Supplement Analysis
for the
Columbia Estuary Ecosystem Restoration Program
(DOE/EA-2006/SA-12)

Palensky Wildlife Area Restoration Project
(Update to previous supplement analysis issued on March 30, 2021)
BPA project number 2010-004-00

Bonneville Power Administration
Department of Energy

Introduction

Bonneville Power Administration (BPA) and the U.S. Army Corps of Engineers (Corps) are partners in the Columbia Estuary Ecosystem Restoration Program (CEERP or estuary restoration program), which is a collaboration intended to evaluate, protect, monitor, and restore fish and wildlife habitat in the Columbia River Estuary.

In July 2016, BPA and the Corps completed the Columbia Estuary Ecosystem Restoration Program Environmental Assessment (DOE/EA-2006) (Programmatic Estuary EA). The Programmatic Estuary EA streamlines the environmental review of routine actions with well understood and predictable environmental impacts common to restoration projects in the Columbia River estuary. The purpose of this Supplement Analysis (SA) is to provide site-specific information about an individual restoration project proposed under the estuary Program.

Consistent with the Programmatic Estuary EA, this SA analyzes the proposed Palensky Wildlife Area Restoration Project, which would restore tidal wetland habitat and floodplain connectivity near the southern confluence of Multnomah Channel with the Columbia River in Multnomah County. This SA analyzes the site-specific impacts of the project to determine if the project is within the scope of the analysis considered in the Programmatic Estuary EA. It also evaluates whether the proposed project presents significant new circumstances or information relevant to environmental concerns that were not addressed by the EA. The findings of this SA determine whether additional National Environmental Policy Act (NEPA) analysis is needed pursuant to 40 Code of Federal Regulations (CFR) § 1502.9(c). This is an update to the SA signed on March 29, 2021 to extend the proposed action's construction timeline until October 31, 2021.

Proposed Action

The Palensky Wildlife Area is a floodplain tidal wetland along Multnomah Channel, approximately 4 miles downstream from the southern confluence of Multnomah Channel and the Columbia River in Multnomah County, Oregon. The site is bound by Multnomah Channel to the east and the West Hills to the west. Approximately 7 perennial streams, including McCarthy Creek and Palensky Slough, and intermittent streams provide fluvial flows into the site from the West Hills. During higher flows on the Columbia River and Multnomah Channel, the area completely floods and backwaters (most frequently

during the springtime freshet). The site is currently limited by artificial barriers and extensive areas of invasive reed canary grass, limiting wetland plant diversity.

BPA proposes to fund the Columbia River Estuary Study Taskforce (CREST) to undertake the Palensky Wildlife Area Restoration Project. The project would occur on the Palensky Wildlife Area, which is owned by BPA and managed by Oregon Department of Fish and Wildlife (ODFW), and the McCarthy property, an adjacent privately-owned parcel. Improving floodplain connectivity and enhancing the naturally functioning, dynamic wetland system would help to address key limiting factors for habitat needs of juvenile salmonids and wildlife species in the region. The overall goal of the Palensky Wildlife Area Restoration Project is to reestablish juvenile fish access and increase floodplain connectivity to hundreds of acres of protected wetland habitat along Multnomah Channel.

The proposed actions would improve habitat for four species (steelhead, Chinook salmon, coho salmon, and bull trout) listed under the Endangered Species Act (ESA), as well as other fish and wildlife. The proposed actions are consistent with those considered in the Programmatic Estuary EA, including the following Columbia River Estuary (CRE) Module management actions, developed by the National Marine Fisheries Service to aid in the recovery of salmon and steelhead throughout the region listed below.

- CRE-1: Restore and maintain ecological benefits in riparian areas, and manage vegetation on dikes and levees
- CRE-3: Protect or enhance instream flows to support fish and wildlife
- CRE-9: Restore degraded off-channel habitats with high intrinsic potential for increasing habitat quality
- CRE-10: Improve access to off-channel habitats by breaching, lowering the elevation, or relocating dikes and levees to restore tidal marsh and shallow-water habitats and tidal channels
- CRE-15: Implement projects to reduce the introduction and spread of invasive plants.

Most of the proposed work would occur within waters and wetlands. Only the two upland disposal sites in the project area would be above existing wetland areas. Construction is planned for summer and fall (July 15 - October 31) of 2021. Typically by early July, the springtime freshet has receded and the wetlands have transformed into firm compact soils covered by invasive reed canary grass. Water levels in McCarthy Creek and Multnomah Channel are at their lowest levels during these months, allowing effective work area isolation and the ability to excavate and transport soils without causing turbidity issues during construction. Additionally, this time period is after the metamorphosis period for amphibians which allows them greater mobility and would make amphibian salvage and relocation much easier.

Prior to any work beginning, CREST would work with ODFW to capture and relocate any amphibians that are within the work area to areas outside the project footprint. Prior to establishing the temporary cofferdams for the new bridges and the removal of the water control structure, CREST would perform fish salvage at the site. Due to existing low water levels and high stream temperatures, it is unlikely that any salmonids would be in the system from July through October. Again, this fish salvage effort would be coordinated between CREST and ODFW.

Equipment needed for the project includes low ground pressure excavators, off road haul trucks, and a bulldozer. The site is accessible by existing gravel roads, dirt roads, and grassy clearings. Some tree clearing would be needed to access restoration areas, but would be coordinated by ODFW, and minimized to the maximum extent practicable to provide access and ensure impacts are minimized. Attempts would be made to avoid large trees over 18-inches diameter at breast height (dbh). Any trees

removed or limbed would be salvaged to be utilized as in-stream wood features, basking logs, or as part of proposed upland habitat features.

Equipment along with logs and other temporary construction materials would be staged within designated areas. Most staging areas would be selected to be in upland areas (above 20feet NAVD88) where possible. Select staging areas would be placed below the upland elevation when there is not a viable alternative. Due to site limitations, mostly being wetlands, equipment would need to be staged within 150 feet of wetlands and waterways when not in use. Staging areas have been strategically located in existing open areas dominated by invasive reed canary grass to minimize impacts to wetlands. Spill kits would be onsite throughout all of the work areas. There would be no storage of fuels, flammable materials, or chemicals in the staging areas.

Prior to earthwork activities, erosion control devices would be installed throughout the project areas. Best Management Practices to be employed will include: temporary sandbag cofferdams, silt curtains, silt fences, and straw wattles. During summertime flow conditions, Palensky Slough doesn't have any active stream flow. A temporary sandbag cofferdam would be installed at the downstream and upstream ends of the work area to isolate the construction activities.

Work elements for this restoration project include the removal of a water control structure, replacement of 2 undersized culverts with channel spanning bridges, strategic lowering of marshplain elevations, installation of large wood/beaver dam analogs/habitat logs, construction of upland habitat features (i.e. hibernacula), and replanting of native plants. The location of these work elements are depicted in Figure 1 and described further below.

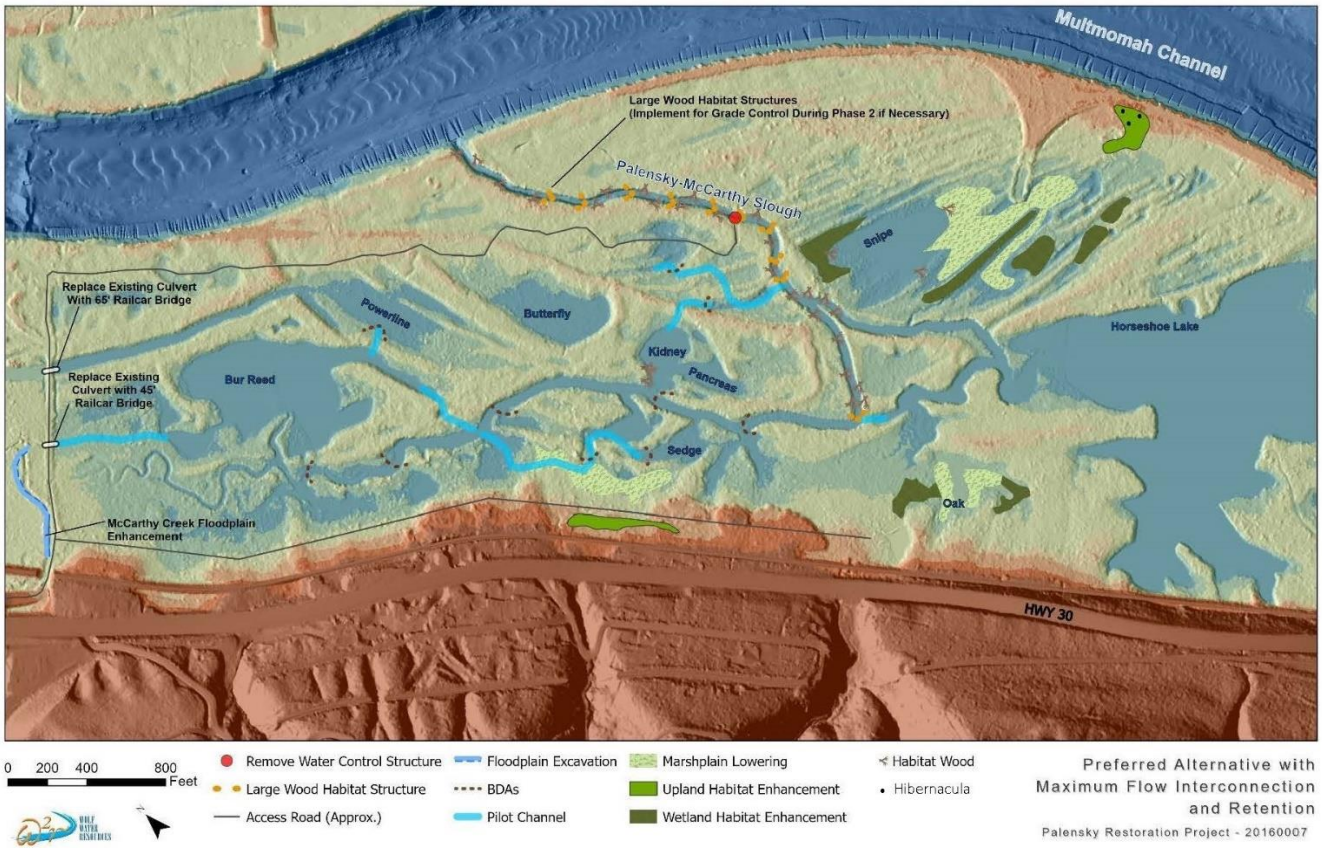

Figure 1. Palensky Wildlife Area Restoration Project

Barrier Removal

The project proposes to remove a water control structure as well as 2 undersized culverts that would be replaced with channel spanning bridges. An excavator would be used to remove the structures and all wood, metal, and shockrete around the structures would be hauled offsite for disposal. Additionally, a sandbag cofferdam just upstream from the existing water control structure would be removed from the channel and the garbage hauled offsite.

The same construction methods would be utilized for both culvert removal and bridge installations. Roadway material removed would be placed along the existing gravel roadway prism to fill in some large potholes. The channel underneath the bridge would be 6 feet wide and have two marshplain benches on each side. The side slopes would be 3:1 and have round river rock installed as scour protection. This round rock would be covered under 12 inches of native soils from onsite. The new bridge would likely be a pre-fabricated rail car bridge and would come in a single piece. Precast ecoblocks would be used for the abutments. An excavator would dig out the abutment footprint and 2 feet of subgrade rock would be placed, with the ecoblocks resting on top. The bridge would likely be placed on top of the ecoblocks with two large excavators. The roadway approaches to the new bridge deck would be raised approximately 1.5 feet to accommodate the low chord elevation of the new bridge and allow more floodwater capacity to pass underneath the bridge opening during higher flows.

To access the McCarthy Creek bridge location a temporary haul road would need to be constructed to the west of the existing gravel road. Fabric and crushed rock would be placed to allow the homeowners at the end of the road continued access to their property. After installation, the fabric and rock used for the temporary road would be removed and hauled offsite. All of the disturbed areas would be decompacted and reseeded. The new side slopes (except underneath the bridge) would be replanted with live willow stakes and other riparian species.

Marshplain Lowering

Marshplain lowering would occur at the floodplain adjacent to McCarthy Creek, Snipe Wetlands, Oak Pond, and Sedge Pond (see Figure 1). Excavators and haul trucks would remove approximately 2,500 cubic yards (cy) of reed canary grass and soils from the floodplain adjacent to McCarthy Creek. Approximately 25,900 cy of soils would be reshaped at Snipe Wetlands, Oak Pond, and Sedge Pond. Additionally, several swales would be excavated in order to expand floodplain connectivity throughout the site.

In order to access the floodplain adjacent to McCarthy Creek, a temporary 12-inch-diameter culvert would need to be installed in McCarthy Creek. About 5 cy of rock would be placed over this culvert and a steel plate would lay on top of the rock and culvert. Anticipated duration would be 4-5 working days.

Once all of the material is moved and floodplain bench is shaped, the culvert, rock, and steel plate would be removed from the stream.

Soil Placement

The 2,500 cy of wetland soils from the floodplain adjacent to McCarthy Creek would be placed in an existing open area that is dominated by invasive reed canary grass. The material would be graded and would not exceed elevation 18.5 feet NAVD88.

Approximately 9,100 cy of soils would be reshaped at Sedge Pond and moved to the two upland disposal locations. Additionally, soils from swale #4 would be hauled to the adjacent Sedge Wetlands and placed in the wetlands not to exceed elevation 18.5 feet (NAVD88).

Approximately 5,020 cy of soils from Snipe Wetland would be transported to the uplands disposal location, along with salvaged rock from the removal of the water control structure (approximately 10cy). The salvaged rock would be mixed with salvaged wood slash and native soils, all loosely layered on top of one another.

Installation of habitat features

Type 1 (continuous log complex) and type 2 (suspended channel spanning structure) wood habitat structures would be installed throughout Palensky Slough. An excavator would place the logs into the dry slough channel and channel banks. These are both made up of long logs (with and without rootwads) and slash that will be keyed into the ground. These structures would serve to enhance habitat complexity and increase roughness in Palensky Slough.

Basking logs and turtle basking rafts would be installed along the northeastern portion of Horseshoe Lake. Likely temporary log mats would need to be placed along the edges of the lake in order to reach out to place the logs and rafts. The logs would be keyed into the marshplain surface with no anchoring. The rafts would consist of 3 logs bolted together and in a triangular shape.

Throughout the project area, Beaver Dam Analogs (BDAs) would be installed to encourage beaver dam establishment and extend periods of inundation in the wetlands while retaining fish passage. BDAs would be hand installed using onsite salvaged live willow cuttings and untreated posts. Live willow cuttings would be woven in between the wooden posts. Rock and anchoring is not planned to be used.

Hibernacula are terrestrial habitat structures consisting of logs, pipe, and rocks loosely piled together that creates interstitial spaces for creatures to live and hide in. Hibernacula would be added to the upland habitat enhancement area. A small 3-inch-diameter natural pipe with multiple perforations would be installed as a passageway from the ground surface into the underground cavity. All of the hibernacula would be above elevation 25.0 feet (NAVD88) at the proposed upland disposal area at Snipe Wetlands (see Figure 1).

Replanting of native plants

The excavated marshplain, wetland enhancement area, and upland disposal sites would all be reseeded with native grasses and replanted. Wetland plugs would be planted in the marshplain areas, scrub-shrub species in the wetland enhancement location, and trees in the uplands. At all of the swales, the side slopes, disturbed soils, and side cast disposal locations would be reseeded with native grasses and

replanted with native riparian plants. The access paths would be replanted with native grass seed and riparian plant species.

Environmental Effects

The typical environmental impacts associated with the estuary restoration program are described in Chapter 3 of the Programmatic Estuary EA, and are incorporated by reference and summarized in this document. Below is a description of the potential site-specific impacts of the Palensky Wildlife Area Restoration Project and an assessment of whether these impacts are consistent with those described in the Programmatic Estuary EA.

Much of the site-specific analysis cited in the environmental impacts section below comes from several sources: CREST's Project Notification Form for BPA's Habitat Improvement Program Biological Opinion; CREST's Clean Water Act Joint Permit Application; and Wolf Water Resources 90% design plan set for the proposed project.

1. **Fish**

Overall, the action is expected to have moderate, beneficial effects on fish. ESA-listed fish in proximity to the project area include coho, Chinook, steelhead, and bull trout. McCarthy Creek is Designated Critical Habitat for Lower Columbia River coho salmon under the ESA. Multnomah Channel is Designated Critical Habitat for Lower Columbia River coho, Chinook, and steelhead. Both McCarthy Creek and Multnomah Channel are considered essential fish habitat (EFH) under the Magnuson-Stevens Act because both provide habitat for coho and/or Chinook salmon. Almost all the work would be completed away from the existing waterway and work area isolation would be used in areas with water. Furthermore, during summertime conditions when construction is proposed, water depths in McCarthy Creek are only a few inches and stream temperatures are above 68 degrees Fahrenheit. The stream does not support salmonids during the summertime and therefore, no direct effects to salmonids as a result of construction are anticipated. Fish salvage, which could cause a direct effect to fish, would be performed prior to establishing the temporary cofferdams for the new bridges and the removal of the water control structure. However, due to existing low water levels and high stream temperatures, it is unlikely that any salmonids would be in the system from July through October.

After construction is complete, when rainfall or surface flow first enters onto newly disturbed soil in the project area, turbidity in McCarthy Creek and the Multnomah Channel could be elevated temporarily. However, injury or mortality to fish is unlikely to occur due to the limited duration and spatial extent of the impact, the erosion and sediment control measures used to limit sediment discharges into McCarthy Creek, and the high dilution levels that would be provided by the Multnomah Channel.

Beneficial effects would far outweigh the temporary negative impacts to fish in the area. The beneficial effects would include: increased access to food, resting, and growth areas in McCarthy Creek and its associated floodplain; and improved fish passage through the removal of the water control structure and two undersized culverts.

These impacts are consistent with the analysis in the Programmatic Estuary EA, Section 3.2.4, which concludes that impacts to fish would be moderate and beneficial because of the long term increased food web support, conversion of vegetation to more natural conditions, restored and improved hydrology, and enhanced water quality while implementing the Best Management Practices (BMPs) and mitigation measures associated with the ESA consultations to limit the temporary negative impacts.

2. **Hydrology and Hydraulics**

A hydraulic modeling assessment was conducted for the Palensky Wildlife Area Restoration Project to examine the hydraulic behavior of the site pre- and post-project to verify that project objectives and constraints would be met. The project intends to restore floodplain connectivity, without any unforeseen flooding impacts. The hydraulic modeling showed that the floodplain restoration actions carried out by the proposed project would not cause a rise in the 100-year flood elevation in the project area. Furthermore, any changes to elevations to support restoration that would occur would not impact upstream or downstream properties. The analysis shows that the flood carrying capacity in the project vicinity would be maintained, the inundation area would not increase, and there would be no measurable increase in base flood levels.

The three barrier removals pose the risk of increased erosion, scour, and changes to velocity, flow, and circulatory patterns. To minimize this risk, wood habitat structures would be placed throughout Palensky Slough where the water control structures would be removed to reduce flow and retain water in the wetland. For both culvert removals, hydraulic conditions under the bridges would match those upstream and downstream for average channel forming conditions. Additionally, scour protection materials would be used to protect the bridge abutements.

With greater floodplain connectivity at the site, it is anticipated that wetland hydrology would improve which could expand the wetland area, re-establish native vegetative communities, and control the proliferation of invasive non-native plant species; specifically, reed canary grass.

The impacts that have been outlined are consistent with the analysis in the Programmatic Estuary EA, Section 3.3.3, which concludes that impacts to hydrology and hydraulics would be moderate. These impacts discussed in the Programmatic Estuary EA, Section 3.3.3 include: erosion, scour, and in-channel deposition; increased frequency and duration of inundation; localized changes in velocity, flow, and circulatory patterns; reconnection of channel habitats; and increased instream flows.

3. **Water Quality**

Over the long-term, water quality in the project vicinity is anticipated to improve. As previously stated, during the summertime, McCarthy Creek is above 68 degrees Fahrenheit and consequently does not support salmonids. Reconnecting the floodplain at the site would increase hydraulic mixing of stream and tidal flows at the site. This would improve water quality by providing cooler conditions for all aquatic organisms and increasing the exchange of water, sediment, and nutrients between the floodplain and the mainstem river.

In the short term, during first re-watering after construction, slight, localized increases in suspended sediment could occur in McCarthy Creek and Multnomah Channel, but these impacts would be short in duration, diluted by high flows, and mitigated by following erosion and sediment control practices.

The impacts associated with the project are consistent with those described in the Programmatic Estuary EA, Section 3.4.3, which concludes that effects to water quality would be low to moderate and mitigated by erosion and sediment control practices. The impacts discussed in the Programmatic Estuary EA, Section 3.4.3 include: construction-related turbidity and erosion; increased composition of native vegetation; increased quantity of tidal marsh habitat; increased flows, tidal exchange, and flushing; increased channel complexity and alignment; and decreased composition, distribution, and quantity of invasive species.

4. **Geomorphology, Soils, and Topography**

Impacts to soils would result from temporary construction activities, including vegetation clearing, grading, and compaction of soils by heavy equipment during construction. Clearing and grading would remove both vegetation and topsoil. Compaction from heavy equipment degrades soil structure, reducing pore space needed to retain moisture and promote gas exchange.

Short-term construction-related impacts would include a temporary increase in soil erosion or temporarily elevated suspended sediments in McCarthy Creek and Multnomah Channel. These impacts would be mitigated by the use of erosion and sediment control devices.

Over the long term, soil impacts associated with restored sediment transport, would be beneficial due to the restoration of the natural soil-forming process, sediment flushing, and floodplain function. Furthermore, the McCarthy Creek floodplain would stabilize due to the installation of native plantings.

Project impacts are consistent with those described in the Programmatic Estuary EA, Section 3.5.3, which predicted that construction would have moderate temporary effects, and that long-term impacts would be beneficial. The impacts discussed in the Programmatic Estuary EA, Section 3.5.3 include: temporary erosion and sedimentation; altered channel form, structure, and density; localized changes in velocity, flow, and circulatory patterns; restored sediment transport; and restored spatial and temporal connectivity of streams and wetlands.

5. **Sediment Quality**

During construction, the project would remove about 32,350 cy of material from below the Ordinary High Water (OHW) line in the form of soil, concrete, and rebar. The concrete and rebar would be hauled offsite and disposed of at an approved facility. About 14,120 cy of soil would be placed in the designated upland disposal areas within the 100-year floodplain and 19,730 cy of material would be placed below OHW in the form of soil, large wood, rock, and two bridges. The project-related earthwork would loosen sediments in and around McCarthy Creek, which would later be suspended in the water column and redistributed within the estuary upon rewatering.

In the long term, the project would change the hydrologic flow patterns to a more natural condition that would remove invasive species and create an elevation more favorable for native emergent vegetation and recruitment of organic sediment. Additionally, lowering the marshplain would extend periods of inundation which would benefit both fish access and available areas for frog egg masses.

These impacts are less than those described in the Programmatic Estuary EA, Section 3.6.3, which concluded that effects to sediment quality would be moderate. The impacts discussed in the Programmatic Estuary EA, Section 3.6.3 include: changing hydrologic flow patterns; floodplain and tidal reconnection; increasing organic materials in sediments; and introduction of pollutants.

6. **Air Quality**

Vehicle emissions during the transportation and operation of construction equipment could cause a minor temporary decrease in air quality for the duration of on-the-ground construction work. Impacts would be low and would not result in violations of state air-quality standards. As described in the Programmatic Estuary EA, Section 3.7.3, impacts on air quality are expected to be low both in concentration and duration. The impacts discussed in the Programmatic Estuary EA, Section 3.7.3 include: temporary and localized increase in dust and pollutants such as carbon monoxide, nitrogen dioxide, particulates, sulfur dioxide, ozone, or lead.

7. **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. These short term effects would be minimized by constructing outside of the nesting season/metamorphosis period and during low water conditions, as well as conducting amphibian salvage prior to construction. In the longer term, effects to wildlife are expected to be beneficial. The action would improve breeding and feeding habitat for semi-terrestrial animals such as beaver, amphibians, waterfowl, shorebirds, and insect-eating birds. Habitat complexity would provide long term benefit to small mammals, reptiles, and amphibians through the addition of hibernacula and basking logs. Likewise, wildlife that use riparian areas would benefit from the planting of native shrubs in the McCarthy Creek floodplain.

The project area does potentially contain habitat for ESA-listed Columbian white-tailed deer. Columbian white-tailed deer are known to occupy areas nearby at the Scappoose Industrial Airpark to the north and Sauvie Island to the northwest. Neither fencing nor herbicide application is proposed by the Palensky Wildlife Area Restoration Project and therefore, measurable effects to Columbian white-tailed deer are not anticipated. Furthermore, the action would avoid impacts by observing timing restrictions developed by BPA and the U.S. Fish and Wildlife Service (USFWS) to avoid adverse effects to the deer. BPA determined that the project would be not likely to adversely affect Columbia white-tailed deer when BPA initiated consultation with USFWS on December 31, 2020. USFWS concurred with BPA's determination on January 19, 2021. No other ESA-listed wildlife species were identified as potentially occurring in the project area.

These impacts are consistent with the Programmatic Estuary EA, Section 3.8.3, which concluded that effects to wildlife would be moderate and beneficial. The impacts discussed in the Programmatic Estuary EA, Section 3.8.3 include: noise or visual disturbance to wildlife, displacement of individual animals, and habitat conversion.

8. **Wetlands, Floodplains, and Vegetation**

In the short term, construction would affect regulated waters in the project area. Excavation would occur below the OHW line of Multnomah Channel at McCarthy Creek, but these areas would be restored following construction. In the long term, the project could potentially increase the acreage of wetlands by introducing Multnomah Channel flows to areas of the McCarthy Creek floodplain that are now inundated less frequently. Additionally, wetland quality would improve due to the restoration of natural flow patterns and the replacement of invasive species with native plants.

These impacts are consistent with the Programmatic Estuary EA, Section 3.9.3, which predicted moderate and beneficial effects. The impacts discussed in the Programmatic Estuary EA, Section 3.8.3 include: alteration of wetland hydrology; restoration of wetland-forming processes; increased wetland area, habitat complexity, composition of native vegetation, riparian buffer area, vegetation cover, and quantity of tidal marsh habitat flows, tidal exchange, and flushing; and decreased composition, distribution, and quantity of invasive species.

Chapters 3, 4, and 5 of the Programmatic Estuary EA provide an assessment of impacts to floodplains and wetlands. Consistent with the Programmatic Estuary EA (including Section 3.9.9), the Palensky Wildlife Area Restoration Project would restore floodplain connectivity and function and improve wetland function and value, as described above. Additionally, the project would not result in floodplain development. While the project may impact wetlands in the short term, the overall long-term impacts would be beneficial, because the goal of the project is to increase native wetland plant diversity and

improve overall wetland quality, compared to the current condition. This Floodplain Statement of Findings was prepared in accordance with the Department of Energy's NEPA implementing regulations and in compliance with Floodplain and Wetland Environmental Review Requirements (10 Code of Federal Regulations 1021 and 1022).

9. **Land Use and Recreation**

BPA is the landowner of the Palensky Wildlife Area and it is not accessible to the public. It is managed by ODFW as a natural area: no hunting, fishing or public access is allowed. The McCarthy property is privately owned and public recreation is not allowed. The landowners seasonally hunt waterfowl at the site and this hunting and private recreational use would continue after the proposed project. In the short term, as the waterfowl hunting season starts in October, the project construction would result in a minor disturbance to waterfowl hunting during the month of October, but the area would be available for the rest of the waterfowl hunting season. In the long term, improving wetland hydrology and plant diversity as well as floodplain connectivity should have a beneficial effect to the waterfowl hunting that occurs in the project vicinity as the improved habitat may draw more waterfowl to the site.

These impacts are consistent with the Programmatic Estuary EA, Section 3.10, which described low to moderate impacts to land use and recreation. The impacts discussed in the Programmatic Estuary EA, Section 3.10.3 include: removal of drainage structures, and changes in access to recreational opportunities.

10. **Cultural Resources**

BPA initiated its site-specific National Historic Preservation Act Section 106 consultation on August 3, 2020. A field survey was conducted and no cultural resources were identified, so BPA completed its consultation on December 23, 2020, determining that the project would have no adverse effect to historic properties. BPA consulted with the Oregon State Historic Preservation Office, Confederated Tribes of the Grand Ronde, Confederated Tribe of Siletz Indians, and the Natural Resources Conservation Service.

Cultural resources impacts are consistent with the analysis in the Programmatic Estuary EA, Section 3.11.3. That is, the action would not impact historic sites, and impacts to cultural resources uncovered during construction would be mitigated by the use of Inadvertent Discovery Plans (IDPs). Therefore, impacts would be low. The impacts discussed in the Programmatic Estuary EA, Section 3.11.3 include: reestablishment of tidal channels, reestablishment of wetland and riparian plant communities, and removal of structures.

11. **Socioeconomics**

The project would result in small, temporary, beneficial impacts to socioeconomics by providing jobs for construction workers. Long-term benefits could result from natural scenery. The project would not displace residents or degrade residential suitability; nor would it cause changes to the tax base. The project area is on land that is not easily accessed by the public, though access may be possible in a small water craft during higher flows.

The expected socioeconomic impacts would be low, consistent with those described in the Programmatic Estuary EA, Section 3.12.3. The impacts discussed in the Programmatic Estuary EA, Section 3.12.3 include: short-term employment opportunities, local short-term traffic or lifestyle disruptions due to construction, land use conversion, and improvements to fisheries.

12. **Visual Resources**

The project area cannot be easily seen from U.S. Highway 30 as there is vegetation and a railroad grade between the project area and the road; however, one of the equipment staging areas and upland placement areas would be located along the railroad grade. During construction, equipment and bare soil may be visible from U.S. Highway 30 in this location or from the Multnomah Channel. The visual effects of the bare soil would be mitigated by the installation of erosion and sediment control devices and replanting of all areas of bare soil.

From the private property, much of the project area may be visible during construction. In the long term, the visual effects on the private property would be mitigated by installation of erosion and sediment control devices and replanting bare soil areas and temporary access roads and staging areas. Furthermore, removal of the water control structure and two undersized concrete culverts would increase hydrologic connectivity, resulting in an increase in the function of the wetland within the project site. The improved floodplain area would be seeded and planted with native woody riparian vegetation, resulting in a more natural looking environment.

These impacts are consistent with the visual resources analysis in the Programmatic Estuary EA, Section 3.13.3, which characterized these effects as low to moderate. The impacts discussed in the Programmatic Estuary EA, Section 3.13.3 include: short-term visual impacts related to construction, and long-term impacts associated with changing the visual condition from a managed state to a more natural landscape.

13. **Noise, Hazardous Waste, Public Health, and Safety**

Noise level is expected to increase intermittently above ambient conditions during the construction period. The project would not result in any long-term effects to ambient noise levels during operation. Requirements to minimize these effects would be considered during the development of construction specifications. The potential for hazardous waste impacts would be low as there is no storage of fuels, flammable materials, or chemicals in the staging areas and a fuel tank would not be needed onsite.

Potential safety risks could be associated with increased area, elevation, and duration of flowing water in McCarthy Creek and Palensky Slough following the removal of the undersized culverts and water control structure. The public could potentially access this water by small water craft during high flows. However, because water levels are expected to rise and fall slowly with the natural tides, safety risks are anticipated to be low. This is consistent with the analysis in the Programmatic Estuary EA, Section 3.14.3, which described low effects to noise, hazardous waste, public health, and safety. The impacts discussed in the Programmatic Estuary EA, Section 3.14.3 include: short-term noise during construction and maintenance, potential encounters with contaminated media during construction, and risks to safety due to change in hydrologic regime after construction.

14. **Transportation and Infrastructure**

The project is not anticipated to have impacts on infrastructure during construction, but would have a small, short-term impact on local traffic from construction vehicle presence. This is consistent with or less than the effects in the Programmatic Estuary EA, Section 3.15.3, which described moderate effects to transportation.

The project would not have any impacts on navigation within the Multnomah Channel. This is consistent with or less than the effects in the Programmatic Estuary EA, Section 3.15.3, which described low effects to navigation.

The impacts discussed in the Programmatic Estuary EA, Section 3.15.3 include: temporary increase in traffic, changes in navigation, and potential damage to infrastructure due to changes in flow patterns.

15. **Climate Change**

Vehicles and equipment operating during construction and maintenance of the project would have temporary emissions, which could contribute in a very minor way to climate change. Due to the short duration of construction and the relatively small number of construction vehicles, temporary emissions associated with project construction are anticipated to be well below 25,000 tons of CO2e during construction. Over the long term, effects are expected to be positive, as the restoration would create a carbon sink that would store carbon dioxide and help mitigate for the release of greenhouse gases.

Plantings would be adaptively managed to address long-term changes in climate (and resulting effects to salinity, surface-water elevation, and groundwater elevation). Marshplain, wetland, and upland areas would be replanted, immediately after construction is completed. All areas would be planted with a variety of native species at a range of elevations to allow plants to adapt to a range of water levels and other fluctuating environmental conditions. Although climate change may increase temperatures, change precipitation patterns, cause more extreme weather events, and raise sea levels, these impacts would likely occur regardless of the Palensky Wildlife Area Restoration Project. Removal of the water control structure and two undersized concrete culverts would create a larger opening that would pass larger flows. Likewise, improving access to the McCarthy Creek floodplain would provide refuge areas to juvenile fish during more extreme flows in the Columbia River.

Overall, the long-term impacts on climate change from the project are expected to be low and beneficial, consistent with the impacts described in the Programmatic Estuary EA, Section 3.16.3. The impacts discussed in the Programmatic Estuary EA, Section 3.16.3 include: both the release and sequestration of greenhouse gases, and the buffering of sea-level rise, particularly during extreme flows.

Findings

This SA finds that the types of actions and the potential impacts related to the proposed Palensky Wildlife Area Restoration Project have been examined, reviewed, and consulted upon and are similar to those analyzed in the Columbia Estuary Ecosystem Restoration Program Environmental Assessment (DOE/EA-2006) 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(d). Therefore, no further NEPA analysis or documentation is required.

/s/ Shawn Skinner
Shawn Skinner
Environmental Protection Specialist

Concur:

/s/ Katey Grange Date: *August 30, 2021*
Katey Grange
NEPA Compliance Officer