



Pacific Fishery Management Council

7700 NE Ambassador Place, Suite 101 Portland, OR 97220-1384
Phone 503-820-2280 | Toll free 866-806-7204 | Fax 503-820-2299 | www.pcouncil.org
Brad Pettinger, Chair | Merrick J. Burden, Executive Director

October 11, 2024

U.S. Army Corps of Engineers
Attn: Planning Branch
PO Box 2946
Portland, OR 97208

To Whom It May Concern,

The Pacific Fishery Management Council (Council) submits the following comments in response to the U.S. Army Corps of Engineers' (Corps) draft Environmental Impact Statement (DEIS) for the proposed Lower Columbia River Channel Maintenance Plan/Dredged Materials Management Plan (DMMP).

The Corps developed the DMMP to support continued operation and maintenance of the Lower Columbia River (LCR) Federal Navigation Channel (FNC) for the next 20 years, with a stated purpose to define the dredged material management practices to maintain the authorized dimensions of the FNC for a minimum of 20 years in the least-cost, operationally feasible, and environmentally acceptable manner. In addition to a "No Action" alternative, the Corps reviewed two alternatives of "Maximize Placement" and "Minimize Dredging". After analysis, the Corps chose the "Maximize Placement" alternative, which includes:

- 15 new transfer placement sites
- 7 new confined aquatic structures
- 49 (plus 4 contingent) shoreline placement sites
- 18 (plus 1 contingent) in-water shallow placement sites
- 11 (plus 4 contingent) upland placement sites.

Council Authorities and Essential Fish Habitat

The Council is one of eight Regional Fishery Management Councils established by the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (MSA) and is charged with sustainably managing West Coast fisheries and the habitats upon which they depend. The Council recommends management actions for Federal fisheries for Washington, Oregon, California, and Idaho. The Council is required to achieve optimum yield for public trust marine fishery resources. Optimizing the yield of our nation's fisheries requires safeguarding these resources, their habitats, and the fishing communities that rely on their harvest.

The MSA requires fishery management Councils to describe, identify, conserve, and enhance essential fish habitat (EFH) for species managed under the Council's fishery management plans (FMPs), and to identify adverse effects to such habitat. EFH is defined as "*those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity*" (16 U.S.C. 1802 (10)). The MSA includes provisions for the identification and designation of habitat areas of particular concern (HAPC), which is a subset of EFH and include habitats that are important to ecosystem function, sensitive to human activities, stressed by development, or are rare. The Council has identified HAPC for Pacific Coast salmon and groundfish.

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 on EFH may result from actions occurring within EFH or outside of it and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). The MSA authorizes the Council to comment on actions that may affect the habitat, including EFH, of a fishery resource under its authority (Section 305(b)(3)(A)) and requires the Council to comment on actions that are likely to substantially affect the habitat of an anadromous fishery resource under its authority (Section 305(b)(3)(B)).

MSA Section 305 (b)(4) requires that Federal agencies respond directly to the Council:

(A) If the Secretary receives information from a Council or Federal or State agency or determines from other sources that an action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by any State or Federal agency would adversely affect any essential fish habitat identified under this Act, the Secretary shall recommend to such agency measures that can be taken by such agency to conserve such habitat.

(B) Within 30 days after receiving a recommendation under subparagraph (A), a Federal agency shall provide a detailed response in writing to any Council commenting under paragraph (3) and the Secretary regarding the matter. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on such habitat. In the case of a response that is inconsistent with the recommendations of the Secretary, the Federal agency shall explain its reasons for not following the recommendations.

The Corps' proposed action and activities proposed in the DMMP are within designated EFH for federally managed Pacific Coast salmon, groundfish, and coastal pelagic species. Such actions may adversely affect the EFH of these species as well as the HAPC for Pacific Coast groundfish (estuaries and seagrass) and Pacific salmon (complex channels and floodplains, thermal refugia, spawning habitat, estuaries, and marine and estuarine submerged aquatic vegetation).

Council Concerns

The Council's primary concerns of the proposed action are the potential losses and alterations of existing shallow water habitat and prey resources for Council-managed species caused by the placement of dredge materials at the proposed sites, and a lack of baseline information and monitoring in the LCR to understand the potential short-term and long-term effects.

The preferred “Maximize Placement” alternative includes 143 new in-water potential dredge placement sites or structures (including contingencies), in addition to the existing placement sites still in use. While the LCR is a heavily altered system, 143 new alterations have the potential to further degrade existing habitat and impacts. Potential habitat alterations include but are not limited to sediment movement (transport, storage, sorting), channel hydraulics and velocities, organic matter imports and exports, and biogeochemical cycling. Altering these ecosystem functions may directly alter shallow water habitats utilized by salmon and groundfish.

In addition to altering physical habitat, burial of organisms due to sediment placement can reduce abundances of invertebrate species by 35-65% (Peterson et al. 2000) and can significantly affect species richness and diversity (Wooldridge et al. 2016, Schooler et al. 2019). The one study in the LCR done by the Pacific Northwest National Laboratory at Woodland Island indicated a significant decrease in total abundance of benthic invertebrates, and an 8% and 88% decrease in two common prey items for juvenile salmon two years post dredge material placement (Sather et al. 2023). While Sather et al. pointed out that the community composition was similar before and after placement and would likely recolonize, this study did not consider the effects of repeated dredge material placement on recolonization, and only reports on two years post impact, so actual recovery and the timeline for recovery is unknown. Other research indicates that recovery times can vary from months to years (Wooldridge et al. 2016, van Egmond et al 2018), however some direct impacts can potentially be mediated by placing sediment prior to recruitment in the spring (Manning et al. 2014). Additionally, placement of coarse sand with limited fines that is typically dredged from the FNC may impede the recruitment and reestablishment of benthic communities at shallow-water placement sites, slowing the rebound of the prey-resources for Council-managed species. The burial, and subsequent slow recovery of the benthic community could ultimately have substantial impact on salmon and groundfish.

The Council continues to have concerns around the potential of increased avian and piscine predation on juvenile salmonids in the LCR as a result of an increased number of pile dikes and shoreline/upland placement sites. LCR estuary mortality of juvenile salmon and steelhead ranges from 24-50% (NOAA 2020). Pile dikes and artificial islands in the LCR provide nesting opportunities for avian species, like Caspian terns and double-crested cormorants, which already account for up to 19% mortality on juvenile salmonids (NOAA 2020). Concurrently, new shallow water habitats and pile dikes can frequently provide optimal habitat for piscine predators like introduced smallmouth bass, walleye, and native northern pikeminnow. Monitoring of both avian and piscine predation is currently underway at Woodland Islands, but results are not available yet, continuing the uncertainty around outcomes of shallow-water placement impacts on salmonids and groundfish.

Continued maintenance of the FNC in the LCR continues to simplify the estuary and remove opportunities for diverse life history types of juvenile salmonids, and repeated dredging and dredge placement actions does not allow for adequate recovery in the system. These repeated actions continue to take an energetic toll on Council-managed species and impact species and habitat recovery.

The Council is also concerned about impacts to commercial and recreational fishing at the proposed sites. Between RM 3 – 103 there are several (> 25) proposed sites that are located in popular recreational bank fishing locations, including shore-based angling and beach launching of

vessels from unimproved boat launches. More than half of these sites are also important to commercial fishing.

The Corps suggests that 100% of the placement sites in the DMMP fall within the “BUDM” (beneficial use of dredged material) category, suggesting that shallow water placement is in fact beneficial, ecologically and/or economically. The BUDM efforts in the LCR in shallow water habitats is entirely experimental. To date only one in-water BUDM pilot project has occurred in the LCR and monitoring of impacts to invertebrates lasted only two years, while monitoring of impacts to fish are still ongoing and has yet to be peer reviewed or published. It is not possible to categorize sites as ecologically beneficial when there is no baseline information or proposals for baseline studies prior to placement. Furthermore, there is no adaptive management plan if results from early placement sites indicate adverse effects and the need to modify placement strategies or site locations later in the 20-year plan.

There are other numerous potential impacts from the dredging and dredge material placement on the EFH of Council-managed species not covered in depth in this letter, including

- entraining of Council-managed species and their prey resources,
- smothering of Council-managed species and their prey resources,
- disrupting salmon migration with pile dike construction,
- stress to Council-managed species and their prey resources due to dredging and pile dike construction,
- dredging and dispersal of contaminated sediment, and
- reduced water quality due to turbidity and siltation.

Council Recommendations to the Corps

The Council provides the following recommendations for consideration.

The Council recommends prioritizing shallow water placement sites where shallow water habitat is limited, rather than locations where this habitat type already exists. The Corps should prioritize placing sediment in areas of lowest environmental impact first, to allow for areas of concern to have longer baseline monitoring and to be informed by lessons learned at placement sites initiated earlier in the 20-year plan.

The Council recommends the Corps inventory all proposed sites for salmon, groundfish, and Coastal Pelagic Species (CPS) species and fishing activity (in consultation with Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, and the Tribes). With that information, the Corps should remove sites from the Alternative that are deemed high-value fish habitat or important to fishing. Alternatively, include at least one additional Alternative in the Range of Alternatives that prioritizes dredge placement sites based on the lack of fish presence/habitat utilization or fishing activity. A broader range of Alternatives for a project of this scale and magnitude is necessary given the scale of this action and potential scale of impacts to fish habitat and fishing. The two proposed alternatives, “Maximize Placement” and “Minimizing Dredging”, greatly limit opportunities to protect important habitats and fishing in the LCR.

The Council recommends conducting baseline studies at proposed shallow water sites for three years prior to any dredge material placement to determine habitat utilization by salmon, groundfish, or CPS species. The Council recommends providing a monitoring and adaptive management plan for sites that are categorized as *ecologically* and *economically* beneficial to better understand baseline conditions and subsequent impacts of dredge placement on Council-managed species and their prey resources. The Council recommends clarifying whether the “economically beneficial” placement sites are also areas utilized by salmon and groundfish. The Council also recommends the Corps secure adequate funding for baseline and monitoring studies for the life of the 20-year DMMP as part of the Operations and Maintenance budget of the DMMP and not tied to other Corps budgets that must compete nationwide. Monitoring and adaptive management are critical to minimizing impacts to habitat and fisheries resources and should be prioritized in the Operations and Maintenance of the LCR FNC. Additionally, the Council agrees with the National Marine Fisheries Service Fish and Wildlife Coordination Act EFH recommendations (NMFS 2024), and recommends the Corps implement those recommendations.

Lastly, while this process started in 2017 and included workshops on site-selection, the final plan will determine the future of the LCR and the species that utilize it for the next 20 years. The Corps’ proposed plan and associated EIS are over 3,000 pages and a 45-day public comment period does not allow for sufficient time to review these materials, or fully consider the implications of the proposed action on EFH, ecosystem function, fisheries, and fishing, nor sufficient time for detailed comment. A DMMP/EIS of this size requires a longer comment period for the public to better engage and we appreciate the recently announced 30-day extension, which will benefit public engagement.

Thank you for considering our concerns and recommendations. We look forward to your timely response to our comments, consistent with MSA Section 305 (b)(4)(B), and to future opportunities to work with you on LCR activities.

Sincerely,

A handwritten signature in black ink, appearing to read "Brad Pettinger", with a long horizontal flourish extending to the right.

Brad Pettinger
Council Chair

LAB:ael

Cc: Council Members
Correigh Greene
Scott Heppell

REFERENCES

Manning, L. M., C. H. Peterson, and M. J. Bishop. 2014. Dominant macrobenthic populations experience sustained impacts from annual disposal of fine sediments on sandy beaches. *Marine Ecology Progress Series* 508:1-15. (i)

NMFS (National Marine Fisheries Service) 2024. Draft Fish and Wildlife Act coordination reports, Appendix J.4. In: U.S. Army Corps of Engineers. Lower Columbia River channel maintenance plan, draft integrated dredged material management plan and environmental impact statement. Portland, OR.

NOAA (National Oceanic and Atmospheric Administration) 2020. Phase 2 Report of the Columbia Basin Partnership Task Force of the Marine Fisheries Advisory Committee.

Peterson, C.H., D.H.M. Hickerson, and G. Grissom Johnson. 2000. Short-Term Consequences of Nourishment and Bulldozing on the Dominant Large Invertebrates of a Sandy Beach. *Journal of Coastal Research* 16(2):368-378. (i)

Sather, N.K., K. Mackereth, and N. Meenu Mohankumar. 2023. Action Effectiveness Monitoring and Research of Dredged Material Placement at Woodland Island. Pacific Northwest National Laboratory, Richland, WA.

Schooler, N. K., J. E. Dugan, and D. M. Hubbard. 2019. No lines in the sand: Impacts of intense mechanized maintenance regimes on sandy beach ecosystems span the intertidal zone on urban coasts. *Ecological Indicators* 106:105457. (i)

van Egmond, E. M., P. M. van Bodegom, M. P. Berg, J. W. M. Wijsman, L. Leewis, G. M. Janssen, and R. Aerts. 2018. A mega-nourishment creates novel habitat for intertidal macroinvertebrates by enhancing habitat relief of the sandy beach. *Estuarine, Coastal and Shelf Science* 207:232-241. (i)

Wooldridge, T., H. J. Henter, and J. R. Kohn. 2016. Effects of beach replenishment on intertidal invertebrates: A 15-month, eight beach study. *Estuarine, Coastal and Shelf Science* 175:24-33. (i)