# **Supplement Analysis**

for the

# **Columbia River Basin Tributary Habitat Restoration** (DOE/EA-2126/SA-76)

Yakima River 89.5 Floodplain Restoration, Phase II BPA project number 1996-035-01 BPA contract number 96709

Bonneville Power Administration
Department of Energy



## Introduction

In December 2020, Bonneville Power Administration (BPA) and the Bureau of Reclamation (BOR) completed the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA-2123) (Programmatic EA). The Programmatic EA analyzed the potential impacts of implementing habitat restoration actions in the Columbia River Basin and its tributaries.

Consistent with the Programmatic EA, this supplement analysis (SA) analyzes the effects of the proposed Yakima River 89.5 Floodplain Restoration, Phase II Project (Project), which would implement many of the specific restoration actions assessed in the Programmatic EA in the Yakima River Basin in Yakima County, Washington. Project objectives would include increasing the quantity and quality of available aquatic habitat for fish and improving channel and floodplain function to support long-term habitat complexity.

The SA also evaluates whether the proposed project presents substantial new circumstances or information relevant to environmental impacts that were not addressed in the Programmatic EA. The findings of this SA determine whether additional National Environmental Policy Act (NEPA) analysis is needed under NEPA, as amended and DOE's Implementing Procedures (dated June 30, 2025).

#### **Proposed Activities**

BPA proposes to fund the Confederated Tribes of the Yakama Nation (YN) to complete the Project along a segment of the Yakima River that includes historical floodplain between river miles (RM) 87 and 91 of the mainstem Yakima River. The Project would support conservation of Endangered Species Act (ESA)-listed species considered in a 2020 ESA consultations with both National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) on the operation and maintenance of the Columbia River System and BPA's commitments to the YN under the 2020 Columbia River Fish Accord Extension agreement, while also supporting ongoing efforts to mitigate for effects of the Federal Columbia River Power System on fish and wildlife in the mainstem Columbia River and its tributaries pursuant to the Pacific Northwest Electric Power Planning and Conservation Act of 1980, 16 U.S.C. 839 et seq.

The Yakima River, a major tributary in the Columbia River basin, is approximately 214 miles in length and situated on tribal, public, private, and state-owned lands. The Project is proposed entirely on the YN Meninick Wildlife Area, in a portion that is owned and managed by the YN. Land adjacent to the Project area consists mostly of wetland habitat managed for waterfowl and native local fish, with sections separated for limited agricultural use. Within the Project area, the Yakima River was confined and cut off from the floodplain and historic channels due to multiple levees.

Restoration activities would include floodplain and side channel activation, large wood structure installation, ford installation, relic beaver dam modification, and native vegetation restoration. YN would perform all fish salvage, dewatering, and in-water construction work between August 1 and September 30, during the On-Reservation in-water work window. YN would develop new temporary access routes within the Project area for the use of heavy equipment. Staging areas would be developed above the 100-yr floodplain or 150 feet from the existing channel for all equipment, and work areas would be minimized to reduce disturbance to existing vegetation and soils and avoid existing on-site riparian zones. Excavated soil would be disposed of on site in spoil disposal areas where soils would be graded to match existing contours and revegetated upon project completion. Overall, the Project would treat about 21 acres of floodplain and stream habitat (Figure 1).

## Floodplain and Side-Channel Activation

To increase floodplain connectivity and flow to existing oxbow ponds, YN proposes to re-connect the mainstem Yakima River channel to historic side-channels and existing perennial side channel. Activation of the side-channels would occur over 18.2 acres requiring about 25,650 cubic yards of excavation of inlets and connector flow paths through the floodplain to create connectivity. Routing side-channels through existing floodplain would minimize excavation requirements and take advantage of existing riparian vegetation along already wetted and seasonally wetted sections of the floodplain. Five relic and inactive beaver dams would be breached or removed from the floodplain. YN would use an excavator to remove approximately forty cubic yards of natural material from the floodplain to help establish flow through the side channels. The excavated channels would be seeded and planted with native species.

## **Large Wood Structures**

Large Wood (LW) jam structures would be constructed at three of the excavated side-channel inlet mouths on the mainstem Yakima River. The LW jams are intended to promote flow into the side-channel while also providing in-stream habitat features. The LW jams would consist of approximately 21 logs with root wads that have their trunks buried into the bank and approximately 21 logs driven vertically into the ground by vibratory pile driving equipment to function as ballasts. The back filled soil would be seeded and planted to increase soil stabilization.

#### **Fords**

Two access routes through the site would be maintained by construction of two stream ford crossings and the enhancement of one existing stream ford crossing. The surface of the fords would be level with the new channel to not disturb flow. Twelve inches of granular material would be placed to allow a driving surface for vehicles and tractors. The existing crossing would become wetted more frequently with the proposed enhancements than under existing conditions.

#### Native Plant Revegetation

All areas disturbed during construction would be replanted with vegetation native to Yakima County, Washington after construction has been completed. Temporary access routes and staging areas would be seeded with a transitional seed mix of native grasses and forbs, along with live plantings. Transitional seeding would include meadow barley (*Hordeum brachyantherum*), blue wildrye (*Elmus glaucus*), common yarrow (*Achillea millefolium*), showy milkweed (*Asclepias speciosa*), arrow leaf balsamroot (*Balsamorhiza sagittata*), river lupine (*Lupinus rivularis*), Anatone bluebunch wheatgrass (*Pseudoroegneria spicata var anatone*), elegant clarkia (*Clarkia unguiculata*), and wild licorice (*Glycyrrhiza lepidota*). Transitional live plantings would include wild rose (*Rosa woodsia*), choke cherry (*Prunus virginiana*), golden currant (*Ribes aureum*), red osier dogwood (*Cornus sericea*), coyote willow (*Salix exigua*), cottonwood (*Populus balsamifera*), black hawthorne (*Crataegus douglasii*), and red alder (*Alnus rubra*).

Excavated riparian areas and newly constructed channel locations would be seeded with a mix of native grasses, rushes, and sedges that would be naturally found in riparian areas. A variety of potted woody

shrubs would also be planted in the riparian zones to enhance native riparian cover. Riparian and bank seeding would include Quick Guard sterile triticale (*Sterile Triticum x Secale*), meadow barley, slough sedge (*Carex obnupta*), Baltic rush (*Juncus balticus*), spike rush (*Eleocharis palustris*), and awl sedge (*Carex stipata*). Riparian and bank planting would include red osier dogwood, coyote willow, cottonwood, black hawthorne, and red alder.

## **Environmental Effects**

Chapter 3 of the Programmatic EA as summarized in relevant analysis below, discusses typical environmental disturbances and impacts stemming from habitat restoration in the Columbia River basin. Below is a description for the Project's potential site-specific impacts and an assessment of whether these impacts are consistent with those described in the Programmatic EA.

## 1. Fish and Aquatic Species

The effects of using construction equipment in and along the Yakima River are consistent with the analysis in Section 3.3.1 of the Programmatic EA ("Fish and Aquatic Species"). Section 3.3.1.3 of the Programmatic EA describes overall low impacts to fish and aquatic species after considering moderate short term effects.

ESA-listed Middle Columbia steelhead (*Oncorhynchus mykiss*), Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), bull trout (*Salvelinus confluentus*), and their designated critical habitat are present within the Project area. BPA completed Section 7 consultation on the potential effect of the Project on ESA-listed species under BPA's programmatic Fish and Wildlife Habitat Improvement Program (HIP) biological opinions. The Project would include implementation of HIP conservation measures, such as staged rewatering of newly formed areas and exposed soils to minimize turbidity.

Overall, short-term project impacts to fish and aquatic species would be moderate, consistent with the analysis in Section 3.3.1.2.1 of the Programmatic EA ("Short-term Effects of Fish and Aquatic Species from Construction Activities"). The short-term effects of the Project would include exposing, displacing, reconfiguring, or compacting earth with mechanized equipment within and along the Yakima River, likely causing moderate, temporary sediment discharges, primarily from the introduction of flows back into the floodplain and channels. These sedimentation impacts would be minimized because new excavations would be accomplished "in the dry" with no exposure to new flows wherever possible while applying conservation measures from BPA's ESA consultation upon wetting the newly excavated areas. Though the amount of sediment discharge would be elevated, turbidity levels would be less than that which they would encounter annually during natural high flow events as discussed in Section 3.3.2.3 in the Programmatic EA, and below levels harmful to fish and at durations not anticipated to cause adverse impacts as evaluated in Section 3.3.1.2.1 of the Programmatic EA ("Short-Term Effects to Fish and Aquatic Species from Construction Activities"). As described therein, these durations would have a low potential for triggering the behavioral and physiological effects from elevated water temperatures induced by high suspended sediment concentrations absorbing and transferring solar energy into the water.

Movement, sounds, and vibrations from construction-related human and mechanical activities would temporarily disturb and displace fish and aquatic organisms from their preferred habitats for the duration of the disturbance. This sound and vibratory disturbance would be minimized as the new sections of side-channels would be constructed in the dry; some work in the existing channel, such as the inlets and large wood installation, would require work area isolation. The work area isolation and instream construction activities would displace fish until it is reintroduced to river flows. Small aquatic organisms that could not be practicably salvaged would likely be destroyed. The newly constructed instream environment would be recolonized by fish and other aquatic organisms, with nearly all fish likely returning in a matter of hours to days, and with full returns likely following the seas onal flushing flows. The anticipated amount of activity and the level of aquatic species disturbance is consistent with the

analysis in Section 3.3.1.2.2 of the Programmatic EA ("Short-Term Effects of Fish and Aquatic Species from Construction Activities") which analyzed similar work area isolation and associated effects.

Project implementation would have beneficial long-term effects on fish and aquatic species from increased stream complexity, enhanced riparian cover, improved protection along the Yakima River, increased floodplain access and flows, and an expected reduction in summer water temperatures. These beneficial effects are consistent with the analysis in Section 3.3.1.2.2 of the Programmatic EA ("Effects to Fish and Aquatic Species").

Overall, Project impacts would be consistent with Section 3.3.1.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Fish and Aquatic Species"), which concluded low impacts to fish and aquatic species after considering moderate short-term adverse effects and beneficial long-term effects.

#### 2. Water Resources

Several aspects of Project construction – including mechanized equipment operations, construction of fords, modification of relic beaver dams, side-channel construction, large wood structures, and floodplain reconnection along the Yakima River – would temporarily expose, displace, reconfigure, or compact earth. In-stream construction, work area isolation, and floodplain and side-channel activation could briefly cause plumes of sediment discharge during work area isolation and reintroduction to flow activities. These short-term effects would be lessened by the application of mitigation measures, such as staged rewatering to slowly introduce flows into dewatered areas, installing sediment barriers in work areas as needed, and soil stabilization utilizing mulch to reduce erosion of bare soil, as detailed in Section 2.4 of the Programmatic EA ("Mitigation Measures and Design Criteria"). With the implementation of the mitigation measures and the short-term duration of any turbidity plume, the Project's anticipated impact to water quality would be low, less than stated in the analysis in Section 3.3.2.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Water Resources"). The Programmatic EA describes overall low water quality impacts after considering moderate short-term adverse effects and beneficial long-term effects. There would be no impact on water quantity as no water withdrawals are proposed.

The Project would result in a long-term decrease in unnatural sediment inputs by increasing sediment storage potential through new side-channels and increasing floodplain access. The Project is expected to result in long-term reduction in stream temperatures from improved stream form, increased floodplain access, and increased vegetative cover and protection. These long-term beneficial effects are consistent with those analyzed in the Programmatic EA.

#### 3. Vegetation

No ESA-listed or state special-status listed plant species are present within the Project area. Project implementation, including the side-channel and floodplain activation, establishment of temporary access roads, and staging and spoil disposal areas would result in the removal or crushing of about 21 acres of vegetation. This would have moderate short term impacts to floodplain vegetation. YN would minimize disturbance to riparian areas during construction to the extent practicable by implementing the following mitigation measures. Any trees or woody material removed during Project construction would be re-established. After construction, YN would re-vegetate temporary work areas. YN would also expand the limited existing riparian corridor by re-seeding and planting using native stock. Increased floodplain inundation would improve vegetation diversity and density in the long term.

The effects of using construction equipment and manually working in and along the Yakima River are consistent with the analysis in Section 3.3.3.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Vegetation"). The Programmatic EA describes overall moderate impacts to vegetation after considering moderate adverse short-term impacts on vegetation from construction and highly beneficial long-term benefits from increased riparian habitat and restored or improved vegetative conditions. Consistent with the Programmatic EA, the overall effect of this Project would be moderate.

## 4. Wetlands and Floodplains

The wetlands delineated in the overall Project area total 135 acres, however, 7.2 acres of wetlands would be directly impacted by Project activities. The short-term effects on wetlands would be moderate and temporary ranging from crushing wetland vegetation to the potential removal of wetland vegetation and soils through the use of heavy equipment operations in and around the identified wetlands. The long-term beneficial effects on wetlands from improved floodplain connectivity would outweigh the negative short-term effects. Construction activities would require excavation adjacent to the wetlands during Project activities which could cause short term negative impacts. The YN has applied and will obtain a permit from the U.S. Army Corps of Engineers (Army Corps) under Nationwide Permit 27 prior to conducting excavation and fill pursuant the Section 404 of the Clean Water Act. The YN would avoid adjacent wetlands and would adhere to all requirements and prescriptions set forth in the Army Corps permit for activities occurring within the wetland.

In the long term, the Project could increase wetland acreage and improve floodplain conditions. The floodplain activation, side-channel reconstruction, and large wood jams would slow down stream flows and increase floodplain inundation potential. Wetland quality would improve due to the restoration of natural flow patterns and the enhancement of native plants. With greater floodplain connectivity at the site, wetland hydrology would likely improve, potentially expanding the wetland areas and reestablishing native vegetative communities.

Flow redirection from the existing mainstem Yakima River would facilitate more natural lateral movement into the floodplain and side-channel areas, which would slow velocities, facilitate more effective connection between the mainstem and the floodplain, and provide more effective sediment movement and retention in the floodplain. Impacts to wetlands and floodplains are consistent with the analysis in Sections 3.2.2, 3.2.9, and 3.3.4 of the Programmatic EA (respectively entitled "Effects Specific to Category 2 – Improving River, Stream, Floodplain, and Wetland Habitat," "Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures," and "Effects to Resources by Resource Type – Wetlands and Floodplains"). Consistent with the Programmatic EA, there would be long term beneficial effects from increased connectivity between the existing Yakima River mainstem and the floodplain.

## 5. Wildlife

No ESA-listed or state special-status terrestrial species are known to exist within the proposed Project area. In the short term, human presence may cause sound and movement that temporarily disturbs local wildlife. Specifically, construction and vegetation removal may temporarily displace mobile species such as birds and small mammals for the duration of such activity, while harassing, harming, or killing smaller, less mobile species or depriving them of habitat. However, abundant similar wildlife habitats are present adjacent to the project area. These effects would be limited in duration, and there would be no long-term negative changes to wildlife habitat. In the long term, the proposed Project would increase the richness and diversity of plant species as well as the extent, heterogeneity, and structural diversity of riparian habitat.

Potential wildlife impacts are consistent with the analysis in Section 3.3.5.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Wildlife"), which anticipates moderate-to-high short-term effects on individual small wildlife species, such as potential construction-related mortality, but comparatively minor impacts on larger animals that may only be temporarily displaced from construction-affected habitats. No population level impacts to wildlife species are anticipated. In the long term, however, wildlife populations would benefit from the increased habitat quality and carrying capacity resulting from the Project. The overall effects of this Project would be low and consistent with those evaluated in the Programmatic EA.

## 6. Geology and Soils

The short-term effects from this Project's construction activities would be moderate due to the proposed side-channel excavation; floodplain activation; modification of relic beaver dams; large wood jam construction; work area isolation actions; and soil compaction by heavy equipment which were considered in the Programmatic EA. These impacts would temporarily increase localized soil erosion potential and decrease soil structure. However, use of erosion and sediment control measures, coupled with post-construction site-restoration activities – including site decompaction and re-seeding – would mitigate these impacts.

Long-term improvement to soils is expected once disturbed surfaces are re-seeded and riparian plantings are established and stabilize the soil surface. Long-term improvement to sediment transport and floodplain access within the Project reach would restore natural sediment-forming processes.

Impacts to geology and soils are consistent with the analysis in Section 3.3.6.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Geology and Soils"), which anticipates overall moderate impacts to geology and soils after considering moderate-to-high short term adverse effects lessened by the implementation of mitigation measures for long term beneficial effects. The overall effects of this Project would be consistent with those evaluated in the Programmatic EA.

## 7. Transportation

The Project area is accessible via Old Mccoy Road, which runs south from the northwest extent of the Project area to the southwest extent of the Project area, and Curlew Road, which runs west from the southwest extent of the Project area. Temporary access routes developed during Project mobilization would provide off-road access. Temporary increases in road congestion may occur due to increased construction equipment along Old Mccoy Road and Curlew Road when staging at the Project site occurs and during construction to move from the upper to lower extent of the Project area. Equipment would utilize temporary off-road access to the extent possible to minimize impacts to Old Mccoy Road and Curlew Road. Staging and storage of equipment would occur along the newly established temporary access routes within the Project area. Further, roadway users would be able to access other local roads around the Project area. Overall, the Project would have low effects on transportation due to the short duration of the Project-related congestion and the availability of other roads around the work areas. No roads would be closed or decommissioned for the Project.

The Project's transportation impacts are consistent with the analysis in Section 3.3.7.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Transportation"), which anticipates a low impact overall given the temporary nature of any effects on roads.

## 8. Land Use and Recreation

The Project is located on YN Reservation lands. The Project area would be located in an area primarily utilized for waterfowl and native local fish management, with small portions used for limited agricultural use. Once the Project is completed, the area would continue to be primarily utilized for the same purposes. In the short term, construction activities would adversely effect wildlife area users because they would be unable to access the Project area. These users would be able to access the adjacent wildlife area and Reservation lands. In the long term, the wildlife area would go back to previous uses and would continue to be utilized for waterfowl and native fish management, agricultural, and livestock grazing.

Impacts to land use and recreation are consistent with the analysis in Section 3.3.8.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Land Use and Recreation"), which conclude that land use practices underlying Project sites would remain unchanged in most cases. Although the floodplain and channels would become reconnected and wetted, the Project's overall effects on land uses and recreation would be low due to the short duration of the Project's construction

and return to pre-Project land uses after construction. This would be consistent with the level of impact evaluated in the Programmatic EA.

#### 9. Visual Resources

The proposed Project is not within a visually sensitive area, but tribal and private users of the wildlife area would have the potential to be able to see Project activities. Users would have the potential of seeing heavy equipment during Project activities and large wood structures within the channel and temporarily exposed soil until vegetation is re-established. After vegetation re-establishment, the Project would have a natural appearance and would not visually detract from the area.

Impacts to visual resources are consistent with the analysis in Section 3.3.9.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Visual Resources"). The analysis concludes that the effects on scenic values from the Project would be low. The overall effects of this Project on visual resources are expected to be low and would be consistent with those evaluated in the Programmatic EA.

# 10. Air Quality, Noise, and Public Health and Safety

Air quality impacts from exhaust and dust emissions from construction equipment would be temporary and localized in nature, with no long- or short-term violations of state air quality standards expected as a result of the Project implementation.

Noise levels for users of the adjacent area would be affected by the operation of construction machinery during excavation of channels and floodplain, and placement of large wood structures. This temporary effect, however, would be minor as it would be generated by a small number of additional vehicles and equipment for a short period of time. Further, it is expected that noise levels would be temporary, and users would use alternative nearby locations that would be subject to less noise. Although construction, transportation, and site-rehabilitation activities would temporarily elevate ambient noise levels at the construction site, the Project would not result in long term changes to noise levels.

Adequate signage and other routine safeguards would minimize risks to workers and public safety, including Old Mccoy Road, Curlew Road, and off-road access locations, for the duration of construction and site restoration.

Impacts to air quality, noise, and public health and safety are consistent with the analysis of Section 3.3.10.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Air Quality, Noise, and Public Health and Safety"), which found the Project's noise effects – and the restoration program's effects on air quality, public health, and safety – to be low. The Project's overall effects would be consistent with those evaluated in the Programmatic EA.

## 11. Cultural Resources

Following a National Historic Preservation Act (NHPA) Section 106 consultation, BPA received notice from the YN Tribal Historic Preservation Office (THPO) that a cultural resource survey had been completed for the Project. A total of four sites were documented, two of which would be avoided by Project activities using flagging or construction barriers, while two others were thoroughly documented and do not require avoidance. BPA initiated consultation with YN Cultural Resources Program (CRP) and YN THPO on June 25, 2025 and determined that the proposed project would have no adverse effect to historic properties provided that the two sites would be avoided by flagging or construction barriers.

Potential cultural resource impacts are consistent with the analysis in Section 3.3.11.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Cultural Resources"), which describes low impacts to cultural resources, with any potential effects being resolved through the Section 106 consultation process under the NHPA.

#### 12. Socioeconomics

The Project would have small, temporary, but beneficial socioeconomic impacts by providing jobs for construction workers and boosting purchases of food, fuel, lodging, and materials for construction and restoration from local businesses in smaller communities. Improvements to natural scenery and recreational enjoyment could have long term socioeconomic benefits.

Consistent with the analysis in Section 3.3.13.3 of the Programmatic EA ("Effects Conclusion for the Proposed Action on Socioeconomics and Environmental Justice"), the Project is anticipated to have low socioeconomic impacts in the Columbia River Basin due to the small scale and dispersed nature of the work involved. Overall, there would be no permanent adverse socioeconomic effects from the Project, and the effects would be consistent with those evaluated in the Programmatic EA.

## 13. Climate Change

Due to the short duration of construction activities and the relatively small number of vehicles and equipment involved, project-related greenhouse gas emissions are anticipated to be low. This minimal contribution to climate change would be offset to some degree by the increased functioning of the floodplain including increased water table inputs, increased carbon sequestration in expanded and improved riparian habitats, and potentially, decreased water temperatures from improved instream and riparian habitat conditions. The overall contribution to climate change and greenhouse gas production would be low.

Impacts to climate change are consistent with the analysis in Sections 3.2.2, 3.2.9, and 3.3.14 of the Programmatic EA (respectively entitled "Effects Specific to Category 2 – Improving River, Stream, Floodplain, and Wetland Habitat," "Effects Specific to Category 9 – Riparian and Upland Habitat Improvements and Structures," and "Effects to Resources by Resource Type – Climate Change"), which found that the Project's overall effects on climate change would be low.

#### **Findings**

BPA finds that the types of actions and the potential impacts related to the proposed Project are similar to those analyzed in the *Columbia River Basin Tributary Habitat Restoration Programmatic Environmental Assessment* (DOE/EA-2126) and Finding of No Significant Impact. There are no substantial changes in the Programmatic EA's Proposed Action and no substantial new circumstances or information about the significance of the adverse effects that bear on the analysis in the Programmatic EA's Proposed Action or its impacts within the meaning of DOE NEPA Implementing Procedures and 40 CFR § 1502. 9.¹ Therefore, no further NEPA analysis or documentation is required.

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Concur:

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<sup>&</sup>lt;sup>1</sup> BPA is aware that the Council on Environmental Quality (CEQ), on February 25, 2025, issued an interim final rule to remove its NEPA implementing regulations at 40 C.F.R. Parts 1500–1508. Based on CEQ guidance, and to promote completion of its NEPA review in a timely manner and without delay, in this SA BPA is voluntarily relying on the CEQ regulations, in addition to the DOE NEPA Implementing Procedures (dated June 30, 2025), to meet its obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

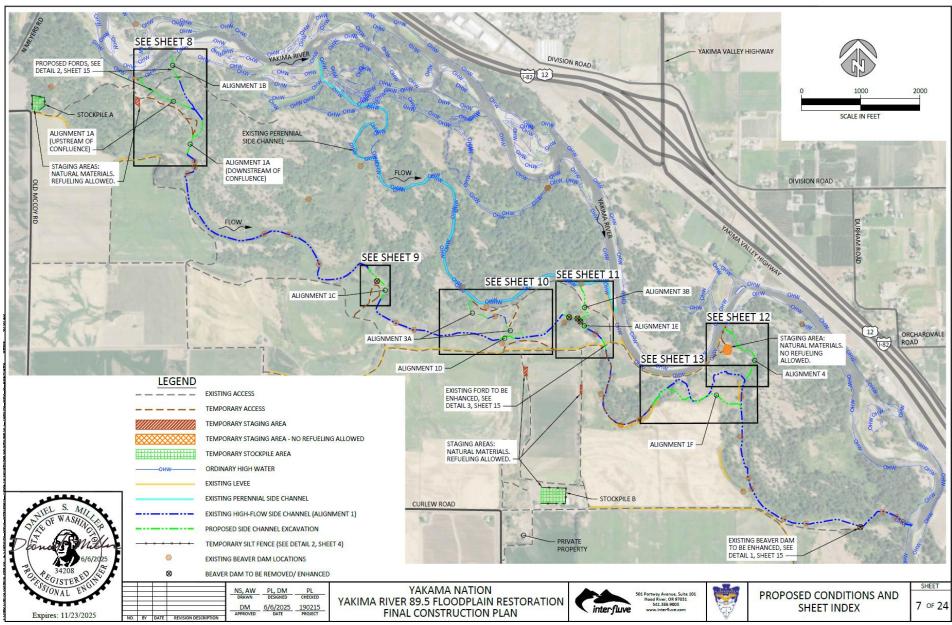


Figure 1: Yakima River 89.5, Phase II Project Components