Supplement Analysis
for the
Aquatic Restoration Environmental Assessment
(DOE/EA-2119/SA-01)

Granite Creek Restoration Project
BPA project number 2000-031-00

Bonneville Power Administration
Department of Energy

Introduction

In November 2019, Bonneville Power Administration (BPA) adopted the US Forest Service (USFS) Umatilla National Forest's Aquatic Restoration Environmental Assessment (EA)(DOE/EA-2119). The Aquatic Restoration EA analyzed the potential impacts of restoration activities occurring within and on lands adjacent to the Umatilla National Forest in Umatilla, Grant, Columbia, Morrow, Wallowa, Union, Baker, Garfield, Asotin, Wheeler, and Walla Walla Counties of Oregon and Washington.

Consistent with the Aquatic Restoration EA, this supplement analysis (SA) analyzes the proposed Granite Creek Restoration Project in Grant County, Oregon. The SA was prepared to analyze the site-specific impacts of the proposed Granite Creek Restoration Project and determine if the project is within the scope of the analysis considered in the Aquatic Restoration EA. It also evaluates whether the proposed project represents significant new circumstances or information relevant to environmental concerns. The findings of this supplement analysis determine whether additional NEPA analysis is needed pursuant to 40 Code of Federal Regulations (CFR) §1502.9(c).

Proposed Action

BPA proposes to fund the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to implement the Granite Creek Restoration Project on Granite Creek in Grant County, Oregon (Figure 1). The project would occur on private property used recreationally and on USFS-managed National Forest System lands. Starting in the 1800s, Granite Creek has been subject to historic mining activities, which resulted in extensive disturbance and alteration of the stream channel and associated riparian areas and floodplains. The effects of mining are still evident today with dredge tailings, simplified stream channels, poor aquatic habitat conditions, degraded riparian conditions, elimination of beaver dam complexes, and disconnected floodplains present in the project area. The proposed project would improve habitat for Endangered Species Act (ESA)-listed Mid-Columbia steelhead (*Oncorhynchus mykiss*) and bull trout (*Salvelinus confluentus*), as well as other non-ESA listed fish and wildlife species, including spring Chinook salmon (*O. tyshawytscha)* and lamprey.

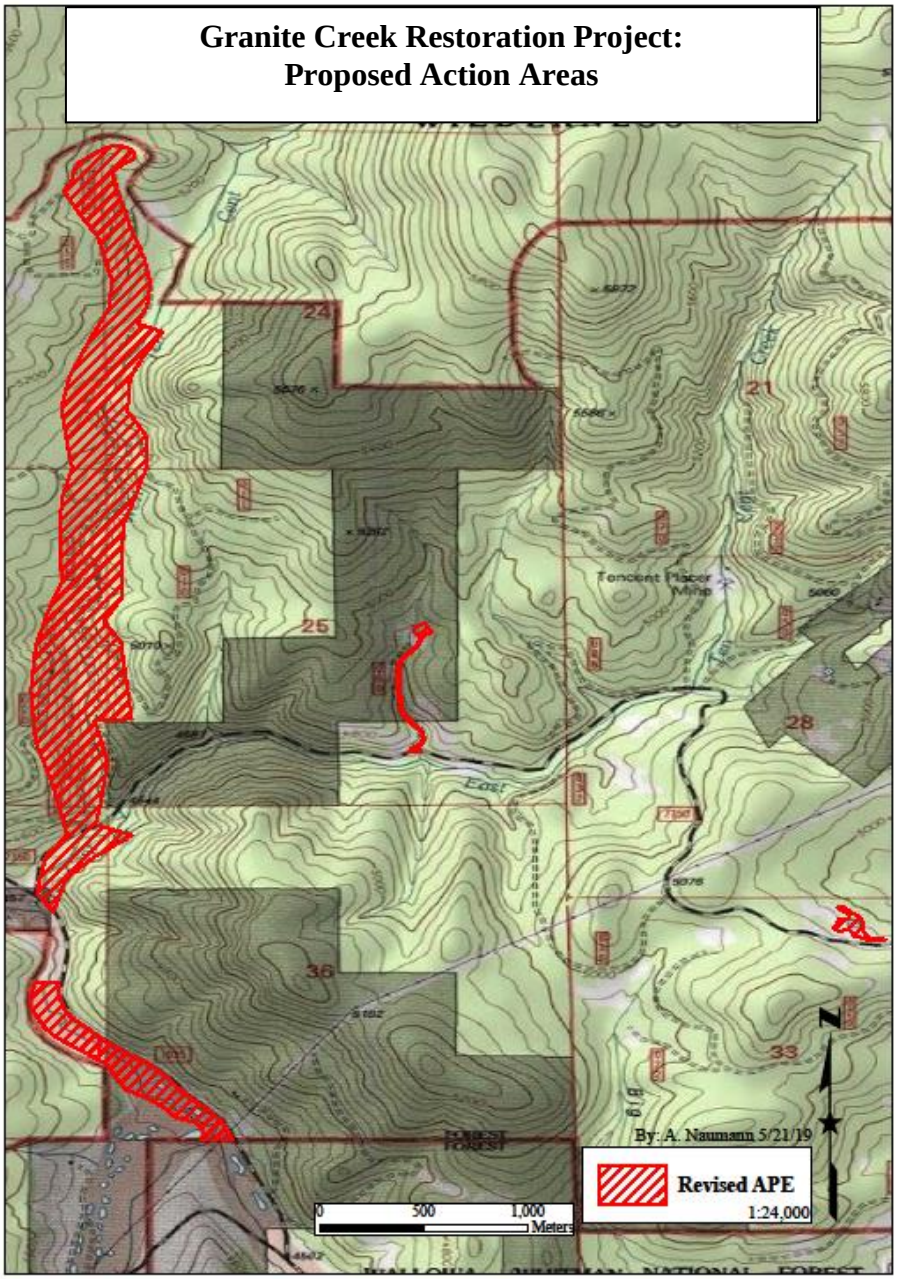

Figure 1. Location of proposed Granite Creek Restoration Project.

The proposed project would recreate key functional attributes that support sustainable fish, wildlife and riparian habitat conditions within the constraints of project area boundaries and budget available. The restoration would be conducted in riverine and floodplain areas to help restore aquatic functions and structure, and plant species composition that would occur pre-disturbance.

Project activities would involve using heavy equipment to reconstruct stream channels and place a variety of large woody debris (LWD) habitat enhancement structures, including apex jams, bank meander rootwads, beaver dam analogs, buried rootwads, channel spanning rootwads, longitudinal logs, single log – tree structures, and single log – rootwad structures. Access roads and stockpile locations needed to assist with the construction of these structures are contained within the area as indicated in Figure 1, which extends downstream from the confluence of Clear Creek with Granite Creek for 3,500 feet and spans from the local road (NF 1035) to 125 feet south of the Granite Creek channel.

Specifically, the project would include the following project elements:

- Project Element 1 - Multiple Side Channel Enhancements and Connections: Project Element 1 would include a series of side channel connections to the main channel throughout the project reach. The side channel enhancements would include excavation of the floodplain and installation of wood habitat structures to create off channel habitats, increase hydrologic capacity, provide resting areas for fish and wildlife species and provide protective cover for fish and other aquatic species.

- Project Element 2 - Floodplain Dredge Pile Grading: Project Element 2 would include areas of floodplain dredge pile grading and berm removal. The floodplain grading would allow a reconnection of historic floodplains and connect wetlands. Excess dredge and berm material would be disposed at upland locations included in Figure 1.

- Project Element 3 - Main Channel Reconstruction: Project Element 3 would include the main channel reconstruction and realignment throughout the project reach. The main channel reconstruction would include structural elements including roughened channel bed materials in riffle reaches. The resulting main channel would improve sediment sorting, velocity variability and depth variability. Rock for riffle construction and boulder ballasts would be obtained from an upland quarry included in Figure 1.

- Project Element 4 - Large Wood Habitat Structures: Project Element 4 would include the large wood habitat structures designed throughout the main channel and side channel enhancements through the project reach. The large wood habitat structures were designed to increase coarse sediment storage, increase habitat diversity and complexity, provide long-term nutrient storage, provide grade control in main channel and side channels and provide velocity refugia for fish. The proposed large wood habitat structures would also support the development of riparian vegetation. Large wood would be provided by the construction contractor and small wood and slash without root wads would be obtained in the area included in Figure 1.

In addition, the stream and floodplain restoration project areas, has three associated upland areas that would be used for the disposal of excavated floodplain material, staging of LWD, source of rock for riffle construction, and source of slash and small wood. Access roads within these upland areas would require improvement (such as regrading, blading, rocking).

The project activities would be conducted in accordance to BPA's Habitat Improvement Program (HIP) biological opinions and are consistent with the following categories of actions identified in the Aquatic Restoration EA:

- Category 2a, Improving secondary channel and wetland habitat.
- Category 2d, Install habit-forming natural material instream structures
- Category 2e, Riparian vegetation planting
- Category 2f, Channel reconstruction
- Category 5a, Road maintenance
- Category 9b, Fencing construction for livestock control

The project would begin in fall 2019 with staging of wood and rock in staging areas. Although work is expected to be completed in 2020 there may be additional work as needed to address issues identified after construction that would be addressed in accordance with the project's adaptive monitoring and management plan.

Environmental Effects

The typical environmental impacts associated with the Aquatic Restoration EA are described in Chapter 3 of the EA, and are incorporated by reference and summarized in this document. Below is a description of the potential site-specific impacts of the Granite Creek Restoration Project and an assessment of whether these impacts are consistent with those described in the Aquatic Restoration EA.

1. **Aquatic Resources – Hydrology and Fisheries**

Although the proposed project activities are designed to improve aquatic habitat conditions for salmonids and other aquatic species over the long term, short-term adverse effects to water quality, fish, and other aquatic organisms may occur because of construction activities.

Water quality would be affected by short term impacts related to construction, including turbidity resulting from channel excavation, floodplain and channel re-contouring, placement of natural wood structures and other similar actions. Turbidity-related impacts would be minimized by implementing the appropriate best management practices (BMPs) and adhering to applicable regulatory requirements and permit conditions, and would, therefore, be low. Construction activities would comply with an erosion control plan to minimize the amount of sediment from entering waterbodies. Temporary and permanent erosion and sedimentation control BMPs could include, but would not be limited to, the use of turbidity curtains, straw bales, coir wattles, sediment fencing, check dams, coir matting, and erosion control blankets.

The wetlands within the project area are of low quality; the Project is expected to have permanent direct impacts resulting from earthwork activities (e.g. cut, fill), and indirect impacts in which wetland areas would likely be converted to side channels. In addition to the negative effects to wetlands, the new inundation levels would either enhance existing wetlands or create new wetland areas. Appropriate Clean Water Act wetland and waterbody permitting would be obtained prior to wetland or waterbody disturbance.

Construction equipment (such as excavators, bulldozers, dump trucks) would pose a risk for accidental spills of fuel, engine fluids, and other contaminants. Additionally, construction-related discharges could occur during vehicle washing, pumping for work-area isolation, or other construction-related water use. Discharge could carry sediments or contaminants to nearby water bodies, floodplains, wetlands, or riparian areas. During construction, BMPs to avoid or minimize potential negative impacts to water quality from accidental spills and/or discharges would be in place. These would include, but would not be limited to: conducting machinery maintenance, staging, and refueling in designated areas away from

waterbodies or sensitive areas or in fully contained areas, and conducting regular checks of machinery for leaks prior to starting work. Thus, potential impacts to water quality related to accidental spills of contaminants would be low.

During project construction, some fish injury or mortality may occur during fish salvage, dewatering, and in-stream construction of the project elements and lowered water quality. The project-related construction effects would be short term and localized to the immediate project area and adjacent shoreline. Long-term, the project would improve hydrological regimes, enhance water quality, and increase habitat area and access for the benefit of native fish. The construction of the proposed project would result in low to moderate short-term effects to fish in the project area; however, after construction, fish species that use this portion of Granite Creek would find improved habitat conditions for all life stages, and the long-term outcomes would be beneficial.

Following construction, the restored channels would provide and maintain consistent ingress and egress for juvenile salmonids at a variety of flow conditions, and restore seasonal inundation patterns to the wetland and floodplain areas, resulting in a long-term benefit to hydrologic processes. Increased fine sediment deposition, expansion of riparian vegetation, and cooler water temperatures would be provided to Granite.

As consistent with the Aquatic Restoration EA, BPA consulted with the US Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) under Section 7 of the ESA and is implementing this project in accordance with the HIP biological opinion and Essential Fish Habitat (EFH) consultation for impacts to ESA-listed fish. Categories of action included in the HIP and relevant to the Granite Creek Restoration Project include those in the 'River, Stream, Floodplain and Wetland Restoration' category.

In addition to ESA-listed species, the USFS also tracks Regional Special Status Species list (RSSL) and Management Indicator Species (MIS) to determine the effects of management activities on their populations and the populations of other species with similar habitat needs. The amount and quality of habitat is used as a proxy for determining the effects of projects on RSSL and MIS, all of which exhibit largely overlapping ranges and similar vulnerability to effects with the ESA-listed fish. Based on the habitat that would be affected, the USFS determined that the project "may impact individuals, but is not likely to cause a trend toward federal listing or loss of viability within the planning area". This determination is based on the USFS' monitoring of previous Aquatic Restoration Biological Opinion (ARBO) projects (on file at the USFS' Supervisor's Office, Pendleton Oregon) and general findings that the nature of instream projects would be beneficial in the long term, even if short term impacts may be negative. Direct effects to instream habitat are of high magnitude (localized turbidity increases) but the duration is short and limited (episodic over two to three weeks with downstream effects of generally less than a few hundred feet) as allowed under the ARBO, HIP, and Clean Water Act permitting.

These impacts are consistent with the analysis in the Aquatic Restoration EA, Chapter 3, Aquatic Resources – Hydrology and Fisheries, which describes impacts as being negative in the short term and beneficial over the long term.

2. **Wildlife**

In the short term, noise and visual disturbance during construction would likely cause wildlife to avoid the project area during the construction period. If present during construction, nesting birds, smaller

ground-dwelling mammals, reptiles, and amphibians could be harmed or killed incidentally during construction. In the longer term, effects to wildlife are expected to be beneficial.
Long-term improvements to topographic and vegetative diversity would increase with restoration actions, which would benefit certain wildlife. Overall, semi-terrestrial mammals such as beaver, as well as amphibians, waterfowl, shorebirds, and insect-eating birds would have expanded and improved wetland and aquatic habitat for feeding and breeding in the long term as a result of this project.

The USFS tracks ESA, RSSL, and MIS listed species within their project area to determine the effects of management activities on their populations and the populations of other species with similar habitat needs. The amount and quality of habitat is used as a proxy for determining the effects on RSSL and MIS. Of the species tracked by USFS within the Umatilla National Forest, only one has the potential to be within the project area and affected by project implementation.

There is one wildlife species protected under the ESA with the potential to be in the Granite Creek project area: gray wolf (*Canis lupus*). There are no known den sites in the project area, and gray wolf usually occur in remote country with sources of ungulates and water nearby. Temporary human disturbance to the site is the only potential effect that this project would have on gray wolf. The construction activity would likely disturb ungulates and other wildlife that were utilizing the area. If wolves were hunting in the area, this activity would likely disturb them. Wolves and deer would be able to use the area without human disturbance at night. Wildlife disturbed by construction activity would be able to move to adjacent areas. This temporary human disturbance would not result in any reductions to deer or other wildlife populations. It would not reduce prey availability for gray wolf and "may effect, but would not likely adversely affect" the gray wolf

The impacts discussed in the Aquatic Restoration EA, Chapter 3, Wildlife include: noise or visual disturbance leading to displacement of individual animals, and habitat conversion. The project would avoid and minimize wildlife impacts by observing buffer zones and timing restrictions developed by BPA and USFWS to avoid adverse effects if any ESA-listed or sensitive wildlife are found within the project work areas. These impacts are consistent with the Aquatic Restoration EA. Overall, there would be a moderate and beneficial impact to wildlife in the long term.

3. **Botany**

In 2019, Umatilla National Forest personnel conducted a botanical survey of the project area to identify sensitive species within the project area; none were identified.

In order to implement the project, construction equipment would need to have access to the river bank in areas with existing vegetation. In the short term, these constriction activities would result in a loss of grasses, shrubs and trees at specific spots in the project area. Construction access and staging was one of the preliminary criteria used to identify areas where construction activities would occur to ensure that equipment access would result in minimal disturbance to what little high quality vegetation existed. There are very few areas where mature vegetation (older than 20 years) exists. The areas where mature vegetation does exist would not be disturbed by project construction.

The vegetation impacts would be temporary and would be mitigated through the adherence to HIP conservation measures and permit requirements. In the long term, the proposed project would include a planting plan that would restore areas affected during construction.

Therefore, the impacts associated with the Granite Creek Restoration Project, which include short-term impacts and long-term benefits, are expected to be low to moderate, consistent with those described in the Aquatic Restoration EA Chapter 3, Botany.

4. **Soils**

All of the proposed project elements would have impacts to soils, through compaction, removal, and mixing of soil strata.

Excavation of soil would occur to create and modify the main and side channel, install the habitat features, and improve site access. The use of heavy machinery would disrupt soils in the project area as a new channel is excavated and the soils and topography are altered. Much of the excavation material cut from the proposed main channel would be used to elevate and plug the old channel bed in several areas. This would promote the frequency, duration and extent of floodplain inundation as well as encouraging more side channel flow. While much of the excavated soils would be relocated within the floodplain, some material that would be removed from the stream channel and floodplain as result of construction will be moved offsite. About 9,970 cubic yards of soil would be disposed of in an upland area near the project area. Side channel excavation soils would be deposited on site, graded and stabilized in areas that would not alter floodplain function.

Within the main and side channels, natural LWD structures would be installed to establish instream habitat and improve floodplain connectivity, and would be placed in locations where they would increase scour of the river bottom to create instream habitat for fish. The material that is displaced from these areas would be moved downstream until they reached a depositional area where slower moving water would cause them to settle back into the river bed and remain in the system. In addition, some of the structures would direct water towards the opposite bank, rather that straight downstream, and the energy from this flow would cause the erosion of the river bank causing lateral channel migration. In areas where structures would result in the lateral migration of the stream channel soils in the stream banks would be eroded and moved downstream. Where those materials are deposited would depend on the size of the material. Larger rocks and cobbles would drop out and settle on the river bed fairly quickly.

During construction, the movement of equipment at staging areas and along temporary access routes would result in some soil compaction, and road maintenance would be needed to ensure roads to the upland tree removal sites do not erode during or after the project. The project design has been developed to avoid and minimize impacts by finding the most direct routes to construction areas and reducing the size of staging areas.

Overall, construction would result in some temporary erosion or soil loss. In the short term, erosion and sediment control measures would be used during construction to control and manage temporary soil loss and accelerated sediment delivery to the river. During construction, erosion protection and sediment control measures would reduce soil impacts to low levels, depending on the area disturbed, site stability, weather, and other factors. These impacts would be temporary and would be mitigated through the BMPs. In the long term, the proposed project would have topography and stream geomorphology more consistent with historic conditions and would include riparian plantings that would restore any areas affected during construction.

The proposed project would be restoring the natural processes of the river that occurred historically and so the effects to soils would be low to moderate, consistent with the Aquatic Restoration EA, Chapter 3, Soils.

5. **Silviculture**

Trees would be removed for LWD elements, access routes/temporary roads, and channel construction. A reduction in tree density would increase the growing space of residual trees providing more available moisture, nutrients, and light. Reduced tree densities, especially juniper, would improve the availability of ground water and improve the overall health of the ecosystem. Revegetation efforts would increase tree density disturbed riparian areas.

Therefore, the impacts associated with the project, which include short and long term benefits, are expected to be low to moderate, consistent with those described in the Aquatic Restoration EA Chapter 3, Silviculture.

6. **Fire and Fuels**

Tree thinning for LWD would redistribute the fuel load and would return fuel variability to treated areas. The removal of trees from the upland sites for use as LWD may impact fire and fuels by reducing the fuel load/ fire potential of the upland sites. The trees present less of a fire risk once they are used in LWD structures due to the natural ability of riparian microclimates to resist fires as available moisture in riparian areas is higher.

Therefore, the impacts which include short and long term benefits, are expected to be low to moderate, consistent with those described in the Aquatic Restoration EA Chapter 3, Fire and Fuels.

7. **Air Resource**

Construction could impact air quality in the project area as a result of the earth moving required and emissions from vehicles. Dust would likely be generated during excavation and transport of soils. In general, excavated soils would likely be moist as they would be excavated from lower-lying areas where moisture is most persistent; therefore, dust from excavation would be minimal.

Climate change could alter precipitation patterns and river hydrology. This could result in potential increases in the magnitude and duration of flow events, alter the timing of snowmelt, increase flow regimes, and changes lake levels. Increases in velocities and erosive forces along streambanks and shorelines and impacts on water temperatures also could likely occur. All of these factors could influence physical sites and biological communities, affecting species assemblages, timing, and use of the delta, and could also lead to changes in noxious and invasive weed cover.

However, impacts would not result in long or short term violations of state air quality standards and the Granite Creek Restoration Project's impact on air quality would be low both in concentration and duration. This level of impact is consistent with the Aquatic Restoration EA and the impacts described in Chapter 3, Air Resource, which include: temporary and localized increase in dust, pollutants, and greenhouse gas emissions.

8. **Range**

This project area is not currently used for livestock; and is degraded from past use. However there may be some removal of existing grasses and forbs due to construction of project elements and tree removals. These short term impacts are expected to be outweighed by revegetation, removal of tree competition, improved and increased habitat. This level of impact is consistent with the Aquatic Restoration EA and the impacts described in Chapter 3, Range.

9. **Heritage Resources**

Site-specific National Historic Preservation Act Section 106 consultation for the Granite Creek Restoration Project was completed in November 2019 by BPA as the lead agency, with USFS. BPA and USFS archaeologists conducted a pedestrian survey, and evaluation of the Area of Potential Effect in November of 2018. No resources were identified, and the tailings were determined not eligible for the National Register of Historic Places. As a result, BPA determined that the project would have no adverse effect on historic properties. This determination was submitted to the Oregon SHPO, Confederated Tribes of the Warm Springs Reservation of Oregon, Confederated Tribes of the Umatilla Indian Reservation, and the Burns Paiute Tribe on September 5, 2019. On October 9, 2019, BPA received a response from Oregon SHPO. BPA and USFS responded to the comments on October 21, 2019 and received concurrence of no adverse effect from Oregon SHPO on November 12, 2019.

The impacts discussed in the Aquatic Restoration EA, regarding cultural resources noted historic sites are not routinely associated with stream or riparian areas and traditional cultural properties are generally not in conflict with aquatic restoration projects. Impacts to cultural resources as a result of this action would be low, which is consistent with the analysis in the Aquatic Restoration EA, Chapter 3, Heritage Resources.

10. **Recreation**

Land ownership in the project area includes the federal government (National Forest System lands) and private ownership. The project is proposed to be implemented on private lands with landowners' consent, and on public lands with USFS authorization. Although part of the project is on public lands, the project area has a low level of intermittent recreational use and the long term impacts to the recreational values are expected to be positive in the long term.

The Granite Creek Restoration Project is expected to have minimal impacts on transportation infrastructure, as project access would be through the private landowner's property and National Forest Road 1035 and there is no existing infrastructure in the project area proposed for removal. While there would be some expected rutting and potholes generated by project use, the roads would be regraded to handle the increased traffic and repaired to at least the same condition upon project completion. There is also potential for a slight delay in vehicle traffic due to the construction and hauling of materials, but the impact is expected to be short term and restricted to daylight hours during the construction period.

Visual resources would be negatively impacted in the short term, but positively impacted in the long-term as the project area is not readily visible to the public, excepting the landowners. During construction, equipment and workers would be present on the site for a short period. The alteration of the physical landscape through the removal of existing dredge materials and post-construction revegetation would shift the character of the site from a somewhat human-engineered landscape to a more natural-looking area.

Implementing the Granite Creek Restoration Project would result in short-term and minimal noise and hazardous waste impacts related to construction and maintenance activities. While there are landowners within the project area, they are aware of the potential for noise disturbance during the period of project implementation. Workers at the construction site would also experience increased noise levels. Workers would wear adequate hearing protection as appropriate and in accordance with the project health and safety plan and applicable occupational health and safety regulations.

Low impacts on recreation are expected from the reconstruction of channels within the project area. The impacts discussed in the Aquatic Restoration EA, are consistent with the Aquatic Restoration EA, Chapter 3, Recreation, which described low to moderate impacts to recreation, transportation infrastructure and visual resources.

11. **Environmental Justice**

The action area for socioeconomics is the project area, which is where most of the direct impacts during construction and operation would occur. The project is located in Grant County, OR, and Granite, OR (population 24) is the closest community at approximately 2.5 miles southeast of the project. John Day (population 1774), the largest city in Grant County, is located about 70 miles southwest of Granite, OR.

The Aquatic Restoration EA did not anticipate that associated projects would have adverse human health or socioenvironmental impacts or disadvantage low-income or minority populations including impacts from: short-term employment opportunities, local short-term traffic or lifestyle disruptions due to construction, land use conversion, and improvements to fisheries. The Granite Creek Restoration Project area is remote and not easily accessible by the public; however, there would be a temporary loss in access to the site during construction. Local users have been notified of road closures and public use is typically minimal in this area. Socioeconomic impacts would be limited in duration, and the adjacent lands would provide a surrogate space for both of these activities. The project area would be reopened to the public shortly following construction and revegetation efforts.

The project would result in small, temporary, beneficial impacts to socioeconomics by providing jobs for construction workers, and long-term benefits could result from the improvement of fish runs and natural scenery. The Granite Creek Restoration Project would not displace residents or degrade residential suitability; nor would it cause changes to the local or regional tax base. The Granite Creek Restoration Project would result in low socioeconomic impacts.

Mitigation

Specific minimization and mitigation measures identified in the Umatilla National Forest's Aquatic Restoration Environmental Assessment (EA) Appendix B to reduce potential impacts associated with the Granite Creek Restoration Project are provided in the mitigation Table 1 below.

Table 1. Mitigation Table

MINIMIZATION AND MITIGATION MEASURE	IMPLEMENTATION
Aquatic Resources – Hydrology and Fisheries	
Design projects to minimize impacts to water quality.	During design (BPA/Contractor)
Schedule construction activities and manage flows and water levels to work in dry working conditions as much as possible.	Before and during construction (BPA/Contractor)
Locate staging areas, storage sites (e.g., fuel, chemical, equipment, and materials), and potentially polluting activities, away from water resources.	Before construction (Contractor)

Wash heavy equipment before delivery to project site to remove oils, fluids, grease, etc.	Before construction (Contractor)
Isolate in-water work areas and conduct fish salvage and relocation, as needed.	During construction (Contractor)
Follow established protocols (legal or scientific) for handling ESA-listed species.	During construction (Contractor)
Maintain fish passage around isolated in-water work areas.	During construction (Contractor)
Follow project-specific Clean Water Act permit protection measures.	During construction (Contractor)
Implement erosion control and stormwater pollution prevention plans.	During construction (Contractor)
Monitor turbidity water during project implementation	During construction (Contractor)
Perform all non-emergency maintenance of equipment off-site.	During construction (Contractor)
Inspect machinery daily for fuel or lubricant leaks.	During construction (Contractor)
Operate machinery for in-water work from dry areas as much as possible.	During construction (Contractor)
Wildlife	
Implement appropriate protective measures (e.g. timing restrictions, noise levels, activity buffers, etc.) as identified in site-specific analyses and consultation with regulatory agencies.	Before and during construction (BPA/Contractor)
Botany	
Inspect and wash equipment as necessary to avoid transport of invasive plants.	Before construction (Contractor)
Identify and flag sensitive plants locations as no-work areas.	Before and during construction (BPA/Contractor)
Protect and retain existing native vegetation as much as possible.	Before and during construction (Contractor)
Use appropriate native seed mix and plants in post-project rehabilitation plans.	After construction (Contractor)
Soils	
Develop and implement soil stabilization plans (e.g. seeding, planting, mulching, etc.).	During design (BPA/Contractor) and after construction (Contractor)
Minimize the size of disturbed areas in access routes and staging areas to avoid unnecessary impacts to soils and vegetation.	During design (BPA/Contractor) and construction (Contractor)
Implement Best Management Practice erosion and sediment control measures.	During construction (Contractor)
De-compact and restore construction roads and staging areas.	After construction (Contractor)
Silviculture	
Use appropriate native trees in post-project rehabilitation plans.	After construction (Contractor)
Fire and Fuels	
Develop burn plan.	Before burn (Contractor)
Follow BMPs to reduce impacts (erosion/air .quality/ etc.) and risk of wildfire.	During burn (Contractor)
Air Resource	
Apply dust control measures (e.g. watering trucks, low speeds, apply gravel to access roads, etc.) as needed.	During construction (Contractor)
Regularly inspect, maintain, and replace (as needed) mufflers and other emission control devices on all construction equipment.	During construction (Contractor)

Range	
Work with affected landowners to address grazing impacts.	Before construction (Contractor)
Heritage Resources	
Project must meet NHPA requirements.	Before construction (BPA)
Mark known cultural resource sites as avoidance areas on construction drawings and flag as no-work areas.	Before and during construction (BPA/Contractor)
Implement mitigation or other measures as instructed by agency cultural resource specialist.	Before and during construction (BPA/Contractor)
An Archaeological/Cultural Resource Inadvertent Discovery Plan will be available on site to protect any unanticipated cultural resources discovered during construction as follows: Stop all work; Cover and protect find in place; Notify Project Manager and agency cultural resources specialist immediately.	Before and during construction (BPA/Contractor)
Recreation	
Provide opportunity for public input for projects likely to be of interest or concern.	During design (BPA)
Develop and implement a Spill Prevention Control and Countermeasures Plans (SPCC).	Before construction (Contractor)
Limit the use of products containing hazardous materials (e.g. wood preservatives, petroleum products, asphaltic compounds, asbestos, lead, etc.) in restoration projects.	Before and during construction (Contractor)
Limit restoration construction work hours to typical working hours as much as possible and minimize construction noise-generating activities (equipment, pumps) at night.	During construction (Contractor)
Use flaggers and signage as necessary to avoid vehicle and other conflicts.	During construction (Contractor)
Dispose of non-hazardous wastes in approved landfills.	During construction (Contractor)
Dispose of hazardous wastes according to applicable federal and state laws.	During construction (Contractor)
Remove all equipment, materials, supplies, and waste from project site.	During and after construction (Contractor)
Repair damage to roads and trails due to project activities.	After construction (Contractor)
Environmental Justice	
Design and mitigate restoration actions to prevent losses to adjacent property owners.	During design and construction (BPA/Contractor)
Use local labor and materials as possible.	Before and during construction (Contractor)

Findings

This SA finds that the types of actions and the potential impacts related to the proposed Granite Creek restoration Aquatic Restoration EA have been examined, reviewed, and consulted upon and are similar to those analyzed in the Aquatic Restoration EA (DOE/EA -2119) and Finding of No Significant Impact. There are no substantial changes in the proposed action and no significant new circumstances or information relevant to environmental concerns bearing on the proposed action or its impacts within the meaning of 10 CFR § 1021.314(c)(1) and 40 CFR §1502.9(c). Therefore, no further NEPA analysis or documentation is required.

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Reviewed by:

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Concur:

/s/ Katey Grange Date: *November 15, 2019*
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