UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
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PORTLAND, OR 97232-1274

Refer to NMFS No:
WCRO-2023-02607

April 8, 2025

P. Allen Atkins
Chief, Regulatory Branch
U.S. Army Corps of Engineers, Seattle District
4735 East Marginal Way South, Bldg. 1202
Seattle, Washington 98134-2388

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Island County Diking District #1 Henry Lagoon and Spit Dredge (NWS-2019-876 in part).

Dear Mr. Atkins:

This letter responds to your October 27, 2023, request for initiation of consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) for the subject action. Your request qualified for our expedited review and analysis because it met our screening criteria and contained all required information on, and analysis of, your proposed action and its potential effects to listed species and designated critical habitat.

We reviewed the US Army Corps of Engineers' (Corps) consultation request and related initiation package. Where relevant, we have adopted the information and analyses you have provided and/or referenced but only after our independent, science-based evaluation confirmed they meet our regulatory and scientific standards. In our biological opinion below, we indicate what parts of your document(s) we have incorporated by reference and where that information is being incorporated.

We adopt by reference the following sections of the Biological Evaluation provided to NMFS titled "Sunlight Beach Erosion Control and Restoration Project" (Environmental Science Associates 2024). Because it is not 508 compliant, the Biological Evaluation is not attached as an appendix to this Opinion. The BE will be included in the administrative record for this consultation and we will send it to readers of the biological opinion as an email reply attachment to requests sent to consultationupdates.wcr@noaa.gov and reference the NMFS No. for this consultation: WCRO-2023-02607.

- Section 3.2.1 for the *Proposed Action*.
- Section 4.0 for the *Action Area*
- Section 5.0 "Environmental Baseline" subsections for each species and Section 6.0 for the *Environmental Baseline*
- Section 7.0 and 8.0 for the *Effects of the Action*

Consultation History

November 2020 – NMFS received a request for consultation for the entire NWS-2019-876 project from the Corps. The project was placed in on hold pending the completion of the Salish Sea Nearshore Programmatic Opinion (SSNP).

September 2022 – Following signing/completion of the SSNP, NMFS sent the Corps a letter and a draft conservation calculator identifying that most or all of the proposed action fits under the SSNP, but not the new dredge and fill placement associated with the Henry Lagoon breach.

August through October 2022 – NMFS met with the Corps project manager and the applicant several times to discuss possible consultation pathways. The Corps determined that excavation in the Henry Spit was not maintenance dredging, because no previous permit for excavation had been issued, it did not fit under the SSNP. Spit excavation and fill would need individual consultation. NMFS expressed that because the action elements in the permit can be logically separated from one another (are not interrelated/interdependent), we could consult on them separately, with the majority of the action under the SSNP, and the lagoon breach. The Corps agreed to split the permit into two consultation requests.

October 2023 – NMFS received the consultation request for this project, a portion of NWS-2019-876.

October 2023 - December 2024 – The consultation was unassigned due to lack of staffing. Nissa Rudh communicated with the applicant and Corps regarding long term impact quantification with the Puget Sound Nearshore Habitat Conservation Calculator (Calculator). The project resulted in -26 debits.

December 2024 – NMFS received project updates from the Corps. Nissa Rudh was assigned as the consulting biologist for the project.

January 2025 – NMFS received a presale agreement for +26 conservation credits from the applicant to offset long term habitat loss associated with the proposed action.

February 2025 – NMFS clarified species and critical habitat determinations with the Corps and initiated consultation.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 Fed. Reg. 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to the Services' existing practice in implementing section 7(a)(2) of the Act. 89 Fed. Reg. at 24268; 84 Fed. Reg. at 45015. We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this biological opinion and incidental take statement would not have been any different under the 2019 regulations or pre-2019 regulations.

BIOLOGICAL OPINION

We examined the status of each species that would be adversely affected by the proposed action to inform the description of the species' "reproduction, numbers, or distribution" as described in 50 CFR 402.02. We also examined the condition of critical habitat throughout the designated area and discuss the function of the physical or biological features essential to the conservation of the species that create the conservation value of that habitat.

The Corps provided us with likely to adversely affect determinations for this consultation. Accordingly, **we have included the following species and critical habitat in this opinion: PS Chinook species and critical habitat, PS steelhead species, PS/GB bocaccio rockfish species and critical habitat, PS/GB yelloweye rockfish species**. Our conclusions regarding the effects of the action on those species and critical habitats is presented below under the heading: Not Likely to Adversely Affect determinations. The following are included in an analysis after the opinion because of the COE determination of not likely to adversely affect: Pacific eulachon, southern resident killer whale (SRKW) species. The following are not included in this opinion because of a no effect determination by the Corps: PS steelhead critical habitat, PS/GB yelloweye rockfish critical habitat, SRKW critical habitat, green sturgeon species, Mexico and Central America DPS of the humpback whale species. Finally, we do not concur with the Corps' determination of no effect for SRKW critical habitat, instead support a may affect, not likely to adversely affect determination. This analysis has been included following the opinion along with other NLAA determinations.

Proposed Action

The proposed action is in Useless Bay on Whidbey Island at 47.987576, -122.471711. The applicant proposes to fill the current inlet to Henry Lagoon with natural sediment, and excavate a new inlet about 0.25 miles to the south. In total, 16,095 square feet of nearshore will be disturbed and about 2,500 cubic yards would be excavated from the breach site and placed at the closure site to close off tidal connection. Work would be conducted in the dry during low tides during the WDFW in water work window. Construction is expected to last three days.

The purpose of the inlet relocation is to facilitate welding of the spit onto Sunlight Beach, to the west, which would eventually distribute sediment across the project site and raise beach elevations.

The full project description including figures and best management practices (BMPs) can be found in section 3.2.1 of the BE.

Figure 1. Proposed Henry Spit breach and closure locations in Useless Bay on Whidbey Island.

Status of the Species and Critical Habitat

Status of the species and critical habitat has been provided by NMFS.

This section provides information regarding the status of each species discussed in this opinion as well as in the NLAA section below. Table 1, below provides a summary of listing and recovery plan information, status summaries and limiting factors for the species addressed in this opinion. More information can be found in recovery plans and status reviews for these species. Acronyms appearing in the table include DPS (Distinct Population Segment), ESU (Evolutionarily Significant Unit), ICTRT (Interior Columbia Technical Recovery Team), MPG (Multiple Population Grouping), NWFSC (Northwest Fisheries Science Center), TRT (Technical Recovery Team), and VSP (Viable Salmonid Population).

Table 1. Listing classification and date, recovery plan reference, most recent status review, status summary, and limiting factors for each species considered in this opinion.

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
Puget Sound Chinook salmon	Threatened 6/28/05 (70 FR 37159)	Shared Strategy for Puget Sound 2007 NMFS 2006	NMFS 2016; Ford 2022	This ESU comprises 22 populations distributed over five geographic areas. All Puget Sound Chinook salmon populations continue to remain well below the TRT planning ranges for recovery escapement levels. Most populations also remain consistently below the spawner–recruit levels identified by the TRT as necessary for recovery. Across the ESU, most populations have increased somewhat in abundance since the last status review in 2016, but have small negative trends over the past 15 years. Productivity remains low in most populations. Overall, the Puget Sound Chinook salmon ESU remains at "moderate" risk of extinction.	• Degraded floodplain and in-river channel structure • Degraded estuarine conditions and loss of estuarine habitat • Degraded riparian areas and loss of in-river large woody debris • Excessive fine-grained sediment in spawning gravel • Degraded water quality and temperature • Degraded nearshore conditions • Impaired passage for migrating fish • Severely altered flow regime
Puget Sound steelhead	Threatened 5/11/07	NMFS 2019	NMFS 2016; Ford 2022	This DPS comprises 32 populations. Viability of has improved somewhat since the PSTRT concluded that the DPS was at very low viability, as were all three of its constituent MPGs, and many of its 32 DIPs (Hard et al. 2015). Increases in spawner abundance were observed in a number of populations over the last five years within the Central & South Puget Sound and the Hood Canal & Strait of Juan de Fuca MPGs, primarily among smaller populations. There were also declines for summer- and winter-run populations in the Snohomish River basin. In fact, all summer-run	• Continued destruction and modification of habitat • Widespread declines in adult abundance despite significant reductions in harvest • Threats to diversity posed by use of two hatchery steelhead stocks • Declining diversity in the DPS, including the uncertain but weak status of summer-run fish

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
				steelhead populations in the Northern Cascades MPG are likely at a very high demographic risk.	• A reduction in spatial structure • Reduced habitat quality • Urbanization • Dikes, hardening of banks with riprap, and channelization
Southern DPS of eulachon	Threatened 3/18/10	NMFS 2017c	NMFS 2022j	The Southern DPS of eulachon includes all naturally-spawned populations that occur in rivers south of the Nass River in British Columbia to the Mad River in California. Sub populations for this species include the Fraser River, Columbia River, British Columbia and the Klamath River. In the early 1990s, there was an abrupt decline in the abundance of eulachon returning to the Columbia River. Despite a brief period of improved returns in 2001-2003, the returns and associated commercial landings eventually declined to the low levels observed in the mid-1990s. Although eulachon abundance in monitored rivers has generally improved, especially in the 2013-2015 return years, recent poor ocean conditions and the likelihood that these conditions will persist into the near future suggest that population declines may be widespread in the upcoming return years	• Changes in ocean conditions due to climate change, particularly in the southern portion of the species' range where ocean warming trends may be the most pronounced and may alter prey, spawning, and rearing success. • Climate-induced change to freshwater habitats • Bycatch of eulachon in commercial fisheries • Adverse effects related to dams and water diversions • Water quality, • Shoreline construction • Over harvest • Predation

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
Puget Sound/ Georgia Basin DPS of yelloweye Rockfish	Threatened 04/28/10	NMFS 2017d	NMFS 2016d	Yelloweye rockfish within the Puget Sound/Georgia Basin (in U.S. waters) are very likely the most abundant within the San Juan Basin of the DPS. Yelloweye rockfish spatial structure and connectivity is threatened by the apparent reduction of fish within each of the basins of the DPS. This reduction is probably most acute within the basins of Puget Sound proper. The severe reduction of fish in these basins may eventually result in a contraction of the DPS' range.	• Over harvest • Water pollution • Climate-induced changes to rockfish habitat • Small population dynamics
Puget Sound/ Georgia Basin DPS of Bocaccio	Endangered 04/28/10	NMFS 2017d	NMFS 2016d	Though bocaccio were never a predominant segment of the multi-species rockfish population within the Puget Sound/Georgia Basin, their present-day abundance is likely a fraction of their pre-contemporary fishery abundance. Most bocaccio within the DPS may have been historically spatially limited to several basins within the DPS. They were apparently historically most abundant in the Central and South Sound with no documented occurrences in the San Juan Basin until 2008. The apparent reduction of populations of bocaccio in the Main Basin and South Sound represents a further reduction in the historically spatially limited distribution of bocaccio, and adds significant risk to the viability of the DPS.	• Over harvest • Water pollution • Climate-induced changes to rockfish habitat • Small population dynamics

Species	Listing Classification and Date	Recovery Plan Reference	Most Recent Status Review	Status Summary	Limiting Factors
Southern resident killer whale	Endangered 11/18/05	NMFS 2008	NMFS 2022k	The Southern Resident killer whale DPS is composed of a single population that ranges as far south as central California and as far north as southeast Alaska. While some of the downlisting and delisting criteria have been met, the biological downlisting and delisting 63 criteria, including sustained growth over 14 and 28 years, respectively, have not been met. The SRKW DPS has not grown; the overall status of the population is not consistent with a healthy, recovered population. Considering the status and continuing threats, the Southern Resident killer whales remain in danger of extinction.	• Quantity and quality of prey • Exposure to toxic chemicals • Disturbance from sound and vessels • Risk from oil spills

This section describes the status of designated critical habitat affected by the proposed action by examining the condition and trends of the essential physical and biological features of that habitat throughout the designated areas. These features are essential to the conservation of the ESA-listed species because they support one or more of the species' life stages (e.g., sites with conditions that support spawning, rearing, migration and foraging).

For most salmon and steelhead, NMFS's critical habitat analytical review teams (CHARTs) ranked watersheds within designated critical habitat at the scale of the fifth-field hydrologic unit code (HUC5) in terms of the conservation value they provide to each ESA-listed species that they support (NMFS 2005). The conservation rankings were high, medium, or low. To determine the conservation value of each watershed to species viability, the CHARTs evaluated the quantity and quality of habitat features, the relationship of the area compared to other areas within the species' range, and the significance to the species of the population occupying that area. Even if a location had poor habitat quality, it could be ranked with a high conservation value if it were essential due to factors such as limited availability, a unique contribution of the population it served, or is serving another important role.

A summary of the status of critical habitats, considered in this opinion, is provided in Table 2, below.

Table 2. Critical habitat, designation date, federal register citation, and status summary for critical habitat considered in this opinion

Species	Designation Date and Federal Register Citation	Critical Habitat Status Summary
Puget Sound Chinook salmon	9/02/05 70 FR 52630	Critical habitat for Puget Sound Chinook salmon includes 1,683 miles of streams, 41 square mile of lakes, and 2,182 miles of nearshore marine habitat in Puget Sounds. The Puget Sound Chinook salmon ESU has 61 freshwater and 19 marine areas within its range. Of the freshwater watersheds, 41 are rated high conservation value, 12 low conservation value, and eight received a medium rating. Of the marine areas, all 19 are ranked with high conservation value.
Puget Sound/Georgia Basin DPS of bocaccio	11/13/2014 79 FR68042	Critical habitat for bocaccio includes 590.4 square miles of nearshore habitat and 414.1 square miles of deepwater habitat. Critical habitat is not designated in areas outside of United States jurisdiction; therefore, although waters in Canada are part of the DPSs' ranges for all three species, critical habitat was not designated in that area. Based on the natural history of bocaccio and their habitat needs, NMFS identified two physical or biological features, essential for their conservation: 1) Deepwater sites (>30 meters) that support growth, survival, reproduction, and feeding opportunities; 2) Nearshore juvenile rearing sites with sand, rock and/or cobbles to support forage and refuge. Habitat threats include degradation of rocky habitat, loss of eelgrass and kelp, introduction of non-native species that modify habitat, and degradation of water quality as specific threats to rockfish habitat in the Georgia Basin.
Southern resident killer whale	08/02/21 86 FR 41668	Critical habitat includes approximately 2,560 square miles of marine inland waters of Washington: 1) the Summer Core Area in Haro Strait and waters around the San Juan Islands; 2) Puget Sound; and 3) the Strait of Juan de Fuca. Six additional areas include 15,910 square miles of marine waters between the 20-feet (ft) (6.1-meter (m)) depth contour and the 656.2-ft (200-m) depth contour from the U.S. international border with Canada south to Point Sur, California. We have excluded the Quinault Range Site. Based on the natural history of the Southern Residents and their habitat needs, NMFS identified three PCEs, or physical or biological features, essential for the conservation of Southern Residents: 1) Water quality to support growth and development; 2) prey species of sufficient quantity, quality, and availability to support individual growth, reproduction and development, as well as overall population growth; and 3) passage conditions to allow for migration, resting, and foraging Water quality in Puget Sound, in general, is degraded. Some pollutants in Puget Sound persist and build up in marine organisms including Southern Residents and their prey resources, despite bans in the 1970s of some harmful substances and cleanup efforts. The primary concern for direct effects on whales from water quality is oil spills, although oil spills can also have long-lasting impacts on other habitat features In regards to passage, human activities can interfere with movements of the whales and impact their passage. In particular, vessels may present obstacles to whales' passage, causing the whales to swim further and change direction more often, which can increase energy expenditure for whales and impacts foraging behavior. Reduced prey abundance, particularly Chinook salmon, is also a concern for critical habitat.

Action Area

"Action area" means all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR 402.02). The proposed dredge will take place over a small area. However, we define the action area as the maximum extent of effects of the action on species and critical habitat. For this reason, the action area includes Henry Lagoon, Henry Spit, and all of Useless Bay, because the alteration of the entrance of Henry Lagoon will change sediment drift dynamics throughout the bay.

More information on the Action Area can be found in Section 4.0 of the BE.

Environmental Baseline in the Action Area

The "environmental baseline" refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all federal, state, or private actions and other human activities in the action area, the anticipated impacts of all proposed federal projects in the action area that have already undergone formal or early section 7 consultations, and the impact of State or private actions which are contemporaneous with the consultation in process. The impacts to listed species or designated critical habitat from federal agency activities or existing federal agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02).

We incorporate by reference and summarize information from Section 5.0 the "Environmental Baseline" subsections for each species and Section 6.0 of the BE (ESA 2024) for the *Environmental Baseline.*

Useless Bay is on the southwest side of Whidbey Island, WA. Henny Spit sits at the entrance of Henny Spit Lagoon, a 20- to 25- acre lagoon, which drains and receives water via the lagoon mouth opening. The upland area consists of a narrow strip of residential development between Useless Bay and tidal wetlands behind the houses and Sunlight Beach Road. The shoreline of Useless Bay is mostly armored with rock berms in front of residencies. The drift cell goes from east to west, with sediment from Henry Spit passing down towards the residential area. A jetty between Henry Spit and the housing (which will be removed as part of the Salish Sea Nearshore Programmatic implementation portion of this project) pushes drifting sediment farther waterward and away from the beach.

The small streams on Whidbey Island do not support populations of any Chinook salmon or steelhead (WDFW, 2024). Maxwellton Creek, located on the east shore of Useless southwest of the project area, is the only stream in the Bay that supports salmonids. The stream contains documented presence of coho and fall chum salmon, as well as cutthroat trout (WDFW, 2024).

No forage fish (surf smelt, sand lance, or herring) spawning is documented on the beaches of Useless Bay (WDFW, 2024b) The Coastal Zone Atlas (Ecology, 2024) identifies a patchy fringes of eelgrass growth in Useless Bay along the shoreline. Eelgrass may be present within the

Henry Spit entrance channel that will be filled. Satellite imagery at low tides show vegetation in the channel that will be filled and north to south along the entire spit.

NMFS supplements the following baseline information regarding Listed Species and Critical Habitat in the Action Area

The entire action area is in PS Chinook and GB/PS bocaccio critical habitat.

PS Chinook have highly variable life histories and individuals from any population in the Puget Sound could be found in the action area. However, the closest, and most likely demographically independent populations present are listed in Table 3 below. Four out of the five populations are well below their target abundances for recovery.

Table 3. Puget Sound populations of Chinook most likely to be found in the action area, based on proximal geography and migration pathways to the Pacific Ocean.

PS Chinook Populations	Mean natural origin spawner abundance for 2015-2019	Low Productivity Planning Range for Abundance (productivity of 1)*	Low Productivity Planning Target for Abundance (productivity of 1)	Current Percent of Low Productivity Planning Target	High Productivity Planning Target for Abudance (productivity	Current Percent of High Productivity Planning Target	Importance for Recovery
Lower Skagit	2130	16,000 - 22,000	16,000	13.3%	3,900	54.6%	Tier 1
Upper Skagit	9568	17,000 - 35,000	26,000	36.8%	5,380	177.8%	Tier 1
NF Stillaguamish	302	18,000 - 24,000	18,000	1.7%	4,000	7.6%	Tier 2
SF Stillaguamish	37	15,000 - 20,000	15,000	0.2%	3,600	1.0%	Tier 2
Skokomish	265	Unknown	Unknown	-	Unknown	-	Tier 1

The closest demographically-independent populations of PS steelhead that could migrate in the action area are the north lake Washington and Lake Sammamish Winter Run (South Central Puget Sound) and all populations north up to the Skagit River. All populations are well below achieving the recovery goals laid out in the Puget Sound Steelhead Recovery Plan (NMFS 2019). See Table 4, below.

Table 4. Recovery Goals for North Cascades populations of PS steelhead. Not shown is the North Lake Washington tributaries (in South Central Puget Sound and may be affected by this action) s which has a n/a abundance and target productivity of 4,800 and 16,000 respectively.

North Cascades MPG Populations		Recovery Goals	
		Abundance under Beverton-Holt	
Population	Current Abundance	High productivity (R/S = 2.3)	Low productivity (R/S = 1.0)
Drayton Harbor Tributaries	35[A]	1,100	3,700
Nooksack River	1,850	6,500	21,700
South Fork Nooksack River (summer-run)	n/a	400	1,300
Samish River + independent tributaries	1,090	1,800	6,100
Skagit River	8,278[B]	15,000[D]	
Sauk River			
Nookachamps Creek			
Baker River	n/a	1,100	3,800
Stillaguamish River	493[C]	7,000	23,400
Canyon Creek (summer-run)	n/a	100	400
Deer Creek (summer-run)	n/a	700	2,300
Snohomish/Skykomish River	1,066	6,100	20,600
Pilchuck River	878	2,500	8,200
Snoqualmie River	836	3,400	11,400
Tolt River (summer-run)	89	300	1,200
North Fork Skykomish River (summer-run)	n/a	200	500

Rockfishes

There is no single, reliable historical or contemporary abundance estimate for the yelloweye rockfish or bocaccio DPSs in the Puget Sound/Georgia Basin (Drake et al. 2010). Between 1980 and 2009, only 113 yelloweye and 110 bocaccio rockfish individuals were recorded in the Puget Sound (WDFW 2009). Subsequent ROV surveys by WDFW were unable to estimate abundance of either species accurately but

Bocaccio rockfish are currently extremely rare in the Puget Sound. Though bocaccio were likely never a predominant component of the multi-species rockfish abundance within the Puget Sound/Georgia Basin (Drake et al. 2010), their present-day abundance is likely a fraction of their historical abundance.

Bocaccio larvae are pelagic and drift with tides and currents. Juveniles live in the nearshore before moving to deeper waters as adults. While no bocaccio have been documented in the action area, their larval and juvenile stage could be present, especially associated with submerged aquatic vegetation. Bocaccio critical habitat includes the nearshore habitat where the project would occur.

Yelloweye rockfish are a deep-water species at all life stages except for their larval period when they float at and near the surface and are also often associated with attach or even drift algae. No yelloweye have been documented at this project location, but larvae extremely difficult to differentiate by species. Yelloweye have been observed more frequently in the North rather than South Puget Sound but historically have been seen in schools with black rockfish in deception pass, off the west shore of Camano Island, off Possession Point, between Edmonds and Seattle and Hood Canal off Pullali Point and in the Great Bend (WDFW 2009) Given this record of presence relative to our action area, Yelloweye larvae could be in the action area.

Effects of the Action

Under the ESA, "effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

The biological assessment provides a detailed discussion and assessment of the effects of the proposed action in Section 7.0 in the BA, and is adopted here (50 CFR 402.14(h)(3)). NMFS has evaluated this section and after our independent, science-based evaluation determined it meets our regulatory and scientific standards. The effects are summarized below and NMFS has supplemented effects information where needed.

The temporary and long-term effects of proposed action identified in the BA are:

- Long-term habitat displacement (3 years)
- Long-term alteration of sediment dynamics caused by dredging a new entrance to Henry Lagoon and filling the old entrance. (10-15 years)
- Construction disturbance and turbidity. (1 week)

Construction effects would be temporary, less than one week, and proposed BMPs including work at low tide and adherence to the in-water-work window will minimize construction effects.

<u>To sections 7.0 and 8.0 NMFS supplements:</u>

Long term habitat degradation caused by the direct disturbance of habitat would occur. In addition, these direct alterations by equipment would alter the drift cell and has a goal of keeping more sediment nearshore in the drift cell. This could have positive effects, and when coupled with the removal of a small jetty in the Salish Sea Nearshore Programmatic Verification for this same NWS permit, may restore a more natural shoreline.

The long-term effects to habitat were quantified in the Puget Sound Nearshore Habitat Conservation Calculator (Calculator). The final calculator output is -26 (-0.26 Discounted Service Acre Years). To achieve this value, the direct areas of disturbance (see Figure 1 in the proposed action section above) were entered as dredging into the Calculator. We assume that the

new entrance channel will reestablish forage (aquatic invertebrates) and submerged aquatic vegetation. We also assume the old channel that is filled in will establish more sand bar/spit characteristics. The dredge entry of into the Calculator reflects a three-year timeline for the reestablishment of these habitat characteristics.

The applicant has signed a presale agreement with the Puget Sound Partnership for the purchase of +26 credits, intended to offset these long-term habitat effects.

Populations of Chinook, steelhead, yelloweye and bocaccio identified in the Environmental Baseline section above, and Chinook and bocaccio critical habitat will be negatively affected by the direct dredge and fill elements of this project for an estimated four cohorts. Longer effects are likely neutrally or positive associated with the change in sediment dynamics for an estimated 15 cohorts. Sediment that is currently drifting more waterward will slowly reestablish more landward. We expect changes in vegetation and substrate conditions in the Bay during this time. Habitat benefits associated with restoration actions carried out by the Puget Sound Partnership as a result of purchased conservation credits would also occur within the same marine basin. The restoration action by the Partnership would be completed within three years of receiving payment from the permit holder.

There is not a permanent loss of habitat from this proposed action, and largely habitat impacts are from an altered sediment process as well as direct dredging of submerged aquatic vegetation in the mouth closure site.

Cumulative Effects

"Cumulative effects" are those effects of future state or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation (50 CFR 402.02). Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

NMFS is unaware of any specific future non-federal activities that are reasonably certain to affect the action area. Given the geographic nature of Sunlight Beach and its current state of development on the narrow land mass between the Puget Sound and the wetland/marsh behind it, NMFS does not predict more development would occur very near the Henry Spit and Henry Lagoon location through design/effect life of the proposed action. However, nearshore areas to the north and south in Useless Bay may be developed, subject to Island County's Shoreline Master Program (Island County 2015).

Habitat loss and degradation of water quality from development and chronic low-level inputs of non-point source pollutants will likely continue and act against the recovery of ESA-listed aquatic species. The intensity of these influences depends on many social and economic factors, and therefore is difficult to predict. Further, the adoption of more environmentally protective practices and standards may gradually reduce some negative environmental impacts over time. Interest in restoration activities has increased as environmental awareness rises among the public. State, tribal, and local government plans and initiatives may benefit ESA-listed PS Chinook, HCSR chum, PS steelhead. However, the implementation of plans, initiatives, and

specific restoration projects are often subject to political, legislative, and fiscal challenges that increase the uncertainty of their success.

Future non-federal activities in the relative area and globally are reasonably certain to contribute to climate change effects within the action area. Residents who live on Sunset Drive between the Puget Sound and the wetlands behind the narrow strip of houses, will undoubtably experience future emergency situations. A future storm event may force residents to abandon this low elevation coastal area. The degree to which future habitat conditions degrade because of climate change, and to what level future non-federal actions are likely to continue or exacerbate existing trends cannot be readily determined. Qualitatively, climate change is likely to adversely affect the overall conservation value of designated critical habitat, though it may have some beneficial effects in certain circumstances. The adverse effects are likely to include, but are not limited to, reduction of cold-water habitat and other variations in quality and quantity of tributary spawning, rearing and migration habitats. It is also likely to include the conversion of estuarine tidal marshes to shallow and deep subtidal habitats as sea levels rise (see Section 2.2).

Integration and Synthesis

The Integration and Synthesis section is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. In this section, we add the effects of the action to the environmental baseline and the cumulative effects, taking into account the status of the species and critical habitat, to formulate the agency's biological opinion as to whether the proposed action is likely to: (1) Reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

PS Chinook have a moderate risk of extinction (Ford 2022). Identified limiting factors to recovery include: Degraded floodplain and in-river channel structure; Degraded estuarine conditions and loss of estuarine habitat; Degraded riparian areas and loss of in-river large woody debris; Excessive fine-grained sediment in spawning gravel; Degraded water quality and temperature; Degraded nearshore conditions; Impaired passage for migrating fish; Severely altered flow regime. The proposed action primarily would alter nearshore estuarine habitat (critical habitat), including submerged aquatic vegetation. The dredge and fill would cause an approximately three-year elimination in forage in the entrance fill area. Longer affects are expected throughout the action area due to drift changes resulting from the proposed action. While the effects are unknown, the movement of sediment will likely affect forage for juveniles in the bay.

PS steelhead both have a moderate risk of extinction (Ford 2022). Identified limiting factors to recovery include continued destruction and adverse modification of habitat, widespread declines in adult abundance, and threats to diversity from hatchery steelhead stock. Changes in Useless bay caused by the alteration of habitat may decrease forage for outmigrating juveniles. But juveniles will likely be migrating in deeper waters. Altered drift patterns may change where juveniles migrate.

GB bocaccio has a high risk of extinction and GB Yelloweye has a moderate risk of extinction. (Tonnes et al. 2016, NMFS 2017). Limiting factors for these species in the Whidbey and Main Basin of the Puget Sound are, in order of most importance, nearshore habitat disruption, chemical contamination through bioaccumulation, derelict fishing gear, fisheries removals, benthic habitat disruption, hypoxia (NMFS 2017). The proposed action would have similar affects to these populations as PS Chinook discussed above. Decreased aquatic vegetation affects larval fish of both species, and juvenile bocaccio. Alteration of bocaccio critical habitat occurs both with the infill of the current entrance and the changing sediment drift associated with the new lagoon entrance.

Short term construction effects for all species and habitat would be limited to the work footprint and a maximum 300-foot turbidity plume, as required under Washington law. Steelhead are not expected to be in the action area during construction, but PS Chinook juveniles, larval and juvenile GB bocaccio and larval GB yelloweye could be present. These effects are unavoidable and minimized through best management practices identified by the proponent.

Long term habitat impacts, as calculated with the Puget Sound Nearshore Habitat Conservation Calculator, would be offset through the purchase of conservation credits from the Puget Sound Partnership (+26). The presale agreement for these credits has already been obtained and the project proponent is expected to complete the purchase within one year. Due to offsets equal to the output of the Calculator, we expect that habitat functionality in the long term would be de minimis. The mitigation proposed provides quantitative assurance that this project would not contribute to overall continued degradation of baseline conditions and a loss of critical habitat for, PS Chinook, and PS/GB bocaccio. The likelihood of survival or recovery of any of the listed species will not be appreciably reduced.

Conclusion

After reviewing and analyzing the current status of the listed species and critical habitat, the environmental baseline within the action area, the effects of the proposed action, the effects of other activities caused by the proposed action, and cumulative effects, it is NMFS' biological opinion that the proposed action is not likely to jeopardize the continued existence of PS Chinook, PS steelhead, PS/GB bocaccio, and PS/GB yelloweye or destroy or adversely modify PS Chinook or PS/GB bocaccio designated critical habitat.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Harass" is further defined by guidance as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." "Incidental take" is defined by regulation as takings that result from, but are not the

purpose of, carrying out an otherwise lawful activity conducted by the federal agency or applicant (50 CFR 402.02). Section 7(b)(4) and section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this ITS.

Amount or Extent of Take

In the biological opinion, NMFS determined that incidental take is reasonably certain to occur as follows:

Take has been assigned to correlate with the take pathways identified in this Opinion.

- Long-term habitat displacement (3 years)
- Long-term alteration of sediment dynamics caused by dredging a new entrance to Henry Lagoon and filling the old entrance. (10-15 years)
- Construction disturbance and turbidity. (1 week)

Take in the form of harm from elevated turbidity levels to PS Chinook juveniles, GB yelloweye larvae and GB bocaccio juveniles and larvae during in-water dredging and fill placement. Increased turbidity would occur for up to one week and not exceed 300 feet of increased NTUs from the dredge and fill location. This extends up to 18,000 square feet, plus 300 waterward on both the lagoon and bay side.

Take in the form of harm to PS Chinook, PS steelhead, GB bocaccio, and GB yelloweye due to long term estuarine habitat displacement caused by the dredging and fill of the Henry Spit proposed prisms to create a new Henry Lagoon entrance. This take will occur for three years, until aquatic forage species and aquatic plants reestablish in the new dredged entrance. This extends up to 18,000 square feet.

Take in the form of harm to PS Chinook, PS steelhead, GB bocaccio, and GB yelloweye due to habitat alteration caused by changed sediment dynamics/drift cell in Useless Bay. This take will occur in all of Useless Bay north and west of Henry Spit.

Take in the form of injury or death to larval GB bocaccio and GB yelloweye due to direct disturbance during construction. Disturbance will be limited to the area proposed for excavation and fill. This extends up to 18,000 square feet.

Effect of the Take

In the biological opinion, NMFS determined that the amount or extent of anticipated take, coupled with other effects of the proposed action, is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

Reasonable and Prudent Measures

"Reasonable and prudent measures" refer to those actions the Director considers necessary or appropriate to minimize the impact of the incidental take on the species (50 CFR 402.02).

1. Ensure the proposed mitigation occurs in a timely manner, relative to the project construction dates.
2. Implement a monitoring and reporting program for the incidental take pathways above.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the federal action agency must comply (or must ensure that any applicant complies) with the following terms and conditions. The [name federal agency] or any applicant has a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this ITS (50 CFR 402.14). If the entity to whom a term and condition is directed does not comply with the following terms and conditions, protective coverage for the proposed action would likely lapse.

1. The following terms and conditions implement reasonable and prudent measure 1:
    a. The Corps shall ensure the project proponent (Island County Diking District #) purchases the proposed mitigation (+26 credits) through the Puget Sound Partnership prior to beginning construction.

2. The following terms and conditions implement reasonable and prudent measure 2:
    a. The proponent shall monitor turbidity on site during excavation and fill to ensure that Washington Code turbidity NTUs outside the 300-foot radius are not exceeded. And shall report exceedances to the Corps and the Services.
    b. Report success or failure of sediment dynamics alteration for nearshore protection of residences to the Services within 5 years of construction.
    c. Report if a sand bar forms offshore in useless bay anytime in the next 15 years.
    d. Reports to NMFS can be submitted to projectreports.wcr@noaa.gov and refer to NMFS No.: WCRO-2023-02607.

Conservation Recommendations

Section 7(a)(1) of the ESA directs federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02).

1. Develop a program to relocate homes on Sunlight Drive to a safer location within the next 25 years.

Reinitiation of Consultation

Under 50 CFR 402.16(a): "Reinitiation of consultation is required and shall be requested by the federal agency where discretionary federal involvement or control over the action has been retained or is authorized by law and: (1) If the amount or extent of taking specified in the incidental take statement is exceeded; (2) If new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (4) If a new species is listed or critical habitat designated that may be affected by the identified action."

NLAA DETERMINATIONS

We reviewed the Corp's consultation request document and related materials. Based on our knowledge, expertise, and your action agency's materials, we concur with the action agency's conclusions that the proposed action is not likely to adversely affect the following NMFS ESA-listed species and/or designated critical habitat:

Pacific eulachon species

We incorporate by reference information on the southern DPS of Pacific eulachon included the provided biological evaluation. A species status and environmental baseline in the action are in section 5.1.6 and effects analysis is in section 8.1.5. Though the be came to a LAAA conclusion, the COE supports the NLAA determination and the analysis provided by the project proponent supports the NLAA determination. It is summarized here:

Eulachon are unlikely to be found in the action area. The primary spawning watershed for eulachon in the Puget Sound is the Elwah River, over 50 miles northwest of the action area. The action area is also out of the direct migrating corridor out of the Puget Sound for this population. The project will eliminate some existing submerged vegetation and reduce potential forage for juvenile eulachon for a period of up to three years. The project would also have effects on the sediment drift in Useless Bay, which is unlikely to affect eulachon, though may change distribution of foraging areas by pushing sediment more nearshore. NMFS agrees that effects to eulachon are insignificant for this proposed action due to proximity of spawning habitat of the known population, and the relative low impacts to submerged aquatic vegetation with abundant prey items for juveniles over the impacting period of the project.

Southern resident killer whale (SRKW) species

We incorporate by reference information on SRKWs included in the provided biological evaluation. A species status and environmental baseline in the action area are in section 5.2.1 and an effects analysis is in section 8.1.7. The analysis is summarized here:

SRKW could potentially use the action area, Useless Bay. But are not expected to use the nearshore portion of Useless bay next to to and directly downdrift of Henry Spit and Lagoon because it is extremely shallow (15-20 ft at high tide). If SRKWs enter Useless bay, the will likely be outside the area impacted by this project. Construction affects to SRKWs are discountable. Forage effects on juvenile Chinook due to eliminated SAV and invertebrates are relatively small, in that they will likely not appreciate upwards to affect SRKW forage in a

meaningful way. SRKWs in this area would likely be following/hunting adult Chinook in deeper waters of the bay or using the pass to access lower portions of the Sound, where they commonly forage in winter months. NMFS agrees the project impacts to SRKWs are insignificant because of the shallow depth of the action area, and the minor affects on a trophic scale, of the impacts to juvenile Chinook.

ESSENTIAL FISH HABITAT RESPONSE

Thank you also for your request for essential fish habitat (EFH) consultation. NMFS reviewed the proposed action for potential effects on EFH pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

Magnuson-Stevens Fishery Conservation and Management Act

Section 305(b) of the MSA directs federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. Under the MSA, this consultation is intended to promote the conservation of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10). Adverse effect means any impact that reduces quality or quantity of EFH, and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects may result from actions occurring within EFH or outside of it and may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH (50 CFR 600.905(b)).

Essential Fish Habitat Affected by the Project

The environmental effects of the proposed action would adversely affect EFH for Pacific Coast salmon and Pacific Coast groundfish. EFH for coastal pelagic species also exists in the project area but NMFS determined that coastal pelagic EFH would not be affected by the proposed action because of the shallow area affected, which is dewatered at low tide, and lack of long-term effects to pelagic habitat, including forage for coastal pelagic species. The action area also contains Habitat Areas of Particular Concern (HAPC) for Pacific Coast salmon and Pacific Coast groundfish which will be adversely affected. Adverse effects to Pacific Coast Salmon and Pacific Coast groundfish EFH include:

1. Water quality degradation by short-term elevated levels of turbidity during construction.

2. Reduced submerged aquatic vegetation and forage due for up to three years from filling the existing Henry Lagoon entrance channel. from the outflow shoreline armoring and scour during increased flow during storm events.
3. Potential changes in EFH habitat including submerged aquatic vegetation and forage from modified sediment dynamics and depths in and outside Henry Lagoon.

Though these elements would result in adverse effects to EFH, the purchase of conservation offsets (mitigation) from the Puget Sound Partnership would result in conservation actions within the Whidbey marine basin that would benefit EFH for these two fisheries. The number of credits that will be purchased from the Puget Sound Partnership (+26) was quantified with the Puget Sound Nearshore Habitat Conservation Calculator. NMFS believes-this is sufficient to mitigate long term habitat effects, but credit purchase does not eliminate effects of the action. NMFS expects those beneficial actions to occur within three year of the credit purchase date.

Essential Fish Habitat Conservation Recommendations

1. Plant suitable native riparian species on Henry Spit and/or incorporate scattered soft armoring elements (anchored root wads or similar) to stabilize the new entrance location. This could reduce or eliminate future dredge events. Reach out to Nissa Rudh for a review of the soft armor design, if added. Soft armor would not change the effects analysis in this opinion and would not be quantified for long term habitat impacts in the Puget Sound Nearshore Habitat Calculator.

Fully implementing these EFH conservation recommendations would protect, by avoiding or minimizing the adverse effects for Pacific Coast salmon, Pacific Coast groundfish, and coastal pelagic species.

Statutory Response Requirement

As required by section 305(b)(4)(B) of the MSA, [insert agency name] must provide a detailed response in writing to NMFS within 30 days after receiving an EFH conservation recommendation. Such a response must be provided at least 10 days prior to final approval of the action if the response is inconsistent with any of NMFS' EFH conservation recommendations unless NMFS and the federal agency have agreed to use alternative time frames for the federal agency response. The response must include a description of the measures proposed by the agency for avoiding, minimizing, mitigating, or otherwise offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations, the federal agency must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects (50 CFR 600.920(k)(1)).

Supplemental Consultation

The Corps must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600. 920(l)).

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The biological opinion will be available online through NOAA Institutional Repository at https://doi.org/10.25923/jp98-fq13 and a complete record of this consultation is on file at Lacey, Washington NMFS office.

Please direct questions regarding this letter to Nissa Rudh, at nissa.rudh@noaa.gov or 360-701-9699

Sincerely,

Kathleen Wells
Assistant Regional Administrator
Oregon Washington Coastal Office

cc: Randel Perry, U.S. Army Corps of Engineers, Seattle District
Margaret Clancy, Consultant, ESA Associates

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