

INCIDENTAL HARASSMENT AUTHORIZATION

Ørsted Wind Power North America, LLC, (Ørsted) and its designees are 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 1 year from the date of issuance.
2. This IHA authorizes take incidental to marine site characterization surveys in the Outer Continental Shelf Lease Area OCS-A 0482 and 0519 and potential export cable routes to landfall locations in Delaware, as specified in Ørsted's IHA application.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of Ørsted, the vessel operators, the lead protected species observers (PSO), and any other relevant designees of Ørsted 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. Any taking exceeding the authorized amounts listed is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (c) The taking by injury, 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.
 - (d) Ørsted shall instruct relevant vessel personnel with regard to the authority of the protected species monitoring team, and shall ensure that relevant vessel personnel and the protected species monitoring team participate in a joint onboard briefing (hereafter PSO briefing), led by the vessel operator and lead PSO, prior to beginning survey activities to ensure that responsibilities, communication procedures, monitoring protocols, safety and operational procedures, and IHA requirements are clearly understood. This PSO briefing must be repeated when relevant new personnel (*e.g.*, PSOs, acoustic source operator) join the survey operations before work commences.
 - (e) The acoustic source must be deactivated when not acquiring data or preparing to acquire data, except as necessary for testing. Unnecessary use of the acoustic source shall be avoided.

- (f) Ørsted must abide by the relevant Project Design Criteria (PDC 4, 5 and 7), or any subsequent revised versions thereof, of the programmatic consultation completed by NMFS' Greater Atlantic Regional Fisheries Office on June 29, 2021 (revised September 2021), pursuant to section 7 of the Endangered Species Act (ESA).

4. Mitigation Requirements

- (a) Ørsted must employ qualified, NMFS-approved visual PSOs (see Section 5 of this IHA). When specified acoustic sources (impulsive: sparkers and boomers; non-impulsive: non-parametric sub-bottom profilers) are operating, a minimum of one PSO must be on duty, per source vessel, during daylight hours and two PSOs must be on duty, per source vessel, during nighttime hours.
- (b) Visual monitoring must begin no less than 30 minutes prior to initiation of specified acoustic sources (see condition 4(a) of this IHA) and must continue until 30 minutes after use of specified acoustic sources ceases.
- (c) PSOs shall establish and monitor applicable Exclusion Zones (see below). These zones shall be based upon the radial distance from the acoustic source (rather than being based around the vessel itself).
- (d) Pre-start clearance and ramp-up – A ramp-up procedure, involving a gradual increase in source level output, is required at all times as part of the activation of the acoustic source when technically feasible. Operators should ramp up sources to half power for 5 minutes and then proceed to full power. A 30-minute pre-start clearance observation period must occur prior to the start of ramp-up (or initiation of source use if ramp-up is not technically feasible). Pre-start clearance observation zones must be as follows: 500-m for all ESA-listed marine mammals and 100-m for all other marine mammals (Table 3). All operators must adhere to the following pre-start clearance and ramp-up requirements:
 - (i) 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 Exclusion Zones for 30 minutes prior to the initiation of ramp-up (pre-start clearance). During this 30 minute pre-start clearance period, the entire applicable Exclusion Zone must be visible, except as indicated in (viii) below.
 - (ii) Ramp-ups shall be scheduled so as to minimize the time spent with the source activated.
 - (iii) A visual PSO conducting pre-start clearance observations must be notified again immediately prior to initiating ramp-up procedures and the operator must receive confirmation from the PSO that the Exclusion Zone is clear prior to proceeding.

- (iv) 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.
 - (v) 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.
 - (vi) Ramp-up may not be initiated if any marine mammal is within the applicable Exclusion Zone. If a marine mammal is observed within the applicable Exclusion Zone during the 30 minute pre-start clearance period, ramp-up may not begin until the animal(s) has been observed exiting the zones or until an additional time period has elapsed with no further sightings (15 minutes for small odontocetes and pinnipeds and 30 minutes for all other species).
 - (vii) PSOs must monitor the Exclusion Zone 30 minutes before and during ramp-up, and ramp-up must cease and the source must be shut down upon observation of a marine mammal within the applicable Exclusion Zone.
 - (viii) Ramp-up may occur at times of poor visibility, including nighttime, if appropriate visual monitoring has occurred with no detections of marine mammals in the exclusion zone in the 30 minutes prior to beginning ramp-up. Acoustic source activation may only occur at night where operational planning cannot reasonably avoid such circumstances.
 - (ix) If the acoustic source 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 Exclusion Zone. For any longer shutdown, pre-start clearance observation and ramp-up are required.
- (e) Shutdown requirements
- (i) Any PSO on duty has the authority to call for shut down of the acoustic source if a marine mammal is detected within the applicable Exclusion 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 Exclusion Zone, the acoustic source must be shut down (Table 3). When shutdown is instructed by a PSO, the acoustic source must be immediately deactivated and any dispute resolved only following deactivation.
- (iv) The shutdown requirement is waived for small delphinids¹ and pinnipeds.
 - (A) If a delphinid (individual belonging to the specified genera of the Family *Delphinidae*) or pinniped is visually detected within the Exclusion Zone, no shutdown is required unless the PSO confirms the individual to be of a genus other than those described in Table 1; in which case, a shutdown is required.
- (v) If there is uncertainty regarding identification of a marine mammal species (*i.e.*, whether the observed marine mammal(s) belongs to one of the delphinid genera for which shutdown is waived or one of the species with a larger Exclusion Zone), PSOs may use best professional judgment in making the decision to call for a shutdown.
- (vi) Upon implementation of shutdown, the source may be reactivated after the marine mammal has been observed exiting the applicable Exclusion Zone or following a clearance period (15 minutes for harbor porpoises and 30 minutes for all other species; Table 3) with no further detection of the marine mammal.
- (vii) Shutdown of acoustic sources is required upon observation of either a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met, entering or within the Level B harassment zone (Table 2).
- (f) Vessel Strike Avoidance – Vessel operators must comply with the measures set forth below 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. These requirements do not apply in any case where compliance would create an imminent and serious threat to a person or vessel or to the extent that a vessel is restricted in its ability to maneuver and, because of the restriction, cannot comply.
 - (i) Vessel operators and crews must maintain a vigilant watch for all marine mammals and slow down, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any marine mammal. A single marine mammal at the surface may indicate the presence of additional submerged animals in the vicinity of the vessel; therefore, precautionary measures should always be exercised. A visual observer

¹ Small delphinids include members of the following genera: *Delphinus*, *Lagenorhynchus*, *Stenella*, or *Tursiops*.

aboard the vessel must monitor a vessel strike avoidance zone around the vessel (species-specific distances detailed in Table 3). 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 to 1) distinguish marine mammal from other phenomena and 2) broadly to identify a marine mammal as a right whale, other whale (defined in this context as sperm whales or baleen whales other than right whales), or other marine mammal.

- (ii) All vessels, regardless of size, must observe a 10-knot speed restriction in specific areas designated by NMFS for the protection of North Atlantic right whales from vessel strikes. These include all Seasonal Management Areas (SMA) (when in effect) and any Dynamic Management Areas (DMA) (when in effect). See www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales for specific detail regarding these areas.
- (iii) Vessel speeds must be reduced to 10 knots or less when mother/calf pairs, pods, or large assemblages of cetaceans are observed near a vessel.
- (iv) All vessels must maintain a minimum separation distance of 500-m from right whales and other ESA-listed species. If an ESA-listed species is sighted within the relevant separation distance, the vessel must steer a course away at 10-knots or less until the 500-m separation distance has been established (Table 3). If a whale is observed but cannot be confirmed as a species that is not ESA-listed, the vessel operator must assume that it is an ESA-listed species and take appropriate action.
- (v) All vessels must maintain a minimum separation distance of 100-m from non-ESA-listed baleen whales (Table 3).
- (vi) All vessels must, to the maximum extent practicable, attempt to maintain a minimum separation distance of 50-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; Table 3).
- (vii) When marine mammals 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.

5. Monitoring Requirements

- (a) Ørsted 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 marine mammal and mitigation requirements (including brief alerts regarding maritime hazards), and must have successfully completed an approved PSO training course for geophysical surveys. Visual monitoring must be performed by qualified, NMFS-approved PSOs.
- (b) PSO names must be provided to NMFS by the operator for review and confirmation of their approval for specific roles prior to commencement of the survey². 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.
- (c) NMFS may approve PSOs as conditional or unconditional. A conditionally-approved PSO may be one who is trained but has not yet attained the requisite experience. An unconditionally-approved PSO is one who has attained the necessary experience. For unconditional approval, the PSO must have a minimum of 90 days at sea performing the role during a geophysical survey, with the conclusion of the most recent relevant experience not more than 18 months previous.
- (d) At least one of the visual 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 team³, 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.
- (e) 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. 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 marine mammal surveys; and (3) previous work experience as a PSO

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

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.

(PSO must be in good standing and demonstrate good performance of PSO duties).

- (f) 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.
- (g) PSOs must coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts and shall conduct visual observations using binoculars or night-vision equipment and the naked eye while free from distractions and in a consistent, systematic, and diligent manner.
- (h) PSOs may be on watch for a maximum of four consecutive hours followed by a break of at least two hours between watches and may conduct a maximum of 12 hours of observation per 24-hour period.
- (i) Any observations of marine mammal by crew members aboard any vessel associated with the survey shall be relayed to the PSO team.
- (j) Ørsted must work with the selected third-party PSO 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:
 - (i) At least one thermal (infrared) imaging device suited for the marine environment;
 - (ii) Reticle binoculars (*e.g.*, 7 x 50) of appropriate quality (at least one per PSO, plus backups);
 - (iii) Global Positioning Units (GPS) (at least one plus backups);
 - (iv) 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;
 - (v) Equipment necessary for accurate measurement of distances to marine mammal;
 - (vi) Compasses (at least one plus backups);
 - (vii) Means of communication among vessel crew and PSOs; and
 - (viii) Any other tools deemed necessary to adequately and effectively perform PSO tasks.

- (k) Equipment specified in (i) through (viii) above may be provided by an individual PSO, the third-party PSO provider, or the operator, but Ørsted is responsible for ensuring PSOs have the proper equipment required to perform the duties specified within this IHA.
- (l) During good conditions (*e.g.*, daylight hours; Beaufort sea state (BSS) 3 or less), PSOs shall conduct observations when the specified acoustic sources (see condition 4(a) of this IHA) are not operating for comparison of sighting rates and behavior with and without use of the specified acoustic sources and between acquisition periods, to the maximum extent practicable.
- (m) Ørsted must consult the NMFS North Atlantic right whale reporting system and Whale Alert, daily and as able, for the presence of North Atlantic right whales before and throughout survey operations, and for the establishment of a DMA. If NMFS should establish a DMA in the Lease Areas during the survey, the vessels must abide by speed restrictions in the DMA.

6. Reporting Requirements

- (a) Ørsted shall submit a draft comprehensive report on all activities and monitoring results within 90 days of the completion of the survey or expiration of the IHA, whichever comes sooner. The report must describe all activities conducted and sightings of marine mammals, must provide full documentation of methods, results, and interpretation pertaining to all monitoring, and must summarize the dates and locations of survey operations and all marine mammals sightings (dates, times, locations, activities, associated survey activities). In addition to the report, all raw observational data shall be made available. The report must summarize the information submitted in interim monthly reports (if required) as well as additional data collected as described above. A final report must be submitted within 30 days following resolution of any comments on the draft report. All draft and final marine mammal and acoustic monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov*, *nmfs.gar.incidental-take@noaa.gov*, and *ITP.clevenstine@noaa.gov*.
- (b) PSOs must use standardized electronic data forms to record data. PSOs shall record detailed information about any implementation of mitigation requirements, including the distance of marine mammal to the acoustic source and description of specific actions that ensued, the behavior of the animal(s), any observed changes in behavior before and after implementation of mitigation, and if shutdown was implemented, the length of time before any subsequent ramp-up of the acoustic source. If required mitigation was not implemented, PSOs should record a description of the circumstances. At a minimum, the following information must be recorded:
 - (i) Vessel names (source vessel and other vessels associated with survey), vessel size and type, maximum speed capability of vessel;

- (ii) Dates of departures and returns to port with port name;
 - (iii) The lease number;
 - (iv) PSO names and affiliations;
 - (v) Date and participants of PSO briefings;
 - (vi) Visual monitoring equipment used;
 - (vii) PSO location on vessel and height of observation location above water surface;
 - (viii) Dates and times (Greenwich Mean Time (GMT)) of survey on/off effort and times corresponding with PSO on/off effort;
 - (ix) Vessel location (decimal degrees) when survey effort begins and ends and vessel location at beginning and end of visual PSO duty shifts;
 - (x) Vessel location at 30-second intervals if obtainable from data collection software, otherwise at practical regular interval
 - (xi) Vessel heading and speed at beginning and end of visual PSO duty shifts and upon any change;
 - (xii) Water depth (if obtainable from data collection software);
 - (xiii) 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;
 - (xiv) Factors that may contribute to impaired observations during each PSO shift change or as needed as environmental conditions change (*e.g.*, vessel traffic, equipment malfunctions); and
 - (xv) Survey activity information (and changes thereof), such as acoustic source power output while in operation, 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, streamers, etc.).
- (c) Upon visual observation of any marine mammal, the following information must be recorded:
1. Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform);
 2. Vessel/survey activity at time of sighting (*e.g.*, deploying, recovering, testing, shooting, data acquisition, other);

3. PSO who sighted the animal;
4. Time of sighting;
5. Initial detection method;
6. Sightings cue;
7. Vessel location at time of sighting (decimal degrees);
8. Direction of vessel's travel (compass direction);
9. Speed of the vessel(s) from which the observation was made;
10. Identification of the animal (*e.g.*, genus/species, lowest possible taxonomic level or unidentified); also note the composition of the group if there is a mix of species;
11. Species reliability (an indicator of confidence in identification);
12. Estimated distance to the animal and method of estimating distance;
13. Estimated number of animals (high/low/best);
14. Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.);
15. 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);
16. 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);
17. Mitigation actions; description of any actions implemented in response to the sighting (*e.g.*, delays, shutdowns, ramp-up, speed or course alteration, etc.) and time and location of the action;
18. Equipment operating during sighting;
19. Animal's closest point of approach and/or closest distance from the center point of the acoustic source; and

20. Description of any actions implemented in response to the sighting (e.g., delays, shutdown, ramp-up) and time and location of the action.
- (d) Reporting sightings of North Atlantic right whales:
- (i) If a North Atlantic right whale is observed at any time by PSOs or personnel on any project vessels, during surveys or during vessel transit, Ørsted must report the sighting information to the NMFS North Atlantic Right Whale Sighting Advisory System (866-755-6622) within two hours of occurrence, when practicable, or no later than 24 hours after occurrence.
 - (ii) North Atlantic right whale sightings in any location may also be reported to the U.S. Coast Guard via Channel 16 and through the WhaleAlert app (<http://www.whalealert.org/>).
- (e) Reporting injured or dead marine mammals:
- (i) Sightings of any injured or dead marine mammal must be reported to NMFS, regardless of the cause of injury or death. In the event that personnel involved in the survey activities discover an injured or dead marine mammal, Ørsted must report the incident to NMFS as soon as feasible by phone (866-755-6622) and by email (nmfs.gar.incidental-take@noaa.gov and PR.ITP.MonitoringReports@noaa.gov) 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) In the event of a vessel strike of a marine mammal by any vessel involved in the survey activities, Ørsted must report the incident to NMFS by phone (866-755-6622) and by email (nmfs.gar.incidental-take@noaa.gov and

PR.ITP.MonitoringReports@noaa.gov) 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/or 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).
7. 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 having more than a negligible impact on the species or stocks of affected marine mammals, or (2) the prescribed measures are likely not or are not effecting the least practicable adverse impact on the affected species or stocks and their habitat.
8. 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 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.

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

Table 1—Authorized Incidental Take by Level B Harassment

Taxonomic group	Common name	Scientific name	Stock	ESA-listed ?	Marine mammal category as it applies to mitigation requirements in the IHA	Level B harassment takes
Cetacean (Mysticete)	North Atlantic right whale	<i>Eubalaena glacialis</i>	Western Atlantic Stock	Yes	North Atlantic right whale	4
	Fin whale	<i>Balaenoptera physalus</i>	Western North Atlantic Stock	Yes	Large whale	6
	Sei whale	<i>Balaenoptera borealis</i>	Nova Scotia Stock	Yes	Large whale	1
	Minke whale	<i>Balaenoptera acutorostrata</i>	Canadian East Coastal Stock	No	Large whale	10
	Humpback whale	<i>Megaptera novaeangliae</i>	West Indies DPS	No	Large whale	5
Cetacean (Odontocete)	Sperm whale	<i>Physeter macrocephalus</i>	North Atlantic Stock	Yes	Large whale	2
	Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>	Western North Atlantic Stock	No	Small odontocete	16
	Atlantic spotted dolphin	<i>Stenella frontalis</i>	Western North Atlantic Stock	No	Small odontocete	24
	Common bottlenose dolphin	<i>Tursiops truncatus</i>	Western North Atlantic Offshore Stock	No	Small odontocete	4,118
			Western North Atlantic Northern Migratory Coastal Stock			
	Long-finned pilot whale	<i>Globicephala melas</i>	Western North Atlantic Stock	No	Large odontocete	8
	Risso's dolphin	<i>Grampus griseus</i>	Western North Atlantic Stock	No	Large odontocete	7
	Common dolphin (short-beaked)	<i>Delphinus delphis</i>	Western North Atlantic Stock	No	Small odontocete	302

Taxonomic group	Common name	Scientific name	Stock	ESA-listed ?	Marine mammal category as it applies to mitigation requirements in the IHA	Level B harassment takes
	Harbor porpoise	<i>Phocoena phocoena</i>	Western North Atlantic Stock	No	Small odontocete	79
Pinniped (Phocid)	Gray seal	<i>Halichoerus grypus</i>	Western North Atlantic Stock	No	Seal	13
	Harbor seal	<i>Phoca vitulina</i>	Western North Atlantic Stock	No	Seal	13

Table 2—Level B Harassment Zones

Equipment	Distance to Level B harassment threshold (m)
ET 216 CHIRP	9
ET 424 CHIRP	4
ET 512i CHIRP	6
GeoPulse 5430	21
TB CHIRP III	48
Pangeo SBI	22
AA Triple plate S-Boom (700/1,000 J)	34
AA, Dura-spark UHD Sparkers	141
GeoMarine Sparkers	141

Table 3—Distances for Clearance, Vessel Separation, and Shutdown/Exclusion Zones

Species	ESA-listed?	Clearance zone (m)	Vessel separation zone (m)	Exclusion/shutdown zone (m)
North Atlantic right whale	Yes	500	500	500
Fin whale				100
Sei whale				
Sperm whale				
Humpback whale	No	100	100	100
Minke whale				
Long-finned pilot whale				
Risso's dolphin				
Harbor porpoise				
Gray seal				
Harbor seal			50 (as feasible)	Not required. See condition 4(f)(iv) in this IHA.
Atlantic white-sided dolphin				
Atlantic spotted dolphin				
Common bottlenose dolphin (coastal and offshore stocks)				
Common dolphin				