



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

Letter of Authorization

Hilcorp Alaska LLC (Hilcorp), is hereby authorized to take marine mammals incidental to those oil and gas activities in Cook Inlet, Alaska, in accordance with 50 CFR 217, Subpart Q-- Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Oil and Gas Activities in Cook Inlet, Alaska, subject to the provisions of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*; MMPA) and the following conditions:

1. This Letter of Authorization (LOA) is valid for one year from the date signed and supersedes the LOA issued to Hilcorp on September 20, 2019.
2. This Authorization is valid only for oil and gas activities in Cook Inlet, Alaska.
3. General Conditions
 - (a) A copy of this LOA must be in the possession of Hilcorp, its designees, and personnel operating under the authority of this LOA.
 - (b) The species authorized for taking by incidental harassment are: gray whale (*Eschrichtius robustus*); fin whale (*Balaenoptera physalus*); minke whale (*Balaenoptera acutorostrata*); humpback whale (*Megaptera novaeangliae*); beluga whale (*Delphinapterus leucas*); killer whale (*Orcinus orca*); harbor porpoise (*Phocoena phocoena*); Dall's porpoise (*Phocoenoides dalli*); Steller sea lion (*Eumetopias jubatus*); California sea lion (*Zalophus californianus*); and harbor seal (*Phoca vitulina*).
 - (c) The taking, by Level A and Level B harassment only, is limited to the species listed in condition 3(b). See Table 1 (attached) for numbers of take authorized.
 - (d) The taking by serious injury, or death of any of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this LOA.
4. The following activities are authorized to take, by incidental harassment only, the species of marine mammals identified in condition 3(b) above and will take place in Cook Inlet, Alaska:
 - (a) Outer continental shelf geohazard survey;
 - (b) Platform and pipeline maintenance;
 - (c) North Cook Inlet Unit subsea well and geohazard survey; and

(d) North Cook Inlet Unit well abandonment activity;

5. Mitigation Measures. Unless constrained by human safety or national security the holder of this Authorization is required to implement the following mitigation measures:

- (a) Hilcorp must conduct a sound source verification (SSV) for sub-bottom profiler use. Results of this SSV must be sent to NMFS and mitigation and monitoring zones may be adjusted based on the results of the SSV.
- (b) If any marine mammal species for which take is not authorized are sighted within or entering the relevant zones within which they are be exposed to sound above the 120 dB re 1 μ Pa (rms) threshold for continuous (e.g., vibratory pile-driving, drilling) sources or the 160 dB re 1 μ Pa (rms) threshold for non-explosive impulsive (e.g., seismic airguns) or intermittent (e.g., scientific sonar) sources, Hilcorp must take appropriate action to avoid such exposure (e.g., by altering speed or course or by shutdown of the sound source).
- (c) If the allowable number of takes in this LOA listed for any marine mammal species is met or exceeded, Hilcorp must immediately cease survey operations involving the use of active sound source(s), record the observation, and notify the National Marine Fisheries Service (NMFS) Office of Protected Resources (OPR).
- (d) Hilcorp must notify NMFS Office of Protected Resources at least 48 hours prior to the start of oil and gas activities each year.
- (e) Hilcorp must conduct briefings as necessary between vessel crews, marine mammal monitoring team, and other relevant personnel prior to the start of all survey activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
- (f) Establishment of monitoring and exclusion zones.
 - 1. For all relevant in-water construction and demolition activity, Hilcorp must implement shutdown zones/exclusion zones (EZs) with radial distances as identified in Table 2 of this LOA issued under §§ 216.106 of this chapter and 217.166. If a marine mammal is sighted within or entering the EZ, such operations must cease.
 - 2. For all relevant in-water construction and demolition activity, Hilcorp must designate safety zones for monitoring (SZ) with radial distances as identified in Table 2 of this LOA issued under §§ 216.106 of this chapter and 217.166 and record and report occurrence of marine mammals within these zones.

3. For all relevant in-water construction and demolition activity, Hilcorp must implement a minimum EZ of a 10 m radius around the source.

(g) Implementation of shutdown measures

1. Hilcorp must deploy protected species observers (PSOs) and PSOs must be posted to monitor marine mammals within the SZs during use of active acoustic sources and pile driving in water.
2. Monitoring must begin 15 minutes prior to initiation of stationary source activity and 30 minutes prior to initiation of mobile source activity, occur throughout the time required to complete the activity, and continue through 30 minutes post-completion of the activity. Pre-activity monitoring must be conducted to ensure that the EZ is clear of marine mammals during daylight hours, and activities may only commence once observers have declared the EZ clear of marine mammals. The holder must monitor the marine mammals' behavior and document it in the event of a delay or shutdown of activity resulting from marine mammals in the EZ.
3. For all activities, a determination that the EZ is clear must be made during a period of good visibility (i.e., the entire EZ must be visible to the naked eye).
4. If a marine mammal is observed within or entering the EZ, Hilcorp must halt all noise producing activities for which take is authorized at that location. If activity is delayed due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily left and been visually confirmed outside the EZ or the required amount of time (15 minutes for porpoises and pinnipeds, 30 minutes for cetaceans) have passed without re-detection of the animal.
5. Monitoring must be conducted by trained observers, who must have no other assigned tasks during monitoring periods. Trained observers must be placed at the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. Hilcorp must adhere to the following additional observer qualifications:
 - i. Hilcorp must use independent, dedicated, trained visual PSOs, meaning that the PSOs must be employed by a third-party observer provider, must not have tasks other than to conduct observational effort, collect data, and communicate with and instruct relevant vessel crew with regard to the presence of protected species and mitigation requirements (including brief alerts regarding maritime hazards), and must have successfully completed an approved PSO

training course appropriate for their designated task. For water jet and pipe grinder activities, PSO may be a trained diver not on diving duty.

- ii. Hilcorp must submit PSO resumes for NMFS review and approval. Resumes must be accompanied by a relevant training course information packet that includes the name and qualifications (i.e., experience, training completed, or educational background) of the instructor(s), the course outline or syllabus, and course reference material as well as a document stating successful completion of the course. NMFS will approve or disapprove PSOs within one week from the time that the necessary information is received by NMFS, after which PSOs meeting the minimum requirements will automatically be considered approved.
 - iii. To the maximum extent practicable, the lead PSO must devise the duty schedule such that experienced PSOs are on duty with those PSOs with appropriate training but who have not yet gained relevant experience.
6. Operations must shut down completely if a beluga whale is sighted within the relevant Level B harassment isopleth provided in Table 2 below.
- (h) Hilcorp must implement soft start techniques for impact pile driving.
 - 1. Hilcorp must conduct an initial set of three strikes from the impact hammer 30 seconds apart, at 40 percent energy, followed by a 1-minute waiting period, then two subsequent three strike sets.
 - 2. Soft start is required for any impact driving, including at the beginning of the day, after 30 minutes of pre-activity monitoring, and at any time following a cessation of impact pile driving of 30 minutes or longer.
 - (i) Hilcorp must implement exclusion zones for beluga whales.
 - (j) Hilcorp must not operate with noise producing activity within 10 miles (16 km) of the mean higher high water (MHHW) line of the Susitna Delta (Beluga River to the Little Susitna River) between April 15 and October 15.
 - (k) Hilcorp must abide by all mitigation measures described in the Biological Opinion for Hilcorp Alaska and Harvest Alaska Oil and Gas Activities, Cook Inlet, Alaska.
6. Monitoring. The holder of this Authorization is required to conduct marine mammal monitoring and to conduct acoustic monitoring as described below:

- (a) Marine Mammal Monitoring Protocols. Hilcorp must conduct briefings between construction supervisors and crews and the observer team prior to the start of all pile driving and removal activities, and when new personnel join the work. Trained observers must receive a general environmental awareness briefing conducted by Hilcorp staff. At minimum, training must include identification of marine mammals that may occur in the project vicinity and relevant mitigation and monitoring requirements. All observers must have no other construction-related tasks while conducting monitoring.
- (b) Visibility. Activities must only commence when the entire EZ is visible to the naked eye and can be adequately monitored. If conditions (e.g., fog) prevent the visual detection of marine mammals, activities must not be initiated. Activity must be halted in low visibility but vibratory pile driving or removal will be allowed to continue if started in good visibility.
- (c) Monitoring periods. Monitoring must begin 15 minutes prior to initiation of stationary source activity and 30 minutes prior to initiation of mobile source activity, occur throughout the time required to complete the activity, and continue through 30 minutes post-completion of the activity. Pre-activity monitoring must be conducted to ensure that the EZ is clear of marine mammals, and activities may only commence once observers have declared the EZ clear of marine mammals. In the event of a delay or shutdown of activity resulting from marine mammals in the EZ, the animals' behavior must be monitored and documented.
- (d) Placement of PSOs
 - 1. At least one on-duty PSO must be placed on the source vessel (for geohazard surveys) or drill rig (for pipe driving and vertical seismic profiling).

7. Reporting. The holder of this Authorization is required to:

- (a) Take limits. Hilcorp must contact NMFS when they have reached the annual limit of authorized takes of beluga whale specified in Table 1 below.
- (b) Monthly reports. Monthly reports must be submitted to NMFS for all months during which in-water activities take place. The monthly report must contain and summarize the following information:
 - 1. Dates, times, locations, heading, speed, weather, sea conditions (including Beaufort sea state and wind force), and associated activities during all in-water activities and marine mammal sightings;
 - 2. Species, number, location, distance from the vessel, and behavior of any sighted marine mammals, as well as associated activity (number of shutdowns), observed throughout all monitoring activities;

3. An estimate of the number (by species) exposed to the activity (based on visual observation) at received levels greater than or equal to the NMFS thresholds discussed above with a discussion of any specific behaviors those individuals exhibited;
4. A description of the implementation and effectiveness of the terms and conditions of the Biological Opinion's Incidental Take Statement (ITS) and mitigation measures of the LOA.

(c) Annual Reports.

1. Hilcorp must submit an annual report within 90 days after each activity year, starting from the date when the LOA is issued (for the first annual report) or from the date when the previous annual report ended.
2. Annual reports will detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed during the period of the report.
3. NMFS will provide comments within 30 days after receiving annual reports, and Hilcorp must address the comments and submit revisions within 30 days after receiving NMFS comments. If no comment is received from the NMFS within 30 days, the annual report will be considered completed.

(d) Final report.

1. Hilcorp must submit a comprehensive summary report to NMFS not later than 90 days following the conclusion of marine mammal monitoring efforts described in this subpart.
2. The final report must synthesize all data recorded during marine mammal monitoring, and estimate the number of marine mammals that may have been harassed through the entire project.
3. NMFS will provide comments within 30 days after receiving this report, and Hilcorp must address the comments and submit revisions within 30 days after receiving NMFS comments. If no comment is received from the NMFS within 30 days, the final report will be considered as final.

(e) Reporting of injured or dead marine mammals.

1. In the event that personnel involved in the survey activities discover an injured or dead marine mammal, Hilcorp must report the incident to NMFS OPR, (301-427-8401) and to regional stranding network (877- 925-

7773) as soon as feasible. The report must include the following information:

- a. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
 - b. Species identification (if known) or description of the animal(s) involved;
 - c. Condition of the animal(s) (including carcass condition if the animal is dead);
 - d. Observed behaviors of the animal(s), if alive;
 - e. If available, photographs or video footage of the animal(s); and
 - f. General circumstances under which the animal was discovered.
2. In the event of a ship strike of a marine mammal by any vessel involved in the survey activities, Hilcorp must report the incident to NMFS OPR and to regional stranding networks as soon as feasible. The report must include the following information:
- a. Time, date, and location (latitude/longitude) of the incident;
 - b. Species identification (if known) or description of the animal(s) involved;
 - c. Vessel's speed during and leading up to the incident;
 - d. Vessel's course/heading and what operations were being conducted (if applicable);
 - e. Status of all sound sources in use;
 - f. Description of avoidance measures/requirements that were in place at the time of the strike and what additional measures were taken, if any, to avoid strike;
 - g. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, visibility) immediately preceding the strike;
 - h. Estimated size and length of animal that was struck;
 - i. Description of the behavior of the marine mammal immediately preceding and following the strike;

- j. If available, description of the presence and behavior of any other marine mammals immediately preceding the strike;
 - k. Estimated fate of the animal (e.g., dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared); and
 - l. To the extent practicable, photographs or video footage of the animal(s).
- 3. In the event of a live stranding (or near-shore atypical milling) event within 50 km of the survey operations, where the NMFS stranding network is engaged in herding or other interventions to return animals to the water, the Director of NMFS OPR (or designee) will advise Hilcorp of the need to implement shutdown procedures for all active acoustic sources operating within 50 km of the stranding. Shutdown procedures for live stranding or milling marine mammals include the following:
 - a. If at any time, the marine mammal(s) die or are euthanized, or if herding/intervention efforts are stopped, the Director of NMFS OPR (or designee) will advise Hilcorp that the shutdown around the animals' location is no longer needed.
 - b. Otherwise, shutdown procedures must remain in effect until the Director of NMFS OPR (or designee) determines and advises Hilcorp that all live animals involved have left the area (either of their own volition or following an intervention).
 - c. If further observations of the marine mammals indicate the potential for re-stranding, additional coordination with Hilcorp must occur to determine what measures are necessary to minimize that likelihood (e.g., extending the shutdown or moving operations farther away) and Hilcorp must implement those measures as appropriate.
- 4. If NMFS determines that the circumstances of any marine mammal stranding found in the vicinity of the activity suggest investigation of the association with survey activities is warranted, and an investigation into the stranding is being pursued, NMFS will submit a written request to Hilcorp indicating that the following initial available information must be provided as soon as possible, but no later than 7 business days after the request for information.

- a. Status of all sound source use in the 48 hours preceding the estimated time of stranding and within 50 km of the discovery/notification of the stranding by NMFS; and
 - b. If available, description of the behavior of any marine mammal(s) observed preceding (i.e., within 48 hours and 50 km) and immediately after the discovery of the stranding.
 - c. In the event that the investigation is still inconclusive, the investigation of the association of the survey activities is still warranted, and the investigation is still being pursued, NMFS may provide additional information requests, in writing, regarding the nature and location of survey operations prior to the time period above.
8. This Authorization may be modified, suspended or withdrawn if the Hilcorp fails to abide by the conditions prescribed herein or if the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

Donna S. Wieting, Director
Office of Protected Resources

Date

Table 1. Maximum number of takes authorized in Year 2.

Species	Level A Takes Authorized	Level B Takes Authorized
Humpback whale	7	5
Minke whale	0	5
Gray whale	0	5
Fin whale	1	5
Killer whale (resident)	0	10
Killer whale (transient)	0	10
Beluga whale (NMFS)	0	10
Beluga whale (Goetz)	0	10
Dall's porpoise	0	10
Harbor porpoise	1	10
Harbor seal	2	1,000
Steller sea lion	0	15
California sea lion	0	5

Table 2. Radii of exclusion zone (EZ) and safety zone (SZ) for Hilcorp's activities.

Activity	Exclusion Zone (EZ) Radius	Safety Zone (SZ) Radius	Level B Zone Radius
Sub-bottom profilers	100 m	1,500 m	3,000 m
Pipe driving	100 m	1,500 m	1,600 m
Water jet	15 m	1,000 m	860 m

