



DEPARTMENT OF THE ARMY
ALASKA DISTRICT, U.S. ARMY CORPS OF ENGINEERS
REGULATORY DIVISION
P.O. BOX 6898
JBER, AK 99506-0898

December 12, 2024

Regulatory Division
POA-2003-00502-M21

Ms. Catherine Coon
Assistant Regional Administrator
National Marine Fisheries Service
Habitat Conservation Division
222 West 7th Avenue, Box 43
Anchorage, Alaska 99513

Dear Ms. Coon:

This is in response to your November 8, 2024, letter providing Essential Fish Habitat (EFH) conservation recommendations for a Department of the Army (DA) permit application submitted by the Port of Alaska, file number POA-2003-00502-M21, Knik Arm. The applicant requests authorization for the Cargo Terminals Replacement Project.

Pursuant to Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation Management Act (MSFCMA), the U.S. Army Corps of Engineers (Corps) is required to respond to your EFH conservation recommendations within 30 days of receiving them. As the non-federal designee, please see the attached response from HDR Consulting on behalf of the Port of Alaska.

Your recommendations have been given full consideration in our evaluation of this permit application. Pursuant to the MSFCMA, you are hereby notified of our final decision regarding your EFH conservation recommendations, and we will not issue the DA permit for at least 10 days from the date of this letter.

Please contact Kerri Hancock via email at Kerri.C.Hancock@usace.army.mil, by mail at the address above, by phone at (907) 753-2719, or toll free from within Alaska at (800) 478-2712, if you have questions. For more information about the Regulatory Program, please visit our website at www.poa.usace.army.mil/Missions/Regulatory.

Sincerely,

Frederick J. Land
Frederick J. Land
Chief, South Section

Enclosures



Program Management Office • 1871 Anchorage Port Road • Anchorage, Alaska 99501

December 3, 2024

Kerri Hancock
U.S. Army Corps of Engineers – Alaska District
Regulatory Division (CEPOA-RD)
P.O. Box 6898
JBER, Alaska 99506-0898

Subject: Re: Cargo Terminals Replacement, POA-2003-00502-M21; NMFS ECO Reference No. AKRO-2024-02661

Dear Ms. Hancock,

In accordance with Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), the Port of Alaska (Port) has prepared this letter for the U.S Army Corps of Engineers (USACE) to explain its reasons for not following all of the conservation recommendations that were provided by the National Marine Fisheries Service (NMFS) in an Essential Fish Habitat (EFH) response letter dated November 8, 2024 for the Cargo Terminals Replacement (CTR) Project (USACE POA-2003-00502-M21; NMFS ECO Reference No. AKRO-2024-02661).

The Port agrees with EFH Conservation Recommendations No. 1-4 in NMFS' letter but would like to clarify that the proposed mitigation measure in Conservation Recommendation No. 5 is not intended to be a measure to avoid and minimize potential adverse impacts on EFH. This mitigation measure was included as requested by NMFS in consideration of potential impacts on Cook Inlet beluga whales. The Port is currently engaging with NMFS on modifying this mitigation measure to continue protection of beluga whales in a way that has a lesser impact on Port schedule and construction efficiency.

The Port does not plan to follow the following conservation recommendation that was provided in the NMFS EFH letter:

- *"Install confined bubble curtains around the construction area(s), to the extent possible, prior to, and during, the installation and removal of piles with a vibratory hammer in the months of April, May, June, and July to further reduce potential adverse impact to EFH. Pacific salmon use of the habitat in the project area peaks from April to July."*

In NMFS' response letter, NMFS cites Limpinsel et al. (2023) for further information on the provided recommendation(s). Upon our review of Limpinsel et al. (2023), the supporting evidence that was cited for implementing measures to attenuate sound levels were regarding the use of an impact hammer, not a vibratory hammer, for all three source documents (Longmuir and Lively 2001, Popper and Hawkins 2019; Tsouvalas and Metrikine 2016). The Port does not believe that Limpinsel et al. (2023) is suggesting and/or providing any scientific evidence or support for the use of bubble curtains during vibratory pile driving. The document clearly recommends use of bubble curtains when sound levels from impact pile driving exceed thresholds, which are only established for impact pile driving.

Currently, NMFS has no injury thresholds for fishes from vibratory pile driving, only a proxy behavioral threshold. The proxy behavioral threshold is for all noise sources and fish species, so it is not specific to vibratory pile driving. Additionally, the 150 dB re 1 μ Pa (rms) that is used as the threshold is problematic due to the following reasons (Popper & Hawkins, 2019; CalTrans 2024):

1. The origin and scientific basis is unknown (Hastings, 2008).

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2. The value is based on the assumption that fishes respond to sound pressure even though most fishes primarily detect particle motion, therefore any behavioral criteria should be based on the acoustic signals that the fish can actually detect and respond to (Popper & Hawkins, 2018, 2019).
3. A single criterion value for behavior does not take into consideration the very substantial species differences in hearing sensitivity, behavior, or response changes with animal age, season, or motivational state (Neo et al., 2014).
4. The behavioral threshold was intended to be advisory and for general information purposes only; it was never intended to be a threshold for determining impacts, assessing take, or determining mitigation (CalTrans 2024).

The Port has been concerned about acoustic impacts on the surrounding marine environment and sponsored extensive monitoring programs of acoustics, marine mammals and fish. A fish in cage study conducted in 2009 exposed juvenile coho salmon to pile driving sounds during the Marine Terminal Redevelopment (MTR) Project (Hart Crowser 2009). These fish were exposed to both vibratory and impact pile driving sounds. This study did not find any short-term or long-term mortalities of juvenile coho salmon with exposure levels of 179 to 191 dB SEL re 1 $\mu\text{Pa}^2\text{sec}$. While the exposure levels were generally lower than expected for projects driving larger piles, it was noted that “the strong currents prevalent within Knik Arm (maximum currents greater than 7 knots) would limit exposure to excessive noise levels associated with pile driving.” Fish in this study were exposed to vibratory sounds that were similar or slightly lower than what is expected with the CTR project; however, they were also exposed to sound from impulsive pile driving that would be higher. The vessel used for the experiments was held in place near pile driving to artificially expose fish for longer periods. The authors concluded that data from this study and other acoustic monitoring and pile driving studies strongly indicate that sheet pile driving during the MTR Project posed little risk to out-migrating juvenile salmon. Note that sound levels from vibratory driving of sheet piles are similar to those of the template piles (CalTrans 2020).

The use of a vibratory pile driver over an impact pile driver is in and of itself considered to be an EFH conservation recommendation (Limpinsel et al. 2023; CalTrans 2020). “Vibratory hammers produce less peak sound pressure than impact hammers and are often employed as an avoidance and minimization measure in the initial placement of the pile by reducing the overall number of strikes necessary to drive the pile to the final elevation. There are no established injury criteria for vibratory pile driving, and resource agencies agree that vibratory pile driving results in reduced adverse effects on fish as compared to impulsive pile driving” (CalTrans 2020). Limpinsel et al. (2023) recommends the use of a vibratory hammer when driving hollow steel piles over an impact hammer (to the maximum extent practicable) as a conservation measure, one that the Port is already proposing to follow. Other conservation recommendations provided in Limpinsel et al. (2023), which the Port has proposed to implement, include using a bubble curtain on impact pile driving and driving piles when the current is reduced (to the maximum extent practicable).

The Port agrees that impacts on EFH should be mitigated, which is why we have proposed using a bubble curtain on all impact pile driving. An unconfined design was found to be effective during construction of the Port’s Petroleum & Cement Terminal (PCT) in 2020 and 2021, and it is anticipated that a similar system will be used for impact installation of permanent piles for the CTR Project. There is no scientific evidence to support the use of a bubble curtain with vibratory pile driving, especially for fish species for which no injury thresholds exist, nor is the Port aware of any other project where the use of bubble curtains on vibratory pile driving has been suggested as a conservation measure for fish species. Typically, sound attenuation methods are considered for impulsive pile driving (i.e., impact pile driving). For example, in a project location with similar EFH resources/species, including ESA-listed salmonids, NMFS’ proposed conservation recommendations include attenuation methods for impact pile driving only, despite the project having vibratory pile driving as well (NMFS WCRO-2024-02427). Vibratory pile installation without a bubble

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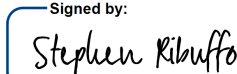
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curtain is encouraged in lieu of impact pile driving along much of the West Coast where salmonids and their habitats are protected under the ESA (Caltrans 2020).

The Port does not plan to follow the provided conservation recommendation of using a bubble curtain during vibratory pile installation and removal of temporary piles because 1) the cited literature does not support the conservation recommendation; 2) the recommendation is not scientifically supported to provide a benefit to fishes or EFH; 3) there is no scientific evidence of vibratory pile driving injuring fish species, nor are there any existing injury thresholds; and 4) vibratory pile driving is typically used in place of impact pile driving as an EFH conservation recommendation. Furthermore, 5) the Port is not aware of any other project where the use of a bubble curtain during vibratory pile driving is considered a mitigation measure for EFH, even in areas with ESA-listed fish species.

Thank you for considering the Port's concerns.

Sincerely,

Signed by:

 169AD3846D4149C...
 Stephen Ribuffo
 Director
 Don Young Port of Alaska

Literature Cited

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