



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 application¹ 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 pipeline². 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 procedures³ 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 appropriate⁴; 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 Inlet⁵, 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 numbers⁶ and negligible impact⁷. 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 impact⁸ 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

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 occasions⁹ 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 lifespan¹⁰, there are plans to double the size of the Port of Anchorage¹¹ and to expand oil and gas development in both state and federal waters of Cook Inlet¹². 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.

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).

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/km² 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 Inlet¹³. In this case, although a higher density should have been used, the estimated takes of beluga whales were adjusted upwards to account for group size¹⁴. 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 densities¹⁵ 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 Inlet¹⁶. 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 2.33¹⁷ for harbor seals tagged in Cook Inlet, which would account for seals at sea and not counted during a survey¹⁸. 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 densities¹⁹ (84 Fed. Reg. 31006), more seals are actually at sea in June than are hauled out²⁰.

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 estimate²¹ of 0.2487 harbor seals/km² for the recent Hilcorp final rule²² (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 data²³. 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.

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/km².

¹⁶ Resulting in 0.1695 seals/km², 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/km². 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 sources²⁴. 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*

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 activity²⁶. That method is inconsistent with NMFS's policy for enumerating takes for construction activities in general²⁷ 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 1²⁸, based on 33 days of pile driving planned for that year (as indicated in Table 1). To account for group size and other factors²⁹, 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 1³⁰. 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 piles³¹. 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

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 porpoises³³ 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.

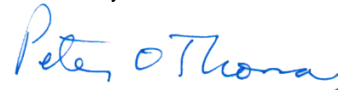
³² Similar results exist for 48- and 60-in piles in Years 2, 3, and 4. Further, the Level A harassment zone for HF cetaceans during impact installation of 24-in piles in Year 2 is 1,545 m, which is 83 percent of the Level B harassment zone of 1,848 m.

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 zones³⁴, 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 distance³⁵. 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 rule³⁶. 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

References

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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.