Supplement Analysis
for the
Columbia Estuary Ecosystem Restoration Program EA
(DOE/EA-2006/SA-3)

Lower Elochoman Wetland Restoration Project
BPA project number 2010-073-00
BPA contract number 80251

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 (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 analyzed the potential impacts of estuarine restoration actions that occur under the BPA-Corps Program to support more efficient environmental review of site-specific restoration projects. The Program was instituted to undertake the activities necessary to evaluate, protect, monitor, and restore fish and wildlife habitat in the estuary. The Programmatic Estuary EA facilitates the environmental review of routine actions with well-understood and predictable environmental impacts common to restoration projects in tidal and riverine systems.

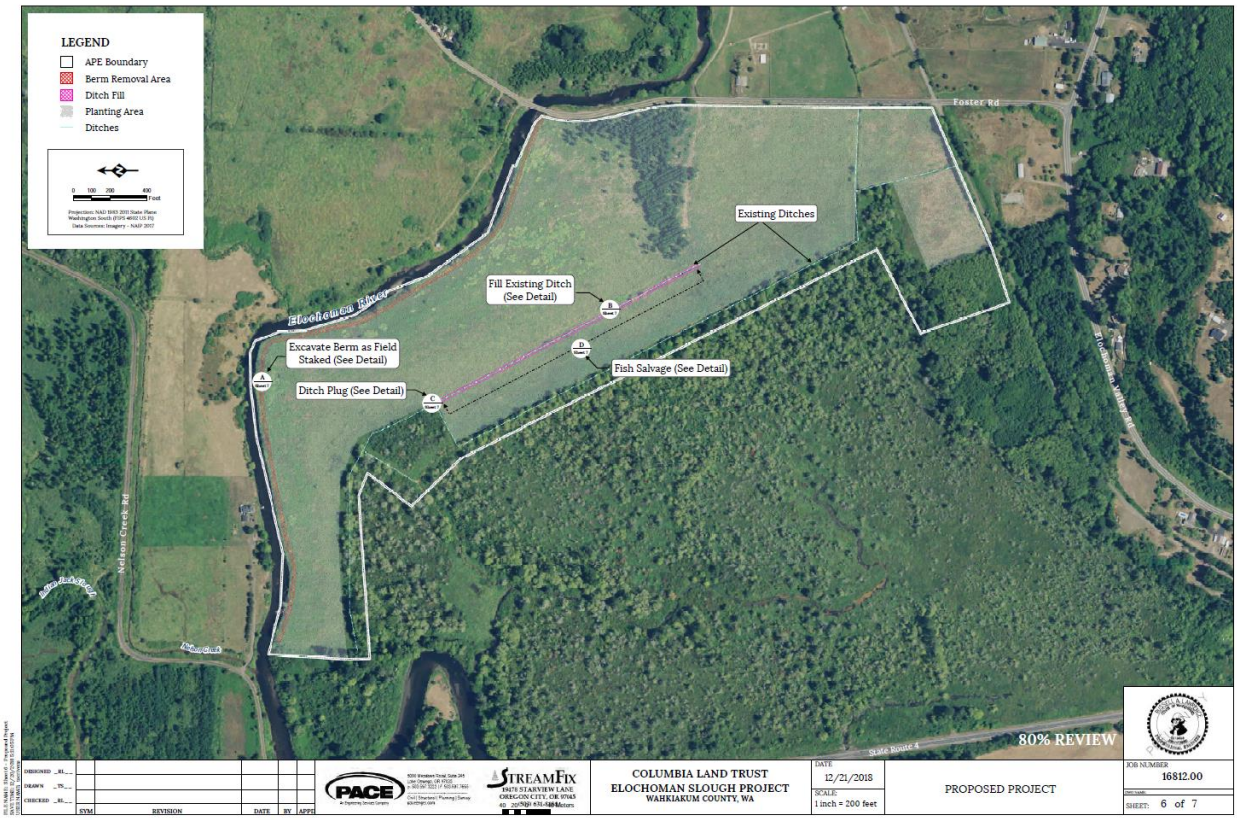
Consistent with the Programmatic Estuary EA, this supplement analysis (SA) analyzes the proposed Lower Elochoman Wetland Restoration Project that would restore habitat along the Elochoman River in Wahkiakum County, Washington. The SA was prepared to analyze the site-specific impacts of the proposed Lower Elochoman Wetland Restoration Project and 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. The findings of this supplement analysis determine whether additional NEPA analysis is needed pursuant to 40 Code of Federal Regulations (CFR) § 1502.9(c).

NEPA History

BPA originally proposed funding this project in 2016 under the name “Lower Elochoman Estuary Restoration.” At that time, the SA was released for public comment. Due to funding issues, BPA abandoned the project without responding to comments or releasing the final SA. BPA reinitiated the project in 2019.

Proposed Action

Figure 1. Lower Elochoman Wetland Restoration Design



Under the proposal, BPA would fund Columbia Land Trust (CLT) to conduct restoration actions along the Elochoman River, approximately one and a half miles north of Cathlamet, Washington. The restoration site historically had tidally-influenced freshwater wetlands and tidal channels. Early in the 20th century, mature Sitka spruce trees were harvested from the site and it was converted to agricultural use. Native vegetation removal, ditching, and wetland filling activities reduced the site's estuarine habitat diversity. In 2015, hydrology and fish access were restored through the removal of tidegates and installation of larger culverts under state Highway 4. Restoration actions being proposed include the removal of a low levee along the Elochoman River, the elimination of a single section of ditch, and native vegetation plantings.

The proposed restoration would improve habitat for 13 Endangered Species Act (ESA)-listed salmon and steelhead populations/species and ESA-listed eulachon (smelt), as well as other fish species and wildlife species, such as Columbian white-tailed deer (CWTD). The proposed restoration actions are consistent with the actions considered in the Programmatic Estuary EA, including the following Columbia River estuary (CRE) module management actions developed by NOAA's National Marine Fisheries Service with the intent of aiding in the recovery of salmon and steelhead throughout the region:

- CRE-1: Protect intact riparian areas in the estuary and restore riparian areas that are degraded.
- CRE-3: Protect or enhance estuary instream flows influenced by Columbia River tributary or mainstem water withdrawals and other water management actions in tributaries.

- CRE-6: Reduce the export of sand and gravels from dredge operations by using dredged material beneficially.
- CRE-9: Protect remaining high-quality off-channel habitat from degradation and restore degraded areas with high intrinsic potential for high-quality habitat.
- CRE-10: Re-establish or improve access to off-channel habitats.
- CRE-15: Reduce the introduction and spread of invasive plants.

Public Scoping, Comments, and Responses

To help determine issues to be addressed in this SA, BPA conducted public scoping between March 2 and April 4, 2016. A letter describing the proposed project, including public notification and conceptual design maps, was sent to local landowners, tribes, local, state and Federal agencies, and other interested parties. The project was then placed on hold in 2016 due to funding issues, but has been reinitiated due to available funds in 2019.

Nine letters were received during the public scoping period. BPA received the following questions, and has provided responses in *italics* below:

Comment 1. Can BPA explain why a levee removal project is a ratepayer responsibility?

- *Although providing quality stewardship for our region's natural and cultural resources is a worthwhile goal in its own right, the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (16 USC 839b(h)(10)(A)) directs BPA to protect, mitigate, and enhance fish and wildlife affected by the development and operation of the Federal Columbia River Power System. Habitat work in the Columbia River estuary, such as removing levees to connect floodplains, is an important part of this work to help fulfill BPA's commitments under the Federal Columbia River Power System Biological Opinion, as supplemented in 2010 and 2014. Juvenile salmonids rear and grow in the estuary, and restoring habitat in this area improves fish habitat.*

  BPA has funded tributary and estuary habitat improvement actions across the basin to restore natural stream channels, enhance flow volume and timing, expand cold-water refuges, and open access to habitat. This work has been done over a broad landscape, including areas that present restoration challenges due to substantial legacy impacts such as dredge mining and disconnected floodplains. The habitat actions provide both near-term and long-term benefits, including actions that improve connectivity and streamflow to provide a buffer against the effects of climate change.

Comment 2. Is this project a meaningful estuary restoration project or is it actually intended to create habitat for species such as Columbian white-tailed deer?

- *The project has benefits for both salmon and wildlife, including deer, as well as broader ecosystem function. By removing the berm and filling the ditch segment, the hydrology of the site would be more natural, enabling natural processes to recover. This would provide benefits to all species which utilize the site as well as upstream and downstream habitat. Along with native vegetation restoration, it would increase prey production and export, sediment capture, nutrient/detritus delivery, large wood delivery, flood attenuation, etc. The head of tide occurs somewhere within the project area and in conjunction with the relatively high elevation of the floodplain. This current approach strikes a balance between fish and deer habitat as well as general ecosystem recovery.*

Comment 3. Will the filling of ditches on the property block water passage through the culvert under Foster Road? If so, will the project include building a larger culvert?

- *No, the filling of ditches on the property would not block water passage through the culvert under Foster Road. The ditch that drains the property and the culvert would not be affected by this project proposal.*

Comment 4. Will the project increase flood risk on neighboring properties, reducing land values?

- *No. There would be no increased risk of flooding on neighboring properties per the project engineer (see Elochoman 2 Restoration Basis of Design Report).*

Comment 5. What impacts to neighboring lands will exist? How will these impacts be mitigated?

- *There would be no impacts to neighboring lands. The land to the west is Columbia Land Trust property. The land to the south is high ground. The land to the east, across Foster Road would not be affected as the river floods north of the property, near the bridge. If anything, removing the berm would relieve that flooding by allowing the river to enter the project area at lower stages, rather than building up and flooding Foster Road. More likely, there would be no impact at all since flooding here is a result of rainfall combined with high tides and background storm events. The land to the north, across the river, would be unaffected. Again, the flood risk to those properties would be reduced by allowing water into the project property at a lower river stage than currently.*

Comment 6. Will BPA conduct a boundary survey delineating the property boundaries?

- *The property boundaries are well-defined. Columbia Land Trust property occurs to the west; the southern boundary is the Elochoman Mainline Road; the eastern boundary is Foster Road; and the northern boundary is the Elochoman River. The only remaining boundary line is the one shared with the inholding at the northwest corner. At the request of that landowner, that shared boundary line was surveyed, marked in the field, and recorded.*

Comment 7. BPA must contact the Washington Department of Ecology if any contamination is suspected, discovered, or occurs during the proposed estuary restoration.

- *BPA would contact the Washington Department of Ecology (WA ECY) if any contaminants are suspected or discovered during the proposed implementation of the project.*

Environmental Effects

The typical environmental impacts associated with the 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 impacts of the Lower Elochoman Wetland Restoration Project and whether they are consistent with the impacts described in the Programmatic Estuary EA. Much of the site-specific analysis cited in the environmental impacts section below comes from the Elochoman 2 Restoration Basis of Design Report.

1. **Fish**

The overall impacts to fish from the proposed Lower Elochoman project would be beneficial. ESA-listed species in the project area may include coho, Chinook, and chum salmon, as well as non-listed cutthroat trout and Pacific lamprey. Detrimental impacts such as increased turbidity and injury or mortality from

fish salvage and work-area isolation would exist, but are short-term and related to project construction. Beneficial impacts such as improvements in hydrological regimes, enhanced water quality, and increased habitat area and access for fish should develop post-construction. These impacts are consistent with the analysis in the Programmatic Estuary EA, Section 3.2.3, which describes fish impacts as expected to be moderate and beneficial. As consistent with the Programmatic Estuary EA, BPA would use the Habitat Improvement Program III (HIP III) process to provide programmatic ESA coverage for impacts to ESA-listed fish for the Lower Elochoman Project. Categories of action included in the HIP III and relevant to the Lower Elochoman project include those in the 'River, Stream, Floodplain and Wetland Restoration' category, including:

- 2a – Improve Secondary Channel and Wetland Habitats
- 2b – Set-back or Removal of Existing Berms, Dikes, and Levees
- 2e – Riparian Vegetation Planting

2. **Hydrology and Hydraulics**

In consideration of the fact that the drainage in this area is dominated by lower Columbia flows during all channel-forming events, a hydraulic modeling analysis was not performed. The only gage for this river (Elochoman) is located near elevation 26, approximately 17 feet above the normal summer flows and 14 feet above the FIRM modeled 100 year flood. The vertical alignment of the existing ditch bottom revealed changes of gradient from negative to positive slopes. Minimal erosion indicators, such as over-hanging clumps of riparian vegetation (reed canarygrass) and sloughing raw dirt banks, were found. However, cross-sectional measurements do indicate a consistent dimension and side slopes through the site. The project site is situated at an elevation high enough that flooding is very infrequent, a result of both upstream inputs and tidal/wind influence.

As discussed within the Programmatic Estuary EA, Section 3.3, at locations where the levee would be breached or lowered to allow tidal exchange with the floodplain, the project site would be inundated, and hydrologic processes which have been disconnected for decades would be restored almost instantaneously. The effects of restoring hydrology would include a localized increase in the water quantity including an increase in the depth of water and duration of water on the site. Hydraulics would also be altered within the site and would be expected to further the development of a natural tidal channel network and restore sediment accretion within tidal marsh due to the restoration of natural processes. Over time, the restoration of hydrologic connectivity and inundation at a project site would support the restoration of natural processes contributing to habitat establishment and development, fish and wildlife usage, and structural and functional dynamics at the project site. Increasing the wetted area via breaching or lowering a levee or dike would provide additional floodplain capacity and conveyance for flood flows, reducing the local flood profile. Restoring local hydrology improves ecological structure, sustaining a diversity of habitat types which in turn increases the resilience and self-sufficiency of the wider ecosystem.

The impacts associated with the project are consistent with those described in the Programmatic Estuary EA, Section 3.3.3, which 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**

The project would result in overall positive impacts to water quality, including increased composition of native vegetation and vegetation cover, increased quantity of tidal marsh habitat, and increased hydrology, tidal exchange, and flushing. Impacts associated with construction activities at the Lower Elochoman project site could result in increases to localized turbidity, but would be short-term and limited to the duration of construction and subsequent site stabilization. As part of the HIP III process, conservation measures would be implemented to ensure that increases in suspected sediment are not exceeding compliance limits. The impacts associated with the Lower Elochoman project are consistent with those described in the Programmatic Estuary EA, Section 3.4.3.

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

The Lower Elochoman property was formed by a combination of physical processes and human alterations. The project area has endured past farming, ditching, tilling, and grading practices as is evident by the existing ditch, berm, and grazed areas that occur along the Elochoman River floodplain.

The landforms visible at today's project area have been altered by a variety of anthropogenic impacts including flood control systems (levees), infrastructure development, and vegetation change. Within the project area, tidal floodplains have been isolated by levee systems. The ditching and leveeing in the project area has driven two noteworthy geomorphic changes. First, ditching and leveeing has disconnected the surface from regular flood inundation. This has resulted in the associated loss of inundation benefits including sediment deposition, reduction in contributions to the vegetation seed bank, reduction in particulate and nutrient exchange, and lack of scouring flood flows. Second, ditching and leveeing has contributed to the lowering of the groundwater surface elevation. This lowering has led to further subsidence of the project area (an increase in soil aeration and decrease in buoyancy, which leads to soil consolidation), and a subsequent lowering of the ground surface.

Soils data for Lower Elochoman and the surrounding area were obtained from the Natural Resources Conservation Service. Soils mapped within the study area consisted of Grehalem silt loam, Montesa silt loam, Nuby silt loam, and Ocosta silty clay loam. Grehalem and Montesa silt loams are both considered to be non-hydric. Nuby and Ocosta soils are both mapped as hydric. Grehalem soils are very deep, well drained soils that exist on nearly level soils on floodplains. Montesa silt loams are very deep, somewhat poorly drained soils that are found on alluvial fans. Nuby silt loams are very deep, poorly drained soils that are found on floodplains. Ocosta silty clay loams are very deep, poorly drained soils that are found on floodplains and deltas that are protected from tidal overflow (USDA-NRCS, Brown 1986).

Impacts from the project are moderate in the short-term, with long-term beneficial impacts consistent with those analyzed in the Programmatic Estuary EA Section 3.5.3. These impacts include temporary erosion and sedimentation; altered channel form; structure and density of soils; localized changes in velocity, flow, and circulatory patterns; and increased groundwater exchange resulting in changes to soil structure and porosity. Analysis of these impacts is included above in Section 2, Hydrology and Hydraulics.

5. **Sediment Quality**

The Lower Elochoman project would remove approximately 5,000 cubic yards (3 acre feet) of material from the 100 year floodplain of the Elochoman River. For the berm removal, material would be

excavated in a direction away from the river to avoid any potential impacts to it, implementing all BMPs required by WA ECY. During the summer, water levels would be well below the work area. Work would be conducted in such a way that no sediment would be delivered to the river. If any sediment is delivered to the river, silt fence or other appropriate BMPs would be utilized. All disturbed areas associated with this project element would be seeded shortly after construction, and planted with native trees and shrubs early in 2020.

The filling of the single ditch segment would occur within the existing ditch footprint, consisting of less than one acre plus access routes. This work would occur after or during the berm removal, approximately mid-July through mid-August. This would result in bare/disturbed soils with the potential for runoff. These areas would be seeded with a mix of sterile, quickly establishing erosion control species and native herbaceous species post-construction. Any/all other BMPs required by WA ECY such as application of straw would be implemented. Due to the elevation of these areas, it is anticipated that seed would have the opportunity to successfully germinate. Establishment should occur before any significant precipitation events. Potential impacts include runoff associated with rain events on exposed soils, which should be avoided by summer time construction followed by seeding.

Overall impacts on sediment quality are moderate in the long term. Though there may be some short-term adverse impacts from disturbing and redistributing sediments, the actions proposed would increase organic material within the floodplain sediments over time, increasing their capacity to store nutrients as well as toxic chemicals. While this may lower sediment quality, water quality could improve the water column, thus improving the health of the aquatic biota. Such impacts have been previously analyzed in the Programmatic Estuary EA Section 3.6.3 and are consistent with the impacts at the Lower Elochoman project.

6. **Air Quality**

Temporary impacts to air quality associated with the Lower Elochoman project would result from the transportation and operation of construction equipment, as well as emissions related to travel to and from project areas for maintenance purposes. Impacts would be low and would not result in long- or short-term violations of state air quality standards. Project impacts on air quality would be low both in concentration and duration, consistent with the impacts described in the Programmatic Estuary EA, Section 3.7.3.

7. **Wildlife**

A population of CWTD resides in the Westport Slough area. This population is reproducing successfully and maintains a stable population estimated at approximately 150 animals on the 1,400 acres between Westport Slough and the Columbia River. A section of the Julia Butler Hansen National Wildlife Refuge for the CWTD is located in Westport Slough, which is south of the Lower Elochoman project area. Inundation of the Lower Elochoman project area may temporarily displace CWTD, although the project is expected to provide a net gain in available habitat for adults and juveniles. The berm scrape down and filling of the single section of ditch would provide newly available habitat at or near mean higher high water (MHHW). All areas would be planted with native species, which would provide various strata of cover and habitat for CWTD during all times of the year. Topographic and vegetative diversity would increase with restoration actions which would benefit CWTD by providing forage and cover habitats within the same area.

CWTD in the Lower Columbia River area are closely associated with riparian habitats often characterized by densely forested swamps covered with tall shrubs and scattered spruce, alder, cottonwood, and willows. In the summer, CWTD preferentially inhabit mixed forests of western red cedar, red alder, and parkland habitat with a grassy understory. The Lower Elochoman project area does contain CWTD habitat and may affect CWTD temporarily during construction and maintenance periods. However, to avoid and minimize impacts to CWTD within and around the project area, CLT must follow the conservation measures set forth in HIP III Biological Opinion of 2013. As a reminder, the measures relevant to this project are:

- To avoid and minimize impacts to CWTD during the fawning period, restoration activities would not occur from June 1 to July 15.
- Project personnel would be instructed to not approach CWTD adults or fawns at any time and reduce vehicle speeds around project sites where CWTD occur to avoid vehicle-deer collisions.
- Herbicides would not be used in CWTD fawning areas from June 1 to July 15. Within suitable or occupied habitat, use only herbicides listed under General Conservation Measures for Terrestrial Species and Critical Habitats #4 in the HIP III Biological Opinion.

In addition to the aforementioned conservation measures, we recommend creating microtopography within the project area to the maximum extent practicable. This entails creating and maintaining areas of higher elevation with native vegetation suitable for CWTD scattered within areas of lower elevation to allow deer to use these areas seasonally.

Impacts on wildlife resulting from the Lower Elochoman project would be low to moderate, and would relate to construction. The conversion of pasture grass to a diverse mixture of trees, shrubs, native grasses, and forbs would permanently displace most upland species. Semi-terrestrial mammals such as beaver, as well as amphibians, waterfowl, shorebirds, and insect-eating birds would have expanded and much improved wetland and aquatic habitat for breeding and feeding. Species favoring riparian forest would benefit from the planting of native tree and shrub species in areas bordering the restored tidal wetland. Project impacts would be consistent with the impacts discussed in Section 3.8.3 of the Programmatic Estuary EA.

The Programmatic Estuary EA acknowledged the potential for restoration projects to impact ESA-listed species. According to an email on March 12, 2019 by Jennifer Siani of the USFWS, the Lower Elochoman Restoration project area contains CWTD habitat and may affect, but is not likely to adversely affect CWTD. Therefore, conservation measures set forth in HIP III Biological Opinion of 2013 must be used by CLT to avoid and minimize impacts to CWTD. If ESA-listed species are potentially impacted, the Programmatic Estuary EA describes the need for consultation, including the implementation of mitigation measures, conservation measures, or project design features identified to minimize impacts.

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

In the Lower Elochoman area, vegetation communities within the wetland and floodplain areas consist predominantly of reed canarygrass (*Phalaris arundinacea*), knotweed species (*Polygonum* spp.), and Himalayan blackberry (*Rubus bifrons*) except for a narrow strip along the western border that is shared with the Lower Elochoman Forest Stewardship Unit. This area contains a mature overstory of Sitka spruce (*Picea sitchensis*), red alder (*Alnus rubra*), and western red cedar (*Thuja plicata*) with a minor component of big leaf maple (*Acer macrophyllum*), Oregon ash (*Fraxinus latifolia*), and black cottonwood (*Populus trichocarpa*). The understory component is that of Douglas spirea (*Spiraea*

douglasii), red-osier dogwood (*Cornus sericea*), black twinberry (*Lonicera involucrata*), and Pacific ninebark (*Physocarpus capitatus*). The understory also contains a minimal occurrence of perennial and annual hydrophytes such as skunk cabbage (*Lysichiton americanus*), slough sedge (*Carex obnupta*), water parsley (*Oenanthe sarmentosa*), small-fruited bulrush (*Scirpus microcarpus*), and other rush species.

There would be a risk to the integrity of the project if the weed populations are not controlled to allow the upcoming native plantings as well as native seed bank to thrive. Wetland sites containing a diversity of native grass, forb, shrubs, and overstory species provide a much higher quality habitat for myriad species, including listed salmonids and CWTD. They provide higher nutrient input, greater shading, prey production, forage opportunities, and higher functioning wetland dynamics such as sediment accretion and water filtration. Without herbicide treatments on all weed species on the project site, it would be an extremely slow, if not impossible process to establish native vegetation for the benefit of a variety of listed and non-listed wildlife species. Further, public opinion is influenced by these restoration projects, and one complaint often cited in restoration projects is that weeds are not controlled which can result in off-site impacts.

Due to the high amount of invasive species present on the site, the entire Lower Elochoman project site would be revegetated with species appropriate to elevation ranges or zones. Such vegetation is needed for supporting accretion, marsh development, and hydrological complexity and would reduce the likelihood for invasive species to dominate and simplify the site.

The impacts to wetlands and vegetation from projects envisioned in the Programmatic Estuary EA, Section 3.9.3 are intended to be moderate and beneficial by design, since wetland restoration, invasive species control, and estuarine habitat improvement are the intent of these actions. The Lower Elochoman project would result in beneficial impacts to native vegetation, wetlands, and estuarine habitats in the proposed restoration area consistent with those considered in the Programmatic Estuary EA.

9. **Land Use and Recreation**

The 100-acre Lower Elochoman project site is located on the lower, tidal reach of the Elochoman River. The property historically functioned as floodplain for the Elochoman River as well as intertidal habitat associated with the Columbia River and its wetland complex within the Julia Butler Hansen Wildlife Refuge. Within the last 100 years, the property was ditched and drained and utilized for agricultural purposes. Within the last 10 years, the site was planted with hybrid poplars, which experienced significant mortality as a result of hydrology and mammalian browsing. CLT purchased the property in 2012 for conservation and to provide and enhance wildlife habitat for listed salmonid and steelhead species, CWTD, and other wildlife species. Although the site is currently hydrologically connected to the Columbia River via sloughs and the newly installed box culverts under State Route 4, the existing fish habitat is limited to straight ditches lacking complexity, roughness, shading, large wood, and length compared to historical conditions. Further, the site is disconnected from the Elochoman River by a levee along its left bank.

Impacts on land use and recreation would result from the lowering of the existing berm and filling of the existing ditch segment. These activities would convert the lands from the historical agricultural uses to tidal marsh habitat, and therefore reducing access within the project vicinity. Restoring degraded farmlands to tidal marsh areas would restore accretion rates and position these areas to better respond

to sea-level rise. The proposed action would impact the farmlands identified as of statewide importance. While estuarine restoration projects would have low to moderate adverse effects to farmlands, the project is occurring in coordination with CLT as a willing landowner, which purchased the property from willing landowners themselves in 2012. Such impacts are consistent with those described in the Programmatic Estuary EA, Section 3.10.3 and Appendix C.

10. **Cultural Resources**

Site-specific National Historic Preservation Act Section 106 consultation for the Lower Elochoman project was completed in 2014, and BPA determined that there would be no adverse effect to historic properties as a result of the project. According to the Cultural Resources Inventory prepared by Applied Archaeological Research, Inc. dated September 4, 2014, no archaeological resources were identified. Therefore, the report findings recommended that there would be no effect for the project undertaking on historic properties. In reviewing BPA's 2014 Section 106 consultation documents on December 13, 2018, which accounted for a phased implementation estimated to be completed in 2018, and the cultural resources inventory report completed for this project, the updated designs and project description continue to be within the scope and scale of that consultation. These findings are consistent with the analysis in the Programmatic Estuary EA, Section 3.11.3.

11. **Socioeconomics**

Lower Elochoman has been used in the past as farmland and more recently as working forest land. When the project site was sold to the CLT, the site had been taken out of agricultural production and a hybrid poplar lease was active. Since acquisition, the poplar lease has been purchased and extinguished. However, no farmland or working forest land would be lost as a result of this proposal because the property was purchased for wildlife habitat and has with it a conservation easement restricting land uses to wildlife habitat conservation and enhancement. Furthermore, the site is not productive for agricultural or hybrid poplar farming due to mammalian browsing and being prone to flooding.

Negative impacts associated with the proposed project include the berm scrape down and filling of the single section of ditch, which would modify the property into a tidally-influenced floodplain with native vegetation, excluding future farming and grazing opportunities. In addition, the acquisition of Lower Elochoman by CLT and the proposed restoration from agricultural to protected wetland would remove the property from the county tax base, reducing tax revenues. Small beneficial impacts would occur associated with the workers needed for construction, as well as long-term benefits associated with improvement of fish runs and natural scenery.

The Programmatic Estuary EA did not anticipate that the projects would have adverse human health or socioenvironmental impacts or disadvantage low-income or minority populations. For the Lower Elochoman project, socioeconomic impacts are low, consistent with those described in the Programmatic Estuary EA Section 3.12.3.

12. **Visual Resources**

The Lower Elochoman property can be seen from Highway 4 (Ocean Beach Highway) to the west. The removal of the berm, filling of the ditch, and restoration of property to a more natural state would increase hydrological connectivity, resulting in an increase in the quality and size of the wetlands within

the project site. The entire property would be seeded and planted with native vegetation, resulting in a more natural-looking environment.

This alteration of the physical landscape through the removal of existing infrastructure would shift the character of the site from a somewhat human-engineered landscape to a more natural-looking area, resulting in low impacts to visual resources as is consistent with the visual resources analysis in the Programmatic Estuary EA, Section 3.13.3.

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

The Lower Elochoman project would result in minimal noise and hazardous waste impacts related to construction and maintenance activities. Potential safety risks could be associated with increased surface area of flowing and standing water with daily tidal flooding in places where there was none in recent history. Flooding on restored sites would be daily tidal flooding or seasonal flooding of the property. The project would increase the surface area of flowing and standing water in places where there was none in recent history, which may result in safety concerns where roads or trails bring people in close proximity to new/restored hydraulics.

Although there may be safety concerns in regards to the flooding of roads or trails with levee breaching projects, this is not the case with the Lower Elochoman Restoration project. The land to the east, across Foster Road would not be affected as the river floods north of the property, near the bridge. If anything, removing the berm would relieve that flooding by allowing the river to enter the project area at lower stages, rather than building up and flooding Foster Road. There would likely be no impact at all since flooding surrounding the project site is a result of rainfall combined with high tides and background storm events. The land to the north, across the river, would be unaffected. Again, the flood risk to those properties would be reduced by allowing water into the project property at a lower river stage than currently.

The Lower Elochoman project includes project designs with a berm scrape down along the southern bank of the Elochoman River and the filling of an existing ditch segment to promote saturation and flooding of the wetland and floodplain habitat within the property, and long-term monitoring to ensure the newly planted vegetation is successful. As a result, the only impacts are associated with construction and maintenance, and are low, consistent with those described in the Programmatic Estuary EA, Section 3.14.3.

14. **Transportation and Infrastructure**

The Lower Elochoman project is expected to have minimal impacts on transportation or infrastructure, as there are no roads that would be removed for the project. The project is not expected to have any impacts on navigability within the Columbia River to the west or within the Elochoman River, consistent with the analysis in the Programmatic Estuary EA, Section 3.15.3.

15. **Climate Change**

Possible negative impacts to climate change include those relating to use of vehicles and equipment associated with construction and maintenance of the Lower Elochoman project area. 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.

Findings

This SA finds that the potential impacts from the proposed Lower Elochoman 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(c). Therefore, no further NEPA analysis or documentation is required.

/s/ Travis Kessler
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Reviewed by:

/s/ Chad Hamel
Chad Hamel
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Concur:

/s/ Sarah T. Biegel Date: *May 8, 2019*
Sarah T. Biegel
NEPA Compliance Officer