



INCIDENTAL HARASSMENT AUTHORIZATION

Skipjack Offshore Energy, LLC (Skipjack) 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 waters of Delaware, when adhering to the following terms and conditions.

1. This incidental harassment authorization (IHA) is valid for one year from the date of issuance.
2. This IHA is valid only for the marine site characterization survey specified in the IHA application, in the Atlantic Ocean.
3. General Conditions
 - (a) A copy of this IHA must be in the possession of Skipjack, the vessel operators, the lead protected species observers (PSO), and any other relevant designees of Skipjack 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) The taking by injury, serious injury, or death of any of the species listed in Table 1 of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.
 - (d) Skipjack 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) Skipjack must employ a minimum of one (1) NMFS-approved PSO on duty at all times during daylight hours (i.e., from 30 minutes prior to sunrise through 30 minutes following sunset) on all survey vessels during geophysical surveys. PSOs must have no tasks other than to conduct observational effort, record observational data, and communicate with and instruct relevant vessel crew with regard to the presence of marine mammals and mitigation requirements. Two (2) PSOs will be on watch during hours of nighttime operations.
 - (b) Visual monitoring must begin no less than 30 minutes prior to initiation of survey equipment (or 30 minutes prior to sunrise) and must continue until 30 minutes after use of survey equipment ceases (or 30 minutes after sunset).
 - (c) Exclusion Zones – PSOs must establish and monitor marine mammal Exclusion Zones. Distances to Exclusion Zones must be from the acoustic source (i.e. the HRG 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 for all other whales, dolphins, seals, and porpoises; and
 - (d) Harassment Zones – PSOs must establish and monitor Level B harassment zones specific to the acoustic sources used during the survey. Harassment Zones must be as follows:
 - (i) 141-m Harassment Zone for all marine mammals during survey operations employing impulsive sources (e.g., boomers and/or sparkers) as the predominant acoustic source; and
 - (ii) 48-m Harassment Zone for all marine mammals during survey operations employing non-impulsive, non-parametric sub-bottom profilers as the predominant acoustic source.
 - (e) Shutdown requirements
 - (i) If a marine mammal is observed within or entering the relevant Exclusion Zones as described under 4(c) while relevant 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[i.e., species comprising the family Phocoenidae and the species comprising the genera *Delphinus*, *Lagenorhynchus*, *Stenella (frontalis)* only), or *Tursiops*], and seals; 30 minutes for all other marine mammals).
- (vi) If geophysical survey equipment is shut 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 zone 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*, or seals are visually detected approaching the vessel (e.g., to bow ride) or towed survey equipment, shutdown is not required.
- (viii) Shutdown of geophysical survey equipment as described in 4(d) is required upon observation of a marine mammal within or approaching the Level B harassment zone of a species for which authorization has not been granted or a species for which authorization has been granted but the authorized number of takes has been met.

- (f) Pre-clearance observation – PSOs must conduct 30 minutes of pre-clearance observation prior to initiation of geophysical survey equipment. 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 odontocetes 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. 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 – 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 mammals. Vessel strike avoidance measures must include the following, except under circumstances when 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 speeds must be reduced to 10 knots or less when mother/calf pairs, pods, or large assemblages of cetaceans are observed near a vessel;
 - (ii) 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.
 - (iii) All vessels must maintain a minimum separation distance of 100 m from sperm whales and all other baleen whales;

- (iv) 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);
 - (v) All 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, and the applicable Seasonal Management Area (SMA) and corresponding speed restriction dates (Mid-Atlantic SMA from November 1 through April 30);
 - (vi) All vessels greater than or equal to 19.8 m in overall length operating from November 1 through April 30 must operate at speeds of 10 knots or less while transiting to and from Project Area;
 - (vii) When marine mammals are sighted while a vessel is underway, the vessel must 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 vessel that is navigationally constrained.
 - (viii) 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
5. Monitoring Requirements – Skipjack 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 must 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) In order to be considered qualified, PSOs must have successfully completed an acceptable PSO training course and/or have demonstrated experience in the role of independent PSO during a geophysical survey. 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) 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 mammals and mitigation requirements (including brief alerts regarding maritime hazards). Non-third-party observers may be approved by NMFS on a case-by-case basis for limited, specific duties in support of approved, independent PSOs.
- (d) Visual monitoring must begin no less than 30 minutes prior to initiation of geophysical survey equipment and must continue until 30 minutes after use of the acoustic source ceases or until 30 minutes past sunset.
- (e) PSOs must coordinate to ensure 360° visual coverage around the vessel from the most appropriate observation posts.
- (f) Visual observations must be conducted using binoculars and the naked eye while free from distractions and in a consistent, systematic, and diligent manner.
- (g) 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.
- (h) In cases where multiple vessels are surveying concurrently, any observations of marine mammals must be communicated to PSOs on all active survey vessels.
- (i) PSOs must be equipped with binoculars and have the ability to estimate distances to observed marine mammals. Reticulated binoculars must be available to PSOs for use as appropriate based on conditions and visibility to support the sighting and monitoring of marine species.
- (j) Night-vision equipment (i.e., night-vision goggles and/or infrared technology) must be available for use during nighttime monitoring
- (k) Position data must be recorded using hand-held or vessel global positioning system (GPS) units for each sighting.

- (l) Skipjack must consult NMFS' North Atlantic right whale reporting systems, including Whale Alert, for the presence of North Atlantic right whales throughout survey operations for the establishment of a Dynamic Management Area (DMA).
- (m) 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.
- (n) Any observations of marine mammals by crew members aboard any vessel associated with the survey must be relayed to the PSO team.
- (o) If Exclusion Zones, and/or 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).
- (p) 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);
- (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 – Skipjack 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 or expiration of this IHA, whichever comes sooner. 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. All draft and final marine mammal and acoustic monitoring reports must be submitted to *PR.ITP.MonitoringReports@noaa.gov* and *ITP.Pauline@noaa.gov*.
- (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, Skipjack 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, Skipjack must report the incident to the NOAA Fisheries Office of Protected Resources (OPR) by email (PR.ITP.MonitoringReports@noaa.gov) and to the NOAA Fisheries New England/Mid-Atlantic Regional Stranding Coordinator by phone (866-755-6622) or by email (nmfs.gar.stranding@noaa.gov) 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, Skipjack must report the incident to NOAA Fisheries OPR by email (PR.ITP.MonitoringReports@noaa.gov) and to the NOAA Fisheries New England/Mid-Atlantic Regional Stranding Coordinator by phone (866-755-6622) or by email (nmfs.gar.stranding@noaa.gov) 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 (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 stock 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 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., 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 in the initial IHA remain valid.

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Catherine Marzin,
Acting Director, Office of Protected Resources
National Marine Fisheries Service

Date

Table 1. Numbers of Incidental Take of Marine Mammals Authorized

Species		Authorized Takes by Level B Harassment
Fin whale		2
Sei whale		1
Minke whale		2
Humpback whale		2
North Atlantic right whale		3
Sperm whale		3
Atlantic white-sided dolphin		4
Atlantic spotted dolphin		2,000
Common bottlenose dolphin	Offshore Stock	135
	Migratory Stock	516
Pilot Whales	Short-finned pilot whale	10
	Long-finned pilot whale	10
Risso's dolphin		30
Common dolphin		70
Harbor porpoise		22
Seals	Gray seal	10
	Harbor seal	10