MARINE MAMMAL COMMISSION

5 August 2019

Ms. Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service's (NMFS) 28 June 2019 proposed rule (84 Fed. Reg. 30991) and the 1 October 2018 application[1] submitted by the Alaska Gasline Development Corporation (AGDC), seeking issuance of regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA). AGDC is seeking authorization to take small numbers of marine mammals by harassment incidental to constructing the Alaska Liquefied Natural Gas (Alaska LNG) facilities in Cook Inlet, Alaska, during a five-year period. Activities would occur from March 2020 until March 2025.

Background

AGDC is proposing to construct facilities to transport and offload natural gas resources originating on the North Slope of Alaska and piped to Cook Inlet via a natural gas pipeline[2]. As part of that project, AGDC would (1) construct a marine terminal consisting of a product loading facility (PLF) and a temporary material offloading facility (MOF) on the eastern side of Cook Inlet near Nikiski, (2) construct a mainline MOF on the west side of Cook Inlet near Beluga Landing, and (3) lay a 42-in natural gas pipeline across the inlet between the two sites. AGDC's proposed activities include vibratory and impact pile driving, dredging, trenching, anchor handling, and use of associated support vessels and aircraft.

NMFS preliminarily has determined that the proposed activities could cause Level A and/or B harassment of small numbers of 10 species or stocks of marine mammals, but that the total taking would have a negligible impact on the species or stocks. NMFS does not anticipate any lethal take of

[1] The 20 February 2018 version of AGDC's application, along with other related documents, was posted on NMFS's website when the *Federal Register* notice published on 28 June 2019. However, the Federal Energy Regulatory Commission's draft environmental impact statement (FERC DEIS) for the Alaska LNG project indicated that a revised version of AGDC's petition for marine mammal incidental take regulations was submitted to NMFS in October 2018. That revised application was provided to the Commission only after it was requested and was not made available to the public on NMFS's website until the week before the close of the public comment period.
[2] Construction activities proposed for the North Slope region would potentially impact other marine mammals and would presumably be addressed by AGDC in a separate MMPA incidental take application.

marine mammals. NMFS believes that the potential for take by Level A and B harassment would be at the least practicable level because of the applicant's proposed mitigation measures. The proposed mitigation, monitoring, and reporting measures include—

- using observers to monitor the Level A and B harassment zones for 30 minutes before, during, and for 30 minutes after the proposed activities;
- using soft-start, delay, and shut-down procedures[3] during pile driving;
- limiting pile driving activities to daylight hours and only when the exclusion zones are visible and can be adequately monitored;
- reporting all injured or dead marine mammals to the Office of Protected Resources, the Alaska Regional Office, and Alaska Region Stranding Coordinators using NMFS's phased approach and suspending activities, when appropriate[4]; and
- submitting annual reports and a final comprehensive summary report to NMFS.

Inadequate analysis of impacts on beluga whales

As indicated in previous letters regarding proposed incidental take authorizations for other sound-producing activities in Cook Inlet[5], the Commission remains concerned about the potential cumulative impacts of human activities on the endangered Cook Inlet beluga whale population. The Commission has recommended that NMFS defer issuance of incidental take authorizations and regulations until it has better information on why the population has not showed signs of recovery since cessation of hunting and, as part of NMFS's small numbers and negligible impact determinations, has a reasonable basis for determining that authorizing additional takes by harassment would not exacerbate that decline or further hinder recovery. No new information was presented in NMFS's analysis of the proposed activities to indicate that the cause (or causes) of the continued decline of the beluga whale population is understood. In addition, NMFS did not follow, or even mention in the preamble, its more recent interpretations of what constitutes small numbers[6] and negligible impact[7]. Further, NMFS did not discuss the criteria used and factual basis for determining that the proposed regulations meet the requirement of effecting the least practicable adverse impact[8] on the stock. Consistent with these ongoing and unresolved concerns, the Commission once again recommends that NMFS defer issuance of a final rule to AGDC or any other applicant proposing to conduct sound-producing activities in Cook Inlet until it has a

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[3] Shutdowns would be required if a marine mammal is moving toward or entering the exclusion zones listed in Table 10 of the *Federal Register* notice, which are based on estimated Level A harassment zones for all species and activities, except for the 500-m exclusion zone for cetaceans in the low- and high-frequency hearing groups (LF and HF, respectively) and phocids during impact pile driving.

[4] The requirement to cease operations in the event that construction activities clearly cause an injury or mortality of a marine mammal was not included in the preamble but was included in the proposed rule.

[5] See the Commission's most recent 1 May 2019 letter.

[6] See NMFS's proposed and final incidental harassment authorizations for geological and geophysical activities in the Atlantic Ocean (82 Fed. Reg. 26244 and 83 Fed. Reg. 63268, respectively) and the Commission's 6 July 2017 letter.

[7] See NMFS's proposed and final incidental harassment authorizations for geological and geophysical activities in the Atlantic Ocean (82 Fed. Reg. 26244 and 83 Fed. Reg. 63268, respectively) and the Commission's 6 July 2017 letter; see also NMFS's proposed rule for geological and geophysical activities in the Gulf of Mexico (83 Fed. Reg. 29212) and the Commission's 21 August 2018 letter.

[8] See NMFS's proposed rule for geological and geophysical activities in the Gulf of Mexico (83 Fed. Reg. 29212) and the Commission's 21 August 2018 letter; see also NMFS's proposed rule for Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) sonar (84 Fed. Reg. 7186) and the Commission's 1 April 2019 letter.

reasonable basis for determining that authorizing any additional incidental harassment takes of Cook Inlet beluga whales would not contribute to or exacerbate the stock's decline.

Appropriately evaluating and limiting incidental takes of beluga whales

The Commission remains concerned that NMFS continues to propose and issue authorizations for the incidental taking of Cook Inlet beluga whales without adequate consideration of the combined or cumulative impacts of current and planned activities on that population. NMFS has indicated on numerous occasions[9] its intent to take a programmatic approach to assessing impacts of human activities on beluga whales, but the intended documents were never made available and the programmatic approach has been abandoned. NMFS also has not taken any steps to place annual limits on the total number and types of incidental takes authorized, as recommended by the Commission in its 14 July 2015 letter on NMFS's draft Cook Inlet Beluga Whale Recovery Plan. In addition to AGDC's project, which is expected, once operational, to result in increased large vessel traffic in the inlet over the facility's projected 30-year lifespan[10], there are plans to double the size of the Port of Anchorage[11] and to expand oil and gas development in both state and federal waters of Cook Inlet[12]. Those activities are expected to have direct impacts on Cook Inlet beluga whales as well as indirect, but potentially significant, impacts on beluga whales through effects on prey species, water quality, and other aspects of the whales' habitat. Given that NMFS is a cooperating agency on FERC's DEIS for the Alaska LNG project, it is imperative that the DEIS adequately address the cumulative impacts on beluga whales. The Commission therefore recommends that NMFS ensure that AGDC's DEIS addresses the cumulative impacts of AGDC's proposed activities and all other sound-producing activities on beluga whales, as well as other marine mammals. The Commission also reiterates its recommendation that NMFS establish annual limits on the total number and types of takes that are authorized for all sound-producing activities in Cook Inlet before issuing the final rule.

Should NMFS decide, once again, to issue the final rule despite the Commission's recommendation that issuance be deferred, the Commission has the following additional concerns regarding this proposed rule.

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[9] NMFS issued a notice of intent to prepare a programmatic EIS on the issuance of incidental take authorizations in Cook Inlet on 14 October 2014 (79 Fed. Reg. 61616), followed by notices of intent to prepare programmatic environmental assessments on 12 August 2015 (80 Fed. Reg. 48299), 28 September 2016 (81 Fed. Reg. 66639), and 5 September 2017 (82 Fed. Reg. 41938).

[10] AGDC estimates that an average of 21 carrier vessels would use the Alaska LNG facilities per month, with 5 assist tugs planned to support berthing and mooring of LNG carriers (section 4.19.2.6 in the FERC DEIS for the Alaska LNG Project). Ice-class support vessels also would be needed during winter (see Appendix W of FERC's DEIS). The extent to which AGDC's vessel transits add to the average vessel transits in Cook Inlet is unclear, as the most recent vessel study analyzed data from nearly 10 years ago (see Eley 2012).

[11] Port of Anchorage Modernization Program (https://www.portofalaska.com/modernization-project).

[12] See Alaska Department of Natural Resources oil and gas activity maps for projected activities in state and federal waters (http://dog.dnr.alaska.gov/Documents/Maps/ActivityMaps/CookInlet/2019-05_ActivityMap_CookInlet.pdf).

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Availability of marine mammals for subsistence use

Based on the proposed activities and mitigation measures, NMFS has preliminarily determined that the proposed taking would not have an unmitigable adverse impact on the availability of marine mammals for subsistence use by Alaska Natives. AGDC indicated that it has met, and would continue to meet, with stakeholders, including many of the Alaska Native villages and traditional councils throughout the Cook Inlet region. AGDC has indicated that its in-water activities would follow mitigation measures to minimize impacts on marine mammal behavior and, therefore, effects on hunting opportunities for Alaska Native communities. Thus, AGDC has not developed a formal plan of cooperation. To ensure that adequate outreach to potentially affected Alaska Native communities has taken place regarding AGDC's proposed activities, the Commission recommends that NMFS require AGDC to submit a stakeholder engagement plan that includes stakeholders contacted (or to be contacted), a summary of input received, a schedule for ongoing community engagement, and measures that would be implemented to mitigate any potential conflicts with subsistence hunting.

Currently subsistence hunting of belugas in Cook Inlet is not allowed because of the small size of the population and its lack of recovery. Under applicable regulations, subsistence hunting can resume if the population increases to a specified size. If AGDC's activities impact Cook Inlet belugas in a way that prevents or slows population growth, that arguably would have an unmitigatable adverse impact on the availability of beluga whales by delaying reopening of subsistence hunting. That is, hunting opportunities would remain unavailable for some longer period. As such, in assessing the potential impacts of activities being conducted by AGDC and others in Cook Inlet on the availability of beluga whales for subsistence, NMFS should consider the possible delay in population recovery and the consequences for renewed hunting opportunities.

Density estimates

Beluga densities—NMFS indicated that the estimated mean density of beluga whales was 0.000158 animals/km^2 near the temporary MOF. This appears to be an underestimate, when compared to densities used by other recent applicants to estimate takes associated with activities in similar areas of Cook Inlet[13]. In this case, although a higher density should have been used, the estimated takes of beluga whales were adjusted upwards to account for group size[14]. The manner in which NMFS addresses such issues speaks to the need for greater consistency in estimating densities for beluga whales in Cook Inlet. Density estimates for beluga whales in Cook Inlet are typically derived from a habitat model developed by Goetz et al. (2012), which generated densities for each 1-square-km cell of Cook Inlet. The Commission recommends that NMFS ensure consistency in density estimates

[13] For example, the density for beluga whales in an area on the east side of Cook Inlet, from Anchor Point to Kasilof, was estimated at 0.0111, as indicated in Table 9 (and identified as Lower Cook Inlet) in the final rule authorizing incidental takes of marine mammals by Hilcorp Alaska, LLC (Hilcorp) for oil and gas- related activities (84 Fed. Reg. 37481).

[14] As noted herein under the section "Take estimates", it appears that the number of days used to estimate takes was also underestimated for pile and pipe driving activities. The recalculated Level B harassment take estimates for beluga whales in Year 2, based on 61 days of vibratory pile driving (marine terminal and mainline MOF), 16 days of impact pile driving (marine terminal), and 7 days of impact sheet pile driving (mainline MOF), would be 12, which is still less than the 20 Level B harassment takes that NMFS proposed to authorize in Year 2.

used by various applicants for beluga whales in Cook Inlet and update relevant habitat-density models as new information becomes available.

Harbor seal and other marine mammal densities—For harbor seals, NMFS indicated that it used an alternative method for estimating densities, because it believed that its original harbor seal densities[15] were overestimated. NMFS's alternative method was based on using the maximum number of seals observed hauled out during a given NMFS aerial survey divided by the area of upper Cook Inlet[16]. However, both methods underestimate the density, as neither method accounts for harbor seals that may have been in the water during the surveys and therefore not available for enumeration by observers. Boveng et al. (2012) determined a haul-out correction factor of 2.33[17] for harbor seals tagged in Cook Inlet, which would account for seals at sea and not counted during a survey[18]. The proportion of seals hauled out would be 0.429 with 0.571 at sea (Boveng et al. 2012). Although NMFS believed that the original density estimate was inflated due to bias associated with the large number of hauled-out harbor seals at river mouths that were observed during NMFS aerial surveys relative to offshore densities[19] (84 Fed. Reg. 31006), more seals are actually at sea in June than are hauled out[20].

NMFS further postulated that the original and alternative densities were inflated, because only about 2.2 seals were observed per day during previous seismic surveys in Cook Inlet (84 Fed. Reg. 31006). The Commission notes that PSOs can only see harbor seals within approximately 1 km of a land- or vessel-based platform. Thus, the number of seals observed during previous seismic surveys in Cook Inlet also is greater than either NMFS's original or alternative densities.

Moreover, NMFS used a density estimate[21] of 0.2487 harbor seals/km^2 for the recent Hilcorp final rule[22] (Table 9 in 84 Fed. Reg. 37481). It too is much greater than either the original or alternative harbor seal density estimate in the AGDC proposed rule. NMFS similarly used greater densities for gray whales and harbor porpoises in the recent Hilcorp final rule. The Commission has repeatedly commented on NMFS's inconsistent and incorrect use of the aerial survey data[23]. The compilation and enumeration of the raw sightings data and the manner in which NMFS estimates densities from those data has never been transparent and therefore cannot be recreated. Given that the densities in various proposed incidental take authorizations are different, even when they are purported to be based on the same data, NMFS cannot espouse that they are considered best available.

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[15] NMFS's original densities were estimated by averaging the total number of harbor seals sightings each year during NMFS aerial surveys divided by the area surveyed that year, resulting in 0.1819 seals/km^2.
[16] Resulting in 0.1695 seals/km^2, which NMFS believes is an overestimate as well. However, Table 8 of the *Federal Register* notice incorrectly specified the density of harbor seals using the alternative method (method 2), as 0.01695 seals/km^2. The proposed numbers of Level A and B harassment takes of harbor seals across all years appear to be based on the incorrect density estimate.
[17] From June, consistent with when the NMFS aerial surveys occur (see Table 4 of Boveng et al (2012)).
[18] The correction factor to adjust an abundance estimate to account for seals in the water is the reciprocal of the proportion of tagged animals hauled out. That correction factor is not the same as the proportion of seals in the water.
[19] Aerial surveys are not used to accurately enumerate pinnipeds at sea, let alone at-sea pinniped densities.
[20] The greatest number of seals haul out in August during the molt (Boveng et al. 2012).
[21] Which does not include use of a haul-out correction factor.
[22] Which used the same NMFS aerial survey data as AGDC.
[23] See the Commission's 1 May 2019 letter, 29 March 2018 letter, 20 April 2015 letter, and 13 April 2015 letter,

In summary, the original yearly harbor seal abundance estimates, which were based on hauled-out seals, should have been multiplied by the haul-out correction factor to determine the overall abundance estimates—a method that is standard practice for NMFS's stock assessments and derivation of pinniped densities and considered best available science. The Commission recommends that NMFS use the haul-out correction factor of 2.33 from Boveng et al. (2012) to revise the yearly abundance estimates and resulting density estimates and recalculate the numbers of takes accordingly. The Commission also recommends that NMFS use the gray whale and harbor porpoise densities specified in Table 9 of the Hilcorp final rule (84 Fed. Reg. 37481) and recalculate the numbers of takes accordingly. The Commission further recommends that NMFS (1) consult with researchers at the Alaska Fisheries Science Center that specialize in both cetacean and pinniped density derivation to ensure it is compiling, enumerating, and analyzing the aerial sightings data and estimating the various marine mammal densities correctly and (2) use marine mammal densities consistently for all future incidental take authorizations in Cook Inlet.

Appropriateness of the Level A harassment zones

As the Commission has indicated in previous letters, there are some shortcomings that need to be addressed regarding the methodology for determining the extent of the Level A harassment zones based on the associated permanent threshold shift (PTS) cumulative SEL (SEL_{cum}) thresholds for the various types of sound sources, including stationary sound sources[24]. For determining the range to the SEL_{cum} thresholds, NMFS uses a baseline accumulation period of 24 hours unless an activity would occur for less time (e.g., 8 hours). The Commission supports that approach *if* an action proponent is able to conduct more sophisticated sound propagation and animat modeling. However, that approach is not ideal for action proponents that either are unable, or choose not, to conduct more sophisticated modeling. In those instances, it is assumed that the receiver is stationary and all of the energy emitted during a 24-hour period is accumulated for the SEL_{cum} thresholds.

As an example, for LF cetaceans, the Level A harassment zone was estimated to be greater than the Level B harassment zone during impact installation of sheet piles (1,763 m vs. 1,000 m, respectively)[25]. Based on the extent of those zones, it is assumed that an animal would experience PTS before responding behaviorally and leaving or avoiding the area. That notion runs counter to the logic that permanent and temporary physiological effects are expected to occur closest to the sound source, with behavioral responses triggered at lower received levels, and thus at farther distances.

The Commission understands that NMFS has formed an internal committee to address this issue and is also consulting with external acousticians and modelers. The Commission continues to believe that animat modeling, that considers various operational and animal scenarios, is the best way to determine the appropriate accumulation time. More importantly, animat modeling could directly inform or be incorporated into NMFS's user spreadsheet that currently estimates the Level A harassment zones. The Commission recommends that NMFS continue to make this issue a *priority*

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[24] However, this also could be an issue for moving sound sources that have short distances between transect lines.
[25] The Level A harassment zone also is greater than the Level B harassment zone for HF cetaceans. The zones for impact sheet pile driving were omitted from Table 6 but were provided to the Commission upon request to verify the zones indicated in Tables 18 and 19 of AGDC's application. NMFS indicated those zones would be included in the final rule.

to resolve in the near future and consider incorporating animat modeling into its user spreadsheet.

Take estimates

To estimate the numbers of marine mammal takes, NMFS proposed to use AGDC's method for estimating days of pile-driving activities, which sums fractions of days in which activities occur to generate the total number of days for each proposed activity[26]. That method is inconsistent with NMFS's policy for enumerating takes for construction activities in general[27] and underestimated the numbers of days of pile driving activity, and hence Level A and B harassment takes. For example, Table 9 in the *Federal Register* notice indicated that 8 killer whales were estimated to be taken by Level B harassment in Year 1[28], based on 33 days of pile driving planned for that year (as indicated in Table 1). To account for group size and other factors[29], NMFS proposed to authorize taking of up to 10 killer whales by Level B harassment (see Table 9 in the notice). However, the Commission estimates that as many as 19 killer whales could be taken by Level B harassment in Year 1 if one considers the actual number of days that pile driving would occur (78 days), as indicated in Table 20 of AGDC's application. The proposed numbers of Level B harassment takes are similarly underestimated for humpback whales, harbor porpoises, harbor seals, and Steller sea lions in Year 1[30]. A similar trend exists for these species for Years 2 through 5. Moreover, the Commission estimates that three humpback whales and one fin whale could be taken by Level A harassment in Year 3 and two humpback whales could be taken by Level A harassment in Year 4. NMFS proposed to authorize takes of only two humpback whales and zero fin whales by Level A harassment on Year 3 and zero Level A harassment takes of humpbacks in Year 4. For these reasons, the Commission recommends that NMFS revise the numbers of Level A and B harassment takes for all marine mammal species to reflect the actual number of days that impact and vibratory pile driving will occur, regardless of the duration of those activities on a given day.

In addition, when NMFS increased the number of Level A and B harassment takes proposed for authorization to account for group size, historical sightings, and the size of the Level A harassment zones, those adjustments do not appear to have been made consistent with the proposed activities. For example, NMFS generally does not authorize taking by Level A harassment during vibratory pile driving. However, in this instance, NMFS proposed to authorize Level A harassment takes of five harbor porpoises and five Dall's porpoises during vibratory pile and sheet pile driving in Year 1, even though the distance to the Level A harassment threshold is only 114 m for 18- and 60-in piles and only 25 m for sheet piles[31]. Level A takes also were proposed during vibratory pile and sheet pile driving for both Steller sea lions and California sea lions (10 each), even though the distances to the Level A harassment threshold were 3 m or less. Similar issues exist for Level A takes

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[26] NMFS did not follow AGDC's approach of summing fractions of days when determining the total number of days associated with anchor handling and instead used the actual number of days anchor handling would occur (as indicated in Table 21 of AGDC's application and Table 2 of the *Federal Register* notice).

[27] Takes are enumerated based on the actual number of days that activities would occur, no matter if for less than 1 hour or up to 8 hours on a given day.

[28] The *Federal Register* notice refers to activities occurring in both seasons (Tables 1 and 2) and years (Tables 6 and 9). For consistency, "Year" is used herein to refer to the timing of proposed activities.

[29] Including historical sightings and the large Level A harassment zones.

[30] Takes of fin whales were estimated to be equal to what NMFS had proposed and therefore may have to be increased to account for group size and other factors as was the original take estimate.

[31] Porpoises do not occur that close to pile driving activities. NMFS did not propose to authorize Level A harassment of LF cetaceans, presumably because those animals also would not occur in close proximity to pile driving activities.

proposed for these same species during vibratory pile and sheet pile driving in Year 2. The Commission recommends that NMFS refrain from authorizing Level A harassment takes for species in which the proposed activities are not likely to result in Level A harassment takes during vibratory pile and sheet pile driving, which includes harbor porpoises, Dall's porpoises, Steller sea lions, and California sea lions.

The proposed numbers of Level A and B harassment takes also are not allocated appropriately based on the extents of the Level A and B harassment zones. For example, in Year 5, the Level A harassment zone for HF cetaceans during impact installation of 48- and 60-in piles is 4,524 m, which is 97 percent of the Level B harassment zone of 4,642 m (Table 6 of the *Federal Register* notice)[32]. However, NMFS proposed to authorize 10 Level A harassment takes and 20 Level B harassment takes of harbor porpoises for that year. The total estimated take of harbor porpoises[33] should have been allocated such that the majority of estimated takes (approximately 97 percent) would be by Level A harassment and the remainder would be by Level B harassment. Similar issues exist for LF and HF cetaceans in other years in which the extents of the Level A harassment zones for impact pile driving represent a large proportion of the corresponding Level B harassment zones. Thus, the Commission recommends that NMFS reallocate the proposed Level A and B harassment takes for LF and HF cetaceans for Years 2, 3, 4, and 5 to ensure that the authorized limits reflect the relative extents of each harassment zone.

Mitigation and monitoring measures

The Level A harassment zones for LF and HF cetaceans and phocids during impact installation of the 48- and 60-in piles are extremely large (3.8 km, 4.5 km, and 2 km, respectively), much larger than can be monitored visually by observers. Similarly, the distance to the Level B harassment zone for vibratory installation of 18- and 60-in piles is 21.5 km. The zones are based on fairly conservative source levels and propagation loss estimates, and hence should be verified by hydroacoustic measurements. Although AGDC indicated that it may conduct hydroacoustic measurements of all pile types and installation methods in section 13.1 of its application, NMFS did not include a requirement for hydroacoustic monitoring in the proposed rule. AGDC indicated that it may measure the source levels and distances to the Level B harassment thresholds but did not include a detailed hydroacoustic monitoring plan, which is standard for conducting such measurements. Thus, it appears that AGDC is not planning to conduct such measurements. Given the estimated large extents of the Level A and B harassment zones and overlap with the critically endangered population of Cook Inlet beluga whales, it is imperative for AGDC to determine the actual range to effects for its activities. The Commission recommends that NMFS (1) require AGDC to provide a detailed hydroacoustic monitoring plan, (2) provide the plan to the Commission for review, and (3) include in the final rule, the requirement to conduct hydroacoustic monitoring during impact and vibratory pile driving of each pile type to verify and adjust the extents of the Level A and B harassment zones, as necessary.

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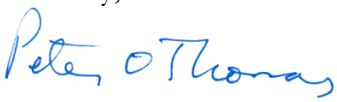
[32] Similar results exist for 48- and 60-in piles in Years 2, 3, and 4. Further, the Level A harassment zone for HF cetaceans during impact installation of 24-in piles in Year 2 is 1,545 m, which is 83 percent of the Level B harassment zone of 1,848 m.

[33] The total estimated take of harbor porpoises would need to be recalculated, taking into account the actual number of days in which pile driving would occur (in this case 8 rather than 2 days).

Further, the proposed rule stated that AGDC would be required to implement shut-down procedures if the number of authorized takes for any species reaches the authorized take limit and such marine mammals are observed within or approaching the Level B harassment zone. Based on the extents of the various Level B harassment zones, and in some cases the Level A harassment zones[34], visual observation of all marine mammals in or approaching those zones is impossible. It is unclear how AGDC plans to extrapolate the numbers of takes to those areas that cannot be reliably observed. However, takes should be extrapolated out to the extent of the Level A and B harassment zones based on the number of each species observed at any given distance[35]. Furthermore, the requirement for AGDC to report weekly or monthly on the numbers of marine mammals taken, and to alert NMFS when the authorized numbers of takes are close to being met was not included in the proposed rule[36]. The Commission recommends that NMFS (1) specify how AGDC should enumerate the numbers of marine mammals taken particularly when observers are only monitoring a portion of the Level A and B harassment zones and (2) require AGDC to keep a tally of the numbers of marine mammals taken, alert NMFS when the authorized limit is close to being met, and follow any guidance provided.

I trust these comments will be helpful. Please let me know if you or your staff have questions with regard to the Commission's recommendations.

Sincerely,



Peter O. Thomas, Ph.D.,
Executive Director

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[34] For example, the Level A harassment zones for vibratory pile and sheet driving for LF and HF cetaceans and phocids.
[35] That is, if 2 belugas were observed within 1 km of the source, then the total number in the Level B harassment zone of 7 km would have been 14.
[36] See, for example, reporting measures to prevent unauthorized incidental taking of Cook Inlet beluga whales outlined in 81 Fed. Reg. 6376.

I oppose the proposal by the Alaska Gasoline Development Corporation taking and importing of marine mammals incidental to constructing Liquefied Natural Gas facilities Project in Cook Inlet.

Regardless of assuming AGDC strictly obeys the regulations proposed for the Project, the project operation will nevertheless result in long-term, negative impacts on the environment, with some impacts more significant than others.

Wetlands, forest, and Central Arctic Herds of caribou would be substantially affected. The installation of facilities for the Project would result in permanent losses of sensitive caribou habitats, vegetation, and conversions of wetlands to uplands due to granular fill placement.

Over the course of five years (2020-2025), six federally listed species including the polar bear, bearded seal, beluga whale, humpback whale, ringed seal, and spectacled eider bird will be adversely affected as the Project passes through three national wildlife refuges.

I do support the marine assessment programs that are used to satellite tag, photo id, and survey the data collected of the marine mammal species and believe we need to continue these assessment programs as information from studying marine mammals are critical for understanding human-related deaths. For example, assessing marine mammal stocks can indicate human threats such as implications for water quality and seafood safety.

I oppose the proposal for the Project as it would grant permission for Alaska LNG to harm and harass marine mammals for the next five years. Not only would the Project have adverse impacts on the marine mammal stocks, but the construction of the Project would result in negative impacts on Alaska Natives' air quality.

Climate change is noticeable in Alaska, as the state is warming twice the global rate. We need to look at this Project long term. My proposal for a specific course of action is to consider alternatives to gas pipelines. We should be more concerned with addressing climate change and the extinction of marine mammal species and less concerned with supplying fossil fuels. I hope our regulatory officials rectify this imbalance as a great deal of Alaska's future depends on the outcome of this project not moving forward.

Submitted via Regulations.gov

July 29, 2019

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www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2019-0064

Re: Taking Marine Mammals Incidental to Alaska LNG Project in Cook Inlet [NOAA-NMFS-2019-0064]

On behalf of the Center for Biological Diversity and Cook Inletkeeper, we submit these comments to urge the National Marine Fisheries Service to withdraw its proposed regulations to allow the incidental take of marine mammals for the Alaska LNG Project in Cook Inlet. The project threatens the survival of the critically endangered Cook Inlet beluga whale, of which there are only about 312 animals. The Fisheries Service should not authorize take of Cook Inlet belugas until and unless it can ensure the conservation and recovery of these endangered whales.

The Alaska LNG Project is a tremendous threat to Alaska's wildlife from Cook Inlet belugas to Arctic polar bears. The project consists of an 800-mile pipeline and associated infrastructure that will run from the North Slope to Cook Inlet, where there will be a pipeline crossing to a liquefaction facility and a marine terminal to ship the LNG abroad. The project will lock in our dependence on fossil fuels from the Arctic and deepen our climate crisis.

The proposed regulations to authorize take of marine mammals for five years associated with the construction of the facilities in Cook Inlet raise serious concerns and must be withdrawn or substantially revised.

1. **The Fisheries Service must not authorize any take of Cook Inlet beluga whales.**

The Service must not authorize take for Cook Inlet beluga whales. Cook Inlet beluga whales are in dire circumstances and among one of the most endangered whales in the world. Numbering

just over 300 animals and experiencing a continuing decline, these beluga whales are in danger of extinction. According to the Service's own report, removal of even one animal would impede the recovery of the stock to its optimum population.[1] Any take, including behavioral harassment, of Cook Inlet beluga whales could contribute to their imperilment and must be avoided.

The U.S. Marine Mammal Commission has repeatedly recommended that the Service "defer issuance of incidental take authorizations and regulations until it has better information on the cause or causes of the decline in [Cook Inlet beluga] population and, and as part of [its] small numbers and negligible impact determinations, has a reasonable basis for determining that authorizing additional takes by harassment would not contribute to or exacerbate that decline."[2] The Commission made a strong recommendation that the Service defer any incidental take application proposing to conduct sound-producing activities in Cook Inlet in light of the status of the Cook Inlet beluga.[3]

The Service has instead chosen to ignore the expert advice of the Marine Mammal Commission, and here it proposes activities that are likely to impede the survival and recovery of endangered Cook Inlet beluga whales. We urge the Service to withdraw its proposed regulations and deny the application, until and unless the project is modified to mitigate all harassment and harm to Cook Inlet belugas and adverse modification of their critical habitat.

2. The negligible impact determination is flawed

The Service's determination that the proposed regulations will have a negligible impact on marine mammal stocks is flawed. In determining the impact of the proposed activities, the Service-- for some marine mammals-- has not provided adequate analysis for how it arrived at its take estimates and negligible impact finding. The Service discounted and overlooked important aspects of the activities that will take marine mammals, including harmful impacts on their prey. Additionally, the Service completely ignores the ongoing and cumulative impacts of the proposed activities combined with other foreseeable activities in Cook Inlet.

a. Negligible impact determination for Cook Inlet belugas is arbitrary

The Service's conclusion that the proposed authorization will have a negligible impact on marine mammals is flawed. Not only is the take of these whales potentially significant, but the habitat impacted by the Alaska LNG activities is beluga critical habitat. Noise is a primary constituent element of beluga whale critical habitat and pile driving activities will negatively affect the species' population and critical habitat.

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[1] Muto, M. et al., Alaska Marine Mammal Stock Assessments, 2018: Beluga Whale (*Delphinapterus leucas*): Cook Inlet Stock (Dec. 30, 2018).

[2] Peter O. Thomas, Executive Director, Marine Mammal Commission letter to Jolie Harrison, Chief of Permits and Conservation Division, National Marine Fisheries Service (May 1, 2019); *see also* Marine Mammal Commission letter to the National Marine Fisheries Service, Comments on Application from Harvest Alaska LLC to take marine mammals incidental to pipeline installation in Cook Inlet, Alaska (Mar. 29, 2018).

[3] *Id.*

First and most importantly, the Service is in error that the proposed activities will have a negligible impact on critically endangered beluga whales. Cook Inlet beluga whales are in a precarious state with a declining population trend and no signs of recovery. As stated previously, the concerns are so great that the Marine Mammal Commission has warned the agency to defer any authorizations for take of Cook Inlet beluga whales. Yet, the Service is nonetheless proceeding to approve activities that impede the survival and recovery of Cook Inlet belugas.

The recovery plan also notes that that noise threatens the recovery of the Cook Inlet beluga.[4] The report concludes that there is a high concern about the impacts of noise on beluga whales:

> In the long term, anthropogenic noise may induce chronic effects altering the health of individual CI belugas, which in turn have consequences at the population level (i.e., decreased survival and reproduction). Although the effects on CI belugas of the diverse types of anthropogenic noises occurring in their habitat have not been analyzed and are currently unknown, there is enough evidence from other odontocete species (and for some effects in other beluga populations) to conclude that the potential for a negative impact to CI beluga recovery is of high relative concern.[5]

In May 2015, the Service included Cook Inlet belugas in its "Species in the Spotlight: Survive to Thrive"—a list of eight species most at risk of extinction in the near future. Based on the current diminished population size of the Cook Inlet beluga and its continued slow decline, NMFS has estimated a twenty-six percent risk that the belugas will be extinct in one hundred years and a seventy percent risk of extinction in three hundred years.[6]

We strongly urge the Service not to authorize the take of *any* Cook Inlet beluga whales. A resident population, like the Cook Inlet beluga whale, is particularly vulnerable to the impacts from high-intensity noise.[7] Because of the continued decline of Cook Inlet beluga whales and the lack of understanding regarding the main causes of mortality, the agency must not issue Alaska LNG a five-year authorization to take beluga whales.

Second, the Service has not adequately considered the impacts to Cook Inlet beluga critical habitat. The proposed rule indicates that the activities are within critical habitat for Cook Inlet belugas, yet the Service's negligible impact justification that the project is not in a high-density area misses the point. Critical habitat is defined as the area *essential* to the conservation and recovery of a species. Notably, the critical habitat rule for Cook Inlet beluga whales includes the acoustic environment as an *essential* physical feature for beluga whales.[8] Thus, sound produced from the proposed activities will have a significant impact on the stock.

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[4] National Marine Fisheries Service, Recovery Plan for the Cook Inlet Beluga Whale (December 2016).
[5] *Id*. at III-13.
[6] National Marine Fisheries Service, Endangered Status for the Cook Inlet Beluga Whale, 73 Fed. Reg. 62919, 62927 (Oct. 22, 2008).
[7] Forney, K. A. *et al.* Nowhere to go: noise impact assessments for marine mammal populations with high site fidelity. *Endanger. Species Res.* 32, 391–413 (2017).
[8] National Marine Fisheries Service, Designation of Critical Habitat for Cook Inlet Beluga Whale, 74 Fed. Reg. 63080 (Dec. 2, 2009)

The Service has noted the importance of sound to Cook Inlet belugas:[9]

> Beluga whales are known to be among the most adept users of sound of all marine mammals, using sound rather than sight for many important functions, especially in the highly turbid waters of upper Cook Inlet. Beluga whales use sound to communicate, locate prey, and navigate, and may make different sounds in response to different stimuli. Beluga whales produce high frequency sounds which they use as a type of sonar for finding and pursuing prey, and likely for navigating through ice-laden waters. In Cook Inlet, beluga whales must compete acoustically with natural and anthropogenic sounds.

Third, the proposed rule likely underestimates take of beluga whales, which are highly sensitive to noise. A new study shows that wild beluga whales have sensitive hearing.[10] The Service here uses thresholds of 120 dB re 1μPa (rms) for continuous and 160 dB re 1μPa (rms) for impulsive or intermittent sources. These are insufficiently conservative to protect Cook Inlet beluga whales. At minimum, the Service should use a 120 dB threshold for all sound sources.

Moreover, the Service has not adequately supported its take estimates for Cook Inlet belugas because the method used to calculate beluga density estimates is unclear. The Service's adjustments for group size are not adequately explained or reasoned. Goetz *et al.* predicted group size in the summer, and one of the prime areas for large groups is near the mainline MOF and pipeline corridor.[11]

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[9] *Id.*

[10] Mooney, T. Aran, et al. Variation in Hearing within a Wild Population of Beluga Whales (Delphinapterus Leucas) Journal of Experimental Biology, 221: jeb171959 (2018)

[11] Goetz, K. T., P. W. Robinson, R. C. Hobbs, K. L. Laidre, L. A. Huckstadt, and K. E. W. Shelden, Movement and dive behavior of beluga whales in Cook Inlet, Alaska. AFSC Processed Rep (2012).

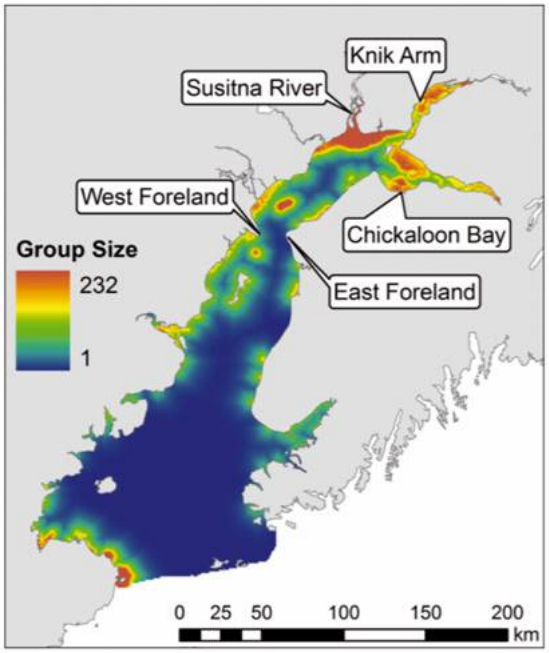

Fig. 5. *Delphinapterus leucas*. Predicted group size of belugas during the summer estimated by the generalized linear mixed effects model using Poisson regression

Fourth, the impacts of pile driving on beluga whales has been underestimated. Pile driving threatens marine mammals by potentially displacing them from key foraging habitat, causing hearing loss, masking communications, and interfering with natural behaviors. Modeling showed that pile driving could mask strong bottlenose dolphin vocalizations 10-15 km from the source.[12] Pile driving has adverse effects on behavior and foraging of beluga whales.[13] Bailey et al. measured 205 dB of broadband sound at 100 meters from one pile-driving source.[14] Some marine mammals have been observed to avoid areas where pile driving was occurring and staying away for more than three days after those activities ceased.[15]

Fifth, the Service relies on avoidance to make its negligible impact determination, and avoidance itself is a harm that displaces an animal from its preferred habitat and can have adverse impacts on foraging, communication, and reproduction. According to the Service itself, the beluga whale's essential habitat features that require an "[a]bsence of in-water noise at levels resulting in the abandonment of habitat by Cook Inlet beluga whales."[16]

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[12] David, J.A., Likely sensitivity of bottlenose dolphins to pile-driving noise, *Water and Environment Journal* 20, pp. 48-54 (2006)

[13] Kendall, Saxon & Cornick, Leslie, Behavior and distribution of Cook Inlet beluga whales, Delphinapterus leucas, before and during pile driving activity,*Marine Fisheries Review* 77:106-114 (2016).

[14] Bailey, Helen, *et al.* Assessing underwater noise levels during pile-driving at an offshore windfarm and its potential effects on marine mammals, *Marine Pollution Bulletin* 60:888. (2010) Note, however, that the thresholds used for TTS and PTS in this study are not stringent enough.

[15] Leunissen, E. M., Rayment, W. J. and Dawson, S. M. Impact of pile-driving on Hector's dolphin in Lyttelton Harbour, New Zealand, *Marine Pollution Bulletin* 142:31–42 (2019).

[16] *Id.*

Sixth, the impacts on prey availability for marine species has not adequately been accounted. High intensity noise can harm fish and invertebrates,[17] which can impede prey availability and foraging for marine mammals. Fish and invertebrates use sound for their life functions. Seismic air gun surveys have been found to damage fish ears at distances of 500 m to several kilometers from seismic surveys, with no recovery apparent 58 days after exposure.[18]

In sum, the Service provides insufficient basis and flawed analysis for its conclusion that the activities will have a negligible impact on the beluga population.

b. The proposed regulations fail to adequately account for days of high-impact sound producing activities

The Service has inappropriately compressed the days of sound-producing activities. For example, the proposed rule anticipates two and three days, respectively, of impact and vibratory piledriving for the mainline MOF; however, the applicant anticipates 13.4 days. Throughout the proposed rule there are numerous errors in calculating the days and take estimates. The Service, therefore, underestimates the total number of takes.

c. Thresholds for marine mammal Level A and Level B take are insufficiently protective

The Service's thresholds for Level A take are not sufficiently conservative. Anthropogenic sound can induce permanent threshold shift (PTS) at lower levels than anticipated here.[19] The Service must also consider that temporary threshold shift (TTS) and behavioral disturbance can amount to Level A take if it interferes with essential life functions. TTS or repeated behavioral responses can impair reproductive success and fitness that would constitute harm or Level A harassment. For example, beluga whales rely on sound for foraging and multi-year displacement from key summer foraging habitat can lead to impaired fitness and reproductive success. NMFS must consider the best available science and set lower thresholds for Level A take, which would lead to larger exclusion zones around the survey.

The threshold for Level B take should be extended to 120 dB for all activities. The application includes a 160 dB level for behavioral responses resulting in Level B take for impulsive sound

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[17] Popper, A.N. & Hastings, M.C. Effects of Anthropogenic Sources of Sounds on Fishes, *Journal of Fish Biology* 75: 455 (2009); Weilgart, L. The Impact of Ocean Noise Pollution on Fish and Invertebrates (2018); McCauley, D. *et al.*, Widely used marine seismic survey air gun operations negatively impact zooplankton. *Nature Ecology and Evolution*, 1:195 (2017)

[18] Weilgart, L,A review of the impacts of seismic airgun surveys on marine life, Submitted to the CBD Expert Workshop on Underwater Noise and its Impacts on Marine and Coastal Biodiversity, 25-27 (2014), available at: http://www.cbd.int/doc/?meeting=MCBEM-2014-01;Weilgart, L., The Impacts of Anthropogenic Ocean Noise on Cetaceans and Implications for Management, Canadian J. of Zoology 85:1091-1116 (2007).

[19] Kastak, D., Mulsow, J., Ghoul, A., Reichmuth, C., Noise-induced permanent threshold shift in a harbor seal [abstract], *Journal of the Acoustical Society of America* 123: 2986 (2008); Kujawa, S.G., and Liberman, M.C., Adding insult to injury: cochlear nerve degeneration after "temporary" noise-induced hearing loss, *Journal of Neuroscience* 29:14077-14085 (2009).

sources. However, the best available scientific literature establishes that behavioral disruption can occur at substantially lower received levels for some species, including beluga whales. Some odontocetes, such as beluga whales, are highly sensitive to a range of low-frequency and low-frequency-dominant anthropogenic sounds, including impulsive seismic airgun noise, which has been shown to displace belugas from near-coastal foraging areas out beyond the 130 dB isopleth.[20]

Other marine mammals exhibit adverse behavioral responses to high-intensity impulsive sounds below 130 dB. For example, bowhead whales have shown almost complete avoidance of seismic airgun received levels at 120 dB to 130 dB and below.[21] Bowhead whales increase call rates at detection of airguns at 94 dB, decrease at 127 dB, and entirely stop calling at 160 dB.[22] Further, one recent study found they significantly dropped their calling rates when exposed to airgun sounds of at least 116 dB re 1 μPa.[23] Harbor porpoise buzz rates, a proxy for foraging success,[24] decrease 15% with exposure to seismic airguns at 130 dB and above.[25]

d. Activities with impacts on marine mammals were erroneously discounted

The Service erroneously made determinations that many of the activities would not result in take of marine mammals, and therefore its negligible impact determination fails to account for numerous harmful activities – dredging, pipeline trenching, vessels, and geophysical surveys.

Geophysical surveys with echosounders and sonar have been linked to marine mammal harm and harassment. The proposed project will include geophysical surveys conducted prior to pipeline construction, include single-beam echosounder, multi-beam echosounder, and side-scan sonar. In 2008, an Independent Scientific Review Panel identified a multibeam echosounder as the "most plausible and likely behavioral trigger" for a massive stranding event of hundreds of whales in Madagascar.[26] In 2002, in the Gulf of California a beaked whale stranding event also correlated

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[20] Miller, G.W., Moulton, V.D., Davis, R.A., Holst, M., Millman, P., MacGillivray, A., and Hannay. D., Monitoring seismic effects on marine mammals—southeastern Beaufort Sea, 2001-2002, in Armsworthy, S.L., et al. (eds.), Offshore oil and gas environmental effects monitoring/Approaches and technologies, at 511-542 (2005); see also Finneran, J.J., Noise-induced hearing loss in marine mammals: A review of temporary threshold shift studies from 1996 to 2015, The Journal of the Acoustical Society of America 138: 1702 (2015).

[21] Miller, G.W., Elliot, R.E., Koski, W.R., Moulton, V.D., and Richardson W.J., Whales, in Richardson, W.J. (ed.), Marine Mammal and Acoustical Monitoring of Western Geophysical's Open-Water Seismic Program in the Alaskan Beaufort Sea, 1998 (1999); Richardson, W.J., Miller, G.W., and Greene Jr., C.R., Displacement of migrating bowhead whales by sounds from seismic surveys in shallow waters of the Beaufort Sea, Journal of the Acoustical Society of America 106:2281 (1999).

[22] Blackwell, S.B. et al., Effects of airgun sounds on bowhead whale calling rates: Evidence for two behavioral thresholds, PLoS ONE 10(6):e0125720 (2015).

[23] Blackwell, S.B., et al., Effects of airgun sounds on bowhead whale calling rates in the Alaskan Beaufort Sea, Marine Mammal Science 29(4): E342-E365 (2013).

[24] Odontocete biosonar is characterized by siting clicks. Once the prey is sited the predator hones in on the prey in what sounds like a "buzz"—indicating a capture, and thus sustenance.

[25] Pirotta, E., et al., Variation in harbour porpoise activity in response to seismic survey noise, Biology Letters 10(5): 20131090 (2014).

[26] Southall, B.L., Rowles, T., Gulland, F., Baird, R.W., and Jepson, P.D. 2013. Final report of the 799 Independent Scientific Review Panel investigating potential contributing factors to a 2008 mass 800 stranding of melon-headed whales (Peponocephala electra) in Antsohihy, Madagascar (2013) http://www.cascadiaresearch.org/Hawaii/Madagascar_ISRP_Final_report.pdf

with a scientific research survey using multibeam sonar.[27] While these echosounders and sonar used lower frequencies than the one proposed here, it is concerning that high-power echosounders have the potential to negatively impact marine mammals across far distances from the source. The Service failed to adequately consider the potential impacts from these surveys, and it should mitigate them with restrictions on low-frequency systems, larger safety zones, and time area closures.

Dredging is planned for the Marine Terminal MOF and pipeline trenching. Dredging harms water quality, including plumes of sediments that can be harmful to marine life. Poor water quality conditions can harm fish and fish nurseries, and sediments can smother and harm or kill benthic species.[28] Depending on water currents and conditions and the method of removing the dredged material, the plume can spread for vast distances and even trail the vessel to its dredged material disposal site. The water quality impacts from dredging may harm marine mammals and the prey they depend upon. Moreover, dredging can stir up contaminants from the sea floor and suspend them in the water column. This can expose Cook Inlet belugas, other marine mammals, and their prey to toxins—which are a key threat and bioaccumulate in marine mammals. Finally, measured noise from dredging operations ranged from 111 to 170 dB, with potential impacts on marine mammals and their prey.[29]

The determination that vessels will not amount to take of marine mammals and therefore do not need to be considered in this rulemaking is in error. The proposed project will include numerous vessel trips for the construction of the Alaska LNG facilities and pipeline, and the ongoing operation of the facilities will also include LNG carriers 204 to 360 times per year. First, low frequency noise from vessels tends to overlap with the communication sounds that marine mammals use, and therefore vessels can mask important communications.[30] Ship noise has been associated with decreased foraging activity for humpback whales,[31] Second, collisions with ships is one of the biggest threats to the world's endangered whales. Third, ballast water and invasive species from ships can have harmful ecological impacts that may affect Cook Inlet's habitat.The Service has underestimated marine mammal take by the proposed project by ignoring the threat posed by vessel traffic.

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[27] Cox, T.M., Ragen, T.J., Read, A.J., Vos, E., Baird, R.W., Balcomb, K., Barlow, J., Caldwell, J., Cranford, T., Crum, L., D'Amico, A., D'Spain, G., Fernández, A., Finneran, J., Gentry, R., Gerth, W., Gulland, F., Hildebrand, J., Houser, D., Hullar, T., Jepson, P.D., Ketten, D., MacLeod, C.D., Miller, P., Moore, S., Mountain, D., Palka, D., Ponganis, P., Rommel, S., Rowles, T., Taylor, B., Tyack, P., Wartzok, D., Gisiner, R., Mead, J., and Benner, L., Understanding the impacts of anthropogenic sound on beaked whales, *J. Cetacean Research and Management* 7: 177-187 (2006); Hildebrand, J., Impacts of anthropogenic sound, in Ragen, T.J., Reynolds III, J.E., Perrin, W.F., Reeves, R.R., and Montgomery, S. (eds.), *Marine Mammal Research: Conservation beyond Crisis* 101-123 (2006).

[28] Jones et al., Assessing the impacts of sediments from dredging on corals, Marine Pollution Bulletin 102: 9–29 (2016); Wenger et al., A critical analysis of the direct effects of dredging on fish, Fish and Fisheries 18:967–985 (2017).

[29] Wenger 2017

[30] Southall, Reducing Noise from Large Commercial Ships, Coast Guard Journal of Safety & Security at Sea, Proceedings of the Marine Safety & Security Council 75: 58 (2018); Putland, R. et al., Vessel noise cuts down communication space for vocalizing fish and marine mammals, Glob Change Biol. 24:1708–1721 (2018); Clark, C.W. at al., *Acoustic Masking in Marine Ecosystems: Intuitions, Analysis, and Implication*, Marine Ecology Progress Series 201, 218-19 (2009), available at http://www.int-res.com/articles/theme/m395p201.pdf.

[31] Blair HB, Merchant ND, Evidence for ship noise impacts on humpback whale foraging behaviour. Biol. Lett. 12: 20160005 (2016).

e. The proposed regulations and findings ignore the cumulative impacts of activities in Cook Inlet

The Service must consider whether the cumulative impacts from proposed activities, "either individually *or in combination*," may have a greater than negligible impact on the Cook Inlet beluga whale and other marine mammals. 50 C.F.R.§ 216.107(f)(2) (emphasis added). The requirement to consider activities "in combination" applies at minimum to all marine and estuarine waters north of 60° N. latitude (50 C.F.R. § 216.103 (definition of "Arctic waters")) and therefore encompasses virtually the entirety of the beluga's designated critical habitat.

To satisfy the cumulative impacts analysis requirement, the Service must consider the cumulative impacts of noise in Cook Inlet, including noise impacts from seismic surveys and any other industrial development. These noises are repeatedly impacting the same individuals, and it is imperative that the agency determine what activities or combination of activities would exceed the cumulative negligible impact threshold. Indeed, we urge the agency in strongest terms to perform such an analysis before any additional MMPA authorizations are issued to take Cook Inlet beluga whales. In this, we echo the Commission, which has repeatedly recommended that the Service defer take authorizations for the belugas "until it has a better understanding of the factor or factors that are causing or contributing to the observed population trend or until the population begins to demonstrate sustained growth." As the Commission noted, deferral is particularly appropriate because NFS is continuing to propose and issue authorizations for the incidental taking of Cook Inlet beluga whales without adequate consideration of the combined or cumulative impacts of current and planned activities on that population."[32]

In addition, the Service must properly analyze the impacts of the subsequent LNG facility operation on marine populations and species. The pile driving in this authorization will result in shipping, further construction and traffic, and these cumulative effects will be long-lasting. The proposed LNG project facilities in this application, namely a marine terminal and mainline across Cook Inlet, will result in increased vessel traffic and harassment of marine mammals, including beluga whales. Despite this, NMFS makes no serious effort to analyze the cumulative population-level effects of these impacts.

Deferral – or, at a minimum, full consideration of cumulative effects – is particularly important here in light of increasing activities impacting beluga whales in Cook Inlet. In addition to Alaska LNG's proposal, there is a growing interest in oil and gas exploration and development. The Service is processing numerous applications to authorize the take of marine mammals incidental to seismic surveys and drilling in Cook Inlet. The proposed Pebble Mine activities will also have damaging impacts on Cook Inlet from vessel traffic, pollution, and possible accidents or spills. Before issuing any additional marine mammal takes, the Service must consider whether the cumulative impacts from these proposed activities, on top of Alaska LNG's authorization, are having "either individually or in combination" a greater than negligible impact on the Cook Inlet beluga whale and other marine mammals. To that end, we urge the Service to issue its programmatic EIS under NEPA, which would address direct, indirect, and cumulative impacts of anthropogenic activities on Cook Inlet beluga whales.

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[32] Thomas, Marine Mammal Commission letter to National Marine Fisheries Service 2019 at 4.

3. The small numbers determination is flawed

The Service's determination that the proposed activities over five years will take only small numbers of any stock or species is insufficiently supported and arbitrary. The Service claimed to compare the number of animals taken to the stock abundance, and it determined that the anticipated take of marine mammals is a small number relative to the population size of the stock.

First, as described above the Service has underestimated take resulting from the proposed activities. The Service estimates that there are only 312 Cook Inlet belugas, but their declining population size means that the amount of take proposed here amounts to more than a small number. It is also concerning that the proposed regulations authorize take of 20 animals each year for five years. This would total anticipated take of 100 Cook Inlet belugas exposed to received levels of noise causing Level B harassment over the five year regulations. However, in making its small numbers finding the Service relies on less than seven percent of the population being taken.

Second, the Service's definition of small numbers conflates this criterion with the negligible impact requirement. Although the Service uses different headings for its small numbers and negligible impact findings, by defining small numbers to be relative to the overall population the criterion ends up being similar to the negligible impact finding. Instead, the small numbers requirement is intended to protect individual marine mammals.

4. The proposed regulations fail to ensure the least practicable adverse impact

The Service has failed to implement "means of effecting the least practicable impact"[33] on marine mammals by instead requiring mitigation measures that are known to be ineffective and by failing to adopt additional mitigation measures.

In the proposed rule, the Service relies on visual monitoring that is known to be ineffective and inadequate to protect marine mammals. The Service has acknowledged that lookouts are not as effective in mitigating acoustic impacts as time-area restrictions.[34] In *Conservation Council*, the court determined that the Service may not choose the lesser mitigation option of lookouts to protect marine mammals (in that case from military sonar) "especially knowing that many potential disruptions to marine mammal behavior will be difficult to detect or avoid through lookouts."[35]

Finally, the Service failed to consider many other mitigation measures to reduce the proposed activities' impacts to the least practicable level.

Limit on cumulative beluga whale takings in Cook Inlet: The Service should place an overall cap on authorizations for Cook Inlet beluga whale incidental take. The various construction, vessel

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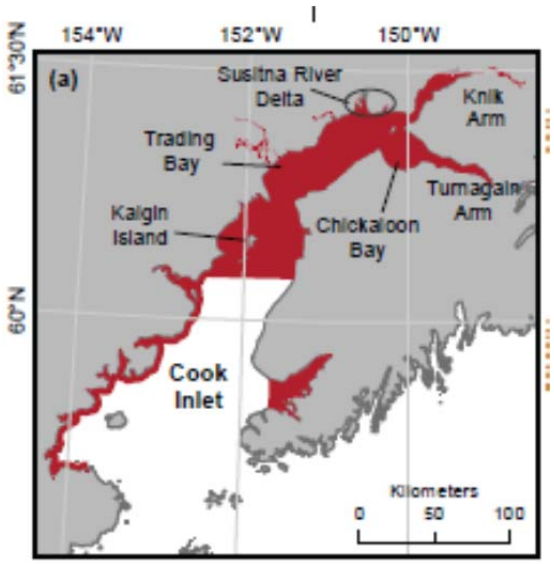
[33] *Id.* at § 1371(a)(5)(A)(ii)(I).
[34] *NRDC v. Pritzker* 828 F.3d 1125, 1133 (9th Cir. 2016),
[35] *Conserv. Council of Hawaii, et al. v. National Marine Fisheries Service, et al.,* 97 F. Supp. 3d 1210, 1230 (D. Haw. 2015).

traffic, oil and gas, and other activities are cumulatively threatening the conservation and recovery of Cook Inlet beluga whales. An overall limit on taking beluga whales for all activities needs to be set.

Time-area restrictions: The Service must not allow pile driving or pipe laying or trenching during times when beluga whales aggregate in the mainline MOF area or pipeline corridor. Among key mitigation measures would be to limit activities in all of the biologically important areas and improve monitoring.[36]



Cook Inlet beluga (*Delphinapterus leucas*) small and resident population biological important areas (BIAs). These BIAs were substantiated through boat-based and aerial survey data, acoustic recordings, satellite-tagging data (Cook Inlet only), traditional ecological knowledge, photo-identification data, and genetic analyses. Both areas are considered BIAs during the entire year.[37]

The Service should also consider time area restrictions that would further mitigate impacts to beluga whales and other marine mammals.

Larger exclusion zones: The Service should require larger exclusion zones. The Service's proposed mitigation measures fail to protect marine mammals from Level B harassment unless there is excessive take. The small 10 to 135-meter exclusion zones do not ensure a least practicable adverse impact. The use of more accurate thresholds would lead to larger exclusion zones. Bailey et al. measured 205-dB of broadband sound at 100 meters from the pile-driving source. While the source was louder at 226-dB in that study, it indicates that the exclusion zone should be much larger.

Air curtains or other noise reduction technologies: There are technologies available to reduce the noise from pile driving. For example, air bubble curtains can reduce sound by 20 to 30 dB

[36] *See e.g.,* Ferguson et al., Biologically Important Areas for Cetaceans Aquatic Mammals 41(1), 2-16 (2015); Nowacek, D. P. *et al.* Responsible Practices for Minimizing and Monitoring Environmental Impacts of Marine Seismic Surveys with an Emphasis on Marine Mammals, *Aquat. Mamm.* **39**, 356–377 (2013).

[37] Ferguson, M. et al, Biologically Important Areas for Cetaceans Within U.S. Waters – Gulf of Alaska Region, Aquatic Mammals 41(1), 65-78 (2015).

depending on their design. Pile caps, dewatered cofferdams, and other physical barrier mitigation should also be explored.

Sound source verification: The Service should require sound source verification to ensure adequate harassment and exclusion zones. While the application indicates that the Alaska LNG project will do sound source verification to ensure that the safety zones are sufficient in in situ, the Service has failed to include this as a required mitigation measure.

5. The finding that there would be no impacts on subsistence harvest is arbitrary

The proposed action may have an adverse impact on the availability of beluga whales, harbor seals, Steller sea lions, and sea otters for Native Alaskan subsistence harvest. For example, the authorization for 20 instances of taking endangered Cook Inlet belugas has an adverse impact on subsistence use, which is suspended due to conservation concerns. Limits on the harvest of beluga whale are in place because of their low population and lack of recovery. There has been a moratorium on the harvest of Cook Inlet beluga whales through a cooperative agreement between the Service and the Cook Inlet Marine Mammal Council since 2006.[38] The proposed activities are stressors on beluga whales, which will contribute to their imperilment. Therefore, any take of beluga whales has an adverse impact on their availability for subsistence use. The Service must not allow unmitigatable adverse impacts on subsistence use of marine mammal stocks.[39]

6. The draft Environmental Impact Statement is flawed

The draft Environmental Impact Statement (EIS) upon which the Service relies is insufficient to comply with the mandates of the National Environmental Policy Act (NEPA) and needs to be revised and recirculated before the Service can issue the regulations proposed here.

We will comment separately on the draft EIS, and those forthcoming comments are incorporated here by reference. We additionally point out some of the basic flaws that the Service needs to take into consideration.

a. The purpose and need are too narrowly defined

The draft EIS' discussion of the need for the proposal fails to comply with NEPA. NEPA's implementing regulations provide an EIS "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."[40] This need inquiry is crucial for a sufficient environmental analysis because "[t]he stated goal of a project necessarily dictates the range of 'reasonable' alternatives."[41] Thus, "an agency cannot define its objectives in unreasonably narrow terms" without violating NEPA.[42] Here, the draft

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[38] National Marine Fisheries Service, Taking Marine Mammals Incidental to Alaska Liquefied Natural Gas (LNG) Project in Cook Inlet, 84 Fed. Reg. 30991, 30999 (June 28, 2019).
[39] 16 U.S.C. § 1371(a)(5)(A)(i)(I).
[40] 40 C.F.R. § 1502.13.
[41] *Carmel-by-the-Sea v. U.S. Dep't of Transp.,* 123 F.3d 1142, 1155 (9th Cir. 1997).
[42] *Id.*

EIS has defined the purpose "as to consider as part of [the lead agency's] decision to authorize natural gas facilities, all factors bearing on the public interest," but the Service is charged with the conservation of marine mammals under the MMPA, which generally prohibits take except in rare circumstances. By narrowly defining the need, the alternatives and mitigation are too narrowly constrained to serve the authorization as the pre-determined outcome.

b. The Service has failed to consider a reasonable range of alternatives

The draft EIS fails to consider a reasonable range of alternatives by examining only alternative locations for the construction and a no action alternative. The alternatives analysis "is the heart of the environmental impact statement."[43] Here, the alternatives do not consider mitigation that would reduce noise impacts on marine mammals in Cook Inlet. Additionally, the conclusion that the no action alternative would not reduce environmental impacts is arbitrary. This approach to alternatives fails to meet the requirements of NEPA to consider alternatives.

c. The discussion of environmental and cumulative impacts of the proposed project is inadequate

The Service has failed to take a hard look at the environmental impacts of the proposed project. Many of these shortcomings are discussed in our comments on the draft EIS.

Most importantly, the Service fails to provide a meaningful disclosure of the environmental impacts of the proposed activities on marine mammals and the Cook Inlet beluga in particular. The construction and long-term operation of the proposed Alaska LNG project will harm and harass Cook Inlet beluga whales through noise, vessel traffic, and water pollution. The draft EIS' consideration of Cook Inlet beluga whales is cursory and fails to provide the hard look required by NEPA.

The draft EIS fails to consider the numerous other proposed projects and ongoing oil and gas activities in Cook Inlet. Although the draft EIS mentions other pipelines in Cook Inlet, it fails to discuss the planned oil and gas lease sales, the Hilcorp seismic survey and exploratory drilling, and Pebble Mine. These are reasonably foreseeable projects that must be analyzed.

Additionally, the draft EIS' consideration of climate change is woefully inadequate and entirely fails to discuss either climate change's impacts on Cook Inlet nor the impact of the proposed activities on climate change in Cook Inlet. The Service must consider how ocean warming and acidification is impacting the habitat and marine mammals affected by the proposed activities as well as how the oil and gas activities enabled by the proposed project contribute to climate change and acidification.

Climate change is likely to result in habitat loss or alteration for marine mammals, including Cook Inlet beluga whales. As a non-migratory population that exhibits high fidelity to summering areas and occupies a small, constricted range, Cook Inlet beluga whales may be particularly vulnerable to climate-induced habitat alteration and reduction of their prey base. This population of belugas relies largely on Pacific salmon (*Oncorhynchus* spp) runs in Cook

[43] 40 C.F.R. § 1502.14.

Inlet, yet these runs are threatened by increasing water temperatures both in marine waters of Alaska and freshwater spawning habitat.[44] Water temperature is known to have a strong effect on the abundance and health of anadromous fish populations, with warmer than usual temperatures associated with increases in disease, depressed oxygen levels, reduced growth and reduced survival in salmonids and other fishes.[45] In addition to the impacts on prey base, increased siltation in Cook Inlet as a result of faster glacier melt and runoff has the potential to result directly in habitat loss or alteration for Cook Inlet beluga whales.[46]

Increasing ocean acidification is also likely to impact coastal Alaskan fish populations and ultimately the marine mammals that depend on them, including Cook Inlet beluga whales. Ocean acidification is occurring more rapidly in the coastal and pelagic waters of Alaska than in tropical climates, and is likely to result in a decrease in abundance of pteropods and other shelled planktonic species, which are unable to grow as rapidly in acidic waters.[47] These species represent an important food source for pink salmon and other species; given the short life cycle of salmon, prey quality and availability during the juvenile stage strongly affect salmon biomass and abundance.[48] Studies estimate that a 10% reduction in pteropods could result in a 20% decrease in the weight of adult salmon. While the full impact of warming waters and ocean acidification on beluga prey species is difficult to predict, these changes will almost certainly be negative and the MMPA requires the agency to take a precautionary approach.

7. The Fisheries Service must comply with the Endangered Species Act

We do not believe that the Service should issue take authorization under the Endangered Species Act for the proposed activities because they will jeopardize the continued existence of Cook Inlet beluga whales and adversely modify their critical habitat.

Section 7(a)(2) of the Endangered Species Act requires federal agencies to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species . . . determined . . . to be critical . . . ."[49] To accomplish this goal, agencies must consult with the delegated agency of the Secretary of Commerce (through the National Marine Fisheries Service) or Interior (through the U.S. Fish and Wildlife Service) whenever their actions "may affect" a listed species.[50] The Service has the discretion to impose terms, conditions, and mitigation on any authorization.

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[44] Kyle R.E., and Brabets, T.P., Water temperature of streams in the Cook Inlet Basin, Alaska, and implications of climate change (2001) (USGS Water Resources Investigations Report 01-4109).

[45] *See, e.g., id*.

[46] University of Alaska, Fairbanks, Center for Global Climate Change and Arctic System Research, The potential consequences of climate variability and change—Alaska (December) (1999), available at http://www.besis.uaf.edu/regional-report/regional-report.html.

[47] Fabry, V.J., Seibel, B.A., Feely, R.A., and Orr, J.C., Impacts of ocean acidification on marine fauna and ecosystems processes, *ICES J. Mar. Sci.* 65: 414-432 (2008).

[48] Aydin, K.Y., McFarlane, G.A., King, J.R., Megrey, B.A., and Myers, K.W., Linking oceanic food webs to coastal production and growth rates to Pacific salmon (Oncorhynchus spp.), using models on three scales, *Deep Sea Res. II* 52: 757-780 (2005).

[49] 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

[50] *Id.*

The proposed action here clearly affects listed species — the critically endangered Cook Inlet beluga whale, other whales, and Steller sea lions— and therefore the Service must consult. The proposed action also affects designated critical habitat for Cook Inlet beluga whales. Importantly, a primary constituent element essential to the conservation of Cook Inlet beluga whales is "the absence of in-water noise at levels resulting in the abandonment of habitat by Cook Inlet beluga whales."[51] The proposed notice indicates that the Service will complete consultation before authorizing any take of marine mammals, and we urge the Service to fulfill this commitment. We strongly believe that the Service cannot authorize the activities proposed here because they will jeopardize the recovery and survival of Cook Inlet beluga whales.

8. Conclusion

For all of the above reasons, we believe that the Service should not authorize take of Cook Inlet beluga whales and other marine mammals for the Alaska LNG project in Cook Inlet. To the extent that the Service is still considering take authorization, it must impose stringent mitigation measures to ensure the least adverse impact on protected species. Thank you for your consideration of these comments.

Sincerely,

/s/ Miyoko Sakashita
Miyoko Sakashita
Oceans Program Director
Center for Biological Diversity
miyoko@biologicaldiversity.org

Bob Shavelson
Cook Inletkeeper
bob@inletkeeper.org

[51] National Marine Fisheries Service,74 Fed. Reg. 63080 (Dec. 2, 2009).

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Jolie Harrison
Chief, Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910–3225

VIA NMFS COMMENT PORTAL

July 29, 2019

Re: NOAA–NMFS–2019–0064

Dear Ms. Harrison:

Established in 1947, Defenders of Wildlife is a national nonprofit conservation organization dedicated to the protection of flora and fauna in its native habitat. Defenders has 1.8 million members and supporters nationwide, including over 6000 in Alaska. We have long advocated for the conservation of marine mammals in Alaska, including endangered Cook Inlet beluga whales. Defenders appreciates this opportunity to comment on NMFS's proposed ITR authorizing the Alaska Gas Development Corp. to take marine mammals incidental to construction and operation of a Liquified Natural Gas (LNG) export facility in Cook Inlet, Alaska.

This LNG export project is the subject of an extensive draft EIS prepared by the Federal Energy Regulatory Commission (FERC), in cooperation with a number of agencies including NMFS. NMFS proposes to rely on the FERC EIS to support the ITR, pending an independent NMFS evaluation of the adequacy of the EIS under NEPA.[1] Comments on the FERC draft EIS are currently due October 3, 2019. The LNG project would be a massive undertaking involving construction of natural gas production facilities on Alaska's north slope; construction of almost 1000 miles of new gas pipeline including a 42" diameter mainline pipe over 800 miles from the north slope to Cook Inlet; and construction of a large LNG export facility in Nikiski.

Given the magnitude of the project, there could be substantial additional information that becomes available in the coming months and is included in the final EIS supporting a project decision. Since NMFS's independent determination of NEPA adequacy would pertain to that final EIS some months hence, and could depend on the responses in that final document to issues not yet raised or fully vetted,

[1] 84 Fed.Reg. 30,991 (June 28, 2019)

it is unclear why NMFS seeks to finalize the ITR in advance of the FERC EIS process. We suggest that NMFS defer the ITR comment period until later in the EIS process, when additional relevant information could be available for NMFS and public review. Alternatively, NMFS could reopen an ITR comment period before finalizing the ITR based on its own determination that additional relevant information has become available.

Cook Inlet Belugas

Cook Inlet belugas were listed as depleted under the Marine Mammal Protection Act in 2000 and as endangered under the Endangered Species Act in 2008. The population decreased from an estimated 1300 animals in 1979 to just 328 now.[2] Although an unregulated subsistence harvest is thought to have contributed to the decline, the harvest has ceased yet the belugas have not shown signs of recovery and are still in decline.[3] NMFS completed a recovery plan for this population in December 2016.

The Cook Inlet beluga recovery plan identifies three threats of highest relative concern that may be impeding the population's recovery.[4] The current proposal would exacerbate two of these top threats: the cumulative impacts of multiple stressors, and noise impacts.[5] We urge NMFS to assess the overall effects of stressors and noise on belugas before drawing a conclusion regarding whether the additional stressors and noise associated with this project would have a negligible impact on, or affect only small numbers of, these animals.[6]

Noise

The noise impacts associated with the LNG project appear to be significant. They include noise from in-water pile driving and anchor handling activities associated with trenching and pipe-laying work.[7] There would also presumably be noise impacts associated with ongoing inspection and maintenance of the pipeline, but NMFS does not mention these noise sources in the ITR. Additionally, the ITR doesn't consider operational noise associated with the proposed Liquefaction Facilities; the FERC draft EIS indicates that noise at the two nearest land-based "noise sensitive areas" would likely double due to facility operation, which would be considered a significant increase.[8] The highest noise levels would apparently occur when there are two LNG carrier ships docked at the facility,[9] but the ITR does not discuss this noise as a potential impact to marine mammals. NMFS should include these additional sources of noise in its analysis or explain how these activities will not generate additional noise in the project area.

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[2] 84 Fed.Reg. 30,999
[3] *Id.*
[4] NMFS, Recovery Plan for the Cook Inlet Beluga Whale (Recovery Plan), December 2016, at III-3.
[5] It also introduces the risk of the third high relative threat, a catastrophic event. The plan notes that oil spills and natural gas blowouts are examples of anthropogenic catastrophic events that could harm beluga whales. *Id.* at III-5.
[6] Stressors for Cook Inlet belugas in addition to noise include chemical pollution and other contamination, shifts in prey abundance and availability, and climate change. Recovery Plan at III-7-10.
[7] 84 Fed.Reg. at 31,001.
[8] FERC Draft EIS at 4-973.
[9] *Id.* at 4-974.

As NMFS notes, baseline ambient noise levels in the vicinity of project area are high due to ongoing shipping, construction and other activities in Cook Inlet.[10] Some sources of noise can cause injury to marine mammals, or induce adverse behavioral responses such as moving away from and avoiding otherwise-desired habitats.[11] Cumulatively, noise can also mask the auditory environment for whales, disrupting, preventing or confusing communication, a vital life function. For Cook Inlet belugas, there is also the identified high relative threat that cumulative noise impacts are impeding the recovery of the population. Since ambient noise levels are already high and that noise is already identified as a high threat to the recovery of the population, it is critical to identify whether noise from the LNG project, in addition to the existing noise associated with other activities, will further impede Cook Inlet beluga recovery.

Negligible Impact

NMFS states that noise impacts "are expected to be in short duration, within the day during the construction activities when the animal is nearby. As construction activities only occur for a maximum of 12 hours during daylight hours between April and October of the year, marine mammals in the project area will not be subject to chronic exposure of construction noise."[12] Additionally, fine-scale modeling indicates that AGDC's proposed LNG facilities construction does not overlap with beluga whale high density areas during the summer and fall.[13] Finally, NMFS states that because the number of whales expected to be impacted by the proposed action equates to less than 7% of the population, the impact is negligible. These observations do not appear to support a "negligible impact" determination.

First, twelve hours of noise every day from April through October does seem to expose marine mammals to chronic noise. It is not continuous, year-round noise, but any exposure filling one-half of every day for one-half of every year for multiple years does not seem a short duration. Instead, it appears to be a substantial source of additional noise impact which needs to be aggregated with other existing noise impacts to understand its likely effect.

Also, while we support the use of the most accurate information possible regarding marine mammal locations and impacts from various activities, we are concerned that Cook Inlet noise and stressors may already be acting in concert to influence the beluga whale population distribution. The range of the remaining belugas has, thus far inexplicably, constricted dramatically so that most animals congregate in the upper Inlet for more of the year, instead of dispersing to the lower Inlet as much as they used to do. If noise pollution has played a role in constricting the range of beluga whales, then using that constricted range to estimate take will tend to understate the impact and ultimately allow for more noise pollution in the now less-occupied portions of beluga critical habitat.

Finally, we are not convinced that a project's impact can be considered negligible because it only impacts 7% of an endangered population. With a minimum population of 312, Cook Inlet belugas are critically endangered and have a potential biological removal (PBR) of less than one animal per year.[14] Indeed, "given the endangered status of this population, even one take every 2 years may still impede

[10] 84 Fed.Reg. at 31,002.
[11] E.g., 84 Fed.Reg. 31,002.
[12] *Id.* at 31,011.
[13] *Id.*
[14] NMFS, Cook Inlet Beluga Whale Stock Assessment Report, December 30, 2018 at 110 (calculating PBR at 0.62).

recovery."[15] That sentence means "take" in the lethal sense but nonetheless, there is no margin for error in recovering this population and on these facts, potentially affecting 6.4% of the population (20 animals) with additional noise impacts is not a negligible impact.[16]

More troubling, though, is that NMFS does not aggregate the cumulative impacts of noise and other stressors, to better identify the overall impacts to beluga whales and other marine mammals. Many existing sources of noise are known and permitted; others are known but not permitted activities; still others are proposed and not yet permitted. Masking, in particular, is of great concern in this regard, as it could help explain the belugas lack of recovery but will not be properly assessed with reference to the current project alone. NMFS must include the noisy baseline that already exists and explain the soundscape we can expect to see in Cook Inlet, and its impact on marine mammals, if the LNG project is added to that baseline.[17]

In sum, we urge NMFS to extend the ITR comment period to parallel the LNG project comment period; to aggregate the sources of noise impacting marine mammals in Cook Inlet to estimate the cumulative exposure to noise and likely impacts; and then reassess whether the impact to Cook Inlet beluga whales in particular can be considered negligible.

Sincerely,

/s/

Pat Lavin
Alaska Policy Advisor

[15] *Id.* at 112.
[16] The same observation attaches to NMFS's "small numbers" conclusion. 84 Fed.Reg. at 31,011-12.
[17] 54 Fed.Reg. 40,342 (September 29, 1989).

July 29, 2019

Ms. Jolie Harrison
Chief, Permits, Conservation and Education Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

RE: Taking Marine Mammals Incidental to Alaska Liquefied Natural Gas (LNG) Project in Cook Inlet

Dear Ms. Harrison:

The Environmental Investigation Agency (EIA) is writing in response to the National Marine Fisheries Service (NMFS) request for comments on a petition to authorize the taking of marine mammals (IHA) by the Alaska Gasline Development Corporation (AGDC) in Cook Inlet, Alaska. While EIA acknowledges the additional details on mitigation activities and the reduced number of permitted takes in this iteration, we remain concerned that this IHA will have a major impact on Cook Inlet's critically endangered population of beluga whales (*Delphinapterus leucas*). We are also troubled by persistent procedural errors that occurred during the public comment period which make it difficult to discern what the true impact of the proposed project would be on Cook Inlet belugas and which have harmed the substantive rights of interested parties in participating in the comment period. For all of these reasons, we urge you to deny AGDC's petition.

Procedural Errors

Before we set out our substantive comments, we would like to raise serious concerns regarding the manner in which NMFS conducted this comment period. Until July 24th, 2019, the only available version of AGDC's application for a Letter of Authorization (LOA) was the previous version of the plan dated February 20th, 2018. The updated version of the application, which not only amends and details the changes in the workplan as well as the time of operation, was not uploaded until five days prior to the closure of the comment. As this comment period is only 30 days, stakeholders concerned about this project could not review the final application for the majority of the comment period.

These changes make it difficult to evaluate key details of the project's impact. For instance, NMFS estimates a total of 14 belugas will be exposed to Level B harassments from 2020-2025, while AGDC estimates 10 belugas but in different seasons. The activities described in both documents are roughly similar for each season and estimates apparently rely on the same research for each density estimate, which makes the discrepancy between takes in each season unclear.

We would also note that this is the second time supplementary materials have been uploaded late, or changed, without explanation during public comment periods in relation to this project. As we detailed in our comment on May 11, 2018, the previous iteration of this request included a similar issue where a draft application dated April 14th, 2017 was the only available version for half the comment period. Moreover, for the majority of the duration of the comment period the NMFS' website listed May 9, 2018 as the closing date of the comment period, when in fact the comment period closes on May 11 according to the Federal Register. This error was only rectified on May 10.

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Pursuant to Title 50 CFR §216. 104, prior to issuing any takes of small numbers of marine mammals NMFS:

> will invite information, suggestions, and comments for a period not to exceed 30 days from the date of publication in the Federal Register. All information and suggestions will be considered by the National Marine Fisheries Service in developing, if appropriate, the most effective regulations governing the issuance of letters of authorization or conditions governing the issuance of an incidental harassment authorization.[1]

As a result of the errors described above, interested parties have not been able to fully effect their right to participate in the comment period.

Substantive Concerns

Approval of AGDC's IHA is inconsistent with NOAA Fisheries' efforts to support the recovery of the Cook Inlet beluga whales. Given the precarious state of the population, and its continuing decline, approval of any new IHAs risks further unacceptable harm and should be deferred at least until the reasons for the population's decline are understood and effective recovery has been demonstrated. This recommendation has also been made repeatedly by the Marine Mammal Commission (MMC).[2]

As NMFS is aware, the beluga whale population of Cook Inlet has declined from an estimated population of 1,300 in 1979 to just 328 individuals in 2016.[3] The population has not recovered as NMFS predicted after the cessation of unrestricted subsistence harvests in 2000 and it has continued to decline at an annual rate of 0.5 percent from 2006-2016.[4] After the population was listed as Endangered under the Endangered Species Act in 2008, critical habitat for the population was designated in 2011 and in 2016 the first version of a Species Recovery Plan was published.[5] Within the Recovery Plan, anthropogenic noise was classified as a threat of high relative concern. Underwater noise is also considered one of several cumulative effects or high stressors that constitute a separate threat to the Cook Inlet belugas.[6] As noted in the Recovery Plan, "there is a general underestimation of the importance of the acoustic environment to CI belugas and other odontocetes in general. There may also be an underestimation of the impacts of anthropogenic noise to CI belugas."[7]

Sound from vessels or piling can cause temporary or permanent threshold shifts in beluga hearing, mask detection of acoustic signals like echolocation or communication calls, and lead to altered behavior or displacement from habitat.[8] While some degree of habituation has likely occurred, activities like pile driving are still likely to affect the beluga population. During previous pile driving activity near Knik Arm in Cook Inlet, beluga sightings remained consistent but sighting time decreased, as did foraging behavior. During active pile driving, belugas were more likely to travel through the affected areas rather than remain to forage, and juvenile sightings also decreased suggesting displacement and avoidance.[9]

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[1] General Regulations Governing Small Takes of Marine Mammals Incidental to Specified Activities. 61 FR 15887 (April 10, 1996).
[2] Marine Mammal Commission (2019). Application from Hilcorp Alaska and Harvest Alaska to take marine mammals incidental to conducting various oil and gas-related activities in Cook Inlet, Alaska.
[3] Muto, M.M. et al. (2019). Alaska Marine Mammal Stock Assessments. National Marine Fisheries Service.
[4] Ibid.
[5] National Marine Fisheries Service. (2016). Recovery Plan for the Cook Inlet Beluga Whale (Delphinapterus leucas). National Marine Fisheries Service, Alaska Region, Protected Resources Division, Juneau, AK.
[6] NMFS 2016
[7] NMFS 2016
[8] Ibid.
[9] Kendall, L. S., & Cornick, L. A. (2015). Behavior and distribution of Cook Inlet Beluga Whales, Delphinapterus leucas, before and during pile driving activity. Marine Fisheries Review, 77(2), 106-115.

New research also indicates the soundscape in Cook Inlet is naturally quieter than previously thought, and anthropogenic noise already exceeds harassment levels on a daily basis.[10] Castellote *et al.* also note that the range harassing levels of sound are transmitted across Cook Inlet is longer than NMFS has calculated. For instance, in Table 6, NMFS estimates the level B distance of sound from a vibratory piledriver as 21.54 kilometers, but Castellote recorded distances up to 37.5 kilometers, suggesting NMFS' calculation of transmission loss is not conservative enough.[11] NMFS must reassess potential takes using the most precautionary distance for potential harassing levels of noise.

NMFS also fails to assess the number of animals exposed to harassing levels of noise as well as the cumulative impact of the project on beluga whales. For instance, echosounders and side scan sonar are disregarded as a source of potential take, as they "operate at frequencies of greater than 200 kHz".[12] However, Deng *et al*. found that while the central frequency output is above 200 kHz, all of the sounders examined by the researchers also generated sound from 90-130 kHz.[13] In Castellote et al. 2014, seven belugas caught from the wild population of Bristol Bay exhibited hearing ranges from 4-150 kHz, well within the range to perceive these side sounds.[14] In keeping with a precautionary approach, echo sounders and other high frequency operations must be reconsidered as a potential source of Level B harassment.

<u>NMFS must conduct a cumulative impacts assessment</u>

The increasing contribution of new anthropogenic sources of noise pollution to the list of existing impacts to Cook Inlet belugas has led many experts to hypothesize that the reason the population is not recovering is because they are suffering "death by a thousand cuts."[15] Consequently recommendation 62 of the Recovery Plan calls for a comprehensive approach for the allocation of takes, including a cumulative cap based on a percentage of the current abundance. A similar recommendation to consider takes cumulatively rather than individually in a region is identified in NOAA's roadmap for underwater noise. While NMFS has accepted this recommendation and previously declared its intention to prepare a cumulative Environmental Impact Statement (EIS) for oil and gas activities for Cook Inlet covering multiple years, this has been postponed if not outright abandoned.

NMFS proposes an IHA of 20 animals per year from 2020-2025, which amounts to almost seven percent of the population. While we acknowledge this is both smaller than the 32 individuals requested by AGDC, and smaller than the 32 proposed in the previous iteration of this project, it still fails to consider the potential cumulative effect this project may have in conjunction with other proposed activities. In addition to AGDC, Hilcorp has also requested an IHA from 2019-2024 for oil and gas activities within the Inlet.[16] Collectively these two permits will run concurrently in time, and in some instances space and could lead to a take of almost 20 percent of the entire population in a given year.

NMFS has also not required consideration of all forms of industrial noise associated with this project. Dredging and commercial vessels can both exceed the 120 dB threshold for non-impulsive noise, but as AGDC notes in their application they were not required to consider these impacts as part of their project's impacts.[17] In the brief assessment of cumulative impacts from this projects, NMFS limits their assessment to

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[10] Castellote, M., Thayre, B., Mahoney, M., Mondragon, J., Lammers, M. O., & Small, R. J. (2019). Anthropogenic Noise and the Endangered Cook Inlet Beluga Whale, Delphinapterus leucas: Acoustic Considerations for Management.
[11] Ibid.
[12] Ibid.
[13] Deng, Z. D., Southall, B. L., Carlson, T. J., Xu, J., Martinez, J. J., Weiland, M. A., & Ingraham, J. M. (2014). 200 kHz commercial sonar systems generate lower frequency side lobes audible to some marine mammals. PloS one, 9(4), e95315.
[14] Castellote, M., Mooney, T.A., Quakenbush, L., Hobbs, R., Goertz, C., Gaglione, E. (2014). Baseline hearing abilities and variability in wild beluga whales (*Delphinapterus leucas)*. *The Journal of Experimental Biology 217.* Available at: http://jeb.biologists.org/content/217/10/1682.full
[15] Ibid.
[16] NMFS (2019a). Incidental Take Authorization: Hilcorp Alaska LLC Oil and Gas Activities in Cook Inlet, Alaska.
[17] Alaska LNG. (2018). Petition for Incidental Take Regulations for Construction of the Alaska LNG Project in Cook Inlet, Alaska. AKLNG-6010-REG-GRD-DOC-00001

strictly noise related to these construction activities. However, as the main intention of this project is to create an export terminal for liquefied natural gas, AGDC's proposed activities could greatly exacerbate vessel traffic noise within Cook Inlet.[18] This source is already the most constant source of underwater noise in Cook Inlet, and NMFS must consider the full impact of the project as part of its cumulative analysis.

Not considering the cumulative impact of all of these projects contradicts the Cook Inlet Beluga Recovery Plan and effectively ignores cumulative threats that may cause irreparable damage to this critically endangered population. NMFS must begin an Environmental Impact Statement for all potential sources of harassment, not limited to oil and gas activities.[19]

Concerns for proposed renewals

NMFS further asserts this IHA "must" be renewed without public input provided the "proposed specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts are the same as described".[20] It is unclear how whether or how an automatic renewal process for IHAs can coexist with NMFS' stated obligation under the Recovery Plan to conduct a cumulative effects analysis of impacts on belugas.

Pursuant to Section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA), IHAs can only be issued "during periods of not more than five consecutive years each…after notice (in the Federal Register and in newspapers of general circulation, and through appropriate electronic media, in the coastal areas that may be affected by such activity) and opportunity for public comment". Therefore, automatic renewal of IHA permits without public comment is inconsistent with the MMPA on its face.[21]

For the reasons outlined herein, we urge you to deny AGDC's petition.

Sincerely,

Daniel Hubbell
Policy Analyst
Environmental Investigation Agency

[18] Castellote et. al 2019
[19] 82 CFR 41939
[20] 84 CFR 31016
[21] 16 U.S.C. 1371 Sec. 101(a)(5)(A).

EXPLOITERS
FRIENDS
of ANIMALS

July 29, 2019

Via regulations.gov

Jolie Harrison, Chief
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

RE: Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Alaska Liquefied Natural Gas (LNG) Project in Cook Inlet (NOAA-NMFS-2019-0064).

Dear Ms. Harrison:

Friends of Animals (FoA)[1] submits these comments on the Taking of Marine Mammals Incidental to Alaska Liquefied Natural Gas (LNG) Project in the Cook Inlet. The proposed action would permit Alaska Gas Development Corporation (AGDC) to take marine mammals in the Cook Inlet distinct population segment by Level A and B harassment under the Marine Mammal Protection Act (MMPA). Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Alaska Liquefied Natural Gas (LNG) Project in Cook Inlet, 84 Fed. Reg. 30991, (June 28, 2019) (hereinafter, "LOA"). FoA requests that the National Marine Fisheries Service (NMFS) deny AGDC's request for a Letter of Authorization (LOA) due to the ramifications that the LOA would have on Cook Inlet beluga whales.

BACKGROUND

A. The Cook Inlet and Cook Inlet Beluga Whales.

The Cook Inlet is a long, narrow body of water that extends from the Anchorage, Alaska area to the Gulf of Alaska, northeast of the Aleutian Islands. *Beluga Whale*, NOAA Fisheries, https://www.fisheries.noaa.gov/species/beluga-whale (last visited July 17, 2019). Cook Inlet is known for its continued industrial development, unpredictable tides and weather, and growing human presence. *Id*. The area is also known for being home to the genetically distinct, small population of Cook Inlet beluga whales, whose numbers have fallen greatly

[1] Friends of Animals is a non-profit international advocacy organization incorporated in the state of New York since 1957. Friends of Animals has nearly 200,000 members worldwide. Friends of Animals and its members seek to free animals from cruelty and exploitation around the world, and to promote a respectful view of nonhuman, free-living, and domestic animals. Friends of Animals has previously commented on numerous federal actions regarding takes of Cook Inlet beluga whales.

over the years and continue to decrease. *Id*. Cook Inlet is also home to harbor seals, harbor porpoises, and killer whales, amongst other marine life. *Id*.

On April 11, 2011, NMFS designated critical habitat for the Cook Inlet beluga whale. Endangered and Threatened Species: Designation of Critical Habitat for Cook Inlet beluga Whale; Final Rule, 76 Fed. Reg. 20180 (April 11, 2011). The critical habitat consists of two areas containing a total of 3,013 square miles of marine habitat. *Id.* at 20205. Area 1 is comprised of 738 square miles of Cook Inlet northeast of a line from the mouth of Threemile Creek to Point Possession. *Id.* Area 1 has the highest concentration of beluga whales in the spring through the fall and is an important area for foraging, calving, molting, and escape from predators. *Id.* Area 2 is comprised of 2,275 square miles south of Area 1, including nearshore areas along the west side of the Inlet and Kachemak Bay on the east side of the lower inlet. *Id.* Area 2 has less concentration of beluga whales in the spring and summer, but they are known to use it during the fall and winter. *Id.* Beluga whales use Area 2 for feeding and as a transient area. *Id.*

The Cook Inlet beluga whale population has suffered great losses over the past few decades. Subsistence hunting resulted in a population decline of 47% between 1994 and 1998 alone. *See* Lowry et al., *Delphinapterus leucas Cook Inlet subpopulation*, The IUCN Red List of Threatened Species 3 (2019). Shortly after, NMFS began highly regulating subsistence hunting; as a result, no belugas have been taken due to subsistence hunting since 2005. Recovery Plan at II-48. National Marine Fisheries Service, *Recovery Plan for the Beluga Whale* at II-48 (2016) (hereinafter, "Recovery Plan"). Despite NMFS's efforts, the beluga population has failed to recover and continues to decline, indicating that other factors are impacting its ability to survive and thrive in the area. Lowry et al. at 3. In 2016, International Union for Conservation of Nature (IUCN) estimated "the size of the mature population in 2016 to be 231 Belugas . . . with an 82% probability that there are fewer than 250 reproductive adults." *Id.* at 3-4 (internal citations omitted). The most recent abundance survey by NMFS estimates there are 328 belugas left in the inlet, notably fewer than the 340 estimated in 2014. *Cook Inlet Beluga Whal*e, Marine Mammal Commission, https://www.mmc.gov/priority-topics/species-of-concern/cook-inlet-beluga-whale/ (last visited July 17, 2019).

Subsistence hunting is cited as the primary cause of the Cook Inlet beluga population decline in previous decades, but NMFS has yet to pinpoint the exact cause of the belugas' present and continued population decline. Recovery Plan at xii, xiv. However, recent research indicates that the cause of the population decline is low birth rates. Lowry et al. at 3. The low birth rates are likely due to the massive amounts of noise, movement, and other disturbances generated by the rapid and vast development of Cook Inlet. *Id.*; *see also* Recovery Plan at III-9. IUCN reports up to a 71% probability that, if present conditions persist, the population cannot withstand any take and will decline further in the future. Lowry et al. at 4. Furthermore, threats to Cook Inlet beluga whales are exacerbated by the whales' already small population size, which makes them more susceptible to depletion or

extinction from "random demographic, environmental, and genetic factors." Lowry et al. at 5. For example, a major oil spill in the Cook Inlet has the potential to push depleted populations of belugas to extinction, particularly considering their tendency to congregate in groups. *Id.*

Although there is a general lack of research on beluga whales, recent studies show that belugas primarily reside in the upper parts of the Inlet during the summer months, then shift further south in the fall, winter, and spring. Lammers et al., *Passive acoustic monitoring of Cook Inlet beluga whales (Delphinapterus leucas)*, 143 J. Acoust. Soc. Am. 2497, 2503 (Sept. 2013). Thus, beluga whales may be found throughout the Inlet at any time of year. Recovery Plan at II-8. Some researchers detected the most belugas in the Upper Cook Inlet in the summer, and in the mid-Cook Inlet in fall, winter, and spring; the furthest south the researchers detected them was at Kenai River. *Id.* Beluga River had the most consistent presence of belugas throughout the year. *Id.* Researchers determined that the Beluga River and the Susitna Delta are the belugas' core summertime home range, whereas in the winter, the belugas spend a lot of time near Trading Bay. *Id.* The little research that does exist regarding belugas may not be accurate because belugas may not produce social signals while resting or traveling, so belugas may have been present in a monitored area but were not detected there. *Id.* In addition, belugas may have transited outside of detection range. Lammers et al. at 2504. These findings of beluga movements are extremely relevant for policymakers and they should be incorporated into policymaking in order to route development and transit away from beluga seasonal home ranges.

B. The Proposed AGDC LOA.

In April of 2017, AGDC requested a LOA to take five species of marine mammals by Level B harassment incidental to constructing LNG facilities in Cook Inlet. *See* LOA, 84 Fed. Reg. 30991. The MMPA defines Level A harassment as "[a]ny act of pursuit, torment, or annoyance which . . . has the potential to injure a marine mammal or marine mammal stock in the wild." 16 U.S.C. § 1362(18)(A)(i). The MMPA defines Level B harassment as "[a]ny act of pursuit, torment, or annoyance which . . . 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." *Id.* § 1362(18)(A)(ii). AGDC's proposed project will potentially impact marine mammals by Level A and Level B harassment. LOA at 31007. Although NMFS only predicts that the project will impact beluga whale by Level B harassment, "potential effects to marine mammals from AGDC's project could result in Level A harassment." *Id*. at 30992, 31007. Thus, AGDC's project may affect beluga whales by Level A harassment.

AGDC's project will occur in Area 2 of the beluga whale's critical habitat. *Id.* at 31011. Specifically, the proposed project includes the construction of facilities at two different sites "to transport and offload LNG in Cook Inlet for export" and the construction of the Mainline oil pipeline ("the Mainline") between the facilities. LOA, 84 Fed. Reg. at 30992. The first site is located in the Cook Inlet approximately 0.5 miles south of Nikiski, AK. *Id*.

AGDC proposes to construct the Marine Terminal at the first site, including a temporary Marine Terminal Offloading Facility ("Marine Terminal MOF") and a permanent Production Loading Facility ("PLF"). *Id.* The second site is located near Beluga Landing on the west side of Cook Inlet. *Id*. AGDC proposes to construct the Mainline at the second site across Cook Inlet, including a potential temporary Mainline Material Offloading Facility ("Mainline MOF"). *Id.* The proposed Mainline will be constructed between the sites, traversing approximately 26.7 miles of the Inlet and directly invading beluga whale critical habitat. *Id.* at 30995.

The proposed issuance of LOA presents long-term, cumulative, and potentially synergistic risks to marine mammals and their habitat in the project area.

NMFS'S ISSUANCE OF THE LOA WOULD VIOLATE THE MARINE MAMMAL PROTECTION ACT

The MMPA was enacted in response to Congressional concern that "certain species and population stocks of marine mammals are, or may be, in danger of extinction or depletion as a result of man's activities." 16 U.S.C. § 1361(1). Under the MMPA, it is unlawful to take any marine mammal unless permitted by a statutory exception. *Id.* § 1371(a). The MMPA defines take as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." *Id.* § 1362(13).

Under the MMPA, citizens are allowed to take "small numbers of marine mammals of a species or population stock" for less than "five consecutive years each" and only if such taking: (1) will have a negligible impact on such species or stock; and (2) will not have an unmitigable adverse impact on the availability of such species or stock for taking for subsistence uses. *Id.* § 1371(a)(5)(A)(i). In order to determine whether a take is negligible, NMFS should consider the potential impact from past, current, and future activities and their impact on the environmental baseline. LOA, 84 Fed. Reg. at 31010.

The potential impacts that AGDC's proposed project will have on the species are varied and numerous. They include hearing impairment, separation of family groups, loss of prey and/or habitat, disturbances to biologically sensitive feeding and mating areas, bodily harm, behavioral changes, and synergistic and/or cumulative effects, amongst others. These numerous negative effects on marine mammals do not constitute negligible impacts, and therefore, AGDC does not meet the qualifications for obtaining a LOA under the MMPA.

A. The Proposed Project Authorizes the Take of a Large Number, Not a Small Number, of Cook Inlet Beluga Whales.

Section 101(a)(5)(A) of the MMPA authorizes the Secretary of the Interior to allow the incidental taking of small numbers of marine mammal species by U.S. citizens engaged in certain activities other than commercial fishing. *See* 16 U.S.C. § 1371. The authorization may only be granted if the taking will have a negligible impact on the species or stock(s). NMFS defines a "negligible impact" as one "resulting from the specified activity that cannot

be reasonably expected to, and is not reasonably likely to, adversely impact the species or stock through effects on annual rates of recruitment or survival." 50 C.F.R. § 216.103 (2019).

NMFS proposes to authorize the take of 20 beluga whales, or 6.41%, of the Cook Inlet population per year for a total of five years. LOA, 84 Fed. Reg. at 31007. Thus, AGDC is authorized to take at least 100 beluga whales if NMFS approves the LOA. The Marine Mammal Commission 2018 Stock Assessment states that "even one take every 2 years may still impede recovery." Marine Mammal Commission, *BELUGA WHALE (Delphinapterus leucas): Cook Inlet Stock* at 112 (2018). Notably, the estimated number of takes is not definite and, based on the vast amount of harmful impacts that AGDC's proposed project would cause, the actual number of takes is likely to be higher. Further, of all the potentially impacted species, NMFS estimates the highest number of takes for Cook Inlet beluga whales.

The current estimate for Cook Inlet belugas is only 328, with fewer than 251 belugas estimated to be reproductive adults. Lowry et al. at 3-4. The Cook Inlet belugas' stagnant population growth cannot sustain the take of 100 belugas, let alone the possibility of a higher number of potential takes.

B. Issuing the LOA Has a Significant, Non-Negligible Impact on Cook Inlet Beluga Whales.

1. The proposed project will create noise pollution that is likely to cause hearing damage.

Noise pollution and hearing damage are one of the threats of highest concern to belugas and "[e]xposure to high intensity sound for a sufficient duration may result in auditory effects such as noise-induced threshold shift (TS)—an increase in the auditory threshold." LOA, 84 Fed. Reg. at 31001. An animal may experience a temporary threshold shift (TTS) if the TS eventually returns to zero, but an animal can also experience a permanent threshold shift (PTS) from the exposure to high intensity sound. *Id*.

In the LOA request, NMFS states that the threshold level for PTS for mid-frequency cetaceans for Impulsive sources (impact pile driving) is a peak sound pressure of 230 dB and a cumulative sound exposure level of 185 dB. LOA, 84 Fed. Reg. at 31004. NMFS found the threshold level for PTS for Non-Impulsive sources (vibrating pile driving) is a cumulative sound exposure level of 198 dB. *Id.* NMFS also states that the threshold for behavioral impacts for Impulsive sources is 160 dB and 120 dB for Non-Impulsive sources. *Id.* Impulsive sounds have "physical characteristics making them more injurious (e.g., high peak sound pressures and rapid rise times) than non-impulsive sound sources." National Marine Fisheries Service, *2018 Revision to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (V.2.0)* (2018) at 20. Notably, a recent study states that, "[a]t present, it is difficult to quantify variability in TTS onset among marine mammals given how little data exist on TTS onset for multiple individual subjects

from multiple species within each hearing group to sound exposures at the same frequency." *See* Southall et al., *Marine Mammal Noise Exposure Criteria: Updated Scientific Recommendations for Residual Hearing Effects*, 45 Aquatic Mammals 156 (2019). Thus, NMFS cannot accurately conclude that the noise pollution from the proposed project will have a negligible or reversible impact on the belugas. Additionally, NMFS's Recovery Plan acknowledges a lack of data on the effects of chronic noise exposure as well as little data on the adverse behavioral effects of anthropogenic noise. Recovery Plan at II-28.

Moreover, NFMS has acknowledged that anthropogenic noise poses a high risk of interfering with the beluga's recovery. Recovery Plan at III-13. Because of conditions that make the Cook Inlet "naturally noisy, complex, and dynamic," there is a greater "potential for negative effects when anthropogenic sources of noise are introduced into [the Cook Inlet] beluga habitat." *Id.* at III-12-13. One study found that "coastal development, oil and gas exploration and extraction, commercial shipping, recreational boating, and military activities" are all threats to the Cook Inlet beluga whales. *See* Lammers et al., at 2497. Vessel traffic, industrial or construction activities, and aircraft all contribute to anthropogenic noise within the Cook Inlet. *Id.* at 2501. A recent study from 2018 analyzing anthropogenic noise in the Cook Inlet reaffirms that "anthropogenic noise carries a threat of high concern to the recovery of the Cook Inlet beluga population." Manuel Castellote et al., *Anthropogenic Noise and the Endangered Cook Inlet Beluga Whale, Delphinapterus leucas: Acoustic Considerations for Management*, 80 Marine Fisheries Review 80 (2018). NMFS appears to be allowing activities to grow in the Cook Inlet, ignoring its own Recovery Plan and data that confirms the substantial threat that anthropogenic noises pose to belugas.

In addition, some anthropogenic activities can create noises of a similar frequency as a whale's communication noises, and thus these anthropogenic noises can "mask," or cover up, a whale's natural sounds. *Id.* at 2497. Beluga whales detect acoustic signals in noise and "[a] primary feature of the auditory system in [belugas] is the ability to resolve a complex sound into its individual frequency components by a set of auditory filters, and the filter shape and size affect the loudness and detectability of complex sounds and broadband signals." Recovery Plan at IX-28. Masking may leave a whale disoriented and unable to communicate with other whales, or incapable of detecting predators, prey, or nearby objects. Masking may also therefore affect the population growth of belugas by impeding a beluga's ability to communicate and creating stress. Further, a study on the influence of background noise on beluga response released in 2018 found that "[a]daptation against a high-intensity sound background reduces the sensitivity so much that signals of any intensity are difficult to analyze. Thus, auditory adaptation to the certain sound background can facilitate or complicate analysis of the fine structure of the signal spectrum, depending on the ratio of signal and background intensities." E. V. Sysueva et al., *Influence of the Background Noise on Recognition of Signals with a Complex Spectrum Structure in the Beluga Whale (Delphinapterus leucas)*, 481 Doklady Biological Sci. at 136-37 (2018). Another study states that "[t]he acoustic characteristics of most of the detected

noise events in this study [on the Cook Inlet] have the potential to mask beluga hearing at certain frequencies and also their communication, and some exceed the current National Oceanic and Atmospheric Administration (NOAA) behavioral harassment thresholds on a daily basis." Manuel Castellote et al. (2018), at 80. Although there are limited studies, the best available science indicates that noise is detrimental to belugas and will cause takes.

NMFS acknowledges that noise pollution and hearing loss are threats of high concern, yet NMFS is considering issuing authorized Level B takes due to noise pollution. NMFS would not be carrying out its Recovery Plan if it issues AGDC's LOA. To comply with its own Recovery Plan, NMFS should deny this LOA.

2. The proposed project will likely cause behavioral disruptions.

With the small number of Cook Inlet belugas, and the uncertainty surrounding their decline, a project that will harass 6.4% of their population per year poses a substantial risk. In the proposed project, the levels for in-water pile driving sources all exceed estimated behavioral threshold levels. LOA, 84 Fed. Reg. at 31004. Thus, Cook Inlet development and Level B harassment could potentially affect the beluga whales' behaviors, particularly feeding, breeding, and migration.

Studies have shown that exposure to noise leads to "displacement from critical feeding and breeding grounds" in a number of marine mammal species, including "the displacement of gray whales from breeding lagoons in response to industrial noise . . . or dredging and shipping." Linda S. Weilgart, *A Brief Review of Known Effects of Noise on Marine Mammals*, 20(2) UCLA International Journal of Comparative Psychology 162 (2007) (internal citations omitted). Noise has been demonstrated to impact beluga whale behavior as well. In one study, beluga whales "appeared to actively avoid icebreakers at distances of 35-50 km, remaining away for 1-2 days." *Id.* (internal citations omitted). Disruptions in feeding and breeding practices due to displacement will have dire consequences for the belugas, as NMFS cites low birth rates due to behavior and habitat modifications as the most probable reason for the decline of the species. Lowry et al. at 3.

NMFS's Recovery Plan also cites reduction in prey as a threat to the Cook Inlet beluga whales. Recovery Plan at III-5. Studies show that fish hear and react to sounds, use sounds to communicate, and avoid predators. *See* Ben Wilson and Lawrence Dill, *Pacific Herring Respond to Simulated Odontocete Echolocation Sounds*, 59 Canadian J. Fish. & Aquatic Sci. 542 (2002). AGDC's proposed project includes dredging/trenching, disposal of dredged material, and facility installation. *Id.* at 31003. Each of these activities would likely cause the beluga's prey to avoid the project area, thus further reducing the beluga whale's source of food. Because the project is likely to cause behavioral disruptions and habitat modifications that will have non-negligible impacts on the beluga's recovery, issuing the LOA violates the MMPA.

3. **The proposed project is susceptible to catastrophic events, which is reasonably likely to negatively impact the species.**

The Recovery Plan cites catastrophic events such as oil spills as one of three "Threats of High Relative Concern" to the Cook Inlet belugas. Recovery Plan at III-5. AGDC's proposed activities increase the risk of an oil spill occurring in the Inlet. The Cook Inlet belugas are particularly at risk because of their small population size and their reduced summer range in the upper Inlet, which "makes them vulnerable to catastrophic events that have the potential to kill or injure a significant portion of the population." *Id*. at III-6.

Since 2003, Alaska's Spill Prevention and Response (SPAR) division has responded to 384 "spills that have the potential to significantly impact human health, public safety, or the environment." *Spill Response Summaries*, Alaska Division of Spill Prevention and Response, https://dec.alaska.gov/spar/ppr/spill-information/response/ (last visited July 15, 2019).

This statistic does not account for the numerous minor spills and accidents that frequently take place throughout the Alaskan waterways. Smaller spills, when aggregated, also pose a threat to belugas and their critical habitat. For example, in 2018, SPAR responded to 661 new spill cases in Alaska's Central Region, where Cook Inlet is located. Alaska Division of Spill Prevention and Response Division*, Integrated Annual Report, Fiscal Year 2018* (2018) at 13 (hereinafter, "SPAR Report"). While SPAR only considered a few to be significant enough to impact the environment, the spills caused almost 30,000 gallons of oil or other hazardous liquid to flow into the Inlet. SPAR Report at 25. Moreover, any oil spill is a significant one, as all spills have the ability to impact marine mammals, the environment, and humans.

In addition, NOAA recently assessed the likelihood of oil spills occurring in different parts of Alaska and found that Cook Inlet faces a high risk of a spill. *See* Thea Card, *NOAA Releases Alaska Oil Spill Risk Report, Southeast and Aleutians Most at Risk*, KDLG (Nov. 19, 2014), *available at* https://www.kdlg.org/post/noaa-releases-alaska-oil-spill-risk-report-southeast-and-aleutians-most-risk. Despite this known risk, SPAR does little to deter industry actors from operating recklessly. Incredibly, of the 2,069 new oil spill cases in fiscal year 2018, SPAR only sought enforcement action against three responsible parties, and referred only two spill cases to law enforcement. SPAR Report at 24. Given the absence of meaningful consequences in virtually all spill cases, companies like AGDC are not sufficiently motivated to operate their facilities to the utmost safety standards required to avoid a potentially catastrophic spill.

In addition to poorly enforced spill regulations, locals in the Cook Inlet area are concerned about the lax regulations for ships in the Inlet and the challenging geography of the area, as these characteristics could contribute to another major oil spill. Frank Mullen, *Cook Inlet Tanker Traffic Needs Escort Tugs*, Alaska Dispatch News, Nov. 26, 2014, https://www.adn.com/commentary/article/cook-inlet-tanker-traffic-needs-escort-

tugs/2014/11/27/. In his editorial in the Alaska Dispatch News, local fisherman Frank Mullen explains the issue:

> Basically, the Cook Inlet shoreline from Chickaloon to Nanwalek and beyond, including Kachemak Bay, Snug Harbor, Kodiak, and everything in between is at risk of an oil spill. This is a lot of risk. It is a near-certainty that a spill will occur; the question is "when?" How quickly people forget the lessons of the Exxon Valdez. A Russian container ship carrying hundreds of tons of fuel recently lost power off the Canadian coast near the Queen Charlotte islands. A rescue effort took place over a week or more. Tugs with adequate power were hard to find in the area. Tow lines repeatedly broke. A catastrophe was avoided, but only because the ship was far enough offshore to buy the rescuers time. If this happens in Cook Inlet -- and it will -- a confined geographical area with extraordinary tides and winter ice to contend with, a spill will be unavoidable.

Id.

The poorly enforced spill regulations, past oil spill data, and difficult geography increases the likelihood of an oil spill. Oil spills cause non-negligible impacts on the beluga whale because oil spills will kill or injure a significant portion of the beluga whale population. Overall, the negative impacts on the beluga whales caused by AGDC's proposed project, including noise pollution, behavioral disruptions, and the strong likelihood of a catastrophic event are clearly non-negligible impacts. Thus, NMFS should not approve AGDC's LOA because it would violate the MMPA.

C. The Proposed Project Will Have More than a Negligible Impact When Analyzed in Combination with Other Authorizations.

MMPA regulations state that:

> [a]n incidental harassment authorization shall be modified, withdrawn, or suspended if, after notice and opportunity for public comment, the Assistant Administrator determines that:
>
> > (1) The conditions and requirements described in the authorization are not being substantially complied with; or
> >
> > (2) The authorized taking, either individually or in combination with other authorizations, is having, or may have, more than a negligible impact on the species or stock or, where relevant, unmitigable adverse impact on the availability of the species of stock for subsistence uses.

50 C.F.R. § 216.107(f).

The proposed project and LOA would result in a significantly negative cumulative impact. In NMFS's Recovery Plan, the agency considers cumulative impacts "particularly relevant in

the case of [Cook Inlet] belugas given the population's failure to recover despite the curtailment of hunting." Recovery Plan at VI-23. NMFS also states that cumulative effects are a threat of high concern due to:

> 1) multiple stressors occur year-round and throughout range of CI belugas;
>
> 2) uncertainty regarding the magnitude of future cumulative effects;
>
> 3) uncertainty over the mechanisms of existing and future cumulative effects (including synergistic effects, if any);
>
> 4) difficulty in detecting impacts attributable to cumulative mechanisms; and
>
> 5) difficulty in effectively mitigating cumulative effects due to the occurrence of multiple stressors.

Recovery Plan at III-10.

NMFS states that, "[e]xposure to any given stressor at a sub-lethal level may predispose individual belugas to greater susceptibility to mortality or long-term effects (e.g., reproductive failure) from other stressors." Recovery Plan at III-30. In 2019 alone, the Cook Inlet currently has two oil and gas projects with active incidental take permits, one oil and gas project with an incidental take permit in progress, and two other energy projects with incidental take permits in progress. *See* National Marine Fisheries Service Incidental Take Authorizations and Applications (July 15, 2019). The active incidental permits authorize a total of 70 beluga whale takes. *See* Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Seismic Surveys in Cook Inlet, Alaska, 81 Fed. Reg. 47240 (July 20, 2016); Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to the Cook Inlet Pipeline Cross Inlet Extension Project, 83 Fed. Reg. 19224 (May 2, 2018). In addition, the incidental take permits in progress propose to permit a total of 89 authorized takes. *See* LOA, 84 Fed. Reg. at 30991; Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Geophysical and Geotechnical Survey in Cook Inlet, Alaska, 81 Fed. Reg. 6375 (February 5, 2016); Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Oil and Gas Activities in Cook Inlet, Alaska, 81 Fed. Reg. 12330 (April 1, 2019). If NMFS approves the proposed take permits, at least a total of 159 beluga whales could be legally harassed.

In 2000, the Cook Inlet beluga whales were listed as depleted under the MMPA. NMFS then listed the beluga whales as endangered under the Endangered Species Act (ESA) in 2008, and designated beluga whale critical habitat in 2011. Yet, eleven years after NMFS listed the Cook Inlet beluga whales under the ESA, there is still no noticeable recovery, and NMFS has not pinpointed an explicit reason for the decline of the population. NMFS cannot issue any more permits or LOAs without assurance to the public that the Cook Inlet beluga whale population will remain sustainable.

Under the ESA, NMFS must develop and implement a recovery plan for the conservation and survival of an endangered species. 16 U.S.C. § 1533(f). Each recovery plan must incorporate:

(i) a description of such site-specific management actions as may be necessary to achieve the plan's goal for the conservation and survival of the species;
(ii) objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of this section, that the species be removed from the list; and
(iii) estimates of the time required and the cost to carry out those measures needed to achieve the plan's goal and to achieve intermediate steps toward that goal.

Id. § 1533(f)(1)(b). In addition, NMFS's Recovery Planning Guidance states that recovery plans must provide a comprehensive monitoring and evaluation program to reach the recovery plan's goal. *See* Recovery Plan at I-5.

The overall strategy of NMFS's current beluga whale Recovery Plan is as follows:

- Continue to monitor the status of the CI beluga population and improve the understanding of CI beluga biology;
- Improve the understanding of the effects of threats of medium or high relative concern on CI belugas;
- Improve the management of threats of medium or high relative concern to reduce or eliminate the effect of those threats on CI belugas;
- Periodically reassess whether the relative concern of each potential threat identified in this plan has changed over time;
- Integrate research findings into current and future management actions; and
- Keep the public informed and educated about the status of CI belugas, the threats limiting their recovery, and how the public can help achieve recovery of these whales.

Recovery Plan at IV-2. However, despite the Recovery Plan's strategy, NMFS has continued to issue incidental take permits for Cook Inlet beluga whales. The authorization of yet another permit would only continue to jeopardize the goals of NMFS's own Recovery Plan and result in a significantly negative cumulative impact. As discussed in more detail below, NMFS has recognized the need to analyze the cumulative impacts of all actions effecting Cook Inlet Beluga whales in a programmatic EIS. However, NMFS has failed to do so. Until NMFS looks at the cumulative impacts of actions impacting the Cook Inlet beluga whales, NMFS should not authorize the any take of Cook Inlet Belugas, which could have non-negligible impact on the population.

NMFS'S ISSUANCE OF THE LOA WOULD VIOLATE THE ENDANGERED SPECIES ACT

The ESA provides protection for listed species that are either endangered or threatened with extinction. 16 U.S.C. § 1531 *et seq.* Under the ESA, federal agencies must consult either Fish and Wildlife Service (FWS) or NMFS to analyze whether a project "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species." *Id.* §1536(a)(2).

Formal consultation is required if it is determined that an action may affect a listed species or critical habitat. 50 C.F.R. § 402.14 (2019). The formal consultation includes but is not limited to:

> (1) Review all relevant information provided by the Federal agency or otherwise available. Such review may include an on-site inspection of the action area with representatives of the Federal agency and the applicant.
>
> (2) Evaluate the current status of the listed species or critical habitat.
>
> (3) Evaluate the effects of the action and cumulative effects on the listed species or critical habitat.
>
> (4) Formulate its biological opinion as to whether the action, taken together with cumulative effects, is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.
>
> (5) Discuss with the Federal agency and any applicant the Service's review and evaluation conducted under paragraphs (g)(1) through (3) of this section, the basis for any finding in the biological opinion, and the availability of reasonable and prudent alternatives (if a jeopardy opinion is to be issued) that the agency and the applicant can take to avoid violation of section 7(a)(2). The Service will utilize the expertise of the Federal agency and any applicant in identifying these alternatives. If requested, the Service shall make available to the Federal agency the draft biological opinion for the purpose of analyzing the reasonable and prudent alternatives. The 45-day period in which the biological opinion must be delivered will not be suspended unless the Federal agency secures the written consent of the applicant to an extension to a specific date. The applicant may request a copy of the draft opinion from the Federal agency. All comments on the draft biological opinion must be submitted to the Service through the Federal agency, although the applicant may send a copy of its comments directly to the Service. The Service will not issue its biological opinion prior to the 45-day or extended deadline while the draft is under review by the Federal agency. However, if the Federal agency submits comments to the Service regarding the draft biological opinion within 10 days of the deadline for issuing the opinion, the Service is entitled to an automatic 10-day extension on the deadline.

(6) Formulate discretionary conservation recommendations, if any, which will assist the Federal agency in reducing or eliminating the impacts that its proposed action may have on listed species or critical habitat.

(7) Formulate a statement concerning incidental take, if such take may occur.

(8) In formulating its biological opinion, any reasonable and prudent alternatives, and any reasonable and prudent measures, the Service will use the best scientific and commercial data available and will give appropriate consideration to any beneficial actions taken by the Federal agency or applicant, including any actions taken prior to the initiation of consultation.

Id. § 402.14(g).

A biological opinion includes:

(1) A summary of the information on which the opinion is based;

(2) A detailed discussion of the effects of the action on listed species or critical habitat; and

(3) The Service's opinion on whether the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat (a ''jeopardy biological opinion''); or, the action is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat (a ''no jeopardy'' biological opinion). A ''jeopardy'' biological opinion shall include reasonable and prudent alternatives, if any. If the Service is unable to develop such alternatives, it will indicate that to the best of its knowledge there are no reasonable and prudent alternatives.

Id. § 402.14(h).

The biological opinion must use the best scientific and commercial data available. 50 C.F.R. § 402.14(d).

NMFS is required by Section 7(a)(4) of the ESA to ensure that an agency action is "not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical." 16 U.S.C. § 1536(a)(2). Since the LOA would impact the Cook Inlet beluga whale population and critical habitat, NMFS must undergo a formal consultation and issue a biological opinion stating whether the project is likely to jeopardize the continued existence of any listed species, or result in destruction or adverse modification of critical habitat for a listed species. *See* 16 U.S.C. § 1536(b). If a proposed agency action will jeopardize a listed species or adversely modify designated critical habitat, it must suggest reasonable and prudent alternatives that will avoid jeopardy and adverse modification of designated critical habitat. *Id.* § 1536(b)(3)(A).

The proposed mitigation of noise and other impacts is not enough. The inevitability of human error, the fact that environmental conditions are unpredictable in the highly variable Cook Inlet, and the issues with the small population size of belugas all mean that the proposed mitigation strategies cannot fully protect the Cook Inlet belugas from the myriad of threats facing them.

Further, NMFS has not finished its formal consultation nor completed its biological opinion. NMFS states its intention to conclude the ESA consultation prior to reaching a conclusion on whether to issue the LOA. LOA, 84 Fed. Reg. at 31012. However, the LOA's comment period is closed on July 29, 2019. By publishing the proposed rule without first completing the consultation, NMFS fails to provide the public with all of the information necessary to comment on the LOA.

NMFS relies heavily on the Federal Energy Regulatory Commission, Alaska LNG Project Draft Environmental Impact Statement at 4-465 (2019) (hereinafter, "Alaska LNG Project Draft EIS"). The Alaska LNG Project Draft EIS does not address many of the human and environmental impacts of the project. In particular, the EIS's analysis of potential effects on listed species is not at all thorough. The analysis of impacts on the beluga whale is approximately one-page long, and the analyses of the other listed species and distinct population segments (DPS) are similarly brief. This brief and cursory analysis does not the meet the requirements of the MMPA, ESA, or National Environmental Policy Act. Without the findings from the ESA consultation, neither NMFS nor the public can be sure they are using the best available science to make decisions.

NMFS'S ISSUANCE OF THE LOA WOULD VIOLATE THE NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) is the "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). One way in which agencies are held accountable by NEPA is through the creation of an EIS. Proposed agency plans that significantly affect the human and natural environment necessitate an EIS. At minimum, NMFS must prepare an EIS in order to mitigate undesirable impacts, to weigh alternatives, to communicate all relevant information to the public, and to adequately measure the impacts to the natural environment, wildlife, humans, and their resources that could result from issuing incidental take permits or letters of authorizations.

Preparing an EIS is a requirement for all "major Federal actions significantly affecting the quality of the human environment."42 U.S.C. § 4332(2)(C). The Council on Environmental Quality (CEQ) defines "major federal action" to include "actions with effects that may be major, and which are potentially subject to Federal control and responsibility."40 C.F.R. § 1508.18. The proposed project and its takes, which require federal authorization, are in fact subject to that federal control. NEPA regulations require the agency to consider the cumulative effects of its proposed actions which "result [ ] from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" with the goal of making sure that "individually minor but collectively significant" actions are properly analyzed. 40 C.F.R. § 1508.7; see also Kern v. BLM, 284 F.3d 1062, 1078 (9th

Cir.2002) (purpose is to avoid "the tyranny of small decisions"). Agencies cannot divide projects to avoid their duties under NEPA. See Sylvester v. U.S. Army Corps of Engineers, 884 F.2d 394, 400 (9th Cir. 1989). NMFS must complete its duties under NEPA and consider all relevant information provided in the EIS comments prior to reaching a final determination on the proposed project.

In order to fully comply with NEPA, NMFS should prepare a programmatic environmental impact statement (PEIS) for all anthropogenic activities in the Cook Inlet before deciding whether to approve this LOA.[2] Before preparing an EIS or Environmental Assessment (EA), an agency should determine if a generic or programmatic environmental document exists that analyzes "actions, effects or issues similar to those involved in the proposed action." 22 C.F.R. § 161.9(l)(1). "A generic environmental document reviews the environmental effects that are generic or common to a class of Departmental actions which may not be specific to any single country or area." *Id*. If a programmatic environmental document does not exist, the agency should decide whether to conduct a programmatic environmental review that focuses "its analysis on the environmental aspects of an entire program rather than on the specific elements of the program." *Id*. NMFS has not prepared a PEIS or programmatic environmental assessment (PEA) analyzing cumulative impacts of all projects proposing take of Cook Inlet beluga whales.

On October 14, 2014, NMFS issued notice that it would prepare a PEIS to analyze the environmental impacts of issuing Incidental Take Authorization (ITAs) pursuant to the MMPA for the takes of marine mammals in the Cook Inlet incidental to anthropogenic activities. Notice of Intent To Prepare an Environmental Impact Statement on the Issuance of Take Authorizations in Cook Inlet, Alaska, 79 Fed. Reg. 61616 (October 14, 2014). On August 12, 2015, NMFS issued notice of its intent to prepare a PEA on the incidental take authorizations for 2016. Programmatic Environmental Assessment on the Issuance of Take Authorizations in Cook Inlet, Alaska, 80 Fed. Reg. 48299 (August 12, 2015). NMFS also issued notice of intent to prepare a PEA in 2017. Notice of Intent To Prepare an Environmental Assessment on the Issuance of Incidental Take Authorizations in Cook Inlet, Alaska, 82 Fed. Reg. 41938 (September 5, 2017). However, NMFS has failed to complete a PEIS or PEA regarding incidental takes and appears to have abandoned the PEIS in favor of conducting individual assessments for each requested permit. NMFS never explained why it reversed its decision to prepare a PEIS or PEA for all Cook Inlet proposed takes.

NMFS should not issue any permits or LOAs until it completes a PEIS that considers all activities for which ITAs or regulations have been or are expected to be issued. The NOAA guidelines state that "[p]rogrammatic reviews should be considered, in particular when a decision maker is . . . (3) making decisions on common elements or aspects of a series or

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[2] Although AGDC's has initiated an EIS for the project, it has not fully considered the impact of its project, as well as the cumulative impact of all projects in the Cook Inlet, on the endangered Cook Inlet Beluga Whales. *See* Alaska LNG Project Draft EIS.

suite of closely related projects." NOAA, Policy and Procedures for Compliance with the National Environmental Policy Act and Related Authorities, §6(E) (Effective: January 13, 2017). NMFS should conduct a PEIS because, as explained above, multiple proposed projects simultaneously anticipate take of Cook Inlet beluga whales. *See* Marine Mammal Commission, 4, https://www.mmc.gov/wp-content/uploads/19-05-01-Harrison-NMFS-Cook-Inlet-OG-activities-proposed-ITR.pdf (last visited July 29, 2019) (hereinafter, "Marine Mammal Commission Comment"). The projects are closely related and involve common elements because the projects all involve incidental take of beluga whales in Cook Inlet due to oil and gas activities. *See* National Marine Fisheries Service Incidental Take Authorizations and Applications (July 15, 2019). For example, on April 1, 2019, NOAA issued proposed regulations to govern Hilcorp Alaska LLC's (Hilcorp) request for authorization to take marine mammals incidental to oil and gas activities in Cook Inlet. Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Oil and Gas Activities in Cook Inlet, Alaska, 84 Fed. Reg. 12330 (Apr. 1, 2019). The Marine Mammal Commission wrote a comment urging NMFS to conduct a PEIS because NMFS is processing AGDC and Hilcorp's application for take simultaneously. Marine Mammal Commission Comment at 4.

Without a PEIS, NMFS cannot adequately understand the comprehensive impacts that approving AGDC's request for a LOA would have on the beluga whale. This critical mistake could decimate the already vulnerable Cook Inlet beluga whale population. Thus, NMFS should defer issuance of the LOA until NMFS conducts a PEIS that cumulatively considers all activities for which NMFS or NOAA has issued or expects to issue ITAs or regulations with respect to their anticipated, cumulative take of Cook Inlet beluga whales. In addition, NMFS should establish annual limits on the total number and type of takes that are authorized for all sound producing activities in Cook Inlet before issuing any LOAs or permits.

CONCLUSION

Friends of Animals respectfully submits these comments and asks NMFS to consider the ethical, ecological, and legal implications of issuing the LOA for Cook Inlet beluga whales. Issuing a LOA to take Cook Inlet beluga whales incidental to the LNG Project would have a non-negligible impact on the endangered DPS. With just a few hundred belugas remaining in the Inlet, it is unconscionable to knowingly allow any takes of the species. It is particularly troubling that the exact cause of the beluga population decline is unknown, and that the exact number of takes is also unknown and will likely be higher than anticipated.

The Cook Inlet beluga is already endangered by noise pollution, oil and other hazardous material spills, and the negative cumulative impacts stemming from increasingly frequent construction, drilling, and marine traffic throughout its shrinking range. Authorizing yet another incidental take for a five-year project, particularly when the results of the ESA consultation are still pending, is both arbitrary decision-making and a violation of NMFS's duties under the MMPA, ESA, and NEPA.

Therefore, Friends of Animals respectfully requests NMFS to reject AGDC's application for a LOA to take Cook Inlet beluga whales.

Sincerely,

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