Supplement Analysis
for the
Columbia River Basin Tributary Habitat Restoration
(DOE/EA-2126/SA-74)

Toppenish Creek Three-way Levee Removal, 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-2126) (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 effect of the proposed Toppenish Creek Three-way Levee Removal, 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 levee removal, increasing the quantity and quality of available aquatic habitat for steelhead and lamprey, and improving channel and floodplain function to support long-term habitat complexity.

This 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 DOE National Environmental Policy Act (NEPA), Implementing Procedures (dated June 30, 2025).

Proposed Activities

BPA proposes to jointly fund the Confederated Tribes of the Yakama Nation (YN), along with the Natural Resources Conservation Service (NRCS), to complete the Project along a segment of Toppenish Creek between river miles (RM) 43 and 44. The Project would support: (1) conservation of ESA-listed species considered in a 2020 Endangered Species Act (ESA) consultation between National Marine Fisheries Service (NMFS) and BPA, among other federal action agencies, on the operation, maintenance, and management of dam and reservoir project comprising the Columbia River System; (2) BPA's commitments to the YN under the 2020 Columbia River Fish Accord Extension agreement; and (3) 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*.

Toppenish Creek is approximately 70 river miles in length and situated entirely on tribal lands within the borders of the YN Reservation. Land adjacent to the Project area consists mostly of rangeland habitat utilized for grazing up to the riparian zone associated with the creek. Within the project area, Toppenish Creek's flow is concentrated to a single threaded channel confined by an existing levee.

YN would perform all fish salvage, dewatering, and in-water construction work between August and October, during the on-reservation in-water work window. Final upland restoration, cattle exclusion, and fencing would be completed in the fall. YN would develop temporary access routes along the channel for the use of heavy equipment, staging areas above the 100-year floodplain or further than 150 feet from the channel for all equipment, and work areas to minimize disturbance to existing vegetation and soils and avoid existing on-site riparian zone. 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 approximately 81 acres of floodplain and stream habitat (Figure 1).

Levee Removal

YN proposes to remove the existing levee to a designed surface grade. Levee removal areas would then be converted to meandering channels (mainstem and side channels) and reconnected floodplain areas. Levee removal spoils would be used to plug and partially fill existing straight sections of the mainstem channel, converting them to functional vegetated floodplain surfaces or a raised-bed channel. The levee sections were originally constructed of local material excavated from the Toppenish Creek alluvial fan and armored with boulders and riprap retrieved from the adjacent quarry.

Reroute Mainstem

The existing mainstem is straight and confined behind the existing levee sections. Once the levee is removed, the mainstem would be rerouted into meandering channels that mimic the historical channel form, as much as possible, within site constraints. Historical photos, remnant scars, upstream functioning analog areas, and desired design gradient guided the layout of the meander pattern and floodplains proposed. The designed meander channels mimics historical channel form while considering significant cultural resource conservation and required channel gradient and length to tie into the rerouted mainstem to provide habitat complexity, encourage channel evolution, and maintain meandering form.

Channel Fill

To re-meander the existing entrenched and straightened mainstem channel as well as tie into the existing downstream and upstream channel elevations, sections of existing mainstem would be filled (plugged) or partially filled. Channel plugging would support re-meander deflection of the mainstem channel and create a functioning vegetated floodplain in place of the modern channel. The channel fill plug would be placed in conjunction with a large wood jam at the upstream end to provide habitat complexity and maintain plug functions while bank and floodplain vegetation is established. Partial channel filling is proposed for a section of the entrenched channel bed that would be retained as the mainstem flow route but would need to be raised above existing (incised) elevation to match design elevation and gradient at the up and/or downstream end. Material for plugs and streambed would be taken locally from levee removal or reconnected floodplain creation – both sources were originally Toppenish Creek alluvial fan materials. Plug material composition would consist of a minimum of 50% large gravel and cobble material and 30% loamy material. The channel bed material composition would consist of gravel and cobble material.

Create High-Flow Channels

The constructed side channels proposed would be designed to activate between the months of March to June with the proposed monthly average discharge being greater than 50 cubic feet per second (cfs). All flows less than 50 cfs would be designed to consolidate in the mainstem for fish use purposes. Activation of the side channels during the spring freshet would dissipate high-flow, stream-energy, and distribute water across the created connected floodplain. Large wood habitat features would create additional habitat function and restore natural floodplain function. The recreated high-flow side channels would mimic functioning conditions immediately upstream of the project area. The side channels would be seasonally activated and provide high-flow refugia and additional habitat complexity to the system. Side channel profiles would be freely draining to their outlets to limit fish stranding risk. Side channels and their habitat would be expected to evolve over time.

Create Backwater / Alcove Habitat

At the downstream end of channel fill locations, proposed backwater alcove habitat for lamprey and salmonid rearing would be constructed. These features would be located where the re-routed meander rejoins the existing channel flow route to create refugia pools for fish. Large wood would be added in the alcoves to provide habitat uplift.

Create Connected Floodplains

The inset floodplains would be connected to the re-routed mainstem channel and the side channels which would be designed to dynamically evolve into functioning riparian corridors overtime. Low floodplain surfaces located between channels would be designed to be inundated annually, while the inset floodplains between the mainstem channel and its currently abandoned floodplain or hillsides would be designed for inundation at the 1.5 year flow event. At the downstream end of the project area, the inset floodplain along river left would be designed to match the elevation of the previously constructed Phase I inset floodplain which was designed to be inundated at the 2 year flow event.

Large Wood Structure

The large wood structures (88) would be designed to maintain and promote habitat complexity as well as geomorphic functions such as scour, deposition, and encourage lateral stream movement. Large wood structures designed for the project area would include:

- **Apex Jams**: Four apex jams would be placed at the upstream end of the partial channel fill (plug) areas. These structures would provide in-channel habitat, support channel deflection into the rerouted mainstem, and reinforce plug stability while floodplain vegetation establishes atop the fill (newly created floodplain surface). The apex jams would include layered logs with root wads situated over a scour pool. The trunks of the logs would be buried in the bank for stability and ballasted with gravel/cobble alluvium backfill, boulders and vertical piles. Logs and slash would be added to the exposed root wads to provide additional roughness and habitat function to maintain the scour pool.
- **Side Channel Inlet Structure:** Six side channel inlet structures would be placed at the inlets of new side channels; these are essentially small apex jams intended to split flow between the mainstem and side channels. These structures would include four logs with root wads situated over a scour pool. The trucks of the logs would be buried in the bank for stability and ballasted with gravel/cobble alluvium backfill and vertical piles. Slash would be added to the exposed root wads to provide additional roughness and habitat function to the scour pool.
- **Bank Buried Jams:** Sixty bank buried jams would maintain scouring pools, provide roughness, and/or instigate complexity (i.e., lateral process, split flow). These would be proposed in both the mainstem channel and side channels. Bank buried (BB) Jams would typically consist of buried logs with root wads situated over a scour pool.

- **Channel Spanning Large Wood:** Eighteen channel spanning large wood would support geomorphic and aquatic habitat complexity via providing grade variability, instigating gravel accumulations, supporting lateral process, and providing in-stream channel roughness. These would be proposed in the mainstem channel and in some side channels. Channel spanning (CS) Jams would typically consist of logs with root wads that are partly ballasted by in-channel boulders (existing or imported) and partially buried.

Floodplain Roughness

Floodplain roughness would include structures, slash, and vegetation that increases surface roughness atop disturbed or unvegetated surfaces where regular floodplain inundation is expected to occur after construction is completed. These treatments would be intended to slow and dissipate surface flow, limit risk of channel avulsion, support fines accumulation on floodplain surfaces, and provide hydraulic refuge and micro-climates for regenerating riparian vegetation. All floodplain roughness types would be constructed of natural materials, expected to decay overtime as riparian vegetation recovers and starts to provide roughness. Three types of floodplain roughness treatments are proposed, depending on inundation patterns and velocities. Floodplain roughness types designed for the project area include:

- **Piles and Slash:** Approximately 2 acres of piles and slash would be proposed on the constructed channel fill plugs to mimic roughness of a forested surface. This treatment would include installation of vertical pile logs with dense racked slash. Piles would be bark-free logs of 12 to 16 inch diameter. Native vegetation planting would occur within the treatment area.
- **Horizontal Logs with Piles and Slash:** Approximately 2,300 linear feet of horizontal logs with piles and slash would be proposed on the constructed inset floodplains to provide surface roughness and hydraulic flow dispersion where inundation and velocities would require more roughness than live-stake trenches could provide. This treatment would include logs being placed on the floodplain surface with slash and then secured with angled log ballasts. Two to four horizontal logs would be linked together with a placement that is perpendicular to surface flow routing. Log sets would be distributed in an offset pattern from each other to maximize surface flow routing dissipation. Native vegetation planting and seeding would occur within the treatment area.
- **Willow Trenches:** Approximately 4,700 linear feet of willow trenched would be proposed on the constructed inset floodplains to provide surface roughness and hydraulic flow dispersion. This treatment would include the installation of live willow stakes with slash in excavated trenches on the floodplain. Trench depth would require a minimum of six inches of groundwater to be exposed in the trench at the time of installation and stakes planted at the bottom of the trench to support stake survival. Stake survival is anticipated to result in dense willow clumps across the floodplain that support riparian vegetation recovery and roughness. Additional slash would be woven into the willow stakes to function as a living floodplain fence structure. Trenches would be, approximately, 20 to 30 feet in length and placed in an offset pattern, perpendicular to surface flow routing. Native vegetation planting and seeding would occur within the treatment area.

Native Plant Revegetation

All areas disturbed during construction would be replanted with vegetation native to Yakima County after construction has been completed. Temporary access routes, staging areas, the upland fill area, and other disturbed locations would be seeded with a transitional or upland seed mix of native grasses and forbs, along with live plantings. Transitional and upland seeding would include meadow barley, blue wildrye, basin wildrye, yarrow (*Achillea millefolium*), desert parsley (*Lomatium papilioniferum*), wooly sunflower (*Eriophyllum lanatum*), river lupine (*Lupinus rivularis*), and bluebunch wheatgrass

(*Pseudoroegneria spicata*). Transitional and upland live planting would include big sagebrush (*Artemesia tridentata*) and green rabbit-brush (*Chrysothamnus viscidiflorus*).

Excavated riparian areas and filled portions of the existing channel would be seeded with a mix of native grasses, rushes, and sedges that would be naturally found in wet meadows and riparian areas. A variety of potted woody shrubs would also be planted in the riparian zones to enhance native riparian cover. Additionally, a variety of willow species would be planted as live stakes on mid-channel islands and riparian benches, and along the banks of the main channel. Riparian and bank seeding would include meadow barley (*Hordeum brachyantherum*), panicled bulrush (*Scirpus microcarpus*), blue wildrye (*Elymus glaucus*), basin wildrye (*Leymus cinereus*), Baltic rush (*Juncus balticus*), spike sedge (*Eleocharis palustris*), and awl-fruited sedge (*Carex stipata*). Riparian and bank live planting would include Woods' rose (*Rosa woodsia*), golden currant (*Ribes aureum*), white alder (*Alnus rhombifolia*), and Lewis' mock orange (*Philadelphus lewisii*). Willow species live plantings would include coyote willow (*Salix exigua*), Geyer's willow (*Salix geyeriana*), and pacific willow (*Salix lasiandra*).

Exclusion Fence

Livestock exclusion fencing would be constructed by YN after project construction is completed to protect the project area from undesired livestock grazing impacts (wild horses and cattle). The exclusion fencing would tie into existing pasture fencing to minimize new fence construction.

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 Toppenish Creek are consistent with the analysis in Section 3.3.1.2 of the Programmatic EA ("*Environmental Consequences for Fish and Aquatic Species*"), which describes overall low impacts to fish and aquatic species after considering moderate short-term effects.

ESA-listed Middle Columbia River steelhead (*Oncorhynchus mykiss*) and their designated critical habitat are present within the Project area, as are Pacific lamprey. Consultation on the Project's effects on steelhead was completed by the Natural Resources Conservation Service (NRCS) under their Programmatic Biological Opinions for Oregon and Washington (NMFS #:WCR-2017-7216). No other aquatic species listed under the ESA, or other state-listed or sensitive aquatic species are present within the Project area.

Overall, short term 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 Toppenish Creek, likely causing moderate, temporary sediment discharges, primarily from the introduction of first time flows into newly constructed floodplain and channels. These 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 NRCS' ESA consultation upon wetting the newly excavated areas. Through 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 harm 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 activity 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 channel and floodplain would be constructed in the dry, but some work in the existing channel would require work area isolation. The work area isolation and instream construction activities would displace fish from the work area until it is reintroduced to creek flows. Small aquatic organisms that could not be practically salvaged would likely be destroyed. The newly constructed in-stream 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 seasonal 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 to Fish and Aquatic Species from Construction Activities*") which describes such work area isolation and the associated effects.

Project implementation would have beneficial long-term effects on fish and aquatic species as a result from increased stream complexity, enhanced riparian cover, improved protection along Toppenish Creek, 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 Organisms unique to the Categories of Action*").

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 described low impacts to fish and beneficial long-term effects.

2. Water Resources

Several aspects of Project construction – including mechanized equipment operation, levee removal, channel reconstruction, large wood structures, and floodplain reconstruction along Toppenish Creek – would temporarily expose, displace, reconfigure, or compact earth. In-stream construction, work area isolation, and floodplain and channel reconstruction 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 extent and duration of any resultant turbidity plume, the Project's anticipated impact to water quality would be low, consistent with the analysis in Section 3.3.2.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Water Resources*"), which 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 and increased 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 described 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 levee removal, channel and floodplain reconstruction, establishment of overland access routes, staging, and spoil disposal areas would have moderate short-term impacts to the floodplain, and YN would minimize disturbance to riparian areas during construction to the extent

practicable. Any trees or woody material removed during Project construction would be re-established. After construction, YN would re-vegetate temporary work areas. YN would 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 Toppenish Creek are consistent with the analysis in Section 3.3.3.3 of the Programmatic EA ("*Effects Conclusion for the Proposed Action on Vegetation*"), which 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 wetland delineated upstream of the Project area totals 1.1 acres and is classified as riverine wetland. The short-term effects on wetlands would be moderate and temporary from the crushing and 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 wetland and floodplain connectivity, and from the removal of the levee, would outweigh the negative short-term effects. Construction activities would require excavation adjacent to the wetland 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 under Nationwide Permit 27 prior to conducting excavation and fill pursuant to Section 404 of the Clean Water Act. The YN would avoid adjacent wetlands to whatever extent practicable 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 channel reconstruction, floodplain reconstruction, levee removal, and large wood structures 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 re-establishing native vegetative communities.

Flow redirection from the existing mainstem Toppenish Creek would facilitate more natural lateral movement into the floodplain reconstruction and channel reconstruction areas, which would slow velocities, facilitate more effective connection between the channels 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 effect from increased connectivity between the existing Toppenish Creek mainstem channel 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 and/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 levee removal, channel excavation, floodplain excavation, large wood structure 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 devices, 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 and mitigation measures for long term benefits. The overall effects of this Project would be consistent with those evaluated in the Programmatic EA.

7. Transportation

The Project area is accessible via Ethier Road, which runs north to south on the northwestern extent of the Project area. Temporary access routes developed during Project mobilization would provide off-road access. Temporary increases in road congestions may occur due to increased construction equipment along Ethier Road when staging at the Project site occurs; however, equipment once on site would not need to utilize Ethier Rd. Staging and storage of equipment would occur behind a gate at the Project access point. Further, roadway users would be able to access other local roads around the Project area. Overall, the Project would have a low effect on transportation due to the short duration of the Project-related staging congestion and the availability of detours 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 livestock grazing purposes. Once the project is completed, the area would continue to be primarily utilized for livestock grazing purposes. In the short term, construction activities would have an adverse effect on grazing due to livestock being unable to utilize the Project area and forcing livestock to use adjacent Reservation lands. In the long term, livestock fence would keep livestock outside of the

riparian area, but livestock would be allowed continued use of the upland areas for grazing purposes and would continue to be the primary use of this land.

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 concludes that land use practices underlying Project sites would remain unchanged in most cases. Although the levee would be removed and the floodplain would become reconnected and wetted, the Project's overall effects on land uses and recreation would be low due to the small amount of riparian area excluded from livestock use relative to the overall quantity of range land available. 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 (users) of Toppenish Creek would have the potential to be able to see Project activities. Users would have the potential of seeing heavy equipment during Project activities, then after implementation users would have the potential to see large wood structures within the channel, 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 on Ethier Road and 2-track access route, 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, the NRCS initiated consultation with the YN Cultural Resources Program (CRP) and YN Tribal Historic Preservation Office (THPO) on August 24, 2023. One previously recorded archaeological site (2023-YN-18) was located within the area of potential effect (APE) for the Project, and the YN THPO determined that the Project would have an adverse effect to 2023-YN-18 and requested further testing within the APE. During fieldwork, subsurface testing was negative for cultural materials, but one feature was documented. THPO reviewed the results of the fieldwork and determined that the Project would still have an adverse

effect, but that it could be mitigated through additional research, which would be compiled and added to the YN Cultural Atlas. THPO also stipulated monitoring during the Project implementation. NRCS concurred with the THPO determination.

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 amenable to resolution 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 effects and this Project 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 wetland 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.

CATHERINE CLARK

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Concur:

KATEY GRANGE

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Katey Grange
NEPA Compliance Officer

[1] 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.

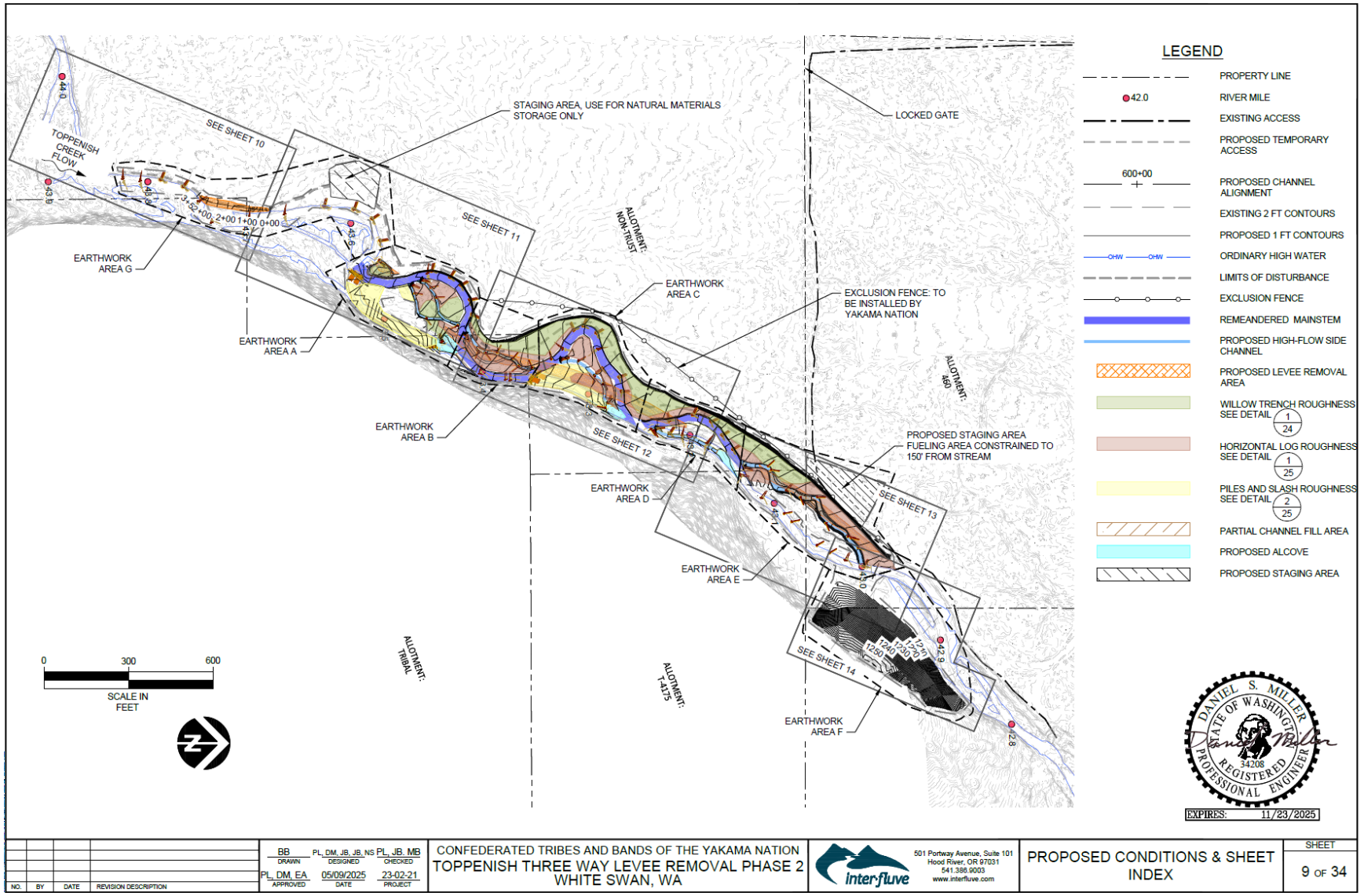

Figure 1: Toppenish Creek 3-way Project Components