



MARINE MAMMAL COMMISSION

26 May 2017

Ms. Jolie Harrison, Chief
Permits and Conservation Division
National Marine Fisheries Service
Office of Protected Resources (F/PR1)
1315 East-West Highway
Silver Spring, Maryland 20910

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the application submitted by Ocean Wind, LLC (Ocean Wind) seeking an incidental harassment authorization under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA). Ocean Wind is seeking authorization to take small numbers of marine mammals by harassment incidental to geophysical and geotechnical surveys off the coast of New Jersey¹ in 2017. The Commission also has reviewed the National Marine Fisheries Service's (NMFS) 3 May 2017 notice (82 Fed. Reg. 20563) announcing receipt of the application and proposing to issue the authorization subject to certain conditions.

Background

Ocean Wind is proposing to conduct high-resolution geophysical (HRG) and geotechnical surveys to characterize seabed and subsurface geological conditions in the New Jersey WEA. The HRG survey would begin in June 2017 and last for 42 days, while the geotechnical survey would begin in September 2017 and last for 12 days. Sub-bottom profilers (both chirper and sparker types) would be used during the HRG survey, and the vessel's dynamic positioning system (i.e., thrusters) would be used during the geotechnical survey. The proposed activities are expected to occur during the day and at night.

NMFS preliminarily has determined that the proposed activities could modify temporarily the behavior of small numbers of up to five species of marine mammals, but that the total taking would have a negligible impact on the affected species or stocks. NMFS does not anticipate any take of marine mammals by death or serious injury. It believes that the potential for temporary or permanent hearing impairment will be at the least practicable level because of Ocean Wind's proposed mitigation measures. The mitigation, monitoring, and reporting measures include—

¹ In the area of the New Jersey Wind Energy Area (WEA; <https://www.boem.gov/Commercial-Wind-Leasing-Offshore-New-Jersey/>).

- conducting sound source verification measurements and adjusting the Level B harassment zones² (based on 160 dB re 1 μ Pa for the HRG survey and 120 dB re 1 μ Pa for the geotechnical survey), as necessary;
- using vessel-based observers to monitor the exclusion zone for 60 minutes before, during, and for 60 minutes after the HRG survey – observers also would monitor the monitoring zone during the geotechnical survey;
- using ramp-up and delay procedures based on a 60-minute clearance time during the HRG survey;
- using shutdown procedures if a non-delphinoid (i.e., a mysticete or sperm whale) cetacean is sighted and power-down procedures if a delphinoid cetacean or pinniped is sighted at or within the designated exclusion zone during the HRG survey;
- reducing the dynamic positioning system's power to the maximum extent possible if a marine mammal enters or approaches the monitoring zone during the geotechnical survey, with normal use resuming after a 60-minute clearance time;
- using passive acoustic monitoring during all HRG survey activities;
- using infrared and night-vision technology for visual observations at night;
- using standard vessel strike avoidance procedures and monitoring the NMFS North Atlantic right whale reporting systems during all survey activities;
- reporting injured and dead marine mammals to the Office of Protected Resources and the Greater Atlantic Regional Fisheries Office Stranding Coordinator using NMFS's phased approach and suspending activities, if appropriate; and
- submitting field and technical reports and a final comprehensive report to NMFS.

Estimation of takes

The Commission noted several typographical errors, inconsistencies, and missing information associated with the take estimation portions of the *Federal Register* notice. NMFS has since indicated it plans to correct these issues and add the missing information to the final incidental harassment authorization. Assuming the discussed revisions are incorporated, the Commission has other concerns regarding the manner in which NMFS has calculated its take estimates.

Specifically, the method NMFS used to estimate the numbers of takes during the proposed activities, which summed fractions of takes for each species across project days, does not account for and negates the intent of NMFS's 24-hour reset policy. As the Commission has indicated in previous letters³, this issue involves policy rather than mathematical accuracy. The Commission understands that NMFS has developed criteria associated with rounding that it plans to share with the Commission. The Commission looks forward to receiving and reviewing those criteria in the near future.

² A 200-m exclusion zone would be used for sub-bottom profilers, and a 500-m monitoring zone would be used for the dynamic positioning system.

³ See the Commission's [29 November 2016 letter](#) detailing this issue.

Appropriate threshold for disturbance zone

NMFS has proposed to authorize takes associated with the use of sub-bottom profilers, which NMFS has characterized as impulsive sources relative to the Level B harassment threshold of 160 dB re 1 μ Pa. However, researchers have observed that various species of marine mammals respond to sound from sources with similar characteristics (including acoustic deterrent devices, acoustic harassment devices, pingers, echosounders, and multibeam sonars) at received levels below 160 dB re 1 μ Pa⁴. Previous Commission letters to NMFS regarding the use of sub-bottom profilers (specifically chirpers or chirps) have pointed out that those sources have temporal and spectral characteristics that suggest a lower, more precautionary Level B harassment threshold of 120 dB re 1 μ Pa would be more appropriate than 160 dB re 1 μ Pa. However, NMFS has not followed the Commission's recommendation⁵.

The Commission remains concerned that NMFS's behavior thresholds do not reflect the current state of understanding regarding the temporal and spectral characteristics of various sound sources and their impacts on marine mammals. Therefore, the Commission recommends that, until the behavior thresholds are updated, NMFS require applicants to use the 120- rather than 160-dB re 1 μ Pa threshold for acoustic, non-impulsive sources (e.g., chirp-type sub-bottom profilers, echosounders, and other sonars including side-scan and fish-finding).

Conditions warranting an incidental take authorization

NMFS has stated that Ocean Wind's proposed activities are not expected to result in any takes of marine mammals by Level A harassment and the proposed mitigation measures are likely to reduce the number and severity of takes by Level B harassment. Ocean Wind would be required to cease HRG activities when a marine mammal is observed approaching or within the 200-m exclusion zone, which NMFS indicated was extremely conservative and exceeds the largest estimated Level B harassment zone of 75 m⁶. Ocean Wind also would be required to power down the dynamic positioning system when a marine mammal is observed approaching or within the 500-m monitoring zone⁷, which should reduce any possibility that a marine mammal would be taken. In addition, NMFS noted that implementation of the mitigation measures proposed for Ocean Wind is based on protocols and procedures that have already been successfully implemented, resulting in no observed take of marine mammals for similar offshore projects.

NMFS has cited the Bureau of Ocean Energy Management (BOEM) lease as the source of the proposed mitigation measures contained in Ocean Wind's application, and Ocean Wind's

⁴ Based on data from Watkins and Schevill (1975), Olesiuk et al. (1995), Kastelein et al. (1997), Kastelein et al. (2000), Morton (2000), Culik et al. (2001), Kastelein et al. (2001), Calström et al. (2002), Johnston (2002), Morton and Symonds (2002), Kastelein et al. (2005), Barlow and Cameron (2003), Kastelein et al. (2006a and 2006b), Carretta et al. (2008), Calström et al. (2009), Brandt et al. (2012 and 2013), Götz and Janik (2013), Hastie et al. (2014), Tougaard et al. (2015).

⁵ 80 Fed. Reg. 50990.

⁶ The 75-m Level B harassment zone is for the sparker. The other Level B harassment zones were estimated to be less than 3 m for the acoustic pinger and 7 m for the chirp.

⁷ Which is consistent with the estimated Level B harassment zone for the dynamic positioning system.

proposed measures appear to be in compliance with, and in some cases go beyond⁸, the BOEM lease requirements⁹. BOEM's Final Programmatic Environmental Impact Statement on Atlantic Proposed Geological and Geophysical Activities states that, for HRG surveys, "if an operator can effectively monitor the 160-dB zone to prevent both Level A and B harassment of marine mammals, it would be reasonable to assume that an incidental take assessment under the MMPA may not be necessary" (BOEM 2014).

It is NMFS's responsibility under the MMPA to assess the likelihood that marine mammals will be taken and whether an incidental take authorization is warranted. In addition, while NMFS may agree with and adopt the proposed mitigation measures set forth in the BOEM lease, it has an independent responsibility to assess the adequacy of those measures.

The Commission believes that the mitigation measures proposed by Ocean Wind are likely to reduce significantly the potential for taking by Level B harassment. This is based on (1) the estimated distance to the 160-dB re 1 μ Pa isopleth for the HRG survey being much less than the proposed Level B harassment zone, (2) the requirement to power down activities when animals approach the monitoring zone for geotechnical surveys, which would reduce the size of the Level B harassment zone, and (3) the requirement to use both visual and passive acoustic monitoring to determine when animals are in or approaching the various zones. In other instances where mitigation measures include a requirement to shut down activities when animals approach the Level B harassment zone, NMFS has reduced the estimated numbers of Level B harassment takes¹⁰, including a few instances when takes have been reduced to zero¹¹. However, for the proposed authorization, the estimated numbers of Level B harassment takes for the various species have not been reduced.

Consistent with previous Commission recommendations and with the intent to streamline the regulatory process for activities subject to restrictive mitigation requirements under multiple permitting authorities, the Commission recommends that NMFS work with the BOEM Office of Renewable Energy to determine the circumstances under which adoption of mutually agreed-upon mitigation measures would avoid the potential for taking marine mammals and the need for an incidental harassment authorization. The Commission further recommends that NMFS use a consistent approach for reducing (or not reducing) the numbers of estimated takes based on the requirement to implement mitigation measures to preclude taking in the respective Level B harassment zones.

⁸ For example, NMFS would require Ocean Wind to reduce the power of the dynamic positioning system to the greatest extent possible if a marine mammal enters or approaches the monitoring zone. That requirement does not appear to be a condition of the BOEM lease and, as NMFS noted, may raise practicability concerns. Specifically, NMFS indicated in the *Federal Register* notice that "a constant position over the drill or CPT [cone penetration testing] site must be maintained to ensure the integrity of the survey equipment. Any stoppage of DP [dynamic positioning] thruster during the proposed geotechnical activities has the potential to result in significant damage to survey equipment." Nevertheless, powering down the dynamic positioning system is included as a proposed mitigation measure for the geotechnical survey.

⁹ <https://www.boem.gov/NJ-SIGNED-LEASE-OCS-A-0498/>

¹⁰ This has become standard practice for incidental harassment authorizations involving Cook Inlet beluga whales, although the Level B harassment zone radii in those instances are greater than 9 km.

¹¹ 81 Fed. Reg. 3378.

Please let me know if you have any questions with regard to this letter.

Sincerely,



Rebecca J. Lent, Ph.D.,
Executive Director

cc: James Bennett, Chief, BOEM Office of Renewable Energy Programs

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