INCIDENTAL HARASSMENT AUTHORIZATION

Narwhal LLC, (Narwhal) is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) to incidentally harass marine mammals, under the following conditions:

1. This incidental harassment authorization (IHA) is valid for one year from the date of issuance.

2. This IHA authorizes take incidental to shallow hazard surveys and ice trail activities, as specified in the Narwhal's IHA application, associated with oil and gas exploration activities in west Harrison Bay, AK.

3. General Conditions

   (a) A copy of this IHA must be in the possession of the Holder of the Authorization (Holder), its designees, lead protected species observers (PSOs), and other applicable personnel operating under the authority of this IHA.

   (b) The species and/or stocks authorized for taking are listed in Table 1. Authorized take, by Level B harassment only, is limited to the species and numbers listed in Table 1.

   (c) The taking, by 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 Table 1 or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA. Any taking exceeding the authorized amounts listed in Table 1 is prohibited and may result in the modification, suspension, or revocation of this IHA.

   (e) The Holder must ensure that construction supervisors and crews, relevant vessel personnel, other relevant personnel, the monitoring team, and relevant staff are trained prior to the start of construction activity subject to this IHA, so that responsibilities, communication procedures, monitoring protocols, and operational procedures are clearly understood. New personnel joining during the project must be trained prior to commencing work.

   (f) The Holder must abide by the terms and conditions (attached) of the Biological Opinion issued by NMFS pursuant to section 7 of the Endangered Species Act.

   (g) Narwhal must coordinate with local subsistence communities, notify the communities of changes to the operation which could negatively impact the subsistence activities of those communities (such as an increase in number of vessels involved in the operation, change in timing of the operation, or change in location of the operation), and must take action to avoid or mitigate impacts to

subsistence harvests, which are raised by the members of the subsistence communities.

(h) Narwhal must have an active Plan of Cooperation (POC) throughout the duration of this IHA. Narwhal also must conduct the communication and coordination as described in the POC.

4. Mitigation Requirements

(a) General mitigation requirements applicable to vessel surveys using a single airgun or sparker as the acoustic source:

(i) During survey operations (e.g., any day on which use of the acoustic source is planned to occur and whenever the acoustic source is in the water, whether activated or not), a minimum of two PSOs (during use of the airgun) or one PSO (during use of the sparker) must be on duty and conducting visual observations at all times during daylight hours (i.e., from 30 minutes prior to sunrise through 30 minutes following sunset).

(ii) Visual monitoring must begin no less than 15 minutes prior to ramp-up and must continue until one hour after use of the acoustic source ceases or until 30 minutes past sunset.

(iii) Visual PSOs shall coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts and shall conduct visual observations using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner.

(iv) PSOs shall establish and monitor applicable shutdown zones and to the extent practicable, the Level B harassment zone (see Table 2). These zones shall be based upon the radial distance from the acoustic source (rather than being based around the vessel itself).

(v) Any observations of marine mammals by crew members aboard any vessel associated with the survey shall be relayed to the PSO team.

(vi) During good conditions (e.g., daylight hours; Beaufort sea state (BSS) 3 or less), visual PSOs shall conduct observations when the acoustic source is not operating for comparison of sighting rates and behavior with and without use of the acoustic source and between acquisition periods, to the maximum extent practicable.

(vii) Visual PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least one hour between watches and may conduct a maximum of 12 hours of observation per 24-hour period.

(viii) Vessels will not allow lines to remain in the water unless both ends are under tension and affixed to vessels or gear. No materials capable of becoming entangled around marine mammals will be discarded into marine waters.

(b) Ramp- up and pre-clearance mitigation requirements applicable to vessel surveys using a single airgun or sparker as the acoustic source:

(i) A ramp-up procedure, involving a gradual increase in source level output, is required at all times as at the start of the activation of the sparker source when technically feasible. Operators should ramp up sparker sources to half power for 5 minutes and then proceed to full power. A 15-minute pre-start clearance observation period of the relevant shutdown zones must occur prior to the start of ramp-up (for sparker use) or prior to use of the airgun source.

(ii) When a ramp-up is required (i.e. during use of the sparker), the operator must notify a designated PSO of the planned start of ramp-up as agreed upon with the lead PSO; the notification time should not be less than 60 minutes prior to the planned ramp-up in order to allow the PSOs time to monitor the pre-start clearance zones for 15 minutes prior to the initiation of ramp-up (pre-start clearance). During this 15 minute pre-start clearance period the entire applicable shutdown zones must be visible, except as indicated in Condition ix below.

(iii) Source use shall be scheduled so as to minimize the time spent with the source activated prior to the start of acquisition.

(iv) A visual PSO conducting pre-start clearance observations must be notified again immediately prior to initiating ramp-up procedures (sparker) or source use (airgun) and the operator must receive confirmation from the PSO to proceed.

(v) Any PSO on duty has the authority to delay the start of survey operations if a marine mammal is detected within the applicable pre-start clearance zone.

(vi) The operator must establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the acoustic source to ensure that mitigation commands are conveyed swiftly while allowing PSOs to maintain watch.

(vii) Ramp-up (sparker) or source use (airgun) may not be initiated if any marine mammal is within the applicable shutdown zone. If a marine mammal is observed within the applicable pre-start clearance zone during the 15 minute pre-start clearance period, ramp-up/source use may not begin until the animal(s) has been observed exiting the zones or until a 15-minute time period has elapsed with no further sightings.

(viii) PSOs must monitor the shutdown zones 15 minutes before and during ramp-up/source use, and ramp-up/source use must cease and the source must be shut down upon observation of a marine mammal within the applicable shutdown zone.

(ix) Ramp-up may occur and/or source use may begin at times of poor visibility, including nighttime, if appropriate visual monitoring has occurred with no detections of marine mammals in the 15 minutes prior to beginning ramp-up/source use.

(x) If the sparker is shut down for brief periods (i.e., less than 30 minutes) for reasons other than implementation of prescribed mitigation (e.g., mechanical difficulty), it may be activated again without ramp-up if PSOs have maintained constant visual observation and no detections of marine mammals have occurred within the applicable shutdown zone. For any longer shutdown, pre-start clearance observation and ramp-up are required.

(c) Shutdown mitigation requirements applicable to vessel surveys using a single airgun or sparker as the acoustic source:

(i) Any PSO on duty has the authority to call for shutdown of the acoustic source if a marine mammal is detected within the applicable shutdown zone.

(ii) The operator must establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the acoustic source to ensure that shutdown commands are conveyed swiftly while allowing PSOs to maintain watch.

(iii) When the acoustic source is active and a marine mammal appears within or enters the applicable shutdown zone, the acoustic source must be shut down. When shutdown is instructed by a PSO, the acoustic source must be immediately deactivated and any dispute resolved only following deactivation.

(iv) Upon implementation of shutdown, the source may be reactivated after the marine mammal has been observed voluntarily exiting the applicable shutdown zone or following a 15-minute clearance period with no further detection of the marine mammal(s).

(d) Vessel strike avoidance. Vessel personnel should use an appropriate reference guide that includes identifying information on all marine mammals that may be encountered. Vessel operators must comply with the below measures except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

(i) Vessel operators and crews must maintain a vigilant watch for all protected species and slow down, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any protected species. A single protected species at the surface may indicate the presence of submerged animals in the vicinity of the vessel; therefore, precautionary measures should always be exercised. A visual observer aboard the vessel must monitor a vessel strike avoidance zone around the vessel (species-specific distances detailed below). Visual observers monitoring the vessel strike avoidance zone may be third-party observers (i.e., PSOs) or crew members, but crew members responsible for these duties must be provided sufficient training[1] to 1) distinguish protected species from other phenomena and 2) broadly to identify a marine mammal as a whale, seal, or other marine mammals.

(ii) Vessel speed within west Harrison Bay must generally be restricted to 15 knots or less, must be reduced to 5 knots if within 300 yds (274 m) of a whale, and must be reduced to 10 knots or less when weather conditions reduce visibility to 1.6 km or less;

(iii) All vessels must maintain a minimum separation distance of 100 m from bowhead whales. If a bowhead whale is sighted within the relevant separation distance, the vessel must steer a course away at 10 knots or less until the 100-m separation distance has been established.

(iv) All vessels must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 100 yds (91 m) from all other marine mammals, with an understanding that at times this may not be possible (e.g., for animals that approach the vessel).

(v) When protected species are sighted while a vessel is underway, the vessel shall take action as necessary to avoid violating the relevant separation distance (e.g., attempt to remain parallel to the animal's course, avoid excessive speed or abrupt changes in direction until the animal has left the area, reduce speed and shift the engine to neutral). This does not apply to any vessel towing gear or any vessel that is navigationally constrained; and

(e) Sea ice trails

(i) General Conditions

1. Personnel shall not approach or interact with any wildlife.

[1] For example, the U.S. Navy's Marine Species Awareness Training: https://www.youtube.com/watch?v=KKo3r1yVBBA

2. Personnel must follow directions of Security and posted signs when traveling the ice trail.

3. Workers must notify appropriate personnel if a ringed seal is observed within 50 meters, or if a seal structure (i.e., breathing hole or lair) is observed within 150 meters, of the centerline of the ice trail.

4. Workers must stay in the vehicle and continue traveling at a constant speed if a seal is observed near the trail. Do not slow down, stop, or exit the vehicle.

(ii) General Ice Trail Mitigation Measures

1. Transport vehicles (passenger vehicles and trucks hauling goods) will not stop within 50 meters of observed seals or 150 meters of known seal lairs. Instead, they will continue travelling at a constant speed.

2. Ice trail speed limits will be 45 miles per hour (mph) or less, based on environmental, road conditions, and ice trail longevity considerations.

3. Delineators will mark the roadway in a minimum of ¼-mile increments on both sides of the portions of ice trails in west Harrison Bay to delineate the path of vehicle travel and areas of planned on-ice activities (e.g., emergency response exercises). Delineators will mark one side of an ice trail a minimum of every ¼ mile. Delineators may also be used to mark the centerline of the roadway.

4. Corners of rig mats, steel plates, and other materials used to bridge sections of hazardous ice will be clearly marked or mapped using GPS coordinates of the locations.

5. Any seal structures (i.e., breathing holes and lairs) observed will be avoided by a minimum of 150 meters during ice testing and new trail construction and their locations will be reported and physically marked.

6. Personnel will be instructed that approaching or interacting with seals is prohibited.

7. If a seal is observed within 50 meters or if a seal structure (i.e., breathing hole or lair) is detected within 150 meters of the centerline of an ice trail Narwhal's Environmental Specialist or Project Manager will be informed of the observation

a. The location of the seal or seal structure will be physically marked (e.g., at its position along the axis of the ice trail) by placing a readily visible marker (e.g., pole and flag) within 15 meters of the edge of the ice trail, while maintaining a distance of at least 15 meters from the seal/seal structure.

b. During the period in which a seal structure is periodically monitored as described in the General Monitoring Measures for Ice Trails section (below), maintenance work will proceed in a manner that minimizes impacts or disturbance to the area.

(iii) Ice Trail Mitigation Measures After March 1st

1. If safety concerns due to unstable icetrail conditions warrant the creation of a workaround route after March 1st, the route will be surveyed for seal structures using a trained observer in a tracked vehicle approximately 2 days prior to establishing the route, weather permitting. Surveys must occur following improved weather conditions before establishing the workaround route. The following protocol will be used for these surveys:

   a. During daylight hours with good visibility, a trained wildlife observer will survey the route 2 days prior to route construction to search for potential seal structures. The observer will be dedicated to monitoring for seal structures while the driver operates the tracked vehicle. Ringed seal structures will be avoided by a minimum of 150 m during ice testing and new route construction.

   b. If a suspected seal structure is observed within 150 m of either edge of the proposed new or workaround route, a marker will be placed 15 m from the location and GPS coordinates will be recorded. The new route must avoid any suspected seal structures by a 150 m distance.

2. Ice trail construction and maintenance activities will remain 50 meters (164 feet) from a seal and 150 meters (about 500 feet) from a known seal structure (i.e., breathing hole or lair) except under emergency conditions when blading or snow blowing is necessary. If snow blowing must occur within 50 meters (164 feet) of a seal or 150 meters (about 500 feet) of a seal structure, the snow will first be pushed so that it can subsequently be blown downwind of the seal structure.

(f) Aircraft

(i) Except during takeoff and landing and in emergency situations, all aircraft will transit at an altitude of at least 457 meters while maintaining Federal Aviation Administration flight rules (e.g., avoidance of cloud ceiling, etc.). If flights must occur at altitudes less than 457 meters, aircraft will make course adjustments, as needed, to maintain at least a 457 meters horizontal separation from all observed marine mammals.

(ii) Aircraft will not hover or circle over marine mammals.

(iii) Aircraft will not land on ice within 1 nautical mile (1.9 kilometers) of hauled-out seals.

5. Monitoring

(a) Shallow water hazard survey PSO requirements

(i) Monitoring must be conducted by qualified, NMFS-approved PSOs, in accordance with the following conditions:

1. The Holder must use independent, dedicated, trained PSOs, meaning that the PSOs must be employed by a third-party observer provider, must have no 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 for geophysical surveys.

2. PSO resumes must be provided to NMFS for review and confirmation of their approval for specific roles prior to commencement of the survey[2]. For prospective PSOs not previously approved or for PSOs whose approval is not current, NMFS must review and approve PSO qualifications. Resumes should include information related to relevant education, experience, and training, including dates, duration, location, and description of prior PSO experience. Resumes must be accompanied by relevant documentation of successful completion of necessary training.

3. NMFS may approve PSOs as conditional or unconditional. For unconditional approval, the PSO must have a minimum of 90 days prior experience, with the conclusion of the most recent relevant experience not more than 18 months previous.

[2] PSO-related inquiries should be directed to *nmfs.psoreview@noaa.gov*.

4. At least one of the PSOs aboard the vessel must be unconditionally-approved. One unconditionally-approved visual PSO shall be designated as the lead for the entire PSO team. This lead should typically be the PSO with the most experience, would coordinate duty schedules and roles for the PSO team[3], and serve as primary point of contact for the vessel operator. To the maximum extent practicable, the duty schedule shall be planned such that unconditionally-approved PSOs are on duty with conditionally-approved PSOs.

5. PSOs must successfully complete relevant training, including completion of all required coursework and passing (80 percent or greater) a written and/or oral examination developed for the training program.

6. PSOs must have successfully attained a bachelor's degree from an accredited college or university with a major in one of the natural sciences, a minimum of 30 semester hours or equivalent in the biological sciences, and at least one undergraduate course in math or statistics. The educational requirements may be waived if the PSO has acquired the relevant skills through alternate experience. Requests for such a waiver shall be submitted to NMFS and must include written justification. Requests shall be granted or denied (with justification) by NMFS within one week of receipt of submitted information. Alternate experience that may be considered includes, but is not limited to (1) secondary education and/or experience comparable to PSO duties; (2) previous work experience conducting academic, commercial, or government-sponsored protected species surveys; (3) previous work experience as a PSO (PSO must be in good standing and demonstrate good performance of PSO duties); and (4) Alaska native traditional knowledge.

7. The Holder must work with the selected third-party observer provider to ensure PSOs have all equipment (including backup equipment) needed to adequately perform necessary tasks, including accurate determination of distance and bearing to observed marine mammals, and to ensure that PSOs are capable of calibrating equipment as necessary for accurate distance estimates and species identification. Such equipment, at a minimum, shall include:

    (a) Reticle binoculars (e.g., 7 x 50) of appropriate quality (at least one

[3] Responsibility for coordination of duty schedules and roles may be delegated, such as to a shore-based monitoring coordinator employed by the third-party observer provider.

per PSO, plus backups).

(b) Global Positioning Units (GPS) (at least one plus backups).

(c) Digital cameras with a telephoto lens that is at least 300 mm or equivalent on a full-frame single lens reflex (SLR) (at least one plus backups). The camera or lens should also have an image stabilization system.

(d) Equipment necessary for accurate measurement of distances to protected species.

(e) Compasses (at least one plus backups).

(f) Means of communication among vessel crew and PSOs.

(g) Any other tools deemed necessary to adequately and effectively perform PSO tasks.

(b) Shallow water hazard survey monitoring requirement

(ii) During use of the single airgun, one PSO will conduct monitoring duties from the source vessel and a second PSO will conduct monitoring from a support vessel.

(c) Sea ice trails observer/environmental specialist requirements

(i) Qualified observers for ice trail monitoring activities need not be trained Protected Species Observers (PSOs), but they will have received the training described in the Wildlife Training in this section. In addition, they will be capable of detecting, observing, and monitoring ringed seal presence and behaviors, and accurately and completely recording data.

(ii) Prior to initiation of sea ice trail construction activities, project personnel associated with ice trail construction, maintenance, or use (i.e., construction workers, surveyors, vehicle operators, security personnel, and the environmental team) must receive annual training on seal avoidance mitigation measures appropriate to their specific responsibilities. The annual training for all such personnel must include reviewing applicable portions of Narwhal's Wildlife Interaction Plan.

(iii) In addition to reviewing the mitigation measures, wildlife training for personnel involved in ice trail construction/maintenance or seal monitoring must include:

1. how to identify ringed seal adults and pups;
2. seal life history;
3. habitat and diet;
4. presence in project area;
5. importance of lairs, breathing holes, and basking;
6. potential effects of disturbance; and
7. applicable laws and regulatory requirements.

(iv) Narwhal will engage local hunters through the Ice Seal Committee point of contact to gather recommendations on methods for ringed seal detection within the exposure areas along the Colville River Delta; and

(v) Narwhal will incorporate recommendations, as appropriate, into training materials provided to personnel responsible for monitoring for ringed seals along the sea ice trail.

(d) Sea ice trail monitoring measures:

(i) If a seal is observed within 50 meters or if a seal structure (i.e., breathing hole or lair) is observed within 150 meters of the centerline of the ice trail, the location of the seal or seal structure will be reported to the Environmental Specialist or Project Manager, who will then relay the observation location information to all personnel using the ice trail.

8. As soon as practicable after the initial seal observation, the Environmental Specialist or qualified observer will observe the seal for approximately 15 minutes to document the animal's location relative to the trail

9. All work that is occurring when the seal is observed and the behavior of the seal during this observation period will be documented for an initial 15 minute observation period and every six hours thereafter during daylight hours until the animal moves more than 50 meters (164 feet) from the center of the trail or is no longer observed.

10. If a ringed seal breathing hole or lair is observed within 150 m of the sea ice trail within the Colville River Delta, the location of the structure will be documented to the extent possible from the sea ice trail using GPS and reported to the Narwhal Permitting and Compliance Manager.

a. At least one ATV driver from a traveling group will monitor the breathing hole/lair from the trail for 15 minutes in daylight

conditions on the day of the initial sighting to determine whether a ringed seal is present; and

b. Observations by an ATV driver for a seal near the breathing hole/lair will occur for 15 minutes each day while the trail is traveled unless it is determined the structure is not actively being used (i.e., a seal is not sighted at that location during monitoring).

(ii) Monitoring after March 1st.

1. If an ice trail is being actively used, under daylight conditions with good visibility, to observe if any ringed seals are within 150 m (500 ft) of the roadway corridor. The following survey protocol must be implemented:

a. Surveys will be conducted every other day during daylight hours. Survey protocol consists of driving the ice trail and stopping every ½ mile to observe the area within 150 meters (about 500 feet) of the roadway corridor for approximately 5 minutes on each side of the corridor to check for the presence of seals or structures. If weather conditions become unsafe, the monitoring activity will be discontinued.

b. When performing observations, qualified observers will have no other primary duty than to watch for and report observations related to ringed seals during this survey. If the observer is driving a vehicle, then the survey will be performed when the driver stops, at periodic intervals sufficient to complete a thorough assessment of the area, given visibility conditions.

6. Reporting

The holder of this Authorization is required to:

(a) Submit a draft report on all monitoring conducted under the IHA ninety calendar days of the completion of marine mammal, or sixty days prior to the issuance of any subsequent IHA for this project, whichever comes first. A final report shall be prepared and submitted within thirty days following resolution of comments on the draft report from NMFS. For data collection purposes, PSOs must use standardized electronic data collection forms. If required mitigation was not implemented, PSOs should record a description of the circumstances.

(b) All draft and final monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *itp.cockrell@noaa.gov*.

(c) Reporting requirements for shallow water hazard surveys

7. Vessel names (source vessel and other vessels associated with survey), vessel size and type, maximum speed capability of vessel[4];

8. Dates (MM/DD/YYYY) of departures and returns to port with port name;

9. PSO names and affiliations, PSO ID (initials or other identifier);

10. Date (MM/DD/YYYY) and participants of PSO briefings;

11. Visual monitoring equipment used (description);

12. PSO location on vessel and height (meters) of observation location above water surface;

13. Observing equipment (description);

14. Watch status (description);

15. Dates (MM/DD/YYYY) and times (Greenwich Mean Time/UTC) of survey on/off effort and times (GMT/UTC) corresponding with PSO on/off effort;

16. Vessel location (decimal degrees) when survey effort begins and ends and vessel location at beginning and end of visual PSO duty shifts;

17. Vessel location (decimal degrees) at 30-second intervals if obtainable from data collection software, otherwise at practical regular interval;

18. Vessel heading (compass heading) and speed (knots) at beginning and end of visual PSO duty shifts and upon any change;

19. Water depth (meters) (if obtainable from data collection software);

20. Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions change significantly), including BSS and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon;

[4] Data collection requirements referencing vessels and related data are not applicable to surveys conducted with a stationary acoustic source, e.g., 0-offset vertical seismic profiling.

21. Factors that may contribute to impaired observations during each PSO shift change or as needed as environmental conditions change (description) (e.g., vessel traffic, equipment malfunctions);

(i) Vessel/Survey activity information (and changes thereof) (description), such as acoustic source power output while in operation, volume of airgun, tow depth of an acoustic source, and any other notes of significance (i.e., pre-start clearance, ramp-up, shutdown, testing, shooting, ramp-up completion, end of operations, etc.); and

(ii) Upon visual observation of a marine mammal species, the following information will be collected:

(a) Sighting ID (numeric);

(b) Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform);

(c) Location of PSO/observer (description);

(d) Vessel/platform/survey activity at time of sighting (e.g., deploying, recovering, testing, shooting, data acquisition, other);

(e) PSO who sighted the animal/ID;

(f) Time/date of sighting (GMT/UTC, MM/DD/YYYY);

(g) Initial detection method (description);

(h) Sightings cue (description);

(i) Vessel location at time of sighting (decimal degrees);

(j) Water depth (meters);

(k) Direction of vessel's travel (compass direction);

(l) Speed (knots) of the vessel(s) from which the observation was made;

(m) Direction of animal's travel relative to the vessel (description, compass heading);

(n) Bearing to sighting (degrees);

(o) Identification of the animal (e.g., genus/species, lowest possible taxonomic level, or unidentified), and the composition of the group if there is a mix of species;

(p) Species reliability (an indicator of confidence in identification) (1 = unsure/possible, 2 = probable, 3 = definite/sure, 9 = unknown/not recorded);

(q) Estimated distance (meters) to the animal and method of estimating distance;

(r) Estimated number of animals (high/low/best) (numeric);

(s) Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.);

(t) Description (as many distinguishing features as possible of each individual seen, including length, shape, color, pattern, scars or markings, shape and size of dorsal fin, shape of head, and blow characteristics);

(u) Detailed behavior observations (e.g., number of blows/breaths, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior before and after point of closest approach);

(v) Animal's closest point of approach (meters) and/or closest distance from any element of the acoustic source; and

(w) Description of any actions implemented in response to the sighting (e.g., delays, shutdown, ramp-up) and time and location of the action;

1. Photos (Yes/No);

2. Photo Frame Numbers (List of numbers);

3. Visibility;

4. Beaufort Sea State (Beaufort scale)

(b) Reporting requirements for ice trials

(i) Date and time of each observation event (e.g., initial observation of a seal or seal structure) and subsequent monitoring;

(ii) Environmental conditions during each observation event;

(iii) Number of animals per observation event; and number of adults/juveniles/pups per observation event;

(iv) Behaviors of seals during each observation event; and

(v) Geographic coordinates of the observed animals or structure (breathing hole or lair), with the position recorded by using the most precise coordinates practicable (coordinates will be recorded in decimal degrees, or similar standard, and defined coordinate system).

(c) PSOs must use standardized electronic data forms to record data, and the Holder must submit all PSO datasheets and/or raw sighting data with the draft report, as specified in condition 6(b) of this IHA.

(d) Reporting injured or dead marine mammals:

(i) Discovery of injured or dead marine mammal – In the event that personnel involved in the any of the project activities covered by the authorization discover an injured or dead marine mammal, the IHA-holder shall report the incident to the Office of Protected Resources (OPR), NMFS (*PR.ITP.MonitoringReports@noaa.gov* and *itp.cockrell@noaa.gov*) and to the Alaska regional stranding coordinator (907-586-7209) as soon as feasible. The report must include the following information:

1. Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);

2. Species identification (if known) or description of the animal(s) involved;

3. Condition of the animal(s) (including carcass condition if the animal is dead);

4. Observed behaviors of the animal(s), if alive;

5. If available, photographs or video footage of the animal(s); and

6. General circumstances under which the animal was discovered.

(ii) Vessel Strike – In the event of a ship strike of a marine mammal by any vessel involved in the activities covered by the authorization, the IHA-holder shall report the incident to OPR, NMFS and to the Alaska regional

stranding coordinator as soon as feasible. The report must include the following information:

1. Time, date, and location (latitude/longitude) of the incident;

2. Species identification (if known) or description of the animal(s) involved;

3. Vessel's speed during and leading up to the incident;

4. Vessel's course/heading and what operations were being conducted (if applicable);

5. Status of all sound sources in use;

6. 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;

7. Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, visibility) immediately preceding the strike;

8. Estimated size and length of animal that was struck;

9. Description of the behavior of the marine mammal immediately preceding and following the strike;

10. If available, description of the presence and behavior of any other marine mammals immediately preceding the strike;

11. 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

12. To the extent practicable, photographs or video footage of the animal(s).

6. This Authorization may be modified, suspended or revoked if the holder fails to abide by the conditions prescribed herein (including, but not limited to, failure to comply with monitoring or reporting requirements), or if NMFS determines: (1) the authorized taking is likely to have or is having more than a negligible impact on the species or stocks of affected marine mammals, (2) the authorized taking is likely to have or is having an unmitigable adverse impact on the availability of the affected species or stocks for subsistence uses, or (3) the prescribed measures are likely not or are not effecting the least practicable adverse impact on the affected species or stocks and their habitat.

7. Renewals

On a case-by-case basis, NMFS may issue a one-time, one-year Renewal IHA following notice to the public providing an additional 15 days for public comments when (1) up to another year of identical, or nearly identical, activities are planned or (2) the specified activities would not be completed by the time this IHA expires and a Renewal would allow for completion of the activities, provided all of the following conditions are met:

(a) A request for renewal is received no later than 60 days prior to the needed Renewal IHA effective date (the Renewal IHA expiration date cannot extend beyond one year from expiration of this IHA).

(b) The request for renewal must include the following:

(i) An explanation that the activities to be conducted under the requested Renewal IHA are identical to the activities analyzed for this IHA, are a subset of the activities, or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, mitigation and monitoring requirements, or take estimates (with the exception of reducing the type or amount of take).

(ii) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.

(c) Upon review of the request for Renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures will remain the same and appropriate, and the findings made in support of this IHA remain valid.

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Kimberly Damon-Randall, Date
Director, Office of Protected Resources,
National Marine Fisheries Service.

Table 1. Authorized take numbers, by species

Species	Total Take by Level B Harassment During Open-water Activities	Total Take by Level B Harassment During Ice Covered Activities	Total Take by Level B Harassment
Bowhead Whale	37	0	37
Ringed Seals	1,465	1,044	2,509
Bearded Seals	320	0	320
Spotted Seals	504	0	504

Table 2. Minimum radial distance to shutdown zones

	Shutdown Zone Radius (m)		
Activity	**Low-Frequency Cetaceans**	**Phocid Pinnipeds**	Level B Harassment Zone Radius (m)
Single Airgun	1,100	350	3,188
Sparker	500	N/A	447