

# FINDING OF NO SIGNIFICANT IMPACT FOR THE ISSUANCE OF AN INCIDENTAL HARASSMENT AUTHORIZATION FOR THE RELOCATION OF THE PORT OF ALASKA'S SOUTH FLOATING DOCK IN ANCHORAGE, ALASKA

## I. INTRODUCTION AND PURPOSE

The National Marine Fisheries Service (NMFS) received an application from the Port of Alaska (POA) requesting take<sup>1</sup> of marine mammals incidental to pile driving and removal associated with the relocation of their south floating dock (SFD) within Knik Arm in upper Cook Inlet, Alaska. NMFS is mandated to review applications and, if appropriate, issue Incidental Take Authorizations<sup>2</sup> pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 et seq.) provided certain findings are made. In addition, the National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR) Parts 1500 -1508<sup>3</sup> and National Oceanic and Atmospheric Administration (NOAA) policy and procedures<sup>4</sup> require all proposals for major federal actions be reviewed with respect to environmental consequences on the human environment. The purpose of this document is to present the evaluation of NMFS' rationale for its finding that issuance of an Incidental Harassment Authorization (IHA) to POA will not significantly impact the quality of the human environment.

## II. BACKGROUND

NMFS issuance of an IHA to POA is pursuant to Section 101(a)(5)(A) of the MMPA and 50 CFR Part 216. The IHA will be valid for one year after the date of issuance. The IHA authorizes take, by Level A (injury) and/or Level B (behavioral) harassment, of small numbers of marine

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<sup>1</sup> "Take" means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal. "Harassment" is statutorily defined as, any act of pursuit, torment, or annoyance which--

- *(Level A Harassment)* has the potential to injure a marine mammal or marine mammal stock in the wild; or,
- *(Level B Harassment)* has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering but which does not have the potential to injure a marine mammal or marine mammal stock in the wild.

<sup>2</sup> Incidental Take Authorizations (ITAs) may be issued as either (1) regulations and the associated Letter of Authorization (LOA) or (2) an Incidental Harassment Authorization (IHA). LOAs may be issued for a maximum period of five years and IHAs may be issued for a maximum period of one year. Detailed information about the MMPA is available at <https://www.fisheries.noaa.gov/topic/laws-policies#marine-mammal-protection-act>.

<sup>3</sup> This FONSI is being prepared using the 2020 CEQ NEPA Regulations. The effective date of the 2020 CEQ NEPA Regulations was September 14, 2020, and reviews begun after this date are required to apply the 2020 regulations unless there is a clear and fundamental conflict with an applicable statute. 85 Fed. Reg. at 43372-73 (§§ 1506.13, 1507.3(a)). The associated EA for this FONSI began on October 2, 2020 and accordingly proceeds under the 2020 regulations.

<sup>4</sup> NOAA Administrative Order (NAO) 216-6A "Compliance with the National Environmental Policy Act, Executive Orders 12114, Environmental Effects Abroad of Major Federal Actions; 11988 and 13690, Floodplain Management; and 11990, Protection of Wetlands" issued April 22, 2016 and the Companion Manual for NAO 216-6A "Policy and Procedures for Implementing the National Environmental Policy Act and Related Authorities" issued January 13, 2017

mammals incidental to the relocation of the SFD. Specifically, the SFD Project will include the removal of the existing access trestle and gangway, and installation of twelve permanent 36-inch steel pipe piles: ten vertical and two battered. Construction of the SFD will also require the installation and removal of up to six 24- or 36-inch temporary template piles. Construction requires impact and vibratory pile driving and vibratory pile removal which are activities that have the potential to result in the harassment of marine mammals.

NMFS' proposed action is a direct outcome of the POA's request, where pile driving and removal has the potential to result in marine mammal harassment and/or injury. To legally harass and/or injure a marine mammal, the POA must obtain authorization from NMFS. An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact<sup>5</sup> on the species or stock(s), and, where relevant, will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses. In addition, the IHA must set forth the permissible methods of taking, other means of effecting the least practicable adverse impact on the species or stock and its habitat, and requirements pertaining to the monitoring and reporting of such takings.

NMFS' issuance of an IHA to POA allowing the taking of marine mammals, consistent with provisions under the MMPA and incidental to the applicant's lawful activities, is considered a major federal action. NMFS determined preparing an Environmental Assessment (EA) was the appropriate level of NEPA analysis for the issuance of the IHA to POA. In addition, NMFS relied on the public process pursuant to the MMPA to develop and evaluate environmental information relevant to the analysis under NEPA by making the draft EA available during the proposed IHA public comment period.

### **III. PROPOSED ACTION AND ALTERNATIVES SUMMARY**

NMFS is required to consider a reasonable range of alternatives to its Proposed Action, which is the consideration whether to issue the IHA to POA. Based on the statutory framework explained above, NMFS considers two alternatives, a no action alternative in which NMFS denies the request for an IHA and an action alternative in which it grants the request and issues an IHA. Thus, the Final EA addresses the potential environmental impacts of two alternatives to meet NMFS' purpose and need:

Alternative 1 (No Action Alternative): Denial of an MMPA authorization constitutes the No Action Alternative, which is consistent with NMFS' statutory obligation under the MMPA to grant or deny incidental take authorization requests and to prescribe mitigation, monitoring, and reporting with any authorizations. Under the No Action Alternative, NMFS would not issue the IHA and NMFS assumes POA would not conduct their planned pile driving and removal

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<sup>5</sup> NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

activities as described in their application. The No Action Alternative served as a baseline against which the impacts of the Preferred Alternative were compared and contrasted.

Alternative 2 (Preferred Alternative): NMFS issues the IHA to POA authorizing take of marine mammals incidental to POA's proposed construction activities described in their application and with the mitigation and monitoring and reporting measures described in Section 2.4 of the Final EA and in the *Federal Register* announcing NMFS' proposal to issue the IHA under "Required Mitigation" and "Required Monitoring and Reporting" sections (86 FR 31870, June 15, 2021).

#### IV. ANALYSIS SUMMARY

The environmental consequences to the marine environment and protected resources are important to the evaluation leading to the decision to issue any given IHA. In particular, because NMFS' action is specific to authorizing incidental take of marine mammals, the key factors relevant to, and considered in a decision to issue any given IHA, are related to NMFS' statutory requirements under the MMPA. The information in the following subsections discusses key factors considered in the analysis in the EA along with the evaluation and reasons why the impacts of our proposed action will not significantly impact the quality of the human environment.

##### A. Summary of Environmental Consequences

In the EA, NMFS presents the baseline environmental conditions for the affected resources in upper Cook Inlet, specifically Knik Arm where the POA would relocate the SFD, along with a qualitative evaluation of potential impacts to marine mammals, including explanations about potential acoustic impacts used to indicate that received sound levels at which marine mammals will experience certain effects.<sup>6</sup> However, since the potential effects of sound on marine mammal species involves a complex analysis of the manner in which sound interacts with the physiology of marine mammals and the potential responses of those animals to sound, only general information about sound and marine mammal hearing along with potential effects of sound on marine mammals is explained in the EA while details concerning exposure estimates and the quantitative analysis of impacts to marine mammals is provided in the "Take Estimation" section of the Final EA and the *Federal Register* notice announcing our proposal to issue the IHA.

##### B. Significance Evaluation

The 2020 CEQ Regulations state that the significance of an action be analyzed in terms of both (i) the potentially affected environment and (ii) the degree of the effects of the proposed action (40 CFR 1501.3(b)). NOAA's Interim Guidance on Application of Revised CEQ NEPA Regulations (December 8, 2020) requires consideration of these two criteria along with additional factors for determining whether the impacts of a proposed action are significant. Each

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<sup>6</sup> Equivalent to regulatory definitions of harassment pursuant to the MMPA.

criterion is discussed below with respect to NMFS's proposed action and is considered individually as well as in combination with the others.

*1. Can the proposed action reasonably be expected to cause both beneficial and adverse impacts that overall may result in a significant effect, even if the effect will be beneficial?*

NMFS' proposed action is not expected to cause either beneficial or adverse impacts resulting in any significant effects. NMFS is proposing to authorize take of marine mammals incidental to pile driving and removal activities. Therefore, impacts from NMFS' proposed action are to marine mammals, which, if affected, would be through the introduction of sound into the marine environment during the relocation of the SFD. Pile driving and removal, which will introduce low-frequency noise into the water column, have the potential to behaviorally disturb marine mammals and, for some species, cause some auditory injury. In addition, noise can mask the detection or interpretation of important sounds (e.g., foraging, mating). Marine mammal prey (e.g., fish and squid) may also be impacted in some of the same ways. However, NMFS expects its action to have only limited, intermittent, localized impacts on marine mammals and their habitat, due to the fact that pile driving and removal is not continuous throughout the day, would occur every day, and would not exceed 21 total hours of total pile driving. Further, marine mammals may not be continuously present within the action area when pile driving and removal may be occurring. Finally, the prescribed mitigation and monitoring requires activity shutdowns should marine mammals approach pile driving and removal activities. While NMFS predicts direct adverse effects to individuals may occur, population-level effects that would rise to the level of significance are not anticipated. Effects to all marine mammals are expected to be negligible, as defined under the MMPA.

*2. Can the proposed action reasonably be expected to significantly affect public health or safety?*

The issuance of an IHA to POA for take of marine mammals is not likely to have the potential for this kind of effect because the proposed relocation of the SFD is unlikely to overlap with activities conducted by the public. Public access, including vessel use, is restricted around the POA. NMFS only authorizes the take of marine mammal species associated with pile driving and removal, which does not involve the public or expose the public directly (e.g., chemicals, diseases) or indirectly (e.g., food sources) to hazardous or toxic materials in a way that would be linked to the quality of the environment and well-being of humans.

*3. Can the proposed action reasonably be expected to result in significant impacts to unique characteristics of the geographic area, such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?*

The primary potential effects that may result from NMFS' proposed action are potential adverse effects to marine mammals that are the subject of the take authorization, as well as their habitat. Any proposed activity must be consistent with the MMPA and NMFS' implementing regulations and, as applicable, must cause no greater than negligible impacts to affected species or stocks,

cause taking determined to be of no greater than small numbers, and include measures sufficient to effect the least practicable adverse impact to marine mammal species or stocks and their habitat. Therefore, it is not likely the issuance of the IHA to POA could adversely impact these areas at a level that would reach significance under NEPA. The action area does not contain, and is not adjacent to, areas of notable visual, scenic, historic, or aesthetic resources that would be substantially impacted. The surrounding water is primarily used for shipping traffic and is already impacted by human development. The waters immediately surrounding the POA were exempt from critical habitat designation; however, noise from pile driving and removal would propagate into Cook Inlet beluga whale critical habitat. However, impacts to EFH and critical habitat for federally-listed species are likely to be minor, localized, and short-term. Long-term impacts are limited to the footprint of the new SFD. POA's activities may overlap spatially with federally designated critical habitat but this overlap is limited to the times during which pile driving and removal is occurring and would affect a small portion of the overall available critical habitat. The use of an unconfined bubble curtain, which is expected to reduce the size of the action area, is included as an additional measure of habitat protection.

*4. Are the proposed action's effects on the quality of the human environment likely to be highly controversial?*

NMFS' action (i.e., issuance of an IHA) and the underlying activity (i.e., pile driving and removal associated with construction) is not controversial with respect to the effects on the quality of the human environment. NMFS has previously assessed and authorized incidental take of marine mammals for pile driving and removal activities at the POA as well as several other locations. The previous POA projects included extensive marine mammal monitoring. The effects of pile driving and removal on marine mammals are well-understood and dependent on species and context. The authorized effects include auditory threshold shift and behavioral reactions such as temporary avoidance, increased swim speeds, and cessation of vocalization or foraging behavior. The environmental effects of the proposed action are not disproportionate in type or scope from similar activities and NMFS has found the authorized take will not adversely affect the marine mammals species or stocks through effects on annual rates of recruitment or survival.

During the public comment period for the proposed IHA (86 FR 31870, June 15, 2021), NMFS received comments expressing concern about the noise levels in Cook Inlet and the status of the Cook Inlet beluga whales. Comments received in response to the publication of the proposed IHA were considered and used to inform the analysis in the Final EA. A more detailed summary of the comments, and NMFS' responses to those comments, is included in the Federal Register notice for the issued IHA. The IHA contains extensive mitigation and monitoring measures designed to avoid, reduce, and mitigate any potential impacts. These requirements are more or equally protective than what was proposed by POA and what has been prescribed by NMFS in previous IHAs to the POA. These measures ensure the least practicable adverse impact to marine mammal species or stocks and their habitat. NMFS bases analyses and mitigation on the best

available science and to date, there is not a substantial disagreement over the evaluation methods used or analysis of impacts anticipated, as described in the EA.

*5. Are the proposed action's effects on the human environment likely to be highly uncertain or involve unique or unknown risks?*

Some scientific uncertainties exist regarding the degree and manner in which anthropogenic noise, including noise produced by pile driving and removal, impacts marine mammals; however, the uncertainty is not substantial. There is a substantial body of peer-reviewed scientific literature regarding the impacts of noise on marine mammals and NMFS has issued incidental take authorizations authorizing the take of marine mammals incidental to similar activities (including those at the POA) and other activities with similar types of marine mammal impacts (including those occurring within Cook Inlet). NMFS has conducted NEPA analyses for those activities including reviewing, evaluating, and considering the results of mitigation and monitoring required for IHAs authorizing takes from similar noise-producing activities and NMFS does not expect the proposed action's effects on the human environment to be substantially different. NMFS expects any potential effects from the issuance of this IHA to be similar to prior analyzed activities, which are not likely to be highly uncertain or involve unique or unknown risks. Mitigation and monitoring methods have been evaluated in numerous prior environmental reviews and are expected to be effective in reducing adverse effects to marine mammals from exposure to pile driving and removal and removal noise levels.

*6. Can the proposed action reasonably be expected to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?*

The issuance of any given IHA may inform the environmental review for future projects but would not establish a precedent or represent a decision in principle about future actions. NMFS' actions under MMPA Section 101(a)(5)(D) are considered individually and are based on the best available scientific information, which is continuously evolving, and requests for ITAs are evaluated on their own merits relative to the criteria established in the MMPA and 50 CFR Part 216 on a case-by-case basis. Therefore, issuance of an IHA to a specific entity for a given activity does not guarantee or imply that NMFS will issue future authorizations upon request in relation to similar activities. For these reasons, the issuance of the IHA to POA would not set a precedent. Should the POA or other future applicants apply for IHA to conduct pile driving and removal in Cook Inlet or elsewhere, NMFS will conduct relevant subsequent analyses and evaluate each on a case-by-case basis under both the MMPA and NEPA.

*7. Is the proposed action related to other actions that when considered together will have individually insignificant but cumulatively significant impacts?*

The proposed action considered herein is the issuance of an IHA to POA, and the effects of such issuance on marine mammals and their habitat. Other relevant actions to be considered in evaluating potentially cumulatively significant impacts include subsistence hunting, pollution,

commercial and recreational fishing, vessel traffic, coastal construction at the POA and elsewhere, oil and gas development activities, mining, marine mammal scientific research, and climate change. Many of these activities are spatially and temporally limited and do not permanently reduce or degrade the habitat available to marine mammals or their prey species. Cook Inlet is also a geographically vast area, and many activities, including the activities proposed by POA, are geographically discrete from other portions of the Inlet, which prevents the continued or permanent disruption of one particular portion of the Inlet for extended durations. We considered all relevant activities in evaluating the potential for cumulatively significant impacts in the Final EA. NMFS' EA concludes that the impacts of the SFD project, considered in context with NMFS's required mitigation, will not result in cumulatively significant impacts to marine mammals and their habitat when viewed collectively with other past, present, and reasonably foreseeable future actions.

NMFS has prescribed mitigation and monitoring to avoid and minimize potential impacts, as required by the MMPA. Specifically, pile driving and removal activities may not commence if Cook Inlet beluga whales are observed within designated pre-clearance zones that essentially encompass all of lower Knik Arm. If pile driving and removal is occurring, the POA is required to shut down pile driving and removal activities should a Cook Inlet beluga whale approach or enter the Level B harassment zone. The takes authorized in the IHA provide coverage for times when, for some reason, pile driving and removal cannot shut down prior to the whale being exposed to noise levels that could potentially result in Level B harassment. Shutdown zones for other marine mammals are designed to avoid and minimize take from both Level A harassment and Level B harassment. NMFS has also implemented a restriction on vibratory pile driving and removal of 36-in battered piles, which effect the largest ensonified zones, during August and September when Cook Inlet beluga whales are most prevalent in Knik Arm. Therefore, we find that the effects of issuance of the IHA are effectively minimized, practicable, and are not significant. When considered incrementally in addition to other activity ongoing in the survey area (i.e., commercial and recreational fisheries, shipping and marine transportation, military activity, recreational boating, energy development, other construction, etc.), cumulative impacts from the combined potential activities are not expected to be significant.

*8. Can the proposed action reasonably be expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources?*

The effects of issuance of this IHA is limited to those occurring to marine mammals and their habitat; and, therefore, NMFS' proposed action is not expected to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. Likewise, it is not expected to cause loss or destruction of significant scientific, cultural, or historical resources. The underlying pile driving and removal activities take place at the POA

and there are no such resources there; therefore, the chance of affecting such resources is so remote and unlikely as to be discountable.

*9. Can the proposed action reasonably be expected to have a significant impact on endangered or threatened species, or their critical habitat as defined under the Endangered Species Act of 1973?*

The issuance of the IHA is not expected to have a significant impact on endangered or threatened species or critical habitat under the ESA. Based on the results of the ESA section 7 consultation (summarized below) along with mitigation measures designed to avoid, minimize and mitigate impacts to ESA-listed species and critical habitat, NMFS expects that any impacts to ESA-listed marine mammals, as well as their critical habitat, will be limited to harassment and not be significant.

The POA's proposed relocation and construction of the SFD has the potential to affect the following species listed as threatened or endangered under the ESA: Cook Inlet beluga whales, humpback whales (Mexico Distinct Population Segment (DPS)), and western DPS Steller sea lions. In 2021, NMFS' Permits and Conservation Division initiated consultation with NMFS' Alaska Regional Office for issuance of the IHA. In August 2021, NMFS' Endangered Species Act Interagency Cooperation Division found that NMFS' issuance of the IHA is not likely to jeopardize the continued existence of endangered or threatened species and would not affect critical habitat, and issued a Biological Opinion providing conclusions specific to NMFS' actions relevant to the proposed construction activities.

NMFS determined that the proposed pile driving and removal activities are likely to result in the take, by acoustic harassment, of a small number of ESA listed animals. NMFS also determined that this take would not jeopardize the continued existence or recovery of said species. Harassment is expected to be the sole outcome of acoustic exposure from pile driving and removal with behavioral responses being temporary in nature. Steller sea lions are considered uncommon in Knik Arm (i.e., take is unlikely to occur and would only be in limited numbers if it did) but NMFS has provided a precautionary take authorization. To reduce potential exposure to sound levels likely to result in take, NMFS is requiring multiple monitoring and mitigation measures for all marine mammals. These are described in detail in the EA and notice of issuance of the IHA, but in summary include: shutdowns for marine mammals within or entering a pre-clearance zone (defined as the area northeast of an in-bound line extending from Point Woronzof to approximately 2.5 kms west of Point McKenzie and southwest of an out-bound line extending from Cairn Point to the opposite bank) and Level B harassment zone (Cook Inlet beluga whales only); shutdown zones at 100 m or at the Level A harassment zone (whichever is larger; non-Cook Inlet beluga whales), continuous visual monitoring before, during, and after pile driving and removal from four monitoring stations; time-area closure (e.g., no vibratory pile driving and removal of 36-in battered piles during August or September); use of an unconfined bubble curtain; and reporting requirements. In addition, the POA has substantially reduced the number

of piles to be installed from that initially conceived for this project (during pre-application coordination phases with NMFS). Therefore, these other means of reducing impacts to Cook Inlet beluga whales were considered as part of the project planning phase.

The only critical habitat designation within the action area relevant to NMFS' action is for Cook Inlet beluga whales, which includes much of Cook Inlet, Alaska. The waters directly surrounding the POA are excluded from critical habitat designation but noise from pile driving and removal will propagate into critical habitat. Use of the critical habitat by Cook Inlet beluga whales of the greater habitat area varies temporally, specifically with a peak in beluga abundance in Knik Arm in later summer months (i.e., August, September). As described above, NMFS is requiring stringent mitigation and monitoring measures throughout the construction season (April through November) with a restriction on driving the piles with the largest isopleths (36-in battered) with a vibratory hammer during the months of August and September to account for this peak occurrence. The action is not likely to destroy or adversely modify Cook Inlet beluga whale critical habitat.

*10. Can the proposed action reasonably be expected to threaten a violation of Federal, state, or local law or requirements imposed for environmental protection?*

The issuance of the IHA to POA will not violate any federal, state, or local laws for environmental protection, as NMFS has engaged in consultation and conducted analyses as necessary to ensure compliance with relevant environmental protection laws. NMFS' Permits and Conservation Division initiated consultation under section 7 of the ESA with NMFS' Alaska Regional Office in 2021 to consider the effects of issuance of the IHA. This consultation concluded in August 2021 and found, as described above, that NMFS' action to potentially issue the IHA would not jeopardize the continued existence of any listed species nor affect critical habitat. NMFS' action will not affect resources of any National Marine Sanctuary, Essential Fish Habitat (EFH) designated pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), or have reasonably foreseeable effects on the uses or resources of the coastal zone of any state (pursuant to the Coastal Zone Management Act). There are no other environmental laws, regulations, federal permits, or licenses applicable to NMFS for the issuance of the IHA.

*11. Can the proposed action reasonably be expected to adversely affect stocks of marine mammals as defined in the Marine Mammal Protection Act?*

POA's proposed activity has the potential to take small numbers of six species of marine mammals, by harassment as defined in the MMPA. However, we expect take to result in a negligible impact on species or stocks. Importantly, effects on individuals or groups of animals does not necessarily translate into an adverse effect to a stock or species, unless such effects result in reduced fitness for those individuals and, ultimately, accrue to the point that there is

reduced reproduction or survival leading to effects on annual rates of recruitment or survival for the species.

For this proposed action, the taking of marine mammals would be incidental to pile driving and removal associated with the POA's SFD project. The source of harassment would be limited to noise exposure from pile driving and removal. In general, the effects on marine mammals from pile driving and removal may include, but are not limited to, hearing threshold shift (temporary and permanent), masking, stress response, and behavioral changes such as temporary avoidance of the immediate vicinity of pile driving and removal, increased travel speed and dive times, and cessation of foraging and vocalizing. The magnitude of the effect of sound on marine mammals is highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (e.g., species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors. For the POA activities, the required mitigation and monitoring measures prescribed in the IHA (including the implementation of shutdowns and reduced noise levels through use of a bubble curtain) will result in reduced exposure to pile driving and removal and removal noise and help further ensure that any resulting take will impact the fitness of any individual marine mammals or, thereby, have any effect on any annual rates of recruitment or survival. Overall, the proposed action will authorize incidental harassment to marine mammals; however, the harassment will result in a negligible impact on the affected species or stocks.

*12. Can the proposed action reasonably be expected to adversely affect managed fish species?*

Authorizing harassment to marine mammals would not adversely affect managed fish species but the underlying activity (pile driving and removal) is expected to result in short-term, minor adverse impacts to some managed fish species. Individual fish may be directly impacted by noise from pile driving and removal; however, these impacts are expected to be limited to behavioral reactions such as temporary avoidance (i.e., displacement). The use of a bubble curtain greatly reduces the potential for fish mortality and reduces effects from turbidity, which also has potential to impact fish.

*13. Can the proposed action reasonably be expected to adversely affect essential fish habitat as defined under the Magnuson-Stevens Fishery Conservation and Management Act?*

Effects of NMFS' action—the issuance of the IHA—is limited to impacts to marine mammals. Further, NMFS' action includes mitigation to reduce impacts to marine mammals and their habitat (which includes prey species such as fish), including the use of bubble curtains, which is expected to reduce ensonification in the area of the activity and thereby reduce acoustic impacts to any acoustically sensitive species. The proposed pile driving and removal activities associated with the relocation and construction of the SFD may result in temporarily elevated noise and turbidity levels at the pile driving and removal locations; however, conditions would immediately return to normal when pile driving and removal ceases. Furthermore, while pile

driving and removal may temporarily increase turbidity, waters in Knik Arm are notoriously turbid and this elevation in turbidity is unlikely to be detectable above naturally occurring background levels. Authorizing the take of marine mammals is directly associated to impacts on the marine mammals and their habitat and would not affect water quality or substrate necessary to provide spawning, feeding, breeding, or growth to maturity functions for managed fish.

In accordance with 2017 guidance issued by NMFS' Office of Habitat Conservation concerning incidental take authorizations and EFH, we determined the issuance of the IHA will not result in adverse impacts to EFH and, further, that it will not require separate consultation per Section 305(B)(2) of the MSFCMA as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267).

*14. Can the proposed action reasonably be expected to adversely affect vulnerable marine or coastal ecosystems, including but not limited to, deep coral ecosystems?*

We do not expect our action to impact any vulnerable marine ecosystems, nor any aspects of biodiversity or functioning of marine ecosystems, in a significant manner. As described elsewhere in this document and the EA, the impact from our action is limited to impacts to marine mammals and their habitat, due to the potential increased noise levels into the marine environment during pile driving and removal. The scientific literature does indicate that impacts to the marine mammal habitat, in the form of effects to marine mammal prey species, is likely. The use of a bubble curtain is a well-accepted measure to reduce impacts on fish and coastal ecosystems. Additional studies have shown that some fish and invertebrate species may experience displacement or behavioral changes as a result of acoustic exposure from pile driving and removal, such as temporary displacement or cessation in vocalization. However, any noise impact is expected to be limited to the duration of pile driving and removal. Thus, short-term minor adverse effects are likely to occur but are not expected to rise to the level of significance. As noted, we do not anticipate significant physical interactions from pile driving and removal on the environment, other than temporary disturbance and temporarily increased turbidity in the vicinity of pile driving and removal, and do not expect that noise from pile driving and removal would impact coastal ecosystems.

*15. Can the proposed action reasonably be expected to adversely affect biodiversity or ecosystem functioning (e.g., benthic productivity, predator-prey relationships, etc.)?*

We do not expect our action to have a substantial impact on biodiversity or ecosystem functioning within the affected environment. Cook Inlet beluga whales may avoid foraging in Ship Creek during pile driving and removal; however, richer, more productive and significant foraging grounds north of the POA would not be ensonified from pile driving and removal. The effects of our proposed action are expected to be limited to behavioral disturbance, masking, or stress. These effects are anticipated to be short term, minor, and localized. Any permanent

threshold shift incurred by non-Cook Inlet beluga whales is expected to be minor (slight threshold shift).

Some recent studies show potential impacts on zooplankton, which form the basis of many food webs, but while there is some scientific disagreement on impacts to zooplankton from this activity (see discussion in response to prior question), those impacts are not expected to affect predator-prey relationships or otherwise impact any form of benthic productivity. Further, many marine mammals are primarily targeting eulachon runs and pile driving and removal is not anticipated to effect the life cycles of fish such that those fish would not be available as prey.

*16. Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?*

The proposed action of issuing the IHA would not result in the introduction or spread of a non-indigenous species. While POA's project would result in increased vessel use during construction, leading to ballast water exchange, the vessels are primarily tugs or small work skiffs that are not uncommon to Cook Inlet. Further, POA is required to implement best management practices to prevent the introduction, continued existence, or spread of noxious organisms or other non-native species. Therefore, it is not likely that NMFS' issuance of the IHA would promote or result in the introduction or spread of invasive species at a level that would reach significance under NEPA.

## **V. CONDITIONS – MITIGATION, MONITORING AND REPORTING**

NMFS does not authorize or permit the POA's proposed SDF project; however, NMFS does authorize the incidental take of marine mammals under its jurisdiction in connection with these activities and prescribes, where applicable, the methods of taking and other means of effecting the least practicable impact on the species and stocks and their habitats. NMFS' issuance of the IHA is thus conditioned with mitigation and monitoring designed to reduce impacts to marine mammals to the level of least practicable impact. Further, POA is required to report findings from monitoring that will result in increased knowledge of the species and the level of taking or impacts on populations of marine mammals that are expected to be present while conducting activities. In summary, mitigation and monitoring that will be required includes, but is not limited to: implementation of shutdown zones, use of a bubble curtain on all plumb piles, limiting pile driving and removal to daylight hours only, restriction on vibratory driving 36-in battered piles during August and September, restriction on using two vibratory hammers at the same time and limiting the number of total hammers used concurrently, use of NMFS-approved protected species observers stationed at four locations before, during, and after pile driving and removal, and extensive acoustic monitoring. Both marine mammal and acoustic monitoring are to be conducted in accordance with the respective plans and required information described in the "Monitoring" section of the IHA. POA must also submit a final report to NMFS. These

conditions are described in detail in the “Mitigation” and “Monitoring” sections of the IHA and in Chapter 2.4 of the Final EA.

**VI. DETERMINATION**

Based on the information presented herein along with the analysis in the Final EA, it is hereby determined the issuance of the IHA to POA will not significantly impact the quality of the human environment. In addition, we addressed all beneficial and adverse impacts of the action to reach the conclusion of no significant impacts associated with NMFS’ issuance of the IHA. Accordingly, the preparation of an Environmental Impact Statement for this action is not necessary.

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Catherine Marzin

Acting Director, Office of Protected Resources

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Date