



**Port of Alaska Modernization Program
Program Management Office**

MEMORANDUM

PCT Project Addendum to Marine Mammal Mitigation and Monitoring Plan

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The Port of Alaska (POA) last submitted a Mitigation and Monitoring Plan (4MP) to the National Marine Fisheries Service (NMFS) on October 28, 2019 as part of its application for Incidental Harassment Authorizations (IHAs) to support the Petroleum and Cement Terminal (PCT) Project. Since then, the POA and NMFS have been in regular communication and have collaborated extensively to refine the mitigation and monitoring plan as it is written in the Phase 1 and Phase 2 IHAs, as well as in the Biological Opinion. In lieu of creating an updated 4MP, the following documents the changes to the October 28, 2019 4MP.

The Biological Opinion was issued by NMFS, Alaska Region on March 23, 2020. IHAs for successive years (Phase 1 and Phase 2) of construction were issued March 31, 2020.

Summary of Modifications

1. Changes to Marine Mammal Observer Qualifications and Training

The 4MP states that the curriculum vitae (CV) of the lead marine mammal observer (MMO) will be submitted to NMFS prior to the start of the project, and NMFS will respond within 7 days or POA will assume tacit approval by NMFS. The IHAs and Biological Opinion state that CVs for all protected species observers (PSOs) will be submitted for approval by NMFS prior to the start of pile driving.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 2.1, page 4*
- *POA IHA Phase 1: Section 5 (b) iii., page 5*
- *POA IHA Phase 2: Section 5 (b) iii., page 5*
- *POA PCT Biological Opinion: Section 2.1.2, 21iii., page 41*

2. Changes to Marine Mammal Observer Locations

The 4MP states that there will be at least three observation stations- two outer stations and a station more central to the construction. The IHAs and Biological Opinion state that there will be four PSO stations- at the PCT, at Ship Creek, near Point Woronzof, and north of the PCT.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 3, page 7*
- *POA IHA Phase 1: Section 5 (a) i., page 5*
- *POA IHA Phase 2: Section 5 (a) i., page 4*
- *POA PCT Biological Opinion: Section 2.1.2, 20 i., page 40*

The 4MP states that MMOs will work in two- to four-person teams at each observation station. The IHAs and Biological Opinion state that the outer stations will have three- to four-person teams and the station at the PCT will have at least two PSOs.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 3, page 7*
- *POA IHA Phase 1: Section 5 (a) ii., page 5*
- *POA IHA Phase 2: Section 5 (a) ii., page 4*
- *POA PCT Biological Opinion: Section 2.1.2, 20 ii., page 40*

3. Changes to Level B Harassment Zone

The 4MP states that impact installation of a 48-inch steel pile with bubble curtain attenuation has a Level B zone of 629 meters (m). The modified zone size for that scenario in the IHAs and Biological Opinion is 824 m.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 3.2.1, Table 3-1, page 9*
- *POA IHA Phase 1: Table 3, page 12*
- *POA PCT Biological Opinion: Section 2.1.2, Table 5, page 37*

4. Bubble Curtain Specifications

Bubble curtain specifications were not included in the 4MP. A Bubble Curtain Implementation and Work Description was provided to NMFS on February 04, 2020 and the IHAs and Biological Opinion outline specific criteria for bubble curtain performance.

Reference:

- *Bubble Curtain Implementation and Work Description: page 1*
- *POA Phase 1: Section 4 (i) iv., page 4*
- *POA Phase 2: Section 4 (j) ii., page 3*
- *POA PCT Biological Opinion: Section 2.1.2, 11. iv., page 39*

5. Changes to Reporting

The 4MP does not state that data sheets will be submitted to NMFS with the weekly and monthly marine mammal monitoring reports; the IHAs and Biological Opinions require that the data sheets are submitted with the weekly and monthly reports.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 4.2, page 21*
- *POA IHA Phase 1: Section 6 (a), page 7*
- *POA IHA Phase 2: Section 6 (a), page 6*
- *POA PCT Biological Opinion: Section 2.1.2, 24, page 41*

The IHAs and Biological Opinion contain more requirements for reporting injured or dead marine mammals that are not present in the 4MP.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 4.4, page 22*
- *POA IHA Phase 1: Section 6 (f) ii.- iii., page 10*
- *POA IHA Phase 2: Section 6 (f) ii.- iii., page 9*
- *POA PCT Biological Opinion: Section 2.1.2, 29. ii.- iii., page 44*

6. Changes to Monitoring and Shutdown Procedures

The 4MP states that the POA intends to avoid in-water pile installation and removal during low-visibility conditions, will extrapolate Level B take if the entire Level B zone is not visible during in-water pile work, and that in-water pile work will not proceed if the entire Level A zone is not visible. The IHAs and Biological Opinion require that in-water work be done in daylight hours only and that if the entire Level B zone is not visible, the current pile segment can be finished, but no new piles can be started until there is once again full visibility of the Level B zone.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 3.1, page 8; Section 3.2, page 9; Section 3.2.2, page 13*
- *POA IHA Phase 1: Section 3 (e), page 2; Section 4 (g) iii., page 3*
- *POA IHA Phase 2: Section 3 (e), page 1; Section 4 (h), page 3*
- *POA PCT Biological Opinion: Section 2.1.2, 1, page 36; Section 2.1.2, 9, page 38*

7. Changes to Mitigation Measures

The 4MP stated that to avoid collisions with marine mammals during in-water work, if a marine mammal approached a moving vessel within 50 m, operations would cease and the vessels would reduce speed to the minimum required for safe steerage and working conditions. The IHAs and Biological Opinion changed that distance to 10 m.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 3.2.2, page 13*
- *POA IHA Phase 1: Section 4 (a), page 2*
- *POA IHA Phase 2: Section 4 (a), page 1*
- *POA PCT Biological Opinion: Section 2.1.2, 2, page 36*

Neither the 4MP nor the Bubble Curtain Implementation and Work Description discussed the transmission of sound through the barge into the water column; the IHAs and Biological Opinion require that noise from the pile driver is isolated from the barge so that noise is not transmitted through the barge into the water.

Reference:

- *POA IHA Phase 1: Section 4 (j), page 4*
- *POA IHA Phase 2: Section 4 (l), page 3*
- *POA PCT Biological Opinion: Section 2.1.2, 13, page 40*

The 4MP does not discuss limiting pile driving to certain months; the IHA and Biological Opinion forbid installation of 144-inch piles by vibratory hammer in August.

Reference:

- *POA IHA Phase 2: Section 4 (k), page 3*
- *POA PCT Biological Opinion: Section 2.1.2, 14, page 40*

According to the 4MP, if in-water pile work is delayed or shut down by a marine mammal, operations cannot resume until the animal(s) is observed outside of the appropriate shutdown zone, or after a period of 15 minutes if the animal is not resighted. The IHAs and Biological Opinion use the 15-minute waiting period for non-beluga marine mammals, and require a 30-minute waiting period for beluga whales.

Reference:

- *4MP submitted to NMFS October 28, 2019: Section 3.1, page 8*
- *POA IHA Phase 1: Section 4 (f), page 2*
- *POA IHA Phase 2: Section 4 (f), page 2*
- *POA PCT Biological Opinion: Section 2.1.2, 7, page 37*

Two beluga whale-specific mitigation measures are included in the IHAs and Biological Opinion that were not included in the 4MP. One measure is the addition of 100 m to every Level B zone for beluga whales. The second is a pre-clearance zone that extends from a line between Point Woronzof and the opposite shore, to a line from Cairn Point to Point Mackenzie. Prior to the onset of pile driving or removal, if a beluga whale(s) is within this pre-clearance zone, work must be delayed until all beluga whales have traveled at least 100 meters away from the Level B harassment zone, and are on a path away from the zone, or have not been sighted within 30 minutes.

Reference:

- *4MP submitted to NMFS October 28, 2019: Sections 3.1 and 3.2, pages 7-13*
- *POA IHA Phase 1: Section 4 (g), pages 2-3*

- *POA IHA Phase 2: Section 4 (g), pages 2-3*
- *POA PCT Biological Opinion: Section 2.1.2, 8, pages 37- 38*

Additional mitigation measures are required by the IHAs and Biological Opinions that were not explicitly stated in the 4MP. They include, but are not limited to, not installing unattenuated plumb piles in water depths of more than 3 m; that PSOs must be in communication with other non-PCT-related PSOs nearby if there is another project happening simultaneously; and that POA is required to conduct briefings for project personnel to explain marine mammal monitoring protocol and procedures.

Reference:

- *POA IHA Phase 1: Section 4 (b), page 2; Section 5 (b) v., page 6*
- *POA IHA Phase 2: Section 4 (b), page 2; Section 4 (m), page 4; Section 5 (b) v., page 5*
- *POA PCT Biological Opinion: Section 2.1.2, 3, 15 and 18, pages 36 and 40*