



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
1201 NE Lloyd Boulevard, Suite 1100
PORTLAND, OR 97232-1274

Refer to NMFS No.:
WCRO-2023-00212

February 8, 2024

Constance Callahan
Chief, Environmental Management Branch
United States Coast Guard—Civil Engineering Unit Oakland
1301 Clay Street, Suite 700N
Oakland, California 94612-5203

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Maintenance Dredging at United States Coast Guard Station Umpqua River Winchester Bay, Oregon

Dear Ms. Callahan:

This letter responds to your March 2, 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 U.S. Coast Guard's (USCG) 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. We adopt by reference the following sections of the BA

- Section 2 for the description of the proposed action, and the action area;
- Sections 3 and 4 for species and habitat information; and,
- Section 5 for the effects of the proposed action.

The USCG submitted the BA for this proposed action on March 2, 2023. NMFS reviewed the BA and responded with a Letter of Insufficiency, documented in an email dated June 5, 2023, for not including pre-dredge sediment analysis results, which would indicate whether or not the dredged sediment was suitable for in-water disposal. NMFS received preliminary sediment analysis results in an email dated August 7, 2023. On September 7, 2023, NMFS received an email stating that the USCG decided to remove the option to discharge dredged material at the Umpqua River Mile (RM) 0.8 In-water Placement Site due to regulatory challenges and an updated figure showing the disposal locations was provided. On October 23, 2023 NMFS received the Portland Sediment Evaluation Team's (PSET) dredged material suitability determination, which indicates the material is suitable for in-water placement. On December 14, 2023, NMFS received an email with an attached approval from the Oregon Department of Fish and Wildlife (ODFW) to extend the in-water work window (IWWW), so that dredging and

WCRO-2023-00212



placement could occur between July 1st and January 31st rather than between November 1st and January 31st. NMFS was asked to include this updated work window in this Opinion. Formal consultation under section 7 of the ESA was initiated on October 30, 2023, with receipt of the requested information noted in the insufficiency email.

On July 5, 2022, the U.S. District Court for the Northern District of California issued an order vacating the 2019 regulations that were revised or added to 50 CFR part 402 in 2019 (“2019 Regulations,” see 84 FR 44976, August 27, 2019) without making a finding on the merits. On September 21, 2022, the U.S. Court of Appeals for the Ninth Circuit granted a temporary stay of the district court’s July 5 order. On November 14, 2022, the Northern District of California issued an order granting the government’s request for voluntary remand without vacating the 2019 regulations. The District Court issued a slightly amended order two days later on November 16, 2022. As a result, the 2019 regulations remain in effect, and we are applying the 2019 regulations here. For purposes of this consultation and in an abundance of caution, we considered whether the substantive analysis and conclusions articulated in the biological opinion and incidental take statement would be any different under the pre-2019 regulations. We have determined that our analysis and conclusions would not be any different.

The USCG is proposing to conduct routine maintenance dredging over a period of 10 years at USCG Station Umpqua River, located in the lower Umpqua River within the town of Winchester Bay, Oregon. The Proposed Action includes an initial dredging event of up to 7,000 cy of material, with a potential second maintenance dredging event of an additional 4,500 cy of material if sediment in-fill occurs more quickly than anticipated. The USCG intends to use either mechanical (clamshell) or hydraulic (suction) dredging to reestablish original elevations (depths) and meet safe navigation and berthing requirements for berthed vessels. All dredged material removed over the permit duration would be placed at either of the two US Environmental Protection Agency (USEPA)-designated Umpqua River Ocean Dredged Material Disposal Sites (ODMDS) located in the Pacific Ocean or at an approved upland placement site. If an approved in-water placement site is identified in the Umpqua River in the future (and the USCG would like to use that site), then the USCG would coordinate with the appropriate resource agencies to amend all permits, as needed, to obtain the necessary approvals to use that site for dredged material placement. Because the ODMDS locations can only be accessed between June and October per EPA seasonal use restrictions, the USCG obtained approval from ODFW for an in-water work window extension so that dredging and material placement could occur between July 1st and January 31st.

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.

One listed salmonid evolutionarily significant unit (ESU) is known to occur within the Action Area: Oregon Coast Coho salmon (*Oncorhynchus kisutch*). Federally threatened eulachon (Southern DPS) (*Thaleichthys pacificus*) and green sturgeon (Southern DPS) (*Acipenser medirostris*) may be seasonally present in the lower Umpqua River and Action Area. Designated

critical habitat for each these fish species as well as for Southern Resident Killer Whale (SRKW) and leatherback sea turtle is located within the action area. Section 3.0 of the BA discusses the status of listed species and critical habitat in the action area and is being adopted here with the following exceptions. The USCG determined the proposed action was not likely to adversely affect designated critical habitat for OC Coho and green sturgeon, stating that the effects would be temporary and localized. However, effects from dredging and material placement will involve sediment disruption and loss or burial of benthic prey organisms, which are an essential part of both species' diets. NMFS determined that the effects of the proposed action are likely to adversely affect designated critical habitat for OC Coho and green sturgeon, even if those effects may be unlikely to bring about a long term or permanent modification of those critical habitats.

In addition to the effected species discussed in the BA, NMFS analyzed the effects to the sunflower sea star *Pycnopodia helianthoides*, which was recently proposed for listing as a threatened species under the ESA. The sunflower sea star occupies nearshore intertidal and subtidal marine waters shallower than 450 m (~1400 ft) deep from Adak Island, AK, to Bahia Asunción, Baja California Sur, MX. They are occasionally found in the deep parts of tide pools. The species is a habitat generalist, occurring over sand, mud, and rock bottoms both with and without appreciable vegetation. Critical habitat is currently indeterminable because information does not exist to clearly define primary biological features. Prey include a variety of epibenthic and infaunal invertebrates, and the species also digs in soft substrate to excavate clams. It is a well-known urchin predator and plays a key ecological role in control of these kelp consumers. More information about sea star biology, ecology, and their life history cycle is found in the proposed listing (88 FR 2023).

From 2013 to 2017, the sunflower sea star experienced a range-wide epidemic of sea star wasting syndrome (SSWS) (Gravem et al. 2021; Hamilton et al. 2021; Lowry et al. 2022). While the cause of this disease remains unknown, prevalence of the outbreak has been linked to a variety of environmental factors, including temperature change, sustained elevated temperature, low dissolved oxygen, and decreased pH (Hewson et al. 2018; Aquino et al. 2021; Heady et al. 2022; Oulhen et al. 2022). As noted above, changes in physiochemical attributes of nearshore waters are expected to change in coming decades as a consequence of anthropogenic climate change, but the specific consequences of such changes on SSWS prevalence and severity are currently impossible to accurately predict.

“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 action area in this case is defined as the 1.3 acre dredging footprint, inclusive of slopes and berth dredging; transit routes to the disposal sites; and an approximate 200-foot buffer around the dredging site and 500-foot buffer around the ODMDS. Section 2.4 of the BA discusses the project area and action area for the Proposed Action and is being adopted here.

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 consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02).

Section 4.0 of the BA provides a detailed description of the environmental baseline and is being adopted here.

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 (see 50 CFR 402.17). In our analysis, which describes the effects of the proposed action, we considered 50 CFR 402.17(a) and (b).

The BA provides a detailed discussion and comprehensive assessment of the effects of the proposed action in Section 5.0 of the initiation package, 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.

While the BA does not address the effects of the action on sunflower sea star, given regionally documented low sea star density, we conclude it is extremely unlikely that any sunflower sea star would be exposed to the construction disturbance based on their sparse distribution and, therefore, the construction effects would be discountable. Furthermore, as habitat generalists, we expect sea stars would be able to successfully use much of the habitat that is disturbed by the project. Thus, any long-term effects on sunflower sea stars from project-induced changes in habitat would be insignificant.

"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 and 402.17(a)). 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. Section 5.4 of the BA discusses cumulative effects and is being adopted here. In summary, there are no other state or private actions anticipated in the action area that would contribute to the effects of this proposed action on ESA listed species.

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.

One factor affecting the status of ESA-listed species considered in this opinion, and aquatic habitat at large, is climate change. Climate change is likely to play an increasingly important role in determining the abundance and distribution of ESA-listed species, and the conservation value of designated critical habitats, in the Pacific Northwest. These changes will not be spatially homogeneous across the Pacific Northwest. Major ecological realignments are already occurring in response to climate change (IPCC WGII, 2022). Long-term trends in warming have continued at global, national and regional scales. Global surface temperatures in the last decade (2010s) were estimated to be 1.09 °C higher than the 1850-1900 baseline period, with larger increases over land ~1.6 °C compared to oceans ~0.88 (IPCC WGI, 2021). The vast majority of this warming has been attributed to anthropogenic releases of greenhouse gases (IPCC WGI, 2021). Globally, 2014-2018 were the 5 warmest years on record both on land and in the ocean (2018 was the 4th warmest) (NOAA NCEI 2022). Events such as the 2013-2016 marine heatwave (Jacox et al. 2018) have been attributed directly to anthropogenic warming in the annual special issue of Bulletin of the American Meteorological Society on extreme events (Herring et al. 2018). Global warming and anthropogenic loss of biodiversity represent profound threats to ecosystem functionality (IPCC WGII 2022). These two factors are often examined in isolation, but likely have interacting effects on ecosystem function. Updated projections of climate change are similar to or greater than previous projections (IPCC WGI, 2021). NMFS is increasingly confident in our projections of changes to freshwater and marine systems because every year brings stronger validation of previous predictions in both physical and biological realms. Retaining and restoring habitat complexity, access to climate refuges (both flow and temperature) and improving growth opportunity in both freshwater and marine environments are strongly advocated in the recent literature (Siegel and Crozier 2020).

As described in section 3.1 of the BA, OC coho salmon and green sturgeon may be present in the action area during the proposed time period for maintenance dredging and material disposal. While Pacific eulachon spawning has been documented in the lower Umpqua River, their presence appears to be rare and infrequent, therefore, eulachon are not expected to occur in the action area during the proposed dredging activities.

All independent populations of the Umpqua River Stratum of OC Coho salmon could be affected by the proposed action as adults are migrating to spawning grounds within the Umpqua Basin from October – Mid-January (ODFW 2009). Adults and smolts from these populations may encounter harm associated with dredging disturbance, entrainment, and adverse effects on critical habitat. Most of these affects would be temporary; however, entrainment may result in mortality to individual fish. The Umpqua stratum is important for the recovery of the ESU. While the most recent 5-year status review for OC Coho indicated that the collective persistence of the OC Coho salmon ESU remains unchanged or slightly improved since the previous 5-year review in 2016, the Umpqua stratum currently has the lowest viability status. Improvements in this stratum would substantially increase the overall sustainability of the entire ESU. However, of all the independent populations for the Umpqua stratum, the Lower Umpqua population has the highest confidence in being persistent. Therefore, adverse effects at the population level would not impede recovery of the Umpqua Stratum or the ESU. OC Coho have been listed as Threatened effective June 20, 2011 (NMFS). The primary factors limiting recovery of OC Coho include diminished floodplain connectivity, reduced stream complexity, degraded water quality,

blocked and/or impaired fish passage, long-term habitat protection, and changes in ocean conditions (NMFS 2016).

The Southern DPS green sturgeon were listed as Threatened effective April 7, 2006 (NMFS). The principle factor in decline of the southern DPS green sturgeon is the loss of spawning habitat due to construction of dams in the Sacramento River system (NMFS 2018). Other threats include insufficient freshwater flow rates in spawning areas, contaminants, potential poaching, entrainment of juveniles, and elevated water temperatures.

The sunflower seastar is proposed for listing throughout its range, and no data exist to suggest anything other than a single, panmictic population, so, to reach a determination of jeopardy, a proposed action would have to impact range-wide population dynamics. We are not currently aware of any habitat types or locations used by sunflower sea stars for mating or spawning, larvae are planktonic, and newly settled juveniles appear in a variety of habitats. We do not expect any single site-specific action to result in jeopardy, but broad-scale programmatic actions occurring over a substantial portion of the range might result in appreciable reductions in the number, distribution, or reproduction of sea stars.

Many conditions in the baseline are understood to limit productivity, and specified as factors limiting productivity in a manner that impedes recovery for each of the effected ESA species. These stressors, as well as those from climate change, already exist and we consider these factors with the addition of any adverse effects produced by the proposed action. The proposed action will, as described above, at each dredging and disposal event over the duration of the permit term, will temporarily degrade water quality and forage, and may potentially injure or kill a small number of juvenile listed species; however, these effects are expected to occur among a small enough number of fish, across the species, and no discernible increased to jeopardy risk can be found for any single ESU/DPS. Adverse effects on critical habitat physical or biological features (PBFs) are temporary and likely to recover some level of habitat function between dredging and placement events.

The USCG has included several measures to minimize effects to ESA listed species including:

- In-water vessel operations will be limited to the designated work areas to minimize disturbance to marine habitats.
- Dredging activities will be completed in compliance with applicable federal and state water quality standards for turbidity. Dredging technique, equipment type, work rate, and timing relative to tidal cycle and wind conditions will be adjusted to control turbidity, as necessary.
- If utilizing mechanical (clamshell) dredging methods, the contractor will not stockpile material on the bottom or take multiple bites with the clamshell bucket. The contractor will not overfill the dredge bucket.
- If utilizing hydraulic dredging methods, the cutterhead of the hydraulic cutterhead dredge will remain on the bottom to the greatest extent possible and only be raised 3 feet off the bottom when necessary.
- The contractor will use a GPS unit to ensure material is removed from the correct locations.
- Material will not be excavated beyond the maximum depth (-12 feet MLLW).

- The USCG will adequately account for potential slumping along the sides of the dredge cuts in the initial impact assessment, and over-dredging at the base of a slope will not occur.
- The contractor will implement the following conservation measures to minimize impacts to native eelgrass (*Zostera marina*) beds in the vicinity of the dredge footprint:
 - Denote eelgrass beds on dredge plans to alert contractor to their presence.
 - Incorporate impact avoidance into environmental protection measures, such as by avoiding operation in or over eelgrass beds or ensuring that vessel operators are aware of eelgrass distribution and objectives to avoid impact, including avoidance of tug propeller wash, vessel grounding, bucket placement outside of dredge footprint, or spudding in or near eelgrass beds.
 - Conducting pre- and post-dredge surveys prior to and after completion of maintenance dredging to determine any inadvertent impacts to eelgrass from dredging, as needed.
- If the captain or crew operating the dredges observes any kind of sheen or other indication of contaminants, they will immediately stop dredging or placement and notify the USCG.
- Contractors will not release any trash, garbage, oil, grease, chemicals, or other contaminants into the water.
- Refueling and repair of vehicles and other equipment will be restricted to construction staging areas, and requirements for safe handling and disposal of hazardous wastes will be implemented.
- During transport and handling of sediment, the contractor will employ containment measures to minimize spillage potential.
- Although not anticipated to be necessary, the contractor will keep surface booms, oil-absorbent pads, and similar materials on site to contain any sheen that may occur on the surface of the water during dredging.
- Placement activities at the ODMDS will be performed in accordance with the SMMP (USEPA and USACE 2009) and with use restrictions specified as part of the USEPA designation for these sites. Material will be dispersed as thinly and evenly as possible to prevent mounding and reduce impacts to marine organisms.
- In-water disposal will take place at sufficient depths to avoid and minimize impacts to aquatic species. Monitoring will occur during disposal to ensure compliance with water quality certification requirements. Work rate, timing, depth, and location will be adjusted, as necessary, to maintain compliance.

With implementation of minimization measures included as part of the proposed action we do not anticipate that critical habitat values will be reduced in a manner that impairs conservation value of the habitat.

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 OC Coho salmon, green sturgeon, or Pacific eulachon; or destroy or adversely modify their 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). “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:

- Incidental take in the form of injury or death due to entrainment or strike during clamshell dredging,
- Incidental take in the form of harm from increased turbidity.
- Diminished benthic prey/forage availability.

The distribution and abundance of fish that occur within an action area are affected by habitat quality, competition, predation, and the interaction of processes that influence genetic population, and environmental characteristics. These biotic and environmental processes interact in ways that may be random or directional, and may operate across far broader temporal and spatial scales than are affected by the proposed action. Thus, the distribution and abundance of fish within the action area cannot be attributed entirely to habitat conditions, nor can NMFS precisely predict the number of fish that are reasonably certain to be injured or killed if their habitat is modified or degraded by the proposed action.

For this proposed action, the potential for occurrences of 1) injury or death from entrainment, and 2) harm from being exposed to elevated turbidity and reductions in forage for juvenile salmonids, is directly related to the amount of time that the dredge is in operation and the timing of the dredge operation. Take in the form of injury or harm from these causes cannot be quantified as a number of fish. There is no feasible way to directly observe and count individual fish injured or killed by entrainment or exposure to dredged materials during disposal. We are not aware of any existing device or practicable technique that would allow safe observation during dredging and disposal operations while yielding reliable counts. In such cases, we use a take surrogate or take indicator that rationally reflects the incidental take caused by the proposed action.

For take associated with entrainment the best available indicator for the extent of take is one that best describes the dredging efforts relative to the amount of materials dredged at each project dredging location. The extent of take for entrainment is the volume of material dredged at each project site where take from entrainment would occur. This indicator is appropriate for this proposed action because it is directly related to the quantitative magnitude of take caused by entrainment during dredging. The volume of materials proposed for dredging in this case totals 11,500 cy, 7,000 cy from the initial dredging event, and a potential additional 4,500 cy, should a second maintenance dredging event be found necessary during the 10-year period. Take will be exceeded if these dredging quantities are exceeded.

For harm associated with exposure to increased turbidity, the levels of suspended sediments are expected to be proportional to the amount of injury or disturbance that the proposed action is likely to cause. Take will be exceeded if turbidity measured beyond the 200-foot buffer around the dredging and/or the 500-foot buffer around the ocean disposal sites, as measured in nephelometric turbidity units (NTUs), exceeds 5 NTU over the background level for two consecutive monitoring intervals.

For harm associated with diminished forage opportunities, reductions in fitness among juveniles are likely when prey availability is decreased and competition increased for prey resources. The extent of take is therefore, measured by the 54,516 square foot area of boat basin where dredging will remove substrate and the benthic prey communities. If the footprint of the dredge prism extends beyond the area described in the proposed action, take will be exceeded.

The amount and extent of take in this ITS serves two functions: (1) it identifies the quantity of incidental take exempted for the action agency and applicant. In the case of a species without 4(d) protective regulations, such as the sunflower sea star, the exemption is not needed because incidental take is not prohibited; and (2) it serves as a check on NMFS's jeopardy analysis. The amount or extent of take identifies the anticipated level of take NMFS considered in reaching its conclusion that the proposed action will not jeopardize the continued existence of a listed species. If this level of take is exceeded, reinitiation of consultation is triggered to ensure that NMFS's no-jeopardy conclusion remains valid.

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” are measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

For the proposed action, BMPs discussed in section 2.6 of the BA minimize incidental take to the greatest degree practicable. Section 9 requires that each formal consultation include a RPM that the action agency provide NMFS with a report that shows that the incidental take surrogate was

not exceeded. For this reason, the single RPM is that the USCG shall provide a post-project report.

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 USCG 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.

The single term and condition is to provide a report within 60 days of each dredging event that includes turbidity observations, length and width of dredged area, volume of sediment removed, and dates of initiation and completion of in-water work. The applicant must also report any exceedance of take covered by this opinion to NMFS immediately. Submit reports to:

Projectupdates.wcr@noaa.gov

Attn: WCRO-2023-00212

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).

To offset adverse effects of the action on critical habitat (decreased forage), look for opportunities to increase and restore off-channel habitat within the Lower Umpqua River.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the USCG or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) the amount or extent of incidental taking specified in the ITS is exceeded, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) 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 this biological opinion; or if (4) a new species is listed or critical habitat designated that may be affected by the identified action.

“Not Likely to Adversely Affect” Determinations

The USCG determined that the proposed action may affect but is not likely to adversely affect (NLAA) Pacific Eulachon and their designated critical habitat, as well as designated critical habitat for OC Coho salmon, North American green sturgeon, SRKW, and leatherback sea turtle. NMFS concurs with the NLAA determinations for Pacific Eulachon and their designated critical habitat, as well as SRKW, and leatherback sea turtles designated critical habitats; however, NMFS has determined the proposed action would adversely affect OC Coho, and North American green sturgeon designated critical habitats as previously stated in this Opinion.

While Pacific eulachon have been historically present in the Umpqua River Estuary, the species hasn't been observed near the action area since June 2003, and their presence currently appears to be rare and infrequent, with small numbers of migrating fish (NMFS 2021), therefore, they are not likely to be present in the action area during dredging or disposal activities. The proposed dredging area consists of mostly fine-grained material and does not provide preferred coarse grained substrate for spawning, therefore the proposed action is NLAA Pacific eulachon or their designated critical habitat. SRKW critical habitat may be affected due to material placement activities at the ODMDS temporarily changing the migration behavior patterns for their primary prey, adult Chinook salmon, but the proposed activities are not expected to produce a measurable effect on the abundance, distribution, diversity, or productivity of Chinook salmon at either the population or species level. Similarly, leatherback sea turtle critical habitat may be affected due to material placement at the ODMDSs affecting prey species (jellyfish) availability. However, due to the wide distribution of available prey in the area, effects from the proposed activity are not expected to produce a measurable effect on prey availability in the action area.

ESSENTIAL FISH HABITAT

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was conducted pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

The action area includes areas designated as EFH for Coastal Pelagic Species, Pacific Coast Groundfish, and Pacific Coast Salmon. Impacts to EFH in the project footprint may include:

- Physical alteration of shallow water habitat.
- Reduced forage from removal and burial of benthic organisms.
- Degraded water quality from temporary turbidity plumes and increased suspension of sediment.

Because the applicant has included measures to minimize effects of the action, no further recommendations are being provided.

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 through NOAA Institutional Repository [<https://repository.library.noaa.gov/>]. A complete record of this consultation is on file at Oregon Washington Coastal Office in Portland, Oregon.

Please contact Kailee McKinney, Consultation Biologist, Oregon Washington Coastal Office at 503.872.2854 or kailee.mckinney@noaa.gov if you have any questions concerning this consultation, or if you require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kim W. Kratz".

Kim W. Kratz, Ph.D
Assistant Regional Administrator
Oregon Washington Coastal Office

cc Erin Hale, USCG

REFERENCES

- 88 FR 2023, Proposed Rule To List the Sunflower Sea Star as Threatened Under the Endangered Species Act. National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce. Federal Register / Vol. 88, No. 51 / Thursday, March 16, 2023 / Proposed Rules. 16212.
- Aquino, C. A., Besemer, R. M., DeRito, C. M., Kocian, J., Porter, I. R., Raimondi, P. T., Rede, J. E., Schiebelhut, L. M., Sparks, J. P., Wares, J. P., and I. Hewson. 2021. Evidence that microorganisms at the animal-water interface drive sea star wasting disease. *Frontiers in Microbiology*. 11(3278).
- Gravem SA, Heady WN, Saccomanno VR, Alvstad KF, Gehman ALM, Frierson TN, Hamilton SL. 2021. *Pycnopodia helianthoides*. IUCN Red List of Threatened Species 2021. 43.
- Hamilton SL, Saccomanno VR, Heady WN, Gehman AL, Lonhart SI, Beas-Luna R, Francis FT, Lee L, Rogers-Bennett L, Salomon AK, and SA Gravem. 2021. Disease-driven mass mortality event leads to widespread extirpation and variable recovery potential of a marine predator across the eastern pacific. *Proceedings of the Royal Society B*. 288(1957): 20211195.
- Heady W, Beas-Luna R, Dawson M, Eddy N, Elsmore K, Francis F, Frierson T, Gehman AL, Gotthardt T, Gravem SA, Hamilton SL, Hannah L, Harvell CD, Hodin J, Kelmartin I, Krenz C, Lee L, Lorda J, Lowry D, Mastrup S, Meyer E, Raimondi PT, Rumrill SS, saccomanno VR, Schiebelhut LM, and C Siddon. 2022. Roadmap to recovery for the sunflower sea star (*Pycnopodia helianthoides*) along the west coast of North America. Sacramento, CA: The Nature Conservancy. 44 pp
- Herring, S. C., N. Christidis, A. Hoell, J. P. Kossin, C. J. Schreck III, and P. A. Stott, Eds., 2018: Explaining Extreme Events of 2016 from a Climate Perspective. *Bull. Amer. Meteor. Soc.*, 99 (1), S1–S157.
- Hewson I, Bistolas KSI, Quijano Cardé EM, Button JB, Foster PJ, Flanzenbaum JM, Kocian J, Lewis CK. 2018. Investigating the complex association between viral ecology, environment, and Northeast Pacific sea star wasting. *Frontiers in Marine Science*. 5.
- Intergovernmental Panel on Climate Change (IPCC) Working Group I (WGI). 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. V. Masson-Delmotte, P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou editor. Cambridge University Press (<https://www.ipcc.ch/report/ar6/wg1/#FullReport>).

- IPCC Working Group II (WGII). 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. H.O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, and B. Rama (eds.) Cambridge University Press
(https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_FinalDraft_FullReport.pdf)
- Jacox, M. G., Alexander, M. A., Mantua, N. J., Scott, J. D., Hervieux, G., Webb, R. S., & Werner, F. E. 2018. Forcing of multi-year extreme ocean temperatures that impacted California Current living marine resources in 2016. *Bull. Amer. Meteor. Soc.*, 99(1).
- Lowry, D., Pacunski, R., Hennings, A., Blaine, J., Tsou, T., Hillier, L., Beam, J., and E. Wright. 2022. Assessing bottomfish and select invertebrate occurrence, abundance, and habitat associations in the U.S. Salish Sea with a small, remotely operated vehicle: results of the Page 249 of 292 2012-13 systematic survey. Olympia, WA: Washington Department of Fish and Wildlife. FPT 22-03. 67 pp.
- NMFS. 2012. Endangered Species Act Section 7 Formal Programmatic Opinion, Letter of Concurrence, and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Revisions to Standard Local Operating Procedures for Endangered Species to Administer Actions Authorized or Carried Out by the U.S. Army Corps of Engineers in Oregon (SLOPES IV In-water Over-water Structures) National Marine Fisheries Service. Portland, Oregon.
- NMFS. 2016. Final ESA recovery plan for Oregon Coast coho salmon (*Oncorhynchus kisutch*).
<https://www.fisheries.noaa.gov/resource/document/recovery-plan-oregon-coast-coho-salmon-oncorhynchus-kisutch>.
- NMFS. 2018. Recovery Plan for the Southern Distinct Population Segment of North American Green Sturgeon (*Acipenser medirostris*).
<https://www.fisheries.noaa.gov/resource/document/final-recovery-plan-southern-distinct-population-segment-north-american-green>.
- NMFS. 2021. Endangered Species Act Section 7(a)(2) Biological Opinion, Letter of Concurrence and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Reinitiation of the U.S. Army Corps of Engineers' Operation and Maintenance Dredging of the Oregon Coastal Navigation Projects.
- NMFS. 2022. 2022 5-Year Review: Summary & Evaluation of Oregon Coast coho Salmon.
<https://www.fisheries.noaa.gov/resource/document/2022-5-year-review-summary-evaluation-oregon-coast-coho-salmon>.
- NOAA National Centers for Environmental Information (NCEI), State of the Climate: Global Climate Report for Annual 2021, published online January 2022, retrieved on February 28, 2022 from <https://www.ncdc.noaa.gov/sotc/global/202113>.

ODFW. 2009. The Oregon Plan for Salmon and Watersheds. Figure 7. Run timing of live adult OC coho salmon. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://nrimp.dfw.state.or.us/DataClearinghouse/default.aspx?pn=ViewFile&att=ODFW%5CODFW_41108_2_2009-03.pdf

ODFW. 2022. Oregon Guidelines For Timing of in-Water Work To Protect Fish And Wildlife Resources. Oregon Department of Fish and Wildlife. <https://www.dfw.state.or.us/lands/inwater/Oregon%20In-water%20Work%20Guidelines%20January%202022.pdf>

Siegel, J., and L. Crozier. 2020. Impacts of Climate Change on Salmon of the Pacific Northwest: A review of the scientific literature published in 2019. National Marine Fisheries Service, Northwest Fisheries Science Center, Fish Ecology Division. <https://doi.org/10.25923/jke5-c307>

StreamNet. 2023. StreamNet Mapper. Accessed October 30, 2023. <https://www.streamnet.org/home/data-maps/sn-mapper/>.