadway and the deciduous and coniferous vegetation located on the river-side of the roadway. Fourth, the historic qualities of the setting viewed from the Hood River Loops has been altered by increased industrial activities since it was constructed. Fifth, the Project would not have any physical impacts upon the spatial organization, circulation, topography, vegetation nor would it adversely affect the “control points” or “beauty spots” that relate to the waterfalls, rock formations, alcoves, sided canyons or scenic vistas identified as significant components of the Hood River Loops in the Columbia River Highway NHL District nomination. Lastly, the alignment of the proposed replacement bridge would be similar to the alignment of the existing bridge and would not obscure, fragment, or significantly contrast with the existing visual environment visible from the highway. Therefore, the overall proximity impacts of the Project would not substantially impair the activities, features, or attributes that qualify the Hood River Loops for protection under Section 4(f).

6. *Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur if the project were not built, as determined after consultation with the official(s) with jurisdiction;*

Finding: As discussed above, the proximity impacts would not substantially impair the activities, features, or attributes that qualify the Hood River Loops for protection under Section 4(f). Construction noise and visual impacts would cease after construction is complete; the existing bridge was not historically associated with construction of the Hood River Loops, therefore no mitigation for proximity impacts is not required.

7. *Change in accessibility will not substantially diminish the utilization of the Section 4(f) property; or*

Finding: Visitors to the Hood River Loops may experience delays due to construction activities, but access to the Hood River Loops would be maintained during and after construction.

8. *Vibration levels from project construction activities are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of protected activities, features, or attributes of the Section 4(f) property.*

Finding: The Hood River Loops are located at a distance from the Project beyond where vibration impacts from construction would be anticipated; construction activities would not cause a substantial impairment of protected activities, features, or attributes of the Hood River Loops.

FHWA in concurrence with ODOT has determined that there would be temporary noise and atmospheric effects during construction and alterations to the view from the Hood River Loops of the existing bridge. Because the two agencies have agreed that the Project would result in no historic properties adversely affected for the Hood River Loops, no mitigation for permanent impacts is proposed or required. During construction, noise and atmospheric effects would be minimized through the implementation of construction BMPs as discussed in Section 3.20, Noise and Vibration.

For the above reasons, the Project does not constitute a use, temporary occupancy, or constructive use of the Hood River Loops under Section 4(f).

Spokane, Portland, and Seattle Railway

Description of Section 4(f) Resource

The 500-foot long segment of the SP&S Railway (now known as the BNSF Railway) that would be located in proximity to and potentially be impacted by the Project was constructed between 1906 and 1907. The railway provided service from Vancouver to Pasco, Washington, and eventually offered freight and passenger service to Spokane and Portland. The rail line segment consists of a section of rails, sleepers, a concrete undercrossing, and sloped rock ballast and is part of a larger linear resource that contributes to the Railway’s overall historical significance in the areas of Transportation and Commerce. It also retains integrity of setting, association, location, and feeling, and is therefore eligible for the NRHP under Criterion A. The SP&S contributed to the industrial and commercial growth of communities along the Columbia River Gorge in the early twentieth century and was a critical transportation route during WWII when it



View of the Spokane, Portland, and Seattle (SP&S) Railway (now known as the BNSF Railway)

carried war materials from aluminum plants and chemical factories to manufacturing centers in Vancouver, Portland, and Seattle. BNSF Railway owns and maintains the historic SP&S rail segment in question that passes under the existing Hood River Bridge. The SP&S Railway qualifies as a Section 4(f) property because it is an NRHP-eligible historic site as documented in the Project’s Historic Resources Technical Report (Appendix H).

Section 4(f) Finding and Mitigation as documented in the Historic Resources Technical Report, Project Alternatives E-2 and E-3 (build alternatives) would involve several changes to the setting of the SP&S Railway, but these changes would have no adverse effects upon the characteristics that make the property eligible for the NRHP or that qualify the property for protection under Section 4(f). The build alternatives (Alternative EC-2 and Alternative EC-3) would result in temporary and permanent potential impacts to the general setting of the SP&S Railway. Permanent impacts include: replacing the Hood River Bridge that would alter the view of the bridge from the railway; placement of a new bridge soffit over the tracks; location of the new bridge piers at least 25 feet from the track centerline with extra distance for curvature; and a change in the crossing location of the bridge either east or west of the existing bridge depending on the alternative.

During construction, the Project would temporarily occupy the BNSF Railway right-of-way in the form of a temporary construction easement across the tracks. The easement would be used as a designated crossing for work vehicles, workers, equipment, and materials and the Project would include the use of overhead cranes and drilled shaft equipment within the easement, and placement of formwork over the tracks. The Project would also place an 8-foot high fence across the BNSF Railway right-of-way on the new bridge where pedestrians have access. The Port would coordinate with BNSF Railway for demolition activities to minimize service delays.

The Section 4(f) legislation states that if the five conditions in 23 CFR 774.13(d), commonly known as the “temporary occupation exception criteria,” are met, then the temporary occupancy is not adverse in terms of the Section 4(f) statute’s preservationist purpose and therefore it does not constitute a “use” as defined under Section 4(f). As required by 23 CFR 774(5)(b), ODOT will consult with the Official with Jurisdiction for the SP&S Railway (DAHP) during the NEPA 45-day comment period for the Supplemental Draft EIS.

Because the Project would not result in a use or temporary occupancy of the SP&S Railway under Section 4(f), no mitigation is proposed or required. During construction, noise and atmospheric effects would be minimized through the implementation of construction BMPs as discussed Section 3.20, Noise and Vibration.

Other Historic Sites

Description of Section 4(f) Resources

The Historic Resources Technical Report also identified six residential structures in the Project’s APE that are eligible for listing on the NRHP (five residential structures in White Salmon, Washington, and one residential structure in Hood River, Oregon). The residential structures represent a variety of time periods (1918-74) and architectural styles including craftsman, contemporary, ranch, Cottage-Revival, and a farmhouse. Many of the residential structures have views of the Hood River Bridge. In addition, the OR&N Columbia River main line (now owned by Union Pacific Railroad) in Hood River, Oregon, is eligible for listing on the NRHP. The OR&N railroad is located east of the Hood River Bridge crossing and is significant for its association with the broad pattern of events that shaped the Columbia River Gorge region and the Pacific Northwest.



View of the OR&N Company's Columbia River main line

Following is a brief description of the railroad and each of the residences and their defining historic characteristics:

- » OR&N’s Columbia River main line: The approximately ¼-mile long rail line segment within the Project APE was originally constructed in the 1880s but was significantly modified in the early twentieth century to its current alignment. The segment is a part of a larger linear resource and contributes to the OR&N railroad’s overall historical significance.
- » 267 SE Oak Street, White Salmon: This 1920s-era single-family residence is located near the bluff in White Salmon but is separated from the bluff by two newer houses and does not have views of the Columbia River or the Gorge. The home is eligible for the NRHP under Criterion C for its 1920s-era English Cottage architecture and is one of the few, mostly unaltered examples of early residential architecture in White Salmon.

- » 301 SE Oak Street, White Salmon: Constructed in 1918, this single-family residence situated near the bluff has sweeping views of the Columbia River, Gorge, and Mount Hood. The home was built in the English Cottage architectural style and is eligible for the NRHP under Criterion A, as it retains much of its original integrity, and for community development and planning for its association with early White Salmon development along the bluff.
- » 345 West Jewett Boulevard, White Salmon: This Northwest-style home was constructed in 1973 and incorporates many elements of regional, Modernist architecture including use of regional materials, vertical wood board siding, a distinctive roof opening and large windows that provide southern views. The building is eligible for the NRHP under Criterion C for embodying Northwest architecture and retains its original integrity.
- » 435 West Jewett Boulevard, White Salmon: Built in 1965, this Ranch-style residence is situated along the bluff with expansive views of the Gorge and Columbia River, Mount Hood, and the Hood River Bridge. The house features a high-pitched hipped and gable roof with overhangs, horizontal wood board and brick siding, and large windows. The building is eligible for the NRHP under Criterion C for embodying Ranch-style architecture and it largely retains its midcentury integrity.
- » 447 West Jewett Boulevard, White Salmon: Designed in the Colonial Revival architectural style, this 1940 home is notable for its side-gable roof, symmetrical fenestration, and brick detailing. The house has one, one-and-a-half, and two-story sections that accommodate the natural slope. The enclosed, outdoor patio has expansive views of the Gorge, Hood River Bridge, and Mount Hood. The house is eligible under Criterion C for its World War II-era Colonial Revival architecture and largely retains its historical integrity.
- » 2495 Old Columbia River Drive, Hood River: Constructed in 1930 with distant views of the Gorge, this property appears to contain character-defining features of a small, early twentieth-century ranch/farmstead. The property is eligible under NRHP Criterion C as one of the few small ranch/farmsteads from the early twentieth century east of Hood River.

More information on each of these structures is included on the Section 106 Finding of Effect forms (Appendix H, Historic Resources Technical Report).

Section 4(f) Finding and Mitigation

The build alternatives would be physically separated from the OR&N railroad and the NRHP-eligible residences and the historic resources would not be either temporarily or permanently incorporated into the Project. Both the OR&N railroad and NRHP-eligible residential structures would experience some degree of permanent and temporary proximity effects from the project, but these effects would not rise to the level of a constructive use under Section 4(f) as demonstrated by the following responses to criteria in 23 CFR 774.15(f) below:

1. *Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the proposed action, on a site listed on or eligible for the National Register, results in an agreement of “no historic properties affected” or “no adverse effect;”*

Finding: As documented in the Historic Resources Technical Report, the Section 106 finding for the Project is “no effect” for the OR&N railroad and 267 SE Oak Street and “no adverse effect” for the other historic residences.

2. *For projected noise levels:*

- i. *The impact of projected traffic noise levels of the proposed highway project on a noise-sensitive activity do not exceed the FHWA noise abatement criteria as contained in Table 1 in part 772 of this chapter; or*
- ii. *The projected operational noise levels of the proposed transit or railroad project do not exceed the noise impact criteria for a Section 4(f) activity in the FTA guidelines for transit noise and vibration impact assessment or the moderate impact criteria in the FRA guidelines for high-speed transportation noise and vibration impact assessment;*

Finding: Table 1 in part 772 sets NAC for different activity categories. Rail lines are not an activity identified in Table 1; however, rail lines are generally not considered a noise-sensitive activity. The eligible residences would be considered activity category B (residential) with a maximum noise level of 67 dBA. The Project’s noise specific technical report modeled traffic noise in the No Action and build alternatives (Alternative EC-2 and Alternative EC-3) and found that noise levels would not exceed 65 dBA at any receiver including receivers closer to the Project than the eligible residences. Therefore, the residences would be expected to experience noise levels less than for the maximum experienced by receiver locations. The Project is not a transit or railroad project.

3. *The projected noise levels exceed the relevant threshold in paragraph (f)(2) of this section because of high existing noise, but the increase in the projected noise levels if the proposed project is constructed, when compared with the projected noise levels if the project is not built, is barely perceptible (3 dBA or less);*

Finding: Rail lines are not an activity identified in Table 1 and are generally not considered a noise-sensitive activity. As discussed above, the Project's noise impact on eligible residences would not exceed relevant thresholds in paragraph (f)(2).

4. *There are proximity impacts to a Section 4(f) property, but a governmental agency's right-of-way acquisition or adoption of project location, or the Administration's approval of a final environmental document, established the location for the proposed transportation project before the designation, establishment, or change in the significance of the property. However, if it is reasonably foreseeable that a property would qualify as eligible for the National Register prior to the start of construction, then the property should be treated as a historic site for the purposes of this section; or*
5. *Overall (combined) proximity impacts caused by a proposed project do not substantially impair the activities, features, or attributes that qualify a property for protection under Section 4(f);*

Finding: The Section 106 Finding of Effect for the OR&N railroad discusses both temporary and permanent proximity impacts to the railroad resulting from the Project consisting of visual impacts and construction related noise and concludes with a finding of "no effect" for the following reasons. First, the construction of the OR&N railroad was not historically associated with construction of the Hood River Bridge as the existing bridge was erected for vehicular traffic and not railroad traffic. Second, the physical characteristics of the OR&N railroad would not be altered by the proposed project. Third, the historic qualities of the setting viewed from the OR&N railroad have been altered since its initial construction by increased industrial and commercial activities as well as transportation infrastructure since it was constructed, and the proposed project is not disproportionately out of scale when compared to this pattern of historical change. Lastly, the alignments of the proposed Project would be similar to the alignment of the existing bridge and would not obscure, fragment, or significantly contrast with the existing visual environment as observed from the OR&N railroad. Therefore, the overall proximity impacts would not substantially impair the activities, features, or attributes that qualify the railroad for protection under Section 4(f).

The residences were designated as a historically significant resource prior to the initiation of the Project. The Section 106 Finding of Effect discusses both temporary and permanent proximity impacts to the eligible residences resulting from the Project consisting of visual intrusion and construction related noise and replacement of the Hood River Bridge and concludes with a finding of "no effect" for 267 SE Oak Street and "no adverse effect" for the other historic residences for the following reasons. First, the construction of these residences was not necessarily historically associated with construction of the Hood River Bridge. Second, for many of the residences, views to the bridge are partially obstructed by other development or vegetation. Third, the historic qualities of the setting viewed from the residences has been altered by increased industrial activities and residential development since they were constructed. Lastly, the alignments of the proposed replacement bridge would be similar to the alignment of the existing bridge and would not obscure, fragment, or significantly contrast with the existing visual environment as observed from those residences with views. The Project features, construction-related activities, and facility operation, therefore, would have no effect or no adverse effect upon the characteristics that make these residences eligible for the NRHP. Therefore, the overall proximity impacts would not substantially impair the activities, features, or attributes that qualify the residences for protection under Section 4(f).

6. *Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur if the project were not built, as determined after consultation with the official(s) with jurisdiction;*

Finding: As discussed, the proximity impacts would not substantially impair the activities, features, or attributes that qualify the eligible railroad or residences for protection under Section 4(f). Construction noise and visual impacts would cease after construction is complete and the existing bridge was not historically associated with construction of the railroad or residences, therefore mitigation for proximity impacts is not required. During construction, noise and atmospheric effects would be minimized through the implementation of construction BMPs as discussed in Section 3.20, Noise and Vibration.

7. *Change in accessibility will not substantially diminish the utilization of the Section 4(f) property; or*
8. *Vibration levels from project construction activities are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of protected activities, features, or attributes of the Section 4(f) property.*

Finding: The project would not affect accessibility of the OR&N railroad as no construction would occur in close proximity to the railroad right-of-way and no easements would be required from Union Pacific. Railroad activities are not sensitive to vibrations and as such would not be impacted by vibration levels from Project construction activities. Residents of the eligible residential structures may experience delays due to construction activities, but access to the residences would be maintained during and after construction. The residences are located at a distance from the Project beyond where vibration impacts from construction would be anticipated; construction activities would not cause a substantial impairment of protected activities, features, or attributes of the residences.

For the above reasons, the Project does not constitute a use, temporary occupancy, or constructive use of the NRHP-eligible residences or the OR&N railroad under Section 4(f).

PARK AND RECREATION FACILITIES

As demonstrated in the Park and Recreation Technical Report, there are three park and recreation properties that qualify for protection under Section 4(f) and which are anticipated to experience impacts as a result of the project.

Bridge Park (Proposed)

Description of Section 4(f) Resource

Bridge Park, also referred to as “Riverfront Park” or “Waterfront Park,” is a proposed park that would be located on a 12-acre site directly under the existing Hood River Bridge on the Washington side of the Columbia River. The property is currently owned by Klickitat County. The City of White Salmon plans to purchase the property from the County for development as a park. Acquisition and development of this park is identified as a potential capital improvement project in the Parks, Open Space, and Recreation element of the City of White Salmon’s Comprehensive Plan (2016).

The conceptual design shows that access to the park would require crossing the BNSF Railway tracks. The concept plans show a gateway entrance at the Mount Adams Chamber of Commerce parking area with an information kiosk and bathroom. A pedestrian and bicycle bridge over the tracks would connect the gateway area to the main park site adjacent to the Columbia River. The concept for the park site includes viewpoints, picnic areas, children’s nature play areas, beach access, a stand-up paddle boarding ramp, and a natural area.

Although it is a planned facility, Bridge Park qualifies as a Section 4(f) property because the property is publicly owned, and the site is formally designated for park and recreation purposes in the Parks, Open Space, and Recreation element of the City of White Salmon’s Comprehensive Plan. This designation in the City’s Comprehensive Plan also demonstrates Bridge Park’s significance as a park and recreation facility and that it is more than a “mere expression of interest or desire.”

Section 4(f) Finding and Mitigation

The build alternatives would require the construction and permanent placement of one land-based pier within Bridge Park. The pier would occupy a comparatively small area in the 12-acre park (less than one percent of the total land area). In Alternative EC-2, the pier would be placed in an area identified as beach access in the park concept plan; under Alternative EC-3 the pier would be located in an area conceptually identified for a trail and picnic area. The Port would obtain a permanent aerial easement for the maintenance of the bridge footing and to provide maintenance access to the underside of the bridge, resulting in a Section 4(f) use of this land as defined in 23 CFR 774.17. The easement would be approximately 0.85 acres under Alternative EC-2 and approximately 0.93 acres under Alternative EC-3. However, aside from the area for the bridge footings, the easement area would be available for park uses.



Looking south toward the area proposed for Bridge Park.

The Bridge Park concept plan depicts the existing bridge alignment centrally located within the park and does not account for a new bridge alignment over the park. However, the 2018 conceptual plan document notes that the preferred bridge alignment would put it parallel and immediately to the west of the existing bridge (as proposed under Alternative EC-2). As discussed below, a mitigation measure proposed in the Supplement Draft EIS is to coordinate with the City of White Salmon during the Project’s design phase or when the design of Bridge Park advances (if prior to construction of the replacement bridge) to incorporate the replacement bridge in the conceptual plan for the park.

The park concept plan may need to be adjusted to account for the final selected bridge alignment. The area shown in the concept plan for the existing bridge overpass and bridge abutment could become available for park uses. Because of the angle of the bridge proposed under the built alternatives, a longer segment of the bridge would cross over the park in Alternative EC-3. Although a slightly larger area of the park would be shaded by the replacement bridge, physical improvements on park land would be limited to the land-based pier (approximately 560 square feet). In addition, the existing bridge footings (approximately 360 square feet) would be removed.

Construction of the replacement bridge would also result in a temporary impact of the land proposed for Bridge Park. In order to construct the bridge over the park and to place the land-based pier within the park, the Port will require a temporary easement on the proposed park parcel. The temporary easement would be approximately 2.64 acres under Alternative EC-2 and approximately 1.46 acres under Alternative EC-3. Within the temporary easement, mature vegetation would be cleared within a smaller area. Under either alternative, restoration of the disturbed area would be coordinated with the City of White Salmon so that it is consistent with the stage of park development at that time.

Mitigation

As described above, both build alternatives would result in a Section 4(f) *de minimis* use of the Bridge Park property as defined in 23 CFR 774.17. The Project would largely avoid impacts to the activities, features, or attributes of Bridge Park either on a temporary or permanent basis. For a park, recreation area, or wildlife refuge, a *de minimis* impact is one that, after taking into account any measures to minimize harm, results in a determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). Avoidance, minimization, and mitigation measures for the identified impacts to Bridge Park include adjusting the park concept design, removing the existing bridge abutment, and replanting mature vegetation (some of which would be removed for park improvements in the absence of the Project). The transportation use of the Bridge Park property together with the proposed impact avoidance, minimization, and mitigation measures incorporated into the Project, would not adversely affect the activities, features, or attributes that qualify Bridge Park for protection under Section 4(f). The public will be afforded opportunities to review and comment on the effects of the Project on Bridge Park through the NEPA process.

As required by 23 CFR 774(5)(b), ODOT will consult with the Officials with Jurisdiction for Bridge Park (Klickitat County and the City of White Salmon) during the 45-day comment period for the Supplemental Draft EIS.

Hood River Marina Park and Basin

Description of Section 4(f) Resource

Hood River Marina Park and Basin is located 0.1 mile west of the Hood River Bridge on the Oregon side of the Columbia River, and is the closest developed park and recreation facility to the existing bridge. Hood River Marina Park and Basin qualifies as a Section 4(f) property because the property is publicly owned, is open to the public, its major purpose is park and recreation activities, and it is significant as a park and recreation facility as demonstrated by its inclusion in the Hood River Valley Parks and Recreation District Master Plan (2012), the Port of Hood River Waterfront Report (2018), and the Port’s list of waterfront recreation sites.



Boat Basin at Marina Park

The 27-acre park is owned by the Port and includes a marina, beach, yacht club, boat launch, cruise ship dock, history museum, beach, and open lawn area, and the Port’s administration office and maintenance shop, which functionally support recreational activities at the Marina Park and Basin. Although located within the Marina Park and Basin boundary, the administration office and maintenance shop are not protected under Section 4(f) as they do not meet the criteria (i.e., they are not open to the public and their major purpose is not park and recreation activities).

Section 4(f) Finding and Mitigation

Both build alternatives could result in a short, temporary closure of some of the parking area for the boat launch during construction. The Project would minimize the amount of land from the Marina Park and Basin that is required for temporary occupation and would restore temporarily occupied land within the construction easement to provide the same functionality as existed prior to construction. There would be no change in ownership for the temporarily occupied land, and the occupation would be for a duration that is less than the time needed for the construction of the project, which is estimated at 6 years. Therefore, the temporary construction impacts do not rise to the level of a Section 4(f) use.

Both build alternatives would require permanent acquisition of land from the Marina Park and Basin to accommodate the southern terminus of the replacement bridge. Under Preferred Alternative EC-2, approximately 0.6 acre would be acquired, E. Port Marina Drive would be realigned, and 3 parking spaces for the boat launch would be removed. Under Alternative EC-3, the acquisition would consist of 0.2 acre and E. Port Marina Drive would be realigned; however, there would be no change in parking.

The following measures would be implemented by the bridge owner to avoid, minimize, or mitigate impacts to Hood River Marina Park and Bridge:

Construction Impacts

- » Advanced notice to park and recreation users about sidewalk, trail, and/or park closures and temporary access changes during construction would be provided.
- » Contractors would be required to minimize dust and air pollutant emissions. Potential control measures are included throughout the WSDOT standard specifications and ODOT standard specifications Section 290. These control measures include vehicle and equipment idling limitations and minimize vehicle track-out and fugitive dust. These measures would be documented in the erosion and sediment control plan that the contractor is required to submit prior to the preconstruction conference. To reduce the impact of construction delays on traffic flow and resultant emissions, road or lane closures would be restricted to non-peak traffic periods when possible.
- » The area required for the temporary occupancy of the park during construction would be minimized to the extent possible.

Long-Term Impacts

- » Wayfinding signage would be provided for the new shared use path indicating connections to park and recreation facilities.
- » Alternative EC-2: Opportunities would be considered to reconfigure the Hood River Marina Park and Basin boat launch parking area to replace some or all of the boat launch parking spaces removed by the Project.

As described above, both build alternatives would result in a Section 4(f) *de minimis* use of Marina Park and Basin land as defined in 23 CFR 774.17. The Section 4(f) use will be a *de minimis* impact as the proposed mitigation would minimize the anticipated impacts. The transportation use of the Hood River Marina Park and Basin, together with the proposed impact avoidance, minimization, and mitigation measures incorporated into the Project, will not adversely affect the activities, features, or attributes that qualify the Hood River Marina Park and Basin for protection under Section 4(f). As required by 23 CFR 774(5)(b), ODOT will consult with the Official with Jurisdiction for Marina Park (the Port) during the 45-day comment period for the Supplemental Draft EIS.

The public will be afforded opportunities to review and comment on the effects of the Project on Marina Park and Basin during the public comment period for the Supplemental Draft EIS.

Waterfront Trail

Description of Section 4(f) Resource

The Port owns and maintains the western 2.6 miles of the 2.8-mile long Waterfront Trail. The trail runs from The Hook on its western end through Waterfront Park, Jensen Beach, Event Site Park, Nichols Basin, The Spit/Sandbar, and Hood River Marina Park and Basin before passing under the existing Hood River Bridge. East of the bridge, the trail extends along the Columbia River waterfront past the Hood River Inn to the privately-owned Hood River Waterplay site. The trail is accessible from many points.

The affected segment of Waterfront Trail qualifies as a Section 4(f) property because the segment is publicly owned (by the Port), is open to the public, its major purpose is park and recreation activities, and it is significant as a park and recreation facility as demonstrated by its inclusion in the Hood River Valley Parks and Recreation District Master Plan (2012), the 2018 Port of Hood River Waterfront Report, and the Port's list of waterfront recreation sites.



Waterfront Trail in Marina Park and Basin looking east to the existing Hood River Bridge

Section 4(f) Finding and Mitigation

Construction activity on the replacement bridge will require closing an approximately 0.1-mile segment of trail through Marina Park for the safety of trail users, thereby temporarily occupying the trail segment. The segment would be closed for less than the duration of construction and represents less than five percent of the trail's length. When this segment of the trail is closed, pedestrians and bicyclists using the western portion of Waterfront Trail would need to use a signed detour to reach the eastern extent of the trail, thereby preserving the trail functionality during construction. The Project would not involve any physical changes to Waterfront Trail during closure of the 0.1-mile segment. Following construction, the 0.1-mile segment would be reopened, would not be physically changed, and would be returned to its preconstruction condition.

Alternatives EC-2 and EC-3 would result in a slightly longer segment of the trail being covered by the replacement bridge as compared with the existing bridge; for Alternative EC-2 the covered portion of the trail would increase from 24 feet to 56 feet and in Alternative EC-3 from 24 feet to 150 feet, but the Project would result in no physical changes to the trail itself. Additional lighting would be incorporated into the Project design to improve lighting and visibility under the bridge.

The following measures would be implemented by the bridge owner to avoid, minimize, or mitigate impacts to Waterfront Trail:

Construction Impacts

- » Pedestrian and bicycle access to Waterfront Trail would be maintained during construction. A signed, ADA-accessible detour route would be provided when portions of the trail are temporarily closed during construction.
- » Advanced notice to park and recreation users about sidewalk, trail, and/or park closures and temporary access changes during construction would be provided.
- » BMPs appropriate to the context would be developed for the Project prior to construction. These BMPs would take into account the practices set forth in ODOT and WSDOT regulations and guidance documents and would be implemented during construction to reduce noise, dust, and pollutant emissions generated by construction equipment. Please also see the air quality and noise mitigation commitments listed in Section 3.18, Air Quality and Greenhouse Gases, and Section 3.20, Noise and Vibration.

Long-Term Impacts

- » Appropriate lighting along the segment of the Waterfront Trail covered by the replacement bridge would be incorporated as part of the Project to mitigate lighting and visibility concerns caused by the wider bridge.
- » Wayfinding signage would be provided for the new shared use path indicating connections to park and recreation facilities.

The Section 4(f) legislation states that if the five conditions in 23 CFR 774.13(d), commonly known as the “temporary occupation exception criteria,” are met, then the temporary occupancy is not adverse in terms of the Section 4(f) statute’s preservationist purpose and therefore it does not constitute a “use” as defined under Section 4(f).

As required by 23 CFR 774(5)(b), ODOT will consult with the Official with Jurisdiction for Waterfront Trail (the Port) during the NEPA 45-day comment period for the Supplemental Draft EIS.

SUMMARY OF IMPACTS BY ALTERNATIVE

The Section 4(f) finding for each Section 4(f) property is summarized in Exhibit 6-2.

Exhibit 6-2. Summary of Section 4(f) Findings by Alternative

Section 4(f) Property	No Action Alternative	Preferred Alternative EC-2	Alternative EC-3
Hood River Bridge	• None	• Use	• Use
Historic Columbia River Highway	• None	• No Use	• No Use
SP&S Railway	• None	• No Use (Temporary occupancy)	• No Use (Temporary occupancy)
Other Historic Sites	• None	• No Use	• No Use
Bridge Park	• None	• <i>de minimis</i> impact	• <i>de minimis</i> impact
Hood River Marina Park and Basin	• None	• <i>de minimis</i> impact	• <i>de minimis</i> impact
Waterfront Trail	• None	• No Use (Temporary occupancy)	• No Use (Temporary occupancy)

6.4. PUBLIC COMMENTS

Public comments will be summarized in this section following the Supplemental Draft EIS comment period.

7. LIST OF PREPARERS

Exhibit 7-1 provides a list of individuals involved in the preparation of the Supplemental Draft EIS.

Exhibit 7-1. List of Supplemental Draft EIS Preparers

Name	Agency/Company	Years of Experience	Area of Responsibility
Agency Staff			
Emily Cline	FHWA	20	Environmental Program Manager
Kevin Greenwood	Port of Hood River	21	Project Director
Jeff Buckland, AICP	ODOT	33	Environmental Project Manager
Sarah Eastman	ODOT	5	Region Environmental Coordinator/Environmental Project Manager/Environmental Technical Reviewer
Magnus Bernhardt, PLA	ODOT	25	Visual Technical Reviewer
Thomas Braibish	ODOT	21	Geology and Soils Technical Reviewer
Daniel Burgin	ODOT	7	Noise Technical Reviewer
Robert W. Hadlow, PhD	ODOT	30	Cultural Resource Technical Reviewer Park and Recreation Technical Reviewer Section 4(f)/6(f) Technical Reviewer
Michael Holthoff	ODOT	27	NEPA Documentation Reviewer
Natalie Liljenwall, PE	ODOT	23	Air Quality Technical Reviewer Energy Technical Reviewer Noise Technical Reviewer
Thomas McConnell	ODOT	23	Land Use Technical Reviewer
Teresa Nowicki, PG	ODOT	17	Hazardous Materials Technical Reviewer
Denis Reich	ODOT	23	Environmental Manager
Ken Sargent	ODOT	30	Vegetation and Wetland Technical Reviewer
Devin Simmons	ODOT	25	Fish and Wildlife Technical Reviewer Waterways and Water Quality Technical Reviewer
Kristen Stallman	ODOT	22	Major Projects Manager
Roy Watters	ODOT	17	Cultural Resources Technical Reviewer and Tribal Liaison
Chris Regan	WSDOT	25	Technical Review Lead for WSDOT
Consultant Team			
Angela Findley, PMP	WSP	25	Consultant Team Project Manager
Allison Kinney	WSP	6	Fish and Wildlife Technical Author Wetlands and Vegetation Technical Author
Anne Pressentin	WSP	20	Public Involvement Lead
Brian Carrico, AICP	WSP	25	Permitting Lead
Bridget Wojtala	WSP	6	Wetlands and Vegetation Scientist
Chivanna Pot, PE	WSP	25	Roadway Design
Cole Bales, PE	WSP	11	Geology and Soils Technical Reviewer
Dan Gunderson, PWS	WSP	17	Fish and Wildlife Technical Lead Wetlands and Vegetation Senior Scientist

Name	Agency/Company	Years of Experience	Area of Responsibility
Davis V. Ellis, MPA	Willamette Cultural Resources Associates	46	Archaeology
Dustin Day, PWS	WSP	21	Fish and Wildlife Scientist Wetlands and Vegetation Technical Lead
Earl Christian	WSP	18	Visual Simulations
Emma Johnson, AICP	WSP	9	Executive Summary Cumulative Impacts Technical Author
Ethan Spoo, AICP	WSP	17	EIS Author
Ginette Lalonde	WSP	20	Air Quality Technical Reviewer Energy Technical Reviewer
Jessie Jones	WSP	18	Graphic Design
Jennifer Rabby, AICP	WSP	17	Cumulative Impacts Technical Reviewer EIS Author Land Use Technical Reviewer Park and Recreation Technical Lead Section 4(f)/Section 6(f) Technical Lead
Jerry Ramsden, PhD, PE	WSP	26	Hydraulics Lead
John Horne, PhD, PE	WSP	33	Geotechnical Lead
Kirk Ranzetta, PhD	AECOM	24	Historic Resources
Malie McClellan	WSP	12	Social and Environmental Justice Technical Lead
Marianne Zarkin, PLA	Marianne Zarkin Landscape Architects	23	Architectural Design
Mark Hirota, PE	WSP	37	Design Lead
Mat Dolata, PE, PTP, PTOE	WSP	14	Transportation Lead
Natalie Owen, PE	WSP	13	Roadway Design
Nicole McDermott, AICP	WSP	12	Cumulative Impacts Technical Lead Land Use Technical Lead Public Involvement
Patrick Romero, INCE, ENV SP	WSP	20	Hazardous Materials Technical Reviewer Noise Technical Lead
Peter Geiger	WSP	31	Economic Technical Lead Geology and Soils Technical Lead Hazardous Materials Technical Lead Waterways and Water Quality Technical Lead
Rebecca Frohning	WSP	19	Air Quality Technical Lead Energy Technical Lead Noise Technical Reviewer
Ryan Weston, PLA	WSP	18	Visual Technical Author

Name	Agency/Company	Years of Experience	Area of Responsibility
Sam Roberts, AICP	WSP	5	Cumulative Impacts Technical Author EIS Author Land Use Technical Author
Scott Keillor, AICP	WSP	30	Land Use Technical Reviewer Community Engagement Lead
Scott Polzin, PMP	WSP	25	Environmental Lead
Shannon Williams, PE	WSP	20	Stormwater Design Technical Reviewer
Shoshana Jones, MA, JD	AECOM	7	Architectural History
Stephanie Sprague, PMP, AICP	WSP	18	Social and Environmental Justice Technical Reviewer Visual Technical Lead
Tim Pfeiffer, PE, GE	Foundation Engineering	34	Geotechnical Investigations Lead
Tim Woods, MS	AECOM	3	Architectural History
Tom Wilson, PE	WSP	27	Bridge Design
Yonas Habtemichael, EIT	WSP	3	Stormwater Design

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8. DISTRIBUTION LIST

The Supplemental Draft EIS is being sent to the agencies, tribes, elected officials, and organizations identified in the Distribution List (Exhibit 8-1). Others interested in viewing the Supplemental Draft EIS can access the document on the Port's website or view copies of the document on an appointment-only basis at the Port's offices. Washington residents can contact the Port to schedule an appointment to view the document in Klickitat County. The document is also available at local libraries listed below.

Exhibit 8-1. Agency and Tribal Distribution List

Federal Agencies

- » National Oceanic and Atmospheric Administration Fisheries, Columbia Basin Branch
- » National Oceanic and Atmospheric Administration Fisheries, West Coast Region
- » National Park Service, Pacific West Region
- » U.S. Army Corps of Engineers, Portland District
- » U.S. Bureau of Indian Affairs, Northwest Regional Office
- » U.S. Coast Guard, 13th District
- » U.S. Department of Agriculture, Rural Development, Tangent, Oregon Office
- » U.S. Environmental Protection Agency, Region 10, Seattle
- » U.S. Fish and Wildlife Service, Portland
- » U.S. Forest Service, Pacific Northwest Region (R6)

Tribes

- » Confederated Tribes and Bands of the Yakama Nation
- » Confederated Tribes of Siletz Indians
- » Confederated Tribes of the Grand Ronde Community of Oregon
- » Confederated Tribes of the Umatilla Indian Reservation
- » Confederated Tribes of the Warm Springs Reservation of Oregon
- » Cowlitz Indian Tribe
- » Nez Perce Tribe

State Agencies

- » Oregon Department of Environmental Quality
- » Oregon Department of Fish and Wildlife
- » Oregon Division of State Lands
- » Oregon Parks and Recreation Department
- » Oregon State Historic Preservation Office
- » Oregon State Marine Board
- » Oregon Water Resources Department
- » Washington State Department of Archaeology and Historic Preservation
- » Washington State Department of Ecology
- » Washington State Department of Fish and Wildlife
- » Washington State Department of Natural Resources
- » Washington State Department of Transportation, Southwest Region
- » Washington State Recreation and Conservation Office

Local Agencies

- » City of Bingen
- » City of Hood River
- » City of Hood River, Landmarks Review Board
- » City of White Salmon
- » Columbia River Gorge Commission
- » Hood River County
- » Hood River County Commissioners
- » Klickitat County
- » Klickitat County Commissioners
- » Klickitat County Natural Resources
- » Klickitat County Senior Service
- » Mid-Columbia Economic Development District
- » Port of Klickitat
- » Port of Klickitat Commissioners
- » Port of Skamania County
- » Skamania County
- » Skamania County Commissioners
- » Southwest Washington Regional Transportation Council

Elected Officials

- » Anna Williams, Oregon Representative
- » Chris Corry, Washington State Representative
- » Chuck Thomsen, Oregon State Senator
- » Curtis King, Washington State Senator
- » Gina Mosbrucker, Washington State Representative
- » Jaime Herrera Beutler, U.S. Representative, Washington
- » Jeff Merkley, U.S. Senator, Oregon
- » Maria Cantwell, U.S. Senator, Washington
- » Patty Murray, U.S. Senator, Washington
- » Ron Wyden, U.S. Senator, Oregon
- » U.S. Representative, Oregon's 2nd Congressional District

Organizations/Businesses

- » AAA of Oregon
- » AAA of Washington
- » Best Western Plus Hood River Inn
- » Bingen School Inn
- » BNSF Railway Company
- » Bridge RV Park and Campground
- » Columbia Gorge Audubon Society
- » Columbia Gorge Fruit Growers
- » Columbia Gorge Wind and Water Assoc.
- » Columbia River Inter-Tribal Fish Commission (CRITFC)
- » Columbia River Towboat Association
- » Columbia Riverkeeper
- » Discover Mortgage
- » Friends of the Columbia Gorge
- » Gorge Flyboard
- » Gorge Heritage Museum/ Klickitat County Historical Society
- » Gorge Technology Alliance
- » Hattenhauer Distributing Company
- » Historic Bridge Foundation
- » Historic Columbia River Highway Advisory Committee

- » History Museum of Hood River County
- » Hood River Chamber of Commerce
- » Hood River Rotary Club
- » Hood River WaterPlay
- » Hood Tech Corporation
- » Innovative Composite Engineering
- » Insitu, Inc.
- » Milestone Nursery
- » Mt. Adams Chamber of Commerce
- » Mt. Adams Transportation Services
- » Oregon Trucking Associations
- » Our Savior Lutheran Church
- » Pacific Boardsports
- » Riverside Farms
- » SDS Lumber
- » Skamania County Chamber of Commerce
- » Skyline Health
- » The Next Door, Inc.
- » Thrive Hood River
- » Tidewater Barge Lines
- » Underwood Fruit
- » Union Pacific Railroad
- » Vanguard Nursery
- » Washington Trucking Associations
- » Washington Trust for Historic Preservation
- » Windermere Real Estate

Local Libraries

- » Stevenson Community Library (limited services during the COVID-19 pandemic)
- » White Salmon Valley Community Library (limited services during the COVID-19 pandemic)

Education Organizations

- » Columbia Gorge Community College
- » Columbia Gorge Education Service District
- » Education Service District #112
- » Hood River County School District
- » White Salmon Valley School District

Media

- » Columbia Gorge News
- » Port of Hood River Port News
- » Port of Hood River website
- » Social media: Facebook, Twitter

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10. GLOSSARY

Term	Definition
303(d)	Section 303(d) of the federal Clean Water Act requires each state to monitor and regulate the quality of water in its rivers and streams. If a water body does not meet a particular water quality standard, as determined by the state, that water body is “303(d) listed.”
Allision	A violent striking (such as in a collision) with a fixed object. This is in contrast with “vessel contact” with a fixed object such as would be made with bridge fenders in the ordinary course of say a tug and barge passing under a bridge.
Anadromous	Refers to fish species that are hatched in fresh water, enter the ocean for a portion of their life cycle, then return to freshwater to spawn. Common anadromous species include but are not limited to salmon, steelhead, eulachon (smelt), and shad.
Apex	The highest point of the bridge deck riding surface.
Asbestos	Asbestos was used extensively in building materials in the early and mid-20th century. It is a known carcinogen, and is extremely friable—that is, it crumbles easily. Demolition of buildings or other structures that contain asbestos can release small particles of asbestos into the air, and these particles in turn can lodge in the lungs of people who breathe this air. Proper caution and abatement procedures can reduce or eliminate this hazard to human health.
Attainment	A geographic area that meets or does better than the National Ambient Air Quality Standards (NAAQS).
Area of potential effects (APE)	The geographic area within which the project may directly or indirectly cause alterations in the character or use of historic properties and cultural and archaeological resources. This is a term that specifically applies to Section 106 of the National Historic Preservation Act (NHPA).
Area of potential impact (API)	The geographic area within which the project may result in direct or indirect impacts. Different resource areas (e.g., land use, fish and wildlife, etc.) may have different API boundaries based on potential impacts.
A-weighted decibel scale (dBA)	A scale used to measure loudness of sound that is adjusted to the frequency response of the human ear.
Benthic zone	The ecological zone at the lowest level of a water body. The benthic zone includes surface sediment on the bed or floor of the water body, as well as some sub-surface layers.
Best management practices (BMPs)	Physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollutant discharge.
Biological assessment (BA)	A document that is prepared for compliance with the (ESA) in cases where the potential exists for a project to affect federally listed species. Its purpose is to document the project’s potential to affect listed species, to document measures taken to avoid adverse effects, and to make a provisional effects call. Scientific data used to prepare BAs are generally gathered through a combination of field reconnaissance surveys, and scientific literature research; and provisional effects determinations are established based on an analysis of project design details. The BA is submitted to NOAA Fisheries and/or the USFWS.
Build alternative	A project alternative that includes construction of one or more project elements.
Cofferdam	A temporary, watertight enclosure for excluding water from an area that is normally submerged.
Columbia River Datum (CRD)	The plane of reference from which river stage is measured on the Columbia River from the lower Columbia River up to Bonneville Dam, and on the Willamette River up to Willamette Falls.

Term	Definition
Cooperating Agency	Any federal agency, other than a lead agency for the proposed project, that has jurisdiction by law or special expertise with respect to any environmental impact involved in the proposed project or project alternative. Upon request of the lead agency, any federal agency with jurisdiction by law shall be a cooperating agency.
Congestion	Congestion occurs when the demand is greater than the transportation system's capacity. For highways, congestion occurs when the average speed along a section of highway or on a particular facility falls below a specified speed, generally below 30 miles per hour (mph). Recurrent congestion is caused by constant excess volume compared to capacity. Nonrecurring congestion is caused by actions such as special events and/or traffic incidents.
Construction staging	A staging area is a designated area where vehicles, supplies, and construction equipment are positioned for access and use to a construction site.
Consulting party	A term used to identify an entity that is involved in determinations of eligibility, findings of effect and any Memorandum during the National Historic Preservation Act (NHPA) Section 106 process. These consulting parties include the SHPOs, federally and non-federally recognized tribes, local government, and other individuals or organizations with a demonstrated interest in the project and its effects on historic properties.
Criteria pollutants	This is a group of six common air pollutants for which the EPA has set National Ambient Air Quality Standards (NAAQS): ozone (O ₃), particulate matter (PM ₁₀ and PM _{2.5}), carbon monoxide (CO), nitrogen oxides (NO _x), sulfur dioxide (SO ₂), and lead.
Critical habitat	Specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitat may also include areas that are not currently occupied by the species but will be needed for its recovery.
Cultural resources	A term that collectively refers to historical and archaeological resources. Cultural resources are broadly divided into the historic built environment (buildings, structures and objects), archaeological sites, and defined features or areas that are important to maintaining cultural identity.
Cumulative effect (cumulative impact)	The effect on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects result from individually minor but collectively significant actions taking place over a period of time.
Decibels	A unit for relative sound intensity. For highway traffic noise, an adjustment, or weighting, of the high and low-pitched sounds is made to approximate the way that an average person hears sounds. The adjusted sounds are called "A-weighted levels" (dBA).
Delay	The additional time that a vehicle must slow down or stop in traffic compared to freely-flowing traffic conditions; used to measure congestion levels.
<i>de minimis</i> impact	An impact that involves the use of Section 4(f) property that is generally minor in nature. A <i>de minimis</i> impact is one that, after taking into account avoidance, minimization, mitigation and enhancement measures, results in no adverse effect to the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f). For historic properties, a <i>de minimis</i> impact is one that results in a Section 106 determination of "no adverse effect" or "no historic properties affected." A <i>de minimis</i> impact determination requires agency coordination with the officials having jurisdiction over the Section 4(f) property and opportunities for public involvement. A <i>de minimis</i> impact determination may not be made when there is a constructive use.

Term	Definition
Disabled	A person having a long-lasting condition, such as severe vision or hearing impairments, or a condition that substantially limits basic physical activities. It may also include people with conditions that make other activities such as learning, getting around inside the home, working at a job, or going places outside the home difficult.
Displacement	An individual, family, partnership, association, corporation, or organization, which moves from their home, business, or farm, or moves their personal property, as a direct result of acquisition, demolition or rehabilitation for a project. Displaced persons from federally funded projects are eligible for relocation assistance under the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (the Uniform Act).
Distinct Population Segment (DPS)	A vertebrate population or group of populations that is discrete from other populations of the species and significant in relation to the entire species.
Easement	A legal right to use property owned by someone else for a designated purpose.
Elderly	A man or woman aged 65 or older.
Embankment	A bank, mound, dike, or the like, raised to carry a roadway or hold back water.
Emergency response time	The amount of time that it takes for emergency responders to arrive at the scene of an incident after the emergency response system was activated.
Endangered species	Any species that is in danger of extinction throughout all or a significant portion of its range.
Environmental justice	The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies. Meaningful involvement means: people have an opportunity to participate in decisions about activities that may affect their environment and/or health; the public's contribution can influence the regulatory agency's decision; community concerns will be considered in the decision-making process; and decision makers will seek out and facilitate the involvement of those potentially affected.
Evolutionary Significant Unit (ESU)	A population of organisms that is considered distinct from similar organisms for purposes of conservation. In the Pacific Northwest, several species of salmonids (salmon, steelhead) are divided into ESUs for purposes of study and species management and recovery.
Erosion	The wearing away of soil and rock. This may be by weathering and the action of streams, glaciers, waves, wind, and underground water.
Floodplain	The 100-year floodplain is an area with a one percent chance of being flooded in any given year.
Full acquisition	A property acquisitions where the entire property would be acquired for the project.
Fugitive dust	A particulate emission made airborne by forces of wind, man's activity, or both. Unpaved roads, construction sites, and tilled land are examples of areas that originate fugitive dust.
Greenhouse gases (GHGs)	Gases that trap heat in the atmosphere. These include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.
Groundwater	Water found below the water table.
Hazardous materials	A substance or mixture of substances having properties capable of producing adverse health or safety effects.
Highways of Statewide Significance	Interstate highways and other principal arterials that are needed to connect major communities in Washington State. The designation helps assist with the allocation and direction of funding.

Term	Definition
Hispanic/Latino	A self-designated classification for people whose origins are from Spain, the Spanish-speaking countries of Central or South America, the Caribbean, or those identifying themselves generally as Spanish, Spanish-American, etc. Origin is viewed as ancestry, nationality, or country of birth of the person or person's parents or ancestors. Hispanic/ Latino persons may be of any race, White and non-White.
Impervious surface area	A hard surface area that either prevents or retards the entry of water into the soil mantle as occurs under natural conditions (prior to development) and from which water runs off at an increased rate of flow or in increased volumes. Common impervious surfaces include but are not limited to rooftops, walkways, patios, driveways, parking lots, storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled or macadam surfaces.
Indirect effects	Effects are caused by the proposed action or alternative and are later in time or farther removed in distance, but still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems.
Jurisdictional waters	Waters under the jurisdiction of the USACE, as granted by the federal Clean Water Act. Although specific determinations must be made, jurisdictional waters typically include waterways and their associated wetlands.
Landscape unit	The geographic unit on which impacts on visual character, viewers, and visual quality are assessed.
Level of service (LOS)	A qualitative measure of the effectiveness of one or more elements of transportation infrastructure. LOS is most commonly used to describe roadway performance, but can also be applied to transit, intersections, or other infrastructure elements. The AASHTO defines the following levels-of-service: A= Free flow; B=Reasonably free flow; C=Stable flow; D=Approaching unstable flow; E=Unstable flow; and F=Forced or breakdown flow.
Limited English proficient	Individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English.
Liquefaction	A phenomenon associated with earthquakes in which sandy to silty, water-saturated soils behave like fluids. As seismic waves pass through saturated soil, the structure of the soil distorts, and spaces between soil particles collapse, causing ground failure. In general, young, loose sediment and areas with high water tables are the most vulnerable to liquefaction.
Low-income	A person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.
Maintenance area	An area that has a history as a non-attainment area for a particular air pollutant—i.e., of failing to meet the NAAQS for that pollutant—but is now meeting the NAAQS and that has a maintenance plan for monitoring levels of that pollutant and ensuring continued conformity to the appropriate NAAQS.
Minority	A person who is: Black (a person having origins in any of the black racial groups of Africa); Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or the Spanish culture or origin, regardless of race); Asian/Pacific Islander (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or American Indian or Alaskan Native (a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition).
Mitigation	The measures that could be taken to lessen the negative effects predicted for each resource. These measures may include reducing or minimizing a specific negative effect, avoiding it completely, or rectifying or compensating for the negative effect.

Term	Definition
Mobile source air toxics (MSATs)	The Clean Air Act identifies 188 air toxics, of which MSATs are the subset emitted by mobile sources. Although MSATs pose potential public health concerns, there are no established regulatory limits for relevant MSAT pollutants.
National Ambient Air Quality Standards (NAAQS)	The maximum allowable level, averaged over a specific time period, for a certain air pollutant in the outdoor air.
National Environmental Policy Act (NEPA)	The federal policy that requires agencies to incorporate environmental considerations into decision making by preparing an environmental assessment or EIS that consider the effects of proposed actions.
National Register of Historic Places (NRHP)	A list of districts, sites, buildings, structures, and objects maintained by the National Park Service (NPS), each determined by the NPS to be of historic, cultural, architectural, archaeological, or engineering significance at the national, state, or local level.
Natural silence	The sounds of nature uninterrupted by human-caused noise or noise from the modern world; also referred to as natural quiet
No Action Alternative	The alternative under which the proposed project will not be built. The No-Action Alternative is carried through the NEPA process and analyzed for effects as a way to formally compare the effects of the proposed project's build alternatives with what is likely to happen if none of these project alternatives is constructed. The No Action Alternative analysis takes into account other projects that are already planned and that are reasonably certain to be constructed.
Noise abatement criteria (NAC)	If future noise levels with a project are predicted to approach or exceed the FHWA noise criteria at a sensitive receptor, abatement is evaluated at the receptor. For residences, the criterion is 67 dBA. WSDOT considers a noise effect to occur if the noise level is within 1 dBA of the 67 dBA criterion.
Noise barrier	A solid wall or earth berm located between the roadway and receiver location, which breaks the line-of-sight between the receiver and the roadway noise sources.
Non-attainment area	An area that fails to meet air quality standards for one or more pollutants. An area may be a non-attainment area for, say, ozone (O ₃), but an attainment area for carbon monoxide (CO). See also maintenance area.
Ordinary high water mark (OHWM)	The highest water level that a water body has reached and maintained long enough to leave visible evidence on the landscape.
Out-of-direction travel distance	Out-of-direction travel distance is the increased distance traveled for trips made from an original to a destination due to changes in the existing roadway.
Partial acquisition	A property acquisition where a portion of the property would be acquired for the project and the remainder would be retained by the current owner.
Participating agency	Under SAFETEA-LU Section 6002, a "participating agency" is any federal or nonfederal agency (federal, state, tribal, regional, or local government agency) that may have an interest in the project. This provides a method for agencies that do not have permitting or approval authority over any portion of the project to have a more formal role in the environmental review and comment process. Nongovernmental organizations and private entities cannot serve as participating agencies.
Particulate matter (PM ₁₀ or PM _{2.5})	Naturally-occurring and man-made particles with a diameter less than 10 microns (PM ₁₀) or 2.5 (PM _{2.5}) microns. Sources of particulate matter include sea salt, pollen, road dust, agricultural dust.
Peak period	A part of the day with the highest traffic volume during which traffic congestion on roads is worst.
Phase II environmental site assessment	An on-the-ground assessment that includes sampling and laboratory analysis to confirm the presence of hazardous materials.

Term	Definition
Piles	Large-diameter steel pipes hammered or drilled into the soil until they reach dense soil or bedrock. The piles provide support to hold the weight of the bridge and traffic. Piles also provide stability in the event of an earthquake.
Pollutant	Any substance that upon reaching the environment (soil, water, or air), is degrading in effect so as to impair the environment.
Pre-contact	Refers to the time before interactions between Native American peoples and Euro-American settlers, for this EIS, in the Pacific Northwest.
Programmatic agreement	A document that spells out the terms of a formal, legally binding agreement between a state DOT and other state and/or federal agencies. In the context of Section 106 of the NHPA, programmatic agreements are used when the effects of an undertaking are not fully known.
Purpose and Need	A formal statement of the objective(s) of the proposed project (Purpose) and the problem(s) that construction of the project is intended to solve (Need). The Purpose and Need Statement is developed early in the project planning stage and serves as a guideline for future project efforts. For example, in evaluating alternatives, any alternative that does not meet the project's purpose and need will be dropped from consideration.
Retaining wall	A retaining wall is a wall that is built to prevent the earth behind it from moving.
Right-of-way	Land set aside for use as a highway. Rights of way are purchased (acquired) prior to the construction of a new road. Usually enough extra land is purchased for the purpose of providing safety clearances, building retaining walls, and implementing other mitigation features.
Riparian	The word riparian (from the Latin ripa, meaning river bank) refers to the interface between a stream or river and the adjoining land. A riparian zone or riparian area refers to the land immediately adjacent to the river. Riparian habitat provides important ecological functions for water, plants, and animals. A riparian corridor is a connected strip of riparian habitat; riparian corridors may be defined in terms of width for purposes of ecological assessment, regulation, and permitting.
River mile (RM)	The measure, in miles, of the distance from the mouth of a river or stream, following the course of the river or stream. The mouth of the river or stream is RM 0.
Scoping	An open process involving agency and public outreach and a public comment period early in the development of a project. Scoping shares preliminary information about the proposed action and the range of possible alternatives to seek input on potential issues, concerns, and the overall technical scope of analysis that should be considered for the project.
Section 106 of the NHPA of 1966	Section 106 of the NHPA applies to undertakings by any federal agency, undertakings receiving federal assistance, and undertakings requiring the issuance of a license from any federal agency. In the event of any of the above undertakings, the head of the acting, assisting, or licensing federal agency must "take into account" the possible effects the undertaking will have on any district, site, building, structure or object that is included in or is eligible for inclusion in the NRHP prior to the approval of expenditure of federal funds or issuance of a license. In addition, the head of any such agency must afford the Advisory Council on Historic Preservation an opportunity to comment on the undertaking.
Section 4(f) of the U.S. DOT Act of 1966	Section 4(f) states that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, wildlife and waterfowl refuge of national, State, or local significance, land of an historic site of national, State, or local significance only if there is no "prudent and feasible alternative" to the use of that land, and the program or project includes all possible planning to minimize harm to the public land involved.
Sediment	A general term for any unconsolidated particulate material that has been deposited by an agent of transport, such as water, ice, or wind.

Term	Definition
Seismic hazard	Refers to the probability and amount of ground movement expected from an earthquake.
Shared use path	Paved, off-road facilities designed for travel by a variety of nonmotorized users, including bicyclists, pedestrians, skaters, joggers, and others.
Signalized intersection	A junction of two or more public roads that is controlled by a traffic signal.
Soundscape	A sound or combination of sounds that arises from an environment, including the listener's perception of sounds heard as an environment.
Spill prevention, control, and countermeasures plan	A plan that includes site information regarding hazardous materials, sensitive environmental receptors, spill prevention and containment methods, response procedures, and equipment and material to carry out preventive and response measures and reporting requirements. These plans ensure that all harmful and/or deleterious materials are properly stored and contained. Contractors are required to prepared and implement the spill prevention, control, and countermeasures plan in accordance to WSDOT Standard Specification 1-07.15(1).
Stormwater	The portion of precipitation (rainwater or snowmelt) that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body or a constructed infiltration facility.
Stormwater treatment	Stormwater treatment (or management) reduces or eliminates the negative impacts of stormwater runoff by controlling flooding, reducing erosion, and improving water quality through the implementation of structural, vegetative or managerial practices used to treat, prevent or reduce water pollution.
Temporary erosion and sediment control plan (TESCP)	A plan to prevent and minimize soil erosion. A TESCP includes measures that may include, but are not limited to, the following (as necessary, depending on site conditions): temporary plastic cover, coir fabric (and/or wattles), seeding and mulching, temporary vegetated filter strips (i.e., for construction site stormwater control), slope drains, silt fence, sand, or geotextile-encased triangular silt dikes.
Thalweg	The line of lowest elevation within a river. The thalweg is in the middle of a rivers navigation channel and also serves as boundary line between states.
Tolling	The practice of charging a fee for use of a transportation facility such as a highway. There are several types of tolling: charging a fixed fee; charging a variable fee based on the type of vehicle, time of day, or volume of traffic; tolling a section of highway; and so-called cordon pricing which charges a fee to enter a particular area such as a metropolitan area. Tolling is generally used to help meet the cost of constructing or operating the facility, but also as a transportation demand management tool.
Traditionally underserved populations	Individuals who are low-income, minority, disabled, elderly, youth, transit-dependent and/or those who are limited English proficient.
Traffic congestion	A condition on road networks that occurs as use increases, and is characterized by slower speeds, longer trip times, and increased vehicular queueing.
Travel time	The total time spent traveling from one point to another point.
Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) (Uniform Act)	<p>A federal law that establishes minimum standards for federally-funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Uniform Act's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally-funded projects.</p> <p>The Uniform Act requires that comparable decent, safe, and sanitary replacement housing within a person's financial means be made available before that person may be displaced. When such housing cannot be provided by using replacement housing payments, the Uniform Act provides for "housing of last resort."</p>

Term	Definition
Viewshed	The portion of the landscape that can be seen from within the project area and that has views of the project area. The boundaries of a viewshed are determined by the surrounding topography, vegetation, and built environment.
Visual quality	Character of the landscape, which generally gives visual value to a setting.
Vehicle miles traveled (VMT)	The total number of miles that residential vehicles are driven in a specified period of time for a given area or transportation facility.
Water quality	Refers to the characteristics of the water—for example, its temperature and oxygen levels, how clear it is, and whether it contains pollutants.
Waters of the State/U.S.	These are waters which are protected under the Clean Water Act and by state statute. They generally include all waters that are used or have been used for commerce, as well as associated waters such as adjacent wetlands or impounded waters. Any project activities that would impact such waters require permitting by the appropriate agency(ies).
Wetlands	Areas that are saturated with groundwater near the surface or areas that are flooded for extended periods of time and that support vegetation that can live in saturated soils. Wetlands generally include swamps, marshes, bogs, and similar areas.
Wetland buffer	An area adjacent to a wetland that can reduce adverse impacts to the wetland's ecological functions and values from development or construction activities. Wetland buffers can also provide support functions for species that live in and around wetlands and reduce the impacts of human disturbance on the wetland.
Wildlife corridor	An area of habitat that connects wildlife populations separated by human activities or structures.

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