

## INCIDENTAL HARASSMENT AUTHORIZATION

Ørsted Wind Power North America, LLC (Ørsted) 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 harass marine mammals incidental to marine site characterization surveys in coastal water from New York to Massachusetts, when adhering to the following terms and conditions.

1. This incidental harassment authorization (IHA) is valid from September 25, 2020 through September 25, 2021.
2. This IHA is valid only for sound from the marine site characterization survey activities specified in the IHA application, in the Atlantic Ocean.
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 authorized for taking are listed in Table 1. The taking, by Level B harassment only, is limited to the species and numbers listed in Table 1. Any taking of species not listed in Table 1, or exceeding the authorized amounts listed in Table 1, is prohibited and may result in the modification, suspension, or revocation of this IHA.
  - (c) Ørsted must ensure that the vessel operator and other relevant vessel personnel are briefed on all responsibilities, communication procedures, marine mammal monitoring protocols, operational procedures, and IHA requirements prior to the start of survey activity, and when relevant new personnel join the survey operations.
4. Mitigation Requirements – The holder of this Authorization is required to implement the following mitigation measures:
  - (a) Ørsted must employ a minimum of one (1) NMFS-approved PSO to be on duty during daylight hours and two (2) NMFS-approved PSOs to be on duty concurrently during nighttime operations. PSOs must have no tasks other than to conduct observational effort, record observational data, and communicate with and instruct relevant vessel crew regarding the presence of marine mammals and mitigation requirements.

- (b) Visual monitoring must begin no less than 30 minutes prior to initiation of survey equipment and must continue until 30 minutes after use of survey equipment ceases.
- (c) Exclusion Zones – PSOs must establish and monitor marine mammal Exclusion Zones. Distances to Exclusion Zones must be from any survey equipment, not the distance from the vessel. Exclusion Zones must be as follows:
  - (i) 500-m Exclusion Zone for North Atlantic right whales; and
  - (ii) 100-m Exclusion Zone for all other marine mammals for survey days operating impulsive acoustic sources (boomers and/or sparkers).
- (d) Harassment Zones – PSOs must establish and monitor marine mammal Level B Harassment Zones specific to the acoustic sources used on survey activity days. Harassment Zones must be as follows:
  - (i) 141-m Harassment Zone for all marine mammals on survey days employing impulsive sources (*e.g.*, boomers and/or sparkers); and
  - (ii) 54-m Harassment Zone for all marine mammals on survey days employing non-impulsive sources (*e.g.*, CHIRP sub-bottom profilers).
- (e) Shutdown requirements
  - (i) If a marine mammal is observed within or entering the relevant Exclusion Zones as described under 4(c) while geophysical survey equipment is operational, the geophysical survey equipment must be immediately shut down.
  - (ii) Any PSO on duty has the authority to call for shutdown of survey equipment. When there is certainty regarding the need for mitigation action on the basis of visual detection, the relevant PSO(s) must call for such action immediately.
  - (iii) When a shutdown is called for by a PSO, the shutdown must occur and any dispute resolved only following shutdown.
  - (iv) The vessel operator must establish and maintain clear lines of communication directly between PSOs on duty and crew controlling the geophysical source(s) to ensure that shutdown commands are conveyed swiftly while allowing PSOs to maintain watch.

- (v) Upon implementation of a shutdown, survey equipment may be reactivated when all marine mammals that triggered the shutdown have been confirmed by visual observation to have exited the relevant Exclusion Zone or an additional time period has elapsed with no further sighting of the animal that triggered the shutdown (15 minutes for small odontocetes and seals and 30 minutes for all other marine mammals).
  - (vi) If geophysical survey equipment shuts down for less than 30 minutes for reasons other than marine mammal mitigation (*e.g.*, due to mechanical or electronic failure) the equipment may be re-activated as soon as is practicable at full operational level if PSOs have maintained constant visual observation during the shutdown and no visual detections of marine mammals occurred within the applicable Exclusion Zones during that time. For a shutdown of 30 minutes or longer, or if visual observation was not continued diligently during the pause, pre-clearance observation is required, as described under 4(f).
  - (vii) If a delphinid(s) from the genera *Delphinus*, *Lagenorhynchus*, *Stenella*, or *Tursiops* is visually detected approaching the vessel (*e.g.*, to bow ride) or towed survey equipment, shutdown is not required. 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), PSOs must use best professional judgment in making the decision to call for a shutdown.
  - (viii) Shutdown of geophysical survey equipment is required upon observation of a species for which authorization has not been granted, or, observation of a species for which authorization has been granted but the authorized number of takes has been met, approaching or observed within the Level B harassment zone.
  - (ix) Shutdown, pre-clearance, and ramp-up procedures are not required during HRG survey operations using only non-impulsive sources.
- (f) Pre-clearance observation –PSOs must conduct 30 minutes of pre-clearance observation prior to initiation of geophysical survey operations (except as described under condition 4(e)(ix)). If a marine mammal is observed within or approaching the pre-clearance zones, described below, during the pre-clearance period, geophysical survey equipment must not be initiated until the marine mammal(s) is confirmed by visual observation to have exited the relevant zone, or, until an additional time period has elapsed with no further sighting of the animal (15 minutes for small odontocetes and seals and 30 minutes for all other species). The pre-clearance requirement includes small delphinids that approach the vessel (*e.g.*, bow ride). Geophysical surveys must not be initiated if:

- (i) a North Atlantic right whale is observed within a 500-m radius of geophysical survey equipment during the pre-clearance period; or
  - (ii) any other marine mammals are observed within a 100-m radius of geophysical survey equipment during the pre-clearance period.
- (g) Ramp-up – when technically feasible, survey equipment must be ramped up at the start or re-start of survey activities. Ramp-up must begin with the power of the smallest acoustic equipment at its lowest practical power output appropriate for the survey. When technically feasible the power will then be gradually turned up and other acoustic sources added in a way such that the source level would increase gradually.
- (h) Vessel Strike Avoidance – Ørsted will ensure that vessel operators and crew maintain a vigilant watch for cetaceans and pinnipeds and slow down or stop their vessels to avoid striking these species. Survey vessel crew members responsible for navigation duties will receive site-specific training on marine mammals and sea turtle sighting/reporting and vessel strike avoidance measures. Vessel strike avoidance measures include the following, except under circumstances when complying with these requirements would put the safety of the vessel or crew at risk:
- (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 visual observer aboard the vessel must monitor a vessel strike avoidance zone around the vessel (distances stated 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 to 1) distinguish protected species 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 (e.g., source vessels, chase vessels, supply vessels), regardless of size, must observe a 10-knot speed restriction in the following specific areas designated by NMFS for the protection of North Atlantic right whales:: any dynamic management areas (DMAs) when in effect, the Cape Cod Bay Seasonal Management Area (SMA) (from January 1 through May 15), the Off Race Point SMA (from March 1 through April 30), the Great South Channel SMA (from April 1 through July 31), the Mid-Atlantic SMAs (from November 1 through April 30), and the Southeast SMA (from November 15 through April 15);

- (iii) Vessel speeds must also 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. If a whale is observed but cannot be confirmed as a species other than a right whale, the vessel operator must assume that it is a right whale and take appropriate action;
  - (v) All vessels must maintain a minimum separation distance of 100-m from sperm whales and all baleen whales. 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);
  - (vi) 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). If marine mammals are sighted within the relevant separation distance, the vessel must reduce speed and shift the engine to neutral, not engaging the engines until animals are clear of the area. This does not apply to any vessel towing gear or any vessels that is navigationally constrained; and
  - (vii) 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 that restriction, cannot comply.
- (i) Seasonal Restrictions – No more than 3 survey vessels may operate concurrently from March through June within the area that includes the three Lease Areas (OCS-A 0486/0517, 0487, and 0500) and ECR areas north of the Lease Areas up to, but not including, coastal and bay waters.

5. Monitoring Requirements – Ørsted is required to conduct marine mammal visual monitoring during geophysical survey activity. Monitoring must be conducted in accordance with the following requirements:

- (a) Visual monitoring will be performed by qualified, NMFS-approved PSOs. PSO resumes must be provided to NMFS for review and approval prior to the start of survey activities.
- (b) Ørsted must employ independent, dedicated, trained PSOs, meaning that the PSOs must 1) be employed by a third-party observer provider, 2) 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 mammals and mitigation requirements (including brief alerts regarding maritime hazards), and 3) have successfully completed an approved PSO training course appropriate for their designated task. On a case-by-case basis, non-independent observers may be approved by NMFS for limited, specific duties in support of approved, independent PSOs on smaller vessels with limited crew capacity operating in nearshore waters.

- (c) Visual monitoring must begin no less than 30 minutes prior to initiation of geophysical survey equipment and must continue until one hour after use of the acoustic source ceases.
- (d) PSOs must coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts.
- (e) 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.
- (f) In cases where multiple vessels are surveying concurrently, any observations of marine mammals must be communicated to PSOs on all active survey vessels.
- (g) PSOs must be equipped with binoculars and have the ability to estimate distances to marine mammals located in proximity to the vessel and/or Exclusion Zones. Reticulated binoculars must also be available to PSOs for use as appropriate based on conditions and visibility to support the sighting and monitoring of marine species.
- (h) Position data must be recorded using hand-held or vessel global positioning system (GPS) units for each sighting.
- (i) Ørsted must consult NMFS' North Atlantic right whale reporting systems for the presence of North Atlantic right whales throughout survey operations and for the existence of a Dynamic Management Area (DMA).
- (j) During good conditions (e.g., daylight hours; Beaufort sea state 3 or less), to the maximum extent practicable, visual PSOs must 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.
- (k) Night-vision equipment (i.e., night-vision goggles and/or infrared technology) must be available for use during nighttime monitoring.

- (l) Any observations of marine mammals by crew members aboard any vessel associated with the survey must be relayed to the PSO team.
- (m) If Exclusion Zones and Harassment Zones are not fully visible to PSOs due to darkness or inclement weather, survey activities may continue, unless a marine mammal is detected within or entering the Exclusion Zones as described under 4(c).
- (n) Data on all PSO observations must be recorded based on standard PSO collection requirements. PSOs must use standardized data forms, whether hard copy or electronic. The following information must be reported:
  - (i) PSO names and affiliations
  - (ii) Dates of departures and returns to port with port name
  - (iii) Dates and times (Greenwich Mean Time) of survey effort and times corresponding with PSO effort
  - (iv) Vessel location (latitude/longitude) when survey effort begins and ends; vessel location at beginning and end of visual PSO duty shifts
  - (v) Vessel heading and speed at beginning and end of visual PSO duty shifts and upon any line change
  - (vi) Environmental conditions while on visual survey (at beginning and end of PSO shift and whenever conditions change significantly), including wind speed and direction, Beaufort sea state, Beaufort wind force, swell height, weather conditions, cloud cover, sun glare, and overall visibility to the horizon
  - (vii) Factors that may be contributing to impaired observations during each PSO shift change or as needed as environmental conditions change (*e.g.*, vessel traffic, equipment malfunctions)
  - (viii) Survey activity information, such as type of survey equipment in operation, acoustic source power output while in operation, and any other notes of significance (*i.e.*, pre-clearance survey, ramp-up, shutdown, end of operations, etc.)
  - (ix) If a marine mammal is sighted, the following information should be recorded:
    - (A) Watch status (sighting made by PSO on/off effort, opportunistic, crew,

alternate vessel/platform);

- (B) PSO who sighted the animal;
- (C) Time of sighting;
- (D) Vessel location at time of sighting;
- (E) Water depth;
- (F) Direction of vessel's travel (compass direction);
- (G) Direction of animal's travel relative to the vessel;
- (H) Pace of the animal;
- (I) Estimated distance to the animal and its heading relative to vessel at initial sighting;
- (J) 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;
- (K) Estimated number of animals (high/low/best) ;
- (L) Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.);
- (M) 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);
- (N) Detailed behavior observations (*e.g.*, number of blows, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior);
- (O) Animal's closest point of approach and/or closest distance from the center point of the acoustic source;
- (P) Platform activity at time of sighting (*e.g.*, deploying, recovering, testing, data acquisition, other); and



- (Q) Description of any actions implemented in response to the sighting (*e.g.*, delays, shutdown, ramp-up, speed or course alteration, etc.) and time and location of the action.

6. Reporting – Ørsted is required to report to NMFS in accordance with the following requirements:

- (a) A monitoring report must be provided to NMFS within 90 days after completion of survey activities. The report must fully document the methods and monitoring protocols, summarize the data recorded during monitoring, describe, assess and compare the effectiveness of monitoring and mitigation measures. Any recommendations made by NMFS must be addressed in the final report prior to acceptance by NMFS. PSO datasheets or raw sightings data must also be provided with the draft and final monitoring report.
- (b) 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 immediately report sighting information to the NMFS North Atlantic Right Whale Sighting Advisory System: (866) 755-6622. North Atlantic right whale sightings in any location may also be reported to the U.S. Coast Guard via channel 16.
- (c) Reporting injured or dead marine mammals:
  - (i) In the event that personnel involved in the survey activities covered by the authorization discover an injured or dead marine mammal, Ørsted must report the incident to the NMFS Office of Protected Resources (OPR) (301-427-8401), and to the NMFS New England/Mid-Atlantic Regional Stranding Coordinator (978-282-8478) 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.
- (ii) In the event of a vessel strike of a marine mammal by any vessel involved in the activities covered by the authorization, the Ørsted must report the incident to NMFS OPR (301-427-8401) and to the NMFS New England/Mid-Atlantic Regional Stranding Coordinator (978-282-8478) 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).

7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.
  
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, or nearly identical, activities as described in the Specified Activities section of this notice is planned or (2) the activities as described in the Specified Activities section of this notice would not be completed by the time the IHA expires and a Renewal would allow for completion of the activities beyond that described in the Dates and Duration section of this notice, 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 (recognizing that the Renewal IHA expiration date cannot extend beyond one year from expiration of the initial 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 under the initial IHA, are a subset of the activities, or include changes so minor (e.g., changes in equipment models but not type) 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); and
    - (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 in the initial IHA remain valid.

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Donna S. Wieting,  
Director, Office of Protected Resources  
National Marine Fisheries Service

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Date

**Table 1. Numbers of Incidental Take of Marine Mammals Authorized**

Species	Total Takes by Level B Harassment Authorized
North Atlantic right whale	24
Humpback whale	21
Fin whale	36
Sei whale	2
Minke whale	13
Sperm whale	3
Long-finned pilot whale	69
Bottlenose dolphin (W.N. Atlantic Offshore)	419
Common dolphin	2,211
Atlantic white-sided dolphin	418
Atlantic spotted dolphin	7
Risso's Dolphin	30
Harbor porpoise	916
Harbor seal	215
Gray seal	215