

Supplement Analysis
for the
Columbia Estuary Ecosystem Restoration Program
(DOE/EA-2006/SA-11)

Bonneville Power Administration
Department of Energy



Background

In July 2016, Bonneville Power Administration (BPA) issued a Finding of No Significant Impact (FONSI) for the Columbia Estuary Ecosystem Restoration Program Environmental Assessment (Estuary EA), (DOE/EA-2006). The estuary restoration program is an ongoing program implemented by BPA and the United States Army Corps of Engineers (Corps), together referred to as the Action Agencies¹, which involves activities and projects to restore estuary habitats along the Columbia River for fish and wildlife. The Estuary EA analyzed potential impacts of restoration projects in the Columbia River estuary to support more efficient environmental reviews of site-specific restoration actions and projects.

Since the release of the Estuary EA, there have been several updates that have necessitated changes to the estuary restoration program. In 2019, the Expert Regional Technical Group (ERTG), a group of regional experts that use best available science to provide technical input on potential restoration actions in the floodplain of the lower Columbia River and estuary, released guidance on new potential actions to be undertaken within the estuary restoration program. Additionally, in July 2020 the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) issued biological opinions (BiOps) for the continued operation and maintenance of the Columbia River System (CRS) (NMFS 2020, USFWS 2020). The proposed action consulted upon in these BiOps contained continued commitments that required minor updates within the estuary restoration program.

BPA has prepared this Supplement Analysis (SA) under the Department of Energy's NEPA Regulations at 10 CFR 1021.314(c) to determine whether there have been substantial changes to the estuary restoration program or significant new circumstances or information relevant to environmental concerns since completion of the Final Estuary EA for the estuary restoration program. This SA reviews if there are changes to the Columbia Estuary Ecosystem Restoration Program (CEERP or estuary restoration program) that fall outside of those considered in the Estuary EA, due to commitments made in the 2020 NMFS CRS BiOp and the 2020 USFWS CRS BiOp; as well as any changes to the estuary restoration program since the release of the Estuary EA.

Upcoming Changes to the Columbia Estuary Ecosystem Restoration Program

In 2019, the Expert Regional Technical Group of the Columbia Estuary Ecosystem Restoration Program published a paper called *Landscape Principles for the CEERP Restoration Strategy* (ERTG 2019). The

¹ BPA and the Corps are referred to as the Action Agencies in this document. While the Bureau of Reclamation is an Action Agency for the Columbia River System Biological Opinion (BiOp), BPA and the Corps have agreed to implement the estuary restoration program.

paper built on NMFS' estuary module described in Section 1.4.6 of the Estuary EA, and developed a landscape framework as an additional scoring criteria for evaluating the quality of potential restoration actions, citing landscape ecology principles that were, historically, only subjectively considered (ERTG 2019). While the estuary restoration program strategy continues to emphasize large-scale hydrologic reconnection of floodplain habitats, the opportunity for large-scale restoration is finite, therefore the ERTG paper identifies restoration of matrix² habitat to consider on both small and large scale projects. NMFS is subsequently in the process of updating the Columbia River Estuary Endangered Species Act (ESA) Recovery Plan Module for Salmon and Steelhead to reflect the updates to available estuary restoration principles.

The 2019 ERTG paper helped inform the proposed action for the consultation on CRS operations and maintenance that resulted in the 2020 CRS BiOps (NMFS 2020, USFWS 2020). The Action Agencies included continued implementation of the estuary habitat restoration program as part of their proposed action. The proposed action consulted upon in the 2020 NMFS CRS BiOp eliminated the use of Survival Benefit Units (SBUs) to measure benefits for ESA-listed anadromous species in the estuary, and replaced them with the commitment from the Action Agencies to reconnect an average of 300 acres of floodplain per year. The Action Agencies also committed to a 5-year rolling review to evaluate the acreage restored to date, the portfolio of potential projects available for the next 5 years, and other relevant findings, to note any changes in strategic approach to either restoration or monitoring practices in the annual estuary restoration program restoration and monitoring plan. The BiOps concluded that the effects of the proposed action were not likely to jeopardize the continued existence of the thirteen ESA-listed species of anadromous salmonids or bull trout, or destroy or adversely modify designated critical habitat (NMFS 2020, USFWS 2020).

The 2020 USFWS CRS BiOp lists the lower Columbia River as containing critical habitat for bull trout and providing essential foraging, migratory, and overwintering habitat for extant tributary populations of bull trout. This BiOp describes how anthropogenic stressors have led to significant habitat modifications to the lower Columbia River and the presence of dams in this region has led to reduced habitat availability and depressed bull trout populations within the Coastal Recovery Unit (CRU). However, given the availability of habitat in the area and connectivity among diverse aquatic systems, there is the possibility of bull trout population reestablishment. The proposed action consulted upon in the 2020 USFWS CRS BiOp includes monitoring and adaptive management that is expected to reduce adverse impacts to bull trout in this CRU. Additionally, this BiOp states that the estuary restoration program and future restoration projects within the estuary would benefit bull trout by increasing the function of estuarine and nearshore marine habitats. The BiOp included as a conservation recommendation that the Action Agencies continue to participate in the estuary restoration program and purchase floodplain properties or easements to reconnect floodplain and side channel habitat to expand shallow water habitat within the estuary (USFWS 2020).

To ensure that the Action Agencies met their ESA obligations under the 2008 NMFS Federal Columbia River Power System BiOp, as supplemented in 2010 and 2014 (2008 BiOp), the Estuary EA identified one of its purposes as "Implement projects in a timely manner to secure and claim survival benefits to help fulfill the Action Agencies' commitments under the [2008 BiOp]." Given the 2020 NMFS and USFWS CRS BiOps and updates to the estuary restoration program since the Estuary EA and FONSI were published in

² Matrix habitat refers to the adjacent riparian and shoreline areas between habitat patches along the salmon migration route.

2016, BPA proposes to update the purposes in Section 1.3 of the Estuary EA with the following three purposes:

- Help meet the Action Agencies' obligations under the ESA by fulfilling commitments begun under the 2008 NMFS FCRPS BiOp, as supplemented in 2010 and 2014, (2008 BiOp) and ongoing commitments under the proposed action consulted upon in the 2020 NMFS Columbia River System BiOp. The 2008 BiOp called for identifying estuary habitat restoration projects and the proposed action consulted upon in the 2020 NMFS CRS BiOp largely continues the commitments regarding estuary habitat restoration projects.
- Help meet BPA's commitments under the Columbia River System Operations Environmental Impact Statement Record of Decision and Mitigation Action Plan (September 2020).
- Help the Action Agencies support conservation of ESA-listed species considered in the 2020 ESA consultation with the USFWS on the operations and maintenance of the CRS.

BPA proposes to replace the use of SBUs as the metric for meeting the commitments in the proposed action (described in Section 1.4.5 of the Estuary EA), with updated commitments from the Action Agencies to restore an average of 300 acres of floodplain habitat annually.

BPA also proposes to update use of the Columbia River estuary (CRE) module management actions described in Section 1.4.6 and Section 2.3 of the Estuary EA with an addition to CRE 1 subcategory 1.4 to include the restoration of matrix habitat. CRE 1 subcategory 1.4, as described in the Estuary EA, includes actions to restore and maintain ecological benefits in riparian areas, and manage vegetation on dikes and levees. These actions include planting and protecting native vegetation, removal of invasive vegetation, and ground disturbing work associated with levee removal, ditch filling, and tidal channel creation. The proposed update would add matrix habitat to subcategory 1.4. Proposed actions considered under this subcategory could also include planting on shoreline, or filling in shoreline habitat (currently armored or otherwise altered to the detriment of historical condition) and planting. As part of the addition of matrix habitat, any projects that include subcategory 1.4 could also now include removal of shoreline armoring and regrading of shoreline topography to a more natural condition. This addition is consistent with the landscape ecology principles and criteria considered in the ERTG 2019 paper and adopted by the estuary restoration program.

Analysis

The updates have been reviewed to determine if they are a substantial changes from what was proposed in the Estuary EA (DOE/EA-2006) and adopted in its corresponding FONSI or if there are significant new circumstances or information relevant to environmental concerns.

Changes to the Estuary EA purposes are administrative in nature and would not change how projects are implemented within the estuary restoration program. The update reflects the most recent commitments made under the proposed action consulted upon in the 2020 NMFS CRS BiOp and the 2020 USFWS CRS BiOp, and would not result in significant impacts or raise any new environmental concerns outside of those discussed in the Estuary EA.

The Action Agencies' replacement of SBUs as the metric for estuary restoration actions in the proposed action, with restoring an average of 300 acres of floodplain habitat annually, reflects the annual average historical restoration acreage since the program's inception. The update simplifies program metrics and

does not change the nature or scale of projects that would be implemented under the program annually.

Incorporating matrix habitat into the list of CRE management subactions provides clarity of terms when defining the type of riparian habitat restoration principles available for practitioners, as described under CRE 1. The use of matrix habitat restoration techniques are likely to be part of a larger project or project phase, and not a stand-alone action. Projects that propose restoration of matrix habitats by means of armored bank removal and replanting are similar to the list of actions described in Section 2.3 of the Estuary EA. These actions include restoring native vegetation through planting and protecting native vegetation (to include fence installation) as well as removing invasive vegetation by both mechanical and chemical means (CRE 1.4). Additionally, these actions could include construction related fish salvage and in-water work, as well as levee and dike removal and breaching (CRE 10.1). Many of the mitigation measures listed in Section 2.4 of the Estuary EA would be similar to those that would be used for matrix habitat actions. The environmental effects of matrix habitat actions would be similar to those described in Section 2.5 of the Estuary EA, such as short term impacts from construction-related turbidity, soil erosion, disturbance, noise, and exhaust. Long-term beneficial effects would be restored estuarine habitats with increased food web support, enhanced water quality, and expanded native plant communities. Restoration of matrix habitat would have the same type and nature of potential environmental effects as those described in the Estuary EA.

The potential updates to the actions described in the Estuary EA would not change the scope or nature of projects being implemented within the estuary restoration program and the addition of matrix habitat is similar to actions that were considered in the Estuary EA. Therefore, there would be no substantial changes in the action and impacts to affected resources would not significantly deviate from those described in the EA. The modifications to the estuary restoration program do not represent a significant new circumstances or information relevant to environmental concerns.

Findings

This SA finds that the proposed action consulted upon in the CRS BiOps related to the estuary restoration program is similar to those analyzed in the Estuary EA (DOE/EA-2006, July 2016). There are no substantial changes in the proposed action (CEERP) 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.

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