

Supplemental Environmental Assessment

Supplement to the Columbia River Federal Navigation Channel Operations and Maintenance Dredging and Dredged Material Placement Network Update

Rice Island Shoreline Placement and Howard Island In-Water Dredged Material Rehandling Site (Sump)

August 2019

Executive Summary

This Supplemental Environmental Assessment (SEA), prepared by the U.S. Army Corps of Engineers, Portland District (Corps), is being submitted for public review under applicable laws and regulations, including the National Environmental Policy Act (NEPA). The information in this SEA is intended to supplement the original environmental assessment (EA) titled: *Final Environmental Assessment Columbia River Federal Navigation Channel Operations and Maintenance Dredging and Dredged Material Placement Network Update, Rice Island Shoreline Placement and Howard Island In-Water Dredge Material Rehandling Site (Sump) September 2015*, and documents the effects of modifying the designated location of the Howard Island sump, previously evaluated in 2015 EA.

The Howard Island sump has never been used, and subsequent to its establishment in 2015, the Corps determined the proposed new location (adjacent to the current location) is a more suitable site. The purpose of initially adding a dredged material re-handling sump off Howard Island is to maximize efficiency of material placement at the existing Howard Island upland placement site. The proposed new location of the sump is expected to be a more stable location in this reach of the river. The new sump location is still within the flow lane, is immediately adjacent to the current sump location, is approximately 18 acres larger than the previously designated site, and would be used in the same manner as described in the original EA.

The proposed new sump location would be finalized after the Corps has received all required environmental clearances, and assuming that the Corps makes a Finding of No Significant Impact (FONSI) for the Proposed Action. The Corps is the lead federal agency for this SEA and was also the lead agency for the original EA.

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ABBREVIATIONS AND ACRONYMS

ACHP	Advisory Council on Historic Preservation
AMD	Advanced Maintenance Dredging
ARPA	Archaeological Resources Protection Act
BA	Biological Assessment
BiOp	Biological Opinion
BMP	Best Management Practice
C&LW	Columbia and Lower Willamette Rivers
CAA	Clean Air Act
CEO	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response. Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CR	Columbia River
Corps	US Army Corps of Engineers
CRD	Columbia River Datum
CRCIP	Columbia River Channel Improvement Project
CWA	Clean Water Act
CWA	citali watci Act
	Coostal Zana Management A at
DEO	Oragon Department of Environmental Quality
DEQ	Oregon Department of Environmental Quanty
DLCD	Oregon Department of Land and Conservation
DMEF	Dredged Material Evaluation Framework
DNK	Washington Department of Natural Resources
DOE	Washington Department of Ecology
DPS	Distinct Population Segment
DSL	Oregon Department of State Lands
DWS	Deep Water Site
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U. S. Environmental Protection Agency
ER	Engineering Regulation
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
FNC	Federal Navigation Channel
FONSI	Finding of No Significant Impact
FR	Federal Register
ft	foot or feet
FWCA	Fish and Wildlife Coordination Act
IWW	in-water-work
kcfs	thousand cubic feet per second
MBTA	Migratory Bird Treaty Act
MCR	Mouth of the Columbia River Project
MCY	million cubic vard(s)
MHHW	mean higher high water
MLLW	mean lower low water
MPRSA	Marine Protection, Research, and Sanctuaries Act
MSA	Magnusson-Stevens Fishery Management and Conservation Act
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NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
Network	Dredged Material Placement Network
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NRHP	National Register of Historic Places
O&M	operation and maintenance
ODFW	Oregon Department of Fish and Wildlife
ODMDS	Ocean Dredged Material Disposal Site
OHW	ordinary high water
RCRA	Resource Conservation and Recovery Act
RHA	Rivers and Harbors Act
RM	river mile
ROD	Record of Decision
ROE	Right of Entry
RPM	reasonable and prudent measures
SE	Supplemental Evaluation
SEF	Sediment Evaluation Framework for the Pacific Northwest
SEIS	Supplemental Environmental Impact Statement
SIP	State Implementation Plan
TMDL	Total Maximum Daily Load
USC	U.S. Code
USGCRP	U.S. Global Change Research Program
USFWS	U.S. Fish and Wildlife Service
VTD	Vancouver to The Dalles Project
WDFW	Washington Department of Fish and Wildlife
WQC	Water Quality Certification
WRDA	Water Resources Development Act

1. INTRODUCTION

The information in this Supplemental Environmental Assessment (SEA) is intended to supplement the original EA titled: *Final Environmental Assessment Columbia River Navigation Channel Operations and Maintenance Dredging and Dredged Material Placement Network Update, Rice Island Shoreline Placement and Howard Island In-Water Dredge Material Re-handling Site (Sump) September 2015*, and documents the effects of modifying the designated location of the Howard *Island sump*, previously evaluated in the 2015 Environmental Assessment (EA).

The Howard Island sump has never been used, and subsequent to its establishment in 2015, the Corps determined that the proposed new location (adjacent to and partially overlapping the current location) is a more suitable site. The purpose of initially adding a dredged material re-handling sump off Howard Island is to maximize efficiency of material placement at the existing Howard Island upland placement site. The proposed new location of the sump is expected to be a more stable location in this reach of the river. The new sump location is still within the flow lane, is immediately adjacent to the current sump location, and would be used in the same manner outlined in the original EA.

1.1. Location, Scope and Nature of the Proposed Action

Howard Island is located in the State of Washington; however, the proposed new sump location straddles the border between the states of Oregon and Washington within the Columbia River. The sump is commonly referred to as the "Howard Island sump" to provide an approximate river location, and because material placed temporarily at the sump will ultimately be dredged and pumped onto the existing Howard Island upland placement site. The Corps has determined through in depth site analysis that the original sump location is less stable than the revised site; therefore, the Corps is proposing to modify the location of the sump.

The Howard Island upland placement site was approved in the 2003 Columbia River Navigation Improvement Project Final Supplemental Integrated Feasibility Report and Environmental Impact Statement and is critically needed for minimum channel maintenance due to limited in-water placement capacity between river mile (RM) 62 and RM 72. As discussed in the 2015 EA, a sump is needed near the Howard Island upland placement site because shoaling is consistently forming beyond the reach of the pipeline dredge to pump material directly from the shoals to the upland site. Temporary storage of dredged material at the sump would also provide flexibility for dredges to be redirected to unexpected, urgent shoaling needs elsewhere in the Columbia River system.

The current location of the Howard Island sump is in the flowlane outside the navigation channel where depths generally range from 30–52 ft. The revised location is immediately adjacent to the current location, but in a more stable area of the river and still within the flowlane. The sump in its revised location would be approximately 68 acres in area, and would be capable of storing up to 400,000 cubic yards (CY) of material (see Figure 1), which is the same storage quantity as the original footprint. The dimensions of the new sump location are approximately 6,800 ft long, 440 ft wide, and would be dredged to a depth of 43 ft, as was originally proposed.



Figure 1. Previously established Howard Island sump location (yellow) and revised sump location (purple).

1.2. Authority and Funding

The Corps has been the governmental agency responsible for maintaining navigable waters since 1824. The Commerce Clause in the Constitution and subsequent court decisions have established the Federal right and obligation to regulate the nation's waterways and to make necessary improvements in the interest of navigation. Congress has furthered this navigation mission by authorizing projects such as Columbia River (CR) Federal Navigation Channel (FNC) through various Rivers and Harbors Acts (RHA), the earliest being enacted in 1878. The RHAs gave way to the Water Resources Development Acts (WRDA) starting in 1973. Congress also provides annual appropriations for maintenance of the CR FNC.

In-water placement of dredged material is governed by Section 404 of the Clean Water Act (CWA). The Corps does not issue itself a Section 404 permit for authorization of dredged material placement in-water; however, the Corps does apply the Section 404(b)(1) guidelines and other substantive requirements under the CWA.

Maintenance dredging and in-water placement of dredged sediments to maintain authorized navigation channels is also carried out in accordance with Section 401 of the CWA and regulations

at 33 Code of Federal Regulations (CFR) parts 335 through 338 ("Operation and Maintenance of Army Corps of Engineers Civil Works Projects Involving Discharge of Dredged or Fill Material into Waters of the U.S. or Ocean Waters").

1.3. Required Consultations and Certifications

Table 1 outlines the required updates to consultations and/or certification required prior to updating the project.

Agency	Consultation/Certifications	Status
Oregon Department of Environmental	CWA 401 water quality certificate	JPA Submitted to DEQ
Quality (DEQ)	Amendment	December 28, 2018
Washington Department of Ecology	CWA 401 water quality certificate	JARPA Submitted to DOE
(DOE)	Amendment	January 4, 2019
National Marine Fisheries Service	ESA - amendment to informal	Biological Assessment Submitted
(NMFS)	consultation	February 22, 2019
US Fish and Wildlife Service	ESA – amended memorandum to the	Memorandum to the File Updated
(USFWS)	file	January 4, 2019
Cultural Resources (Section 106	Amendment to memorandum for the	Memorandum to the File Amended
National Historic Preservation Act)	record	December 20, 2019
Compliance		

Table 1: List of Consultations and/or Certifications needed.

2. PURPOSE AND NEED

The purpose of this action is to improve dredged material placement network function to accommodate dredging activities intended to maintain the CR FNC at the requisite depth for safe passage of shipping traffic. This action includes establishing a sump at Howard Island and this SEA supplements the information in the original 2015 EA to include effects of a revised location for the sump.

The revised sump location would result in a project footprint modification that warrants supplemental analysis under National Environmental Policy Act (NEPA). The need for establishing a sump at Howard Island is to ensure safe and reliable passage of shipping traffic along the CR FNC by supplementing the dredge material placement network, which is nearing capacity. The action is also intended to facilitate efficient movement of dredged material to the Howard Island upland placement site.

2.1. Alternatives

The Howard Island sump has never been used and to this date only exists on the record as a potential placement/re-handling site. This SEA includes an evaluation of effects that could result from modifying the site location that was presented in the preferred alternative in the 2015 EA. The overall intent and functionality of the sump under the preferred alternative remains unchanged from the original EA; only the designated location of the sump would be modified under this action. Therefore, the Corps is not proposing an entirely new alternative, but rather is providing a supplemental analysis for the revised location of the sump.

In essence, the **No Action Alternative** being considered in this supplemental NEPA document is maintaining the current sump location. The **Preferred Alternative** is redrawing the sump boundary within the more suitable location. For the purposes of this supplemental effects analysis, the action of changing the sump location will be compared to maintaining the current sump location.

2.1.1. Current and Proposed Howard Island Sump Locations

The current Howard Island sump location (Figure 2) is on the Oregon side of the CR FNC at RM 68 – RM 69 entirely within the State of Oregon. The total sump acreage is 40 acres and would have had a maximum capacity of 400,000 cy at any given time; this site has never been used and only exists in the record as a mapped polygon. The Howard Island upland placement site was approved in the 2003 Columbia River Channel Improvement Project Final Supplemental Integrated Feasibility Report and Environmental Impact Statement and is critically needed for minimum channel maintenance due to limited in-water placement capacity between RM 62 and RM 72. A sump is now required at Howard Island upland placement site because shoaling is consistently forming beyond the reach of the pipeline dredge to pump material directly from the shoals to the upland site. Temporary storage of dredged material at the sump also provides flexibility for dredges to be redirected to unexpected, urgent shoaling needs elsewhere in the Columbia River system. For the reasons listed above, the addition of a sump between RM 68 and RM 69 to the network for this reach of the river would improve efficiency of placing material upland and overall channel maintenance.



Figure 2. Current Howard Island sump location. Bathymetric survey dated 24 July 2014.



Figure 3. Proposed revised sump location (the eastern most polygon) overlaid with current sump location (the western most polygon).

The sump is located in and near waterways that are used for commercial shipping and barge traffic, commercial and recreational fishing, and recreational boating. Northwest (downstream) of the proposed sump site is the Port of Longview, which has eight marine terminals and waterfront industrial property spanning 835 acres on the deep-draft Columbia River, 66 miles from the Pacific Ocean in southwest Washington State (Port of Longview 2015). There is also a private chip barge facility located in the entrance to the Old Mouth Cowlitz just downstream of the Cowlitz River. Downstream of the proposed sump site on the Oregon side of the river, there is a private vessel construction and repair shipyard and the City of Rainier marina and boat launch.

The sump is located near an anchorage area designated by the U.S. Coast Guard and upstream of a stern anchor buoy for deep draft vessels. Ongoing coordination with the Columbia River Pilots will ensure that sump operations are compatible with anchorage operations.

Northwest (downstream) of where the sump would be located is the confluence of the Cowlitz River, Carrolls Channel, and the Columbia River. Carrolls Channel, is located on the north side of Howard Island and separates the island from the state of Washington mainland. The convergence of these three waterways makes the area around Howard Island a dynamic hydraulic environment. The relocated site has been determined by the Corps to be a more stable site as a sump location in this environment.

3. AFFECTED ENVIRONMENT

The affected environment remains unchanged from that discussed in the 2015 EA; therefore, the affected environment section of the original NEPA document is hereby incorporated by reference. In summary, this reach of the lower Columbia River (LCR) supports a wide range of aquatic and terrestrial vegetative communities including intertidal marshes, and sandy islands colonized by riparian vegetation. The thalweg of the river is primarily comprised of fine and medium grained sand, which falls out of the water column quickly during dredging and placement activities. The Howard Island sump is not considered wetland habitat. It is classified as open deep-water, riverine habitat.

Wildlife supported in this environment include aquatic species such as corbicula clams, largemouth bass, smallmouth bass, bullhead, carp, catfish, channel crappie, crawfish, eulachon, yellow perch, northern pike minnow, Chinook salmon, coho salmon, chum salmon, sockeye salmon, American shad, steelhead trout, green and white sturgeon, suckerfish, coastal cutthroat trout and walleye. The sump area is deeper than most areas used by ESA-listed fish species (i.e., deeper than 20 ft). Terrestrial wildlife species that utilize the sump area include terns, cormorants, gulls, pelicans, eagles, osprey, and waterfowl.

ESA-Listed Species Under NMFS Jurisdiction

The federally listed threatened and endangered species or managed fisheries under the jurisdiction of the NMFS that may occur in the proposed project area are shown in Tables 2-4.

Evolutionarily Significant Unit	Status	Critical Habitat	Federal Register (FR) Citation	
Chinook Salmon (Oncorhynchus tshawytscha)				
Snake River spring/summer run	Threatened	Yes	70 FR 37160; 28 June 2005	
Snake River fall run	Threatened	Yes	70 FR 37160; 28 June 2005	
Lower Columbia River	Threatened	Yes	70 FR 37160; 28 June 2005	
Upper Columbia River spring run	Endangered	Yes	70 FR 37160; 28 June 2005	
Upper Willamette River	Threatened	Yes	70 FR 37160; 28 June 2005	
Coho Salmon (Oncorhynchus kisutch)				
Lower Columbia River	Threatened	Proposed	70 FR 37160; 28 June 2005	
		_	78 FR 2725; 14 January 2013	
Chum Salmon (Oncorhynchus keta)				
Columbia River	Threatened	Yes	70 FR 37160; 28 June 2005	
Sockeye Salmon (Oncorhynchus nerka)				
Snake River	Endangered	Yes	70 FR 37160; 28 June 2005	
Steelhead (Oncorhynchus mykiss)				
Snake River Basin	Threatened	Yes	71 FR 834; 1 January 2006	
Lower Columbia River	Threatened	Yes	71 FR 834; 1 January 2006	
Middle Columbia River	Threatened	Yes	71 FR 834; 1 January 2006	
Upper Columbia River	Threatened	Yes	71 FR 834;1 January 2006	
Upper Willamette River	Threatened	Yes	71 FR 834; 1 January 2006	

Table 2. ESA-listed Anadromous Salmonids under NMFS Jurisdiction.

Species	Status	Critical Habitat	Federal Register (FR) Citation
Southern DPS* Green Sturgeon	Threatened	Yes	71 FR 17757; 7 April 2006
(Acipenser medirostris)			_

Southern DPS* Pacific EulachonThe(Thaleichthys pacificus)The	hreatened	Yes	75 FR 13012; 18 March 2010
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*DPS = Distinct Population Segment

Table 4. EFH in the Action Area.

Fishery Management Plan with EFH	EFH affected	EFH conservation plan	
Pacific Coast Salmon	Yes	Yes	
Coastal Pelagic Species	Yes	Yes	

ESA-Listed Species Under USFWS Jurisdiction

The federally listed threatened and endangered species under the jurisdiction of USFWS that may occur in the proposed project area are shown in Table 5.

Table 5. ESA-listed Wildlife Species under USFWS Jurisdiction.

Species	Status	Critical Habitat	Federal Register
Short-tailed Albatross (Phoebastria albatrus)	Endangered	(none)	65 FR 46643 46654; 31 July 2000
Marbled Murrelet (Brachyramphus marmoratus)	Threatened	Designated	57 FR 45328 45337; 1 October 1992
Western Snowy Plover (<i>Charadrius nivosus nivosus</i>)	Threatened	Designated	58 FR 12864 12874; 5 March 1993
Columbian White-tailed Deer (Odocoileus virginianus leucurus)	Endangered	(none)	32 FR 4001; 11 March 1967
Northern Spotted Owl (<i>Strix occidentalis caurina</i>)	Threatened	Designated	55 FR 26114 26194; 26 June 1990
Oregon Silverspot Butterfly (Speyeria zerene hippolyta)	Threatened	Designated	45 FR 44935; 15 October1980
Bull Trout (Salvelinus confluentus)	Threatened	Designated	63 FR 31693 31710; 10 June 1998
Streaked Horned Lark (<i>Eremophila alpestris strigata</i>)	Threatened	Designated	78 FR 61506; 3 October 2013
Yellow-billed Cuckoo (Coccyzuz americanus)	Threatened, proposed	(none)	78 FR 61621; 3 October 2013
Water Howellia (Howellia aquatilis)	Threatened	(none)	58 FR 19795 19800; 16 April 1993

The lower Columbia River currently meets the National Ambient Air Quality Standards (NAAQS).¹ The maintenance State Implementation Plan (SIP) provides the region strategy for ensuring attainment status with a focus on emission reductions from on-road vehicles, non-road vehicles, paints and household products, and industry. The Port of Portland recently replaced the engine on the contract pipeline dredge, which is used for dredging in the Columbia River, which greatly reduced its air emissions.

Climate change is likely to play an increasingly important role in determining the fate for wildlife species and the conservation value of habitats in the Columbia River. These changes would not be spatially homogeneous across the Columbia River. Areas with elevations high enough to maintain temperatures well below freezing for most of the winter and early spring would be less affected. Low-lying areas that historically have received scant precipitation contribute little to total stream flow and are likely to be more affected.

¹ http://www.deq.state.or.us/aq/forms/annrpt.htm

Land ownership in the lower Columbia River is comprised of holdings by private, corporate, and governmental entities (local, state, and federal). A wide range of property uses and activities are observed along the Columbia River and associated upland sites, such as: agricultural, commercial, ecosystem restoration, industrial, recreational, residential, etc. A fair amount of properties adjacent to the Columbia River rely on the river for important and critical components of agricultural and commercial operations on their property. Primary categorization of holdings is forest and farmlands in the lower Columbia River, interspersed with urban and industrial areas in the upper reaches of the lower Columbia River. The racial composition of the counties that border the Columbia River (with the exception for Multnomah County of Oregon) as a whole are underrepresented when compared to the national statistics. The Columbia River supports a 410 million dollar fish industry (salmon, crab, groundfish, etc.).

No known cultural or historic resources are located in the proposed new Howard Island sump location. Multi-beam bathymetry data taken in July 2014 from a Corps survey vessel of proposed area shows no anomalies on the river bottom. No hazardous waste sites are known to be present in the project area, and the likelihood of undiscovered hazardous waste sites in the project area is very low.

4. ENVIRONMENTAL EFFECTS

The overall effects of establishment and use of a sump near Howard Island are not substantially different from those presented in the original 2015 EA; therefore, the effects analysis from that document is hereby incorporated by reference. The information below supplements the effects analysis contained in the 2015 EA to include effects of the establishment and use of the sump in its proposed new location. The sump has never been used, so no net change in effects of the activity would result from moving the boundary of the site on navigation maps.

4.1. Biological Impacts

The revised sump location is approximately 18 acres larger which has the potential to increase the amount of disturbed area; however, the overall effects on the biological environment would remain the same. Dredging and placement of dredged material in the Howard Island sump may temporarily disrupt the deepwater aquatic habitat during and immediately after work. There would be a temporary loss of benthic habitat but it is expected that the benthic community would re-establish itself after dredging and placement activities. No significant direct or indirect impacts on the biological environment are expected. There would be no permanent removal of aquatic habitat at or adjacent to the project area. No indirect impacts are expected to the deepwater migratory corridor. Use of the sump supports the Corps' balanced placement approach, which would minimize future dredging needs and resulting effects to species. Additionally, the sump would allow upland placement onto Howard Island, which would support the development of streaked horned lark habitat, according to the habitat development plan outlined in the 2014 Biological Opinion for Columbia River Channel Maintenance Effects on Streaked Horned Larks (USFWS 20214).

4.2. Vegetation Impacts

If the Howard Island sump location is not modified, the sump, at its current location, could be used, but material may flow out of the area into the navigation channel and have to be dredged again further downstream. This would likely have no effect on submerged or terrestrial vegetation as material would enter the channel or flowlane where vegetation is not abundant. Moving the sump

location would expand its footprint by 18 acres; however, the sump would still be located just outside the flowlane where minimal aquatic vegetation is present.

4.3. Wildlife Impacts

If the current sump location were used rather than the proposed new location, hydraulic instability in the area could disperse dredged material more rapidly than in the more stable location being proposed. Dredging the Howard Island sump at its new proposed location would not permanently alter which wildlife species may utilize the Howard Island reach because it would maintain its deepwater habitat characteristics. In both locations, temporary disturbances to wildlife during use of the sump are expected to dissipate quickly once work is completed. Those temporary disturbances may take the form of noise generated by dredge equipment and increased turbidity in the immediate work area while dredging and sediment pumping onto the Howard Island upland site takes place.

4.4. Endangered Species Impacts

NMFS ESA-Listed Species Effects

On April 27, 2015, the Corps requested an ESA Section 7 determination from NOAA Fisheries, regarding the need to initiate consultation for adding the Howard Island sump to the network of placements sites for Operations & Maintenance (O&M) dredging in the LCR. NOAA Fisheries responded in an e-mail dated July 16, 2015. At that time, NOAA Fisheries determined that consultation was not necessary because the likely effects of the action fell within the range of effects already covered in the 2012 BiOp for O&M dredging of the CR FNC (NWR-2011-02095). Additionally, the sump is located in water deeper than 20 ft, beyond the normal depth of use for juvenile salmonids, and the action did not propose any increase to overall dredging or placement quantities. Therefore, no increase in take, beyond that already established in the 2012 BiOp was thought to be likely by using the Howard Island sump.

Subsequent to the 2015 NOAA Fisheries determination, the service reconsidered the potential effects of the action and on August 1, 2019 determined that the Corps plan to modify the Howard Island sump to an expanded footprint at an adjacent upstream location falls within the proposed design criteria and reasonable and prudent measures of the 2012 BiOp (NWR-2011-02095). NOAA Fisheries asserted that there was no need for re-initiation of consultation or variance as the modification would not cause any effect not considered in the aforementioned BiOp.

U.S. Fish and Wildlife Service ESA-Listed Species Effects

Effects of CR O&M dredging and placement activities on listed wildlife species under the jurisdiction of the U.S. Fish and Wildlife Service were addressed in the USFWS 2010 Letter of Concurrence and in the 2014 Biological Opinion for O&M dredging on the CR. Dredging at the sump would not permanently affect USFWS ESA-listed species or their designated critical habitat because it would maintain its deepwater habitat characteristics and USFWS ESA species are not present in the project area. Therefore, no additional direct or indirect effects on USFWS ESA-listed species, including bull trout, would be expected by using the current or revised locations of the Howard Island sump.

4.5. Invasive Species Impacts

No difference in effects on invasive species would result from moving the boundary of the Howard Island sump. Dredge boats operated by the Corps or its contractors may be used to place material in the sump. These dredges must abide by all Vessel General Permit conditions which require responsible management of bilge water so as not to introduce invasive species; therefore, no direct or indirect impacts as a result of the revised sump location are anticipated.

4.6. Air Quality Impacts

Changing the location of the Howard Island sump would not change the project's ability to meet air quality standards. At both the current documented location and the proposed new location there would be a temporary and localized reduction in air quality due to emissions from the dredge during dredging and aquatic placement of dredged materials. There also would be temporary and localized increases in noise levels from this equipment. These impacts would be minor and temporary in nature, and would cease once dredging and placement is completed. No difference in direct or indirect effects would result from moving the sump location as proposed.

4.7. Climate Change Impacts

Changes in weather patterns could influence seasonal river flows, subsequently affecting the presence of or size of shoaling in the lower Columbia River, thereby influencing the timing of dredging and placement of materials. The Corps assumes that any effects climate change might have across the project area during this timeframe would be negligible and effects on any aquatic or terrestrial habitat would be immeasurable. Dredging and placement at either sump location would not result in significant direct or indirect effects on climate change.

4.8. Geologic Impacts

No difference in effects on the geologic environment would result from dredging and placement at the current versus the proposed sump location. Dredging the Howard Island sump would result in temporary excavation of the riverbed to create the sump, followed by the temporary placement and subsequent removal of dredged materials within the sump to the Howard Island upland placement site. These actions would not permanently change the deep-water or physical sediment characteristics of the riverbed.

4.9. Water Quality

The effects on water quality would not change between the current and revised sump locations. Though the footprint of the sump in its revised location is 18 acres larger than the current footprint, the quantity that will be placed and dredged at any given time within the site will not exceed the 400,000 cy as included in the original compliance documents. The overall quantity of material to be dredged in the reach and the number of dredging days will not change with addition of the sump in its revised location.

There may be minimal temporary and localized reduction in water quality during dredging operations at the Howard Island sump due to turbidity. These impacts would be minor and temporary in nature, and would cease once dredging/placement is completed. Although there is some evidence that disposal of fine sediments decreases dissolved oxygen in the water column, the sediment

dredged in the LCR is primarily sand (<2% fines); therefore, it is unlikely that dissolved oxygen would be impacted by dredging and placement of this sandy material in the proposed sump. Additionally, no toxins were detected during sediment testing under the Corps' Sediment Evaluation Framework, which establishes contaminant thresholds. Therefore, there is no expectation of water quality being impacted by re-suspension of toxins during placement.

Any construction and the use of equipment during dredging and placement at the Howard Island sump would not measurably affect water quality beyond levels disclosed in the current Clean Water Act Section 401 water quality certificates, which will be amended to reflect the new proposed sump location. The revised site, though larger, would not be used for storage of more than the previously certified 400,000 cy of material. Therefore, no significant direct or indirect impacts are anticipated as a result of implementation of the proposed action.

4.10. Hydrology

No direct or indirect impacts on hydrology in the project area are expected from moving the Howard Island sump location. The Howard Island sump, regardless of whether the current location is maintained or if it is constructed in the revised location, would not significantly alter the hydrologic environment because the sump would not be filled to a level that would result in mounding , which could otherwise modify water flow in that reach of the river.

4.11. Wetlands

No wetlands exist at the current sump location or the new proposed location; therefore, wetlands would not be impacted as a result of dredging and placement activities at either site.

4.12. Archeological and Historic Resources Impacts

Multi-beam bathymetry data taken in July 2014, and reviewed by Corps cultural resources staff, revealed no anomalies on the river bottom at the current or new proposed sump location. Additionally, the environmental setting for the proposed undertaking is dynamic and heavily disturbed by natural sand wave shoaling, as evidenced by bathymetry data, so prehistoric or historic cultural sites, if they did once exist at this location, are likely no longer present. There is no potential for historic properties, particularly shipwrecks or related material, eligible for listing to the National Register of Historic Places to exist. This dynamic environment also results in the regular movement of dredged materials placed in this location, so there is no long-term impact caused by the sediment. Due to these conditions, and in accordance with 36 CFR 800.3(a)(1), the proposed location change and expansion does not have the potential to cause effects.

4.13. Cumulative Impacts

Cumulative impacts can result from individually minor, but collectively measurable impacts of actions taking place over a period of time. Resources determined to have the potential to result in measurable cumulative effects when added to other past, present, and reasonably foreseeable future actions were addressed in this analysis. Cumulative effects of past, present, and future actions combined with the effects of dredging the Howard Island sump are captured in their entirety in the original 2015 EA, which is hereby incorporated by reference. The following is a brief summary of the cumulative effects, which remain unchanged from those discussed in the 2015 EA.

4.13.1. Anticipated Combined Effects of Past, Present, and Future Actions

No significant cumulative direct or indirect effects on water quality are expected when the anticipated effects of proposed action are combined with the effects of past, present, and future actions such as maintenance dredging of the LCR. The cumulative effects on water quality under the proposed action are likely to be *de minimus* in magnitude. Dredging the Howard Island sump in its new proposed location would not add or detract to cumulative air quality effects as discussed in the 2015 EA; as described in that document this activity could incrementally increase in-air and in-water noise levels within Columbia River, when added to other maintenance dredging activities. However, these impacts would be temporary in nature (reaching highest levels during construction).

The geographical boundary for biological resources is the lower Columbia River Basin. Past development within the lower Columbia River basin has resulted in losses of aquatic and riparian habitats, which has caused adverse impacts to fish and wildlife resources. Most of the losses were due to filling, hydraulic alterations (including channelization, diking and, draining of wetlands), and upland forestry practices to support development, industry and agriculture uses. In-water biological resources have been impacted by commercial and recreational fishing activities. These actions occurred in a regulatory landscape very different from what exists today.

Completion of present reasonably foreseeable projects has the potential to cumulatively impact biological resources in the Columbia River when combined with effects of moving the sump location, expanding its footprint by 18 acres. Direct impacts include the physical removal of habitat through dredging, burial of habitat or conversion of a habitat. Indirect cumulative impacts to biological resources are a result of temporary increases in turbidity, in-air noise and in-water noise. For example, dredging or filling in areas previously undisturbed, and at the same time, could fragment shallow water habitat used for feeding, shelter and migration by ESA-listed salmon and other aquatic species. However, many of the foreseeable projects are already working with federal, state and local resource agencies to adhere to conservation measures and best management practices (BMPs) (in-water work windows to avoid key migration times for salmonids, etc.); and, developing mitigation plans to offset adverse impacts on biological resources. Future land users are also required to comply with local land use and shoreline plans and even more specific local area plans (i.e. the local comprehensive land use plans for counties in Washington and Oregon; these plans provide policies to guide management and planning of land activities that may affect the Columbia River). Compliance of future development with these plans and applicable BMPs and conservation measures would minimize direct and indirect cumulative impacts to biological resources.

This cumulative impacts analysis considers the effects of implementing the proposed action in combination with effects of past, present, and reasonably foreseeable future actions as outlined in the 2015 EA. The level of cumulative impacts that would accrue for a modified location are the same as those discussed for the current sump location. In terms of effects of the dredging and placement activities that would occur at the modified site location, cumulative impacts could result for the resources identified above, but these impacts would be minimized through BMPs, conservation measures, and federal and state requirements to avoid, minimize and mitigate measurable impacts.

5. OTHER APPLICABLE LAWS

5.1. Environmental Evaluation and Compliance

The following laws provide environmental standards for operation and maintenance activities at Corps civil works projects, associated Corps owned lands and outgrants, and are related to environmental stewardship. The preferred alternative must also comply with these environmental laws and executive orders.

5.1.1. National Environmental Policy Act

This SEA satisfies the requirements of the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*). This SEA was released for a 14-day public comment period.

5.1.2. Clean Air Act

The Clean Air Act of 1970 (CAA), as amended, established a comprehensive program for improving and maintaining air quality throughout the United States. The intent of the Act is achieved through permitting of stationary sources, restriction of toxic substance emissions from stationary and mobile sources, and the establishment of National Ambient Air Quality Standards. Noise pollution is addressed through Title IV of the Act. Modifying the location of the sump would not substantially change the effects that were outlined in the 2015 EA.

5.1.3. Clean Water Act

The Clean Water Act (CWA) governs the release of pollutants into waterways.

<u>Section 401</u> – Requires water quality certification (WQC) from the state that a discharge to waters of the United States in that state would not violate the states' water quality standards. EPA retains jurisdiction in limited cases. Operations and Maintenance of the Network is currently covered by Washington Department of Ecology (DOE) WQC Order #9765 and Oregon Department of Environmental Quality (DEQ) WQC File Number NWPOP-CLA-F05-001-FR. The Corps submitted WQC amendment packages to Oregon DEQ on December 28, 2019 and Washington DOE on January 9, 2019 to modify the sump location. Washington DOE granted an extension to the existing WQC through December 31, 2020 to cover dredge and placement activities associated with relocation of the Howard Island sump. On August 6, 2019, Oregon DEQ affirmed that the Proposed Action falls under the existing May 19, 2014 WQC.

<u>Section 404</u> – Regulates the discharge of dredged or fill material into waters of the United States. The Corps has permitting responsibility under Section 404 of the CWA. However, the Corps does not issue itself a 404 permit for discharges of dredged or fill material, but the Corps does apply the 404(b)(1) guidelines (40 C.F.R. Part 230). Only when there is no practicable alternative would any discharge of fill material occur in waters of the United States, including wetlands. Moving the location of the Howard Island sump will result in no net increase of dredged material being placed in a sump location. Re-handling dredged material in-water has no net loss of aquatic functions and values and the temporary effects of in-water placement comply with the guidelines. Therefore, relocating the sump complies with the 404(b)(1) guidelines.

5.1.4. Endangered Species Act

In accordance with Section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed or proposed species within NOAA Fisheries and USFWS jurisdiction. Any incidental take as a result of the construction and operation and maintenance of the LCR FNC and Network has been coordinated between NMFS, USFWS, and the Corps. The Corps submitted a BA to NMFS on February 22, 2019, and subsequently withdrew the request from formal consultation after receiving correspondence from NMFS on August 1, 2019 stating that the Proposed Action fell within the scope of effects analyzed under the 2012 BiOp (NWR-2011-02095).

The Corps received a Letter of Concurrence from the USFWS on 29 September 2010 reflecting "not likely to adversely affect" determinations for non-streaked horned lark species and their critical habitat for O&M dredging of the LCR FNC, as discussed in section 5.2.3. The Corps completed Section 7 consultation for potential effects of O&M dredging and placement activities in the LCR on streaked horned larks with the USFWS, culminating in the USFWS Biological Opinion with an incidental take statement, dated 6 June 2014. The Biological Opinion concluded that continued O&M of the LCR FNC will not jeopardize the continued existence of streaked horned lark nor will it adversely modify or destroy designated critical habitat for the species. The anticipated effects of the proposed action analyzed in this EA are not different from the anticipated effects associated with other LCR O&M activities described in the 2010 and 2014 Biological Opinions; therefore, the effects on threatened streaked horned larks, threatened bull trout, threatened Columbian white tailed deer, and their designated critical habitat determinations in those opinions remain unchanged. No new species or critical habitat have been designated since the 2014 BiOp for streaked horned larks; therefore, the USFWS concurred with this determination during a phone call with Ms. Cat Brown on May 4, 2015, and the Corps determination is recorded in a memorandum for the record dated May 20, 2015. This determination was reexamined for the proposed action to revise the sump location and the Corps found that the 2015 determination remains valid, as no ESA-listed species occur within the project area, nor is there critical habitat present within the expanded footprint.

5.1.5. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments

Federal agencies shall establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and strengthen the United States government-to-government relationships with Indian tribes. Government-to-government coordination for cultural and natural resources was coordinated via letter correspondence June 3, 2015, with the Confederated Tribes and Bands of the Yakama Nation, the Cowlitz Indian Tribe, the Confederated Tribes of Grand Ronde, the Confederated Tribes of Siletz Indians of Oregon, the Confederated Tribes of the Umatilla Indian Reservation, the Nez Perce Tribe, and the Confederated Tribes of the Warm Springs. The Confederated Tribes of Grand Ronde responded to the Corps letter on July 8, 2015. The response indicated the Confederated Tribes of Grand Ronde have no concerns with the proposed action. The same tribes were notified of the Corps' intent to revise the location of the sump via a January 2019 letter transmitted to those tribes.

5.1.6. Executive Order 12898, Environmental Justice

This order requires federal agencies to minimize adverse impacts on subsistence, low-income or minority communities, ensuring no persons or group of people bear a disproportionate burden of negative environmental impacts resulting from the execution of this country's domestic and foreign policies. No subsistence, low-income or minority communities would be affected by the proposed activities because the project area is uninhabited and therefore there would be no change in population, economics or other indicator of social well-being.

5.1.7. Executive Order 13834, Efficient Federal Operations

Federal agencies shall (a) Achieve and maintain annual reductions in building energy use and implement energy efficiency measures that reduce costs; (b) Meet statutory requirements relating to the consumption of renewable energy and electricity; (c) Reduce potable and non-potable water consumption, and comply with stormwater management requirements; (d) Utilize performance contracting to achieve energy, water, building modernization, and infrastructure goals; (e) Ensure that new construction and major renovations conform to applicable building energy efficiency requirements and sustainable design principles; consider building efficiency when renewing or entering into leases; implement space utilization and optimization practices; and annually assess and report on building conformance to sustainability metrics; (f) Implement waste prevention and toxic waste management and disposal; (g) Acquire, use, and dispose of products and services, including electronics, in accordance with statutory mandates for purchasing preference, Federal Acquisition Regulation requirements, and other applicable Federal procurement policies; and (h) Track and, as required by section 7(b) of the order

(https://www.federalregister.gov/documents/2018/05/22/2018-11101/efficient-federal-operations), report on energy management activities, performance improvements, cost reductions, greenhouse gas emissions, energy and water savings, and other appropriate performance measures. The proposed action would be conducted in a manner that would prevent pollution and chemical spills by following construction, operations and maintenance BMPs.

5.1.8. Executive Order 13112, Invasive Species

Federal agencies are required to combat the introduction or spread of invasive species in the United States. This order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, this is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." The Corps and its contractors would follow BMPs to minimize the spread of invasive species.

5.1.9. Executive Order 11990, Protection of Wetlands

The purpose of this executive order is to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. In planning their actions, federal agencies are required to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The proposed action would not impact wetlands.

5.1.10. Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA) (16 U.S.C. 661 *et seq.*) directs federal agencies to prevent the loss and damage to fish and wildlife resources; specifically, wildlife resources shall be given equal consideration in light of water-resource development programs. Consultation with the USFWS is required when activities result in the control of, diversion or modification to any natural habitat or associated water body, altering habitat quality or quantity for fish and wildlife. For the

Corps, all coordination under this Act is in accordance with the 2003 Supplemental Environmental Impact Statement (SEIS) FWCA analysis developed by federal and state resource agencies. The USFWS FWCA Report was finalized by USFWS. This report was reviewed June 9, 2015. All actions related to the proposed project are included in the 2003 Coordination Agreement. The Corp will submit a request for concurrence on the coverage of the proposed action in 2003 FWCA Report.

5.1.11. Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is designed to actively conserve and manage fishery resources found off the coasts of the United States, and to support international fishery agreements for the conservation and management of highly migratory species. The MSA established procedures designed to identify, conserve, and enhance Essential Fish Habitat (EFH) for fisheries regulated under a federal fisheries management plan. Federal agencies must consult with the NMFS on all federal actions authorized, funded, or carried out by the agency that may adversely affect EFH.

The Corps will abide by recommendations for the reduction of potential effects on EFH set forth by NOAA Fisheries in the 2012 BiOp (NWR-2011-02095).

5.1.12. Marine Mammal Protection Act

This Act established a federal responsibility to conserve marine mammals within waters of the United States. With certain specified exceptions, the Act establishes a moratorium on the taking and importation of marine mammals, as well as products taken from them, and establishes procedures for waiving the moratorium and transferring management responsibility to the states. Marine mammals (or their parts) could potentially occur in the project area. It is possible that dredging the sump could disturb pinnipeds with the movement of dredges. However, it is highly unlikely the effects would rise to the level of harm or harassment. Moving the location of the sump would not result in any effects on marine mammals not already accounted for in the 2015 EA.

5.2. Cultural Resources

The following laws govern the identification, designation, and protection of historic and archeological resources whenever an action is authorized, funded or carried out by the federal government. Coordination of any investigations and determinations, and recommendations regarding preservation procedures are the sole responsibility of a Corps district archeologist. The archeologists primarily conduct their reviews for compliance with the following:

- Antiquities Act of 1906, 16 U.S.C. §§ 431, 432, 433.
- Archeological and Historical Preservation Act of 1960, 16 U.S.C. §§ 469–469c.
- National Historic Preservation Act of 1966 (NHPA), 16 U.S.C. 470 et seq.
- Protection and Enhancement of the Cultural Environment, Executive Order 11593 (36 FR 8921; 13 May 1971).
- American Indian Religious Freedom Act of 1978, 42 U.S.C. § 1996.
- Archaeological Resources Protection Act of 1979 (ARPA), 16 U.S.C. §§ 470aa-470mm.
- Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), 25 U.S.C. § 3001.
- Indian Sacred Sites, Executive Order 13007 (61 FR 26771; 29 May 1996).

The project has an inadvertent discovery plan in place in order to ensure that there will be no impacts to any resources that may be discovered or in place.

5.2.1. National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires agencies to consider the potential effects of their projects and undertakings on historic properties eligible for, or listed on, the National Register of Historic Places. Historic properties include archaeological sites or historic structures or the remnants of sites or structures. To determine the potential effect of the project on known or unknown historic properties, the following items are analyzed: the nature of the proposed activity and its effect on the landscape; the likelihood that historic properties are present within a project area; whether the ground is disturbed by previous land use activities and the extent of the disturbance; reviewing listings of known archeological or historic site locations, including site data bases and areas previously surveyed or listings of sites on the National Register for Historic Places. The Corps professional cultural resources staff have made a determination of no potential to effect for the proposed action following these findings and recommendations.

5.2.2. Native American Graves Protection and Repatriation Act

This Act provides for the protection of Native American and Native Hawaiian human remains and cultural items. It also establishes requirements for the disposition of Native American human remains and sacred or cultural objects found on federal lands. The Act also provides for the protection, inventory, and repatriation of Native American human remains and cultural items (funerary objects, sacred objects, and objects of cultural patrimony). Tribal coordination regarding the current project has been conducted, and in the unlikely event that any human remains are encountered during the project, the tribal groups and the appropriate SHPO will be notified immediately and the Native American Graves Protection and Repatriation Act process will be followed.

5.2.3. The Archaeological Resources Protection Act

This Act establishes criminal penalties for individuals who excavate or remove archaeological resources from public lands without a permit. In the event that archaeological resources are discovered, activity will cease in the immediate area of discovery and Portland District staff archaeologists will be informed. District archaeologists will then initiate consultation with the State Historic Preservation Office and associated tribes in accordance with the NHPA, Archeological Resources Protection Act, or NAGPRA as appropriate.

6. COORDINATION AND DISTRIBUTION

6.1. Public Comment Period

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and avoidance, minimization, and/or related environmental requirements. Agency consultation for this project has been accomplished through a variety of formal and informal methods

This SEA was issued for a 14-day public review period. Review comments were requested from federal and state agencies, as well as various interested parties.

In addition to the posting of the SEA on the Corps website, a notice requesting comments regarding this SEA was sent to the following agencies and groups:

U.S. Fish and Wildlife Service National Marine Fisheries Service U.S. Environmental Protection Agency U.S. Coast Guard

Confederated Tribes of Siletz Confederated Tribes of the Grand Ronde Confederated Tribes of the Warm Springs Cowlitz Indian Tribe Confederated Tribes of the Umatilla Indian Reservation Nez Perce Tribe Confederated Tribes of the Yakama Nation

Columbia County, Oregon Wahkiakum County, Washington

Oregon State Historic Preservation Office Oregon Department of Land Conservation and Development Oregon Department of State Lands Oregon Department of Fish and Wildlife Oregon Department of Parks and Recreation Oregon Department of Environmental Quality Oregon Department of Geology and Mineral Industries Oregon Department of Fish and Wildlife State of Oregon Governor's Office

Washington State Historic Preservation Office (Washington Department of Archaeology and Historic Preservation) Washington Department of Ecology Washington Department of Fish and Wildlife Washington Department of Natural Resources State of Washington Governor's Office

American Rivers Columbia River Bar Pilots Columbia River Business Alliance Columbia River Channel Coalition Columbia River Estuary Study Taskforce Columbia River Crab Fishermen's Association Columbia River Fishermen's Protective Union Columbia River Inter-Tribal Fish Commission Lower Columbia River Estuary Partnership Lower Columbia Ports Coalition Northwest Environmental Advocates Oregon State University Oregon Natural Resources Council Oregon Charter Boat Association Oregon Sea Grant Oregon Coastal Management Program Pacific States Marine Fish Commission Pacific Northwest Waterways Association Portland Audubon Society Salmon for All Save Our Wild Salmon Washington Public Ports Association Wahkiakum Port District #1 and #2

The public notice for comments initially opened on March 6, 2019. However, due to a broken hyperlink in the email to interested parties, the comment period was extended through April 3, 2019. No comments were received from the public or other interested parties.

6.2. Changes from *Draft* SEA to *Final* SEA

At the time of posting the draft SEA to the Corps website for public review and comment, the Corps had not yet received final responses from Oregon DEQ, Washington DOE, or NOAA Fisheries. While there were no public comments or major changes to the scope of the effects analysis, this final SEA includes the culmination of coordination with state and federal entities and a new finding in accordance with Executive Order 13834, superseding findings in the draft SEA for Executive Order 13514 issued October 2009. The following list summarizes the changes made to the report from the draft SEA posted March 6, 2019 to this final report.

- Under Section 4.12, additional information was added to note the effect that the dynamic environment within the Columbia River has on cultural resources and the eventual transport of sediment.
- Under Sections 4.4 and 5.1.4, the latest response from NOAA Fisheries evaluating potential effects to listed species from the proposed relocation of the Howard Island sump. NOAA Fisheries sent an email response on August 1, 2019 stating that the Proposed Action fell within the scope of effects analyzed under the 2012 BiOp (NWR-2011-02095).
- Under Section 5.1.3, the paragraph addressing compliance with Section 401 of the Clean Water Act has been updated to include final responses from Washington DOE and Oregon DEQ. Following publication of the draft SEA, Washington DOE granted a one-year extension to WQC Order #9765, through December 31, 2020, for the Proposed Action. Additionally, Oregon DEQ affirmed that the Proposed Action falls under the May 19, 2014 WQC (WQC File Number NWPOP-CLA-F05-001-FR).
- Under Section 5.1.7., text for Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* was deleted and replaced with reference to Executive Order 13834, *Efficient Federal Operations*. The overall effects determination is unchanged.

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