



MARINE MAMMAL COMMISSION

18 August 2025

Mr. Benjamin Laws, Supervisor
Incidental Take Program
Permits and Conservation Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3225

Dear Mr. Laws:

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) 29 July 2025 (90 Fed. Reg. 35762) and the application submitted by 8 Star Alaska, LLC (8 Star AK)¹, seeking issuance of regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA). 8 Star AK is seeking authorization to take small numbers of marine mammals by harassment incidental to constructing the Alaska Liquefied Natural Gas facilities in Cook Inlet, Alaska, during a five-year period. Activities would occur from January 2026 through December 2030. The Commission reviewed the previous application and proposed rule and provided recommendations in its [5 August 2019 letter](#) that should be reviewed and incorporated, as applicable, for any final rule that is issued.

Background

8 Star AK would 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. As part of that project, 8 Star AK 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 pipeline across the inlet between the two locations. 8 Star AK would be required to implement various standard mitigation, monitoring, and reporting measures, including multiple time-area closures².

¹ A subsidiary of Alaska Gasline Development Corporation (AGDC), who applied for and received an incidental taking authorization that expires on 31 December 2025 for the same activities. No work has been conducted or will be conducted by the time the current authorization expires.

² The Commission informally noted that NMFS omitted from the proposed regulation text the requirement that 8 Star AK refrain from conducting pile driving associated with the Mainline MOF from June 1 to September 7 (90 Fed. Reg. 35802). NMFS confirmed that the Mainline MOF time-area closure requirement would be included in section 217.44 of the final rule, similar to the time-area closure for the Susitna Delta.

Availability of marine mammals for subsistence use

Similar to the previous proposed rule, 8 Star AK indicated that it has met, and would continue to meet, with stakeholders, including subsistence users (90 Fed. Reg. 35809). However, neither 8 Star AK's stakeholder engagement plan nor its application (nor the preamble to the proposed rule) includes any information regarding which stakeholders, including Alaska Native communities and tribal councils, were or are going to be contacted. That information was never provided for AGDC nor was its stakeholder engagement plan made available to the public³. It appears that 8 Star AK's current stakeholder engagement plan was provided to the agency for review four days prior to the *Federal Register* notice published and had not been updated since 2017⁴, which is evident from the scant information that was included and subpar nature of the plan. To ensure that adequate outreach to potentially affected Alaska Native communities has taken place regarding 8 Star AK's proposed activities, the Commission again recommends that NMFS require 8 Star AK to include in its stakeholder engagement plan which stakeholders have been or will 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.

Source levels

The proxy source levels proposed for impact installation of 24- and 48-in pipe piles by 8 Star AK are lower than those previously used by AGDC. Specifically, the proxy source levels proposed for 48-in piles are 6 dB less for root-mean-square sound pressure level (SPL_{rms}) and 8 dB less for single-strike sound exposure level (SEL_{ss} ; compare Table 7 at 90 Fed. Reg. 35783 with Table 5 at 85 Fed. Reg. 50740). 8 Star AK's source levels were based on NMFS's interim proxy source levels estimated from median source levels in California Department of Transportation (2020) and Illingworth and Rodkin (2017)⁵ for 40- to 48-in piles. Of the eight datasets NMFS used to inform its interim proxy source levels⁶—

- bubble curtains were used for three (two at Antioch and one at Avon Wharf from Caltrans (2020)⁷, although the proxy source levels were intended to be unattenuated;
- a dewatered casing within which a pile was driven was used for one of them (Geyserville from Caltrans (2020))⁷, again although the proxy source levels were intended to be unattenuated;
- a mix of mean and maximum source levels was used for another (Navy Kitsap from Caltrans (2020))⁷; and
- incorrect source levels⁸ were used from the Philadelphia dataset from Illingworth and Rodkin (2017).

³ <https://www.fisheries.noaa.gov/action/incidental-take-authorization-alaska-gasline-development-corporation-liquefied-natural-gas>.

⁴ See page 2 of the [stakeholder engagement plan](#).

⁵ This reference is missing from the *Federal Register* notice.

⁶ Some were single piles and others were summary data for a given site.

⁷ Source levels also were taken from the Caltrans (2020) summary tables, which are often incorrect, instead of the project-specific sections within Caltrans (2020).

⁸ The wrong data were taken from the summary tables.

In general, NMFS had not used the Philadelphia dataset from Illingworth and Rodkin (2017) until its proxy source levels were developed, because the source levels are 5–10 dB less than other locations, presumably due to the substrate. However, Illingworth and Rodkin (2017) did not note whether the substrate was in fact mud or something similar.

NMFS's interim proxy source levels did not include those from Austin et al. (2016) that originated from Cook Inlet and that informed AGDC's previously-used source levels. Removing the attenuated source levels and those from Illingworth and Rodkin (2017), only three source level datasets would remain with two from California (Alameda and Vallejo) and one from Washington (Kitsap; Caltrans (2020)). If those three datasets⁹ and the data from Austin et al. (2016) in Table 5 of the preamble to the AGDC final rule were used to estimate more applicable proxies, the median source levels would be 209 dB SPL_{peak}, 195 dB SPL_{rms}, and 181 dB SEL_{s-s}. For all these reasons, the Commission recommends that NMFS use median source levels of 209 dB SPL_{peak}, 195 dB SPL_{rms}, and 181 dB SEL_{s-s} from Caltrans (2020; Alameda, Vallejo, and Kitsap) and Austin et al. (2016) rather than the interim proxies it proposed to use of 213 dB SPL_{peak}, 192 dB SPL_{rms}, and 179 dB SEL_{s-s} to re-estimate the Level A and B harassment zones and numbers of takes for impact installation of 48-in piles for the 8 Star AK final rule. The Commission further recommends that NMFS use the revised median proxy source levels of 209 dB SPL_{peak}, 195 dB SPL_{rms}, and 181 dB SEL_{s-s} rather than its interim proxy source levels for impact installation of 48-in piles for all incidental take authorizations¹⁰ until such time that the agency finalizes its proxy source levels.

Similar issues may exist for NMFS's interim proxy source levels for impact installation of 24-in piles and other sizes of piles. However, the underlying data upon which the interim proxy source levels were based are not known. The Commission has recommended for nearly a decade that NMFS develop proxy source levels, yet the proxies have still not been finalized. Since the interim proxy source levels are known to be incorrect for impact installation of 48-in piles, as well as other pile sizes and installation methods for which the Commission has commented informally, it is imperative that NMFS prioritize finalizing the proxy source levels. Once finalized, the proxies will improve efficiencies for the agencies and the applicants, as approximately 90 percent of the current incidental take authorizations involve pile installation.

Sound attenuation device (SAD)

8 Star AK proposed to use a SAD (e.g., bubble curtain, resonators, dewatered casings, etc.) and, if the sound source verification (SSV) results show a reduction of at least 2 dB, then section 217.44 (m) of the proposed rule would require the SAD to be used throughout construction activities. However, NMFS did not include in the proposed regulatory text the specific requirement for 8 Star AK to use a SAD, rather the proposed rule only required its use after SSVs confirm that sound reduction is achieved. The Commission has never seen an incidental take authorization stipulate the requirements in such a manner. In any event, NMFS has required various bubble curtain performance standards to be adhered to in Cook Inlet for both unconfined¹¹ and confined¹²

⁹ Assuming mean source levels were used for all metrics for the Kitsap dataset.

¹⁰ Currently, the proposed incidental harassment authorizations for Turnagain Marine Construction in Seward included impact installation of 48-in piles and used the interim proxy source levels. Although the numbers of takes may not change, the extent of the Level A and B harassment zones for the purposes of monitoring would.

¹¹ See as an example section 4(h) in [the 2021 final authorization issued to the Port of Alaska](#)

¹² See as an example section 4(i) in [the 2020 final authorization issued to the Port of Alaska](#).

bubble curtains to ensure some amount of sound attenuation is achieved. In this instance, a 2-dB reduction is a low bar to meet.

The Commission informally suggested that NMFS include even more basic bubble curtain performance standards¹³ in the 8 Star AK proposed rule and caveat them such that the standards would need to be implemented only *if* bubble curtains would be used, since it is unclear at this point whether 8 Star AK would use bubble curtains, resonators, dewatered casings, etc. NMFS responded that, because 8 Star AK has not selected a contractor, it did not want such a requirement to be included in the rule due to practicability concerns related to that uncertainty. Once 8 Star AK selects the contractor, a detailed SSV plan would be required to be reviewed and approved by NMFS. That may be the case, but use of a SAD and the associated performance standards are considered mitigation measures, not monitoring or reporting measures that typically are specified in an SSV plan. Previous SSV plans for Cook Inlet do not include such details¹⁴, nor do more recent more detailed SSV plans for much larger piles that have more stringent sound attenuation requirements¹⁵. Furthermore, including a basic mitigation requirement that if a bubble curtain is used, certain performance standard measures must be met does not obligate 8 Star AK to use such a SAD. The Commission recommends that NMFS include in section 217.44 of the final rule the requirements that, if an unconfined¹⁶ or confined¹⁷ bubble curtain is used, specific standard performance measures must be met.

SSV plan and report

Section 217.44(m) of the proposed rule would require 8 Star AK to (1) conduct SSV measurements *prior to the start* of all pile-driving activities at each location, (2) test for the effectiveness of the SAD, and (3) if the SSV results show that a reduction of at least 2 dB is achieved, employ the use of the SAD. Since SSV measurements cannot be conducted prior to the start of pile driving, NMFS presumably intended the measure to require SSV measurements to be conducted at the beginning of pile driving. The acoustic monitoring section of the proposed rule (section 217.45(b)(1)(ii)) also would require 8 Star AK to monitor a minimum of two piles of each type and size. The regulatory text however does not specify that SSV measurements would need to occur at each location, for each pile installation method (impact and vibratory pile driving), or with and without the SAD. The Commission therefore recommends that NMFS require 8 Star AK to (1) conduct SSV measurements at the beginning of all pile-driving activities at each location in section 217.44 (m) of the final rule and (2) monitor a minimum of two piles of each size, each type, and each installation method without the SAD at each location and a minimum of two piles of each size, each

¹³ If a bubble curtain is used, at a minimum, (1) the bubble curtain must distribute air bubbles around 100 percent of the piling circumference; (2) the lowest bubble ring must be in contact with the substrate for the full circumference of the ring, the weights attached to the bottom ring shall ensure 100 percent substrate contact, and no parts of the ring or other objects shall prevent full substrate contact; and (3) air flow to the bubblers must be balanced around the circumference of the pile.

¹⁴ See, as one example, [the 2020 SSV plan for the Port of Alaska](#).

¹⁵ See, as one example, [the 2024 SSV plan for Revolution Wind](#).

¹⁶ See section 4(h) in [the 2021 final authorization issued to the Port of Alaska](#) or section 3(c)(8)(ii – iv) in) in [the 2023 final authorization issued to Revolution Wind](#) for the relevant performance standards for unconfined bubble curtains.

¹⁷ See section 4(i) in [the 2020 final authorization issued to the Port of Alaska](#) for the relevant performance standards for confined bubble curtains.

type, and each installation method with the SAD at each location in section 217.45(b)(1)(ii) of the final rule.

In addition, neither the preamble nor the regulatory text specified whether the 2-dB reduction must be verified in the near field (at the 10 m distance), in the far field (1 km or near the extent of the Level B harassment zone), or in both. 8 Star AK's SSV plan merely stated that the contractor would collect several measurements with and without the SAD and would compare source levels in the near field and propagation rates in the far field. That is insufficient. The strong current flow and extreme tidal stages in Cook Inlet previously have rendered unconfined bubble curtains ineffective. Confined bubble curtains and resonators have attenuated only in-water sound levels in Cook Inlet, with some sound propagated directly from the pile into the seafloor unattenuated that has been shown to propagate through the seafloor and refract into the water column at longer ranges (Austin et al. 2016). Further, Reyff (2021) and Reyff et al. (2021) have specified that the effects of the air bubble casing in reducing overall sound levels at distant positions was not evident in Cook Inlet, because sound levels at lower frequencies dominate and fall off with distance at a much lower rate than the higher frequency sounds. Reyff et al. (2021) also noted that, depending on the associated spectra of the sound, the transmission loss of the attenuated source levels was much lower, resulting in larger zones, than the unattenuated source levels. The Commission recommends that in section 217.44(m) of the final rule NMFS require 8 Star AK to use the SAD if the SSV results show that a reduction of at least 2 dB is achieved in both the near and far field.

8 Star AK would conduct concurrent pile-driving activities using multiple hammers, in addition to pile-driving activities using only a single hammer (see Table 7 in the preamble to the proposed rule). The SSV requirements in the proposed rule would apply only to the use of a single hammer. Currently, there are seven single hammer pile-driving event scenarios and five concurrent pile-driving scenarios. In response to the Commission's inquiry regarding SSV measurements for concurrent pile driving, NMFS indicated that while it agreed that conducting SSV of concurrent pile driving is likely appropriate, it did not think it was appropriate to include specific requirements related to SSV for concurrent pile driving in the regulatory text. Instead, NMFS indicated it would collaborate with 8 Star AK on an appropriate number of each concurrent pile-driving scenarios to be monitored and plan to do so in development of the detailed SSV plan. At the very least, the Commission recommends that NMFS specify in section 217.45(b)(1) of the final rule that SSV measurements must be made on an appropriate number of each concurrent pile-driving scenarios in consultation with the agency and as specified in the final SSV plan.

Similar to the stakeholder engagement plan, 8 Star AK's SSV plan provided scant details¹⁸, including what data and metrics would be reported. NMFS indicated that a detailed SSV plan would be developed once 8 Star AK retains a contractor. Many of the SSV reporting requirements including the relevant statistics, metrics, environmental parameters (water depth, sediment type), pile size/type, SAD on/off, etc. were appropriately specified in section 217.45(b)(1)(iii)(A – E) of the proposed rule. However, a glaring omission in both the SSV plan and SSV reporting requirements in the proposed rule was the Level A and B harassment zone extents. The entire reason for conducting SSV for source levels and sound propagation is to verify the extents of the Level A and B harassment zones. In response to the Commission's informal inquiry regarding the omission, NMFS

¹⁸ And incorrect thresholds for otariids exposed to impulsive sources.

indicated that a separate requirement for 8 Star AK to provide the extents of the Level A and B harassment zones was unnecessary because an additional measure stated that, if appropriate, the results of the SSV report may be used to adjust the extent of the Level A and B harassment zones for in-water pile driving in section 217.44(b)(1)(v) of the proposed rule. Neither the extents of the Level A and B harassment zones nor transmission loss values are required to be included in the SSV report (see section 217.45(b)(1)(iii)(A – E) of the proposed rule). Absent reporting those key data, it is unclear how in-season Level A and B harassment zones could be adjusted per section 217.44(b)(1)(v) of the proposed rule.

Reporting the actual Level A and B harassment zones has been a standard requirement of other incidental take authorizations in Cook Inlet¹⁹ and many other locations. Transmission loss values have been provided by most contractors, but not all. Given the inconsistency in the data contractors provide and the inherent uncertainty in transmission loss in Cook Inlet that has been highlighted by Austin et al. (2016), Reyff (2021), Reyff et al. (2021), and Reyff (2023), NMFS should require transmission loss to be reported in the SSV report as well. The Commission recommends that NMFS (1) provide the detailed SSV plan to the Commission for review and (2) include in section 217.45(b)(1)(iii) of the final rule the requirement for 8 Star AK to report the extents of the Level A and B harassment zones and transmission loss values for attenuated and unattenuated impact and vibratory installation of each pile size/type, including for the concurrent pile-driving scenarios monitored.

Numbers of protected species observers (PSOs)

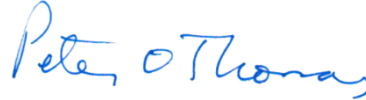
Section 217.45(a)(6)(i) of the proposed rule would require a minimum of two PSOs to be monitoring for marine mammals during all pile-driving activities. However, neither the preamble to nor the proposed rule specified whether two PSOs would be required to monitor at each pile-driving location since pile driving could occur at various locations within Cook Inlet²⁰ or whether two PSOs would be required to monitor each active hammer when multiple hammers would be used during concurrent pile driving at a specific location at a given time (see Tables 2 and 8 in the *Federal Register* notice and 8 Star AK's application for more details). Such details are imperative for the action proponent to know what is required under any final rule or letter of authorization issued thereunder and for the agency to be able to make the necessary determinations under the MMPA. This is particularly important given that the shut-down zones extend from 20 m to 2 km for pinnipeds and all cetaceans except beluga whales and to more than 21 km for beluga whales when a single hammer is used and 34 km when multiple hammers are used (see Table 19 in the notice). For these reasons, the Commission recommends that NMFS specify in section 217.45 (a)(6)(i) of the final rule that, for all pile-driving activities, a minimum of two PSOs must be on duty (1) at each pile-driving location at all times when a single hammer is used and (2) to monitor the area around each active hammer, totaling four PSOs at all times during concurrent pile driving.

¹⁹ See, as one example, the [2020 final authorization issued to the Port of Alaska](#).

²⁰ e.g., main terminal MOF and mainline MOF.

Please let me know if you or your staff have questions regarding any of the Commission's comments or recommendations.

Sincerely,



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

References

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