MAYFLOWER WIND

January 23, 2023

Sent by Email

Kelsey Potluck
Marine Resources Management Specialist
Office of Protected Resources
NOAA Fisheries

RE: Mayflower Wind – 2023 Geophysical Surveys - Incidental Harassment Authorization

Dear Ms. Potluck,

Based on recent discussions with you, Mayflower Wind is submitting this request for an abbreviated notice IHA. Thank you for your assistance on this and please contact us with any questions or if you need additional information.

The National Marine Fisheries Service (NMFS) issued an Incidental Harassment Authorization (2021-22 IHA) to Mayflower Wind to cover marine site characterization surveys in coastal waters of Massachusetts and Rhode Island effective July 1, 2021 through June 30, 2022. Mayflower Wind is requesting a new incidental take authorization under section 101(a)(5) of the Marine Mammal Protection Act of 1972, as amended, for the take of marine mammals incidental to additional site characterization surveys in the same locations, including high-resolution geophysical (HRG) surveys of the Lease Area and Export Cable Routes, commencing April 1, 2023 – March 31, 2024.

All survey equipment, methods and vessels will be the same or similar to those described in the IHA application for the 2021-2022 surveys. The 2023-2024 surveys will also be within the same survey area described in the 2021-2022 IHA application (Figure 1). The total survey trackline, active sound source days, and vessel days will be reduced in 2023–2024 compared to those in 2021–2022. A total of 3,450 km of trackline (1,950 in the Lease Area and 1,500 km along the ECC) will be surveyed within the 12-month period being requested. On average, approximately 50 km will be surveyed per day within the Lease Area and 20 km within the ECC resulting in 39 active sound source days in the Lease Area and 75 in the ECC. The reduced amount of survey activity means the 2023-2024 surveys will utilize fewer vessels (up to two) than the 2021–2022 surveys (up to four).

Since the 2021-2022 IHA application was submitted, updated marine mammal density estimates have been released by Roberts et al. (2016, 2022). These new density estimates and the reduced level of survey activity were used to update the take calculations for the 2023-2024 surveys. Density-based take estimates were calculated using similar methods as described in the 2021–2022 application. However, since the survey activity is likely to be completed in a shorter period of time (2-3 months) potential takes were calculated using the two highest density months for each species in the Lease Area where 39 days of survey activity are anticipated and three highest density months for each species along the ECCs where 75 days of survey activity are expected. Specifically, takes were calculated by multiplying the

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marine mammal densities from the two months with the highest average density in the Lease Area and from the three months with the highest average density along the ECCs (Tables 1 and 2) by the area of water likely to be ensonified by geophysical survey equipment in each month and region. The estimated takes for the two regions were then summed together to calculate the total density-based take estimates (Table 4). The numbers of marine mammals per day recorded by PSOs during prior survey activities were also updated since the previous application and are shown in Table 3. The density-based take estimates were compared to the PSO data takes estimates and the mean group size for each species and the largest value was selected as the requested take (Table 4). This is the same overall approach to determining the requested take that was used in the 2021-2022 application.

Thank you very much for your attention to this request and please contact us with any questions.

Sincerely,

Erin Healy
Marine Science Permitting Manager
Erin.healy@mayflowerwind.com

cc: Ben Laws, Deputy Chief, Permits and Conservation Division, Office of Protected Resources, NOAA

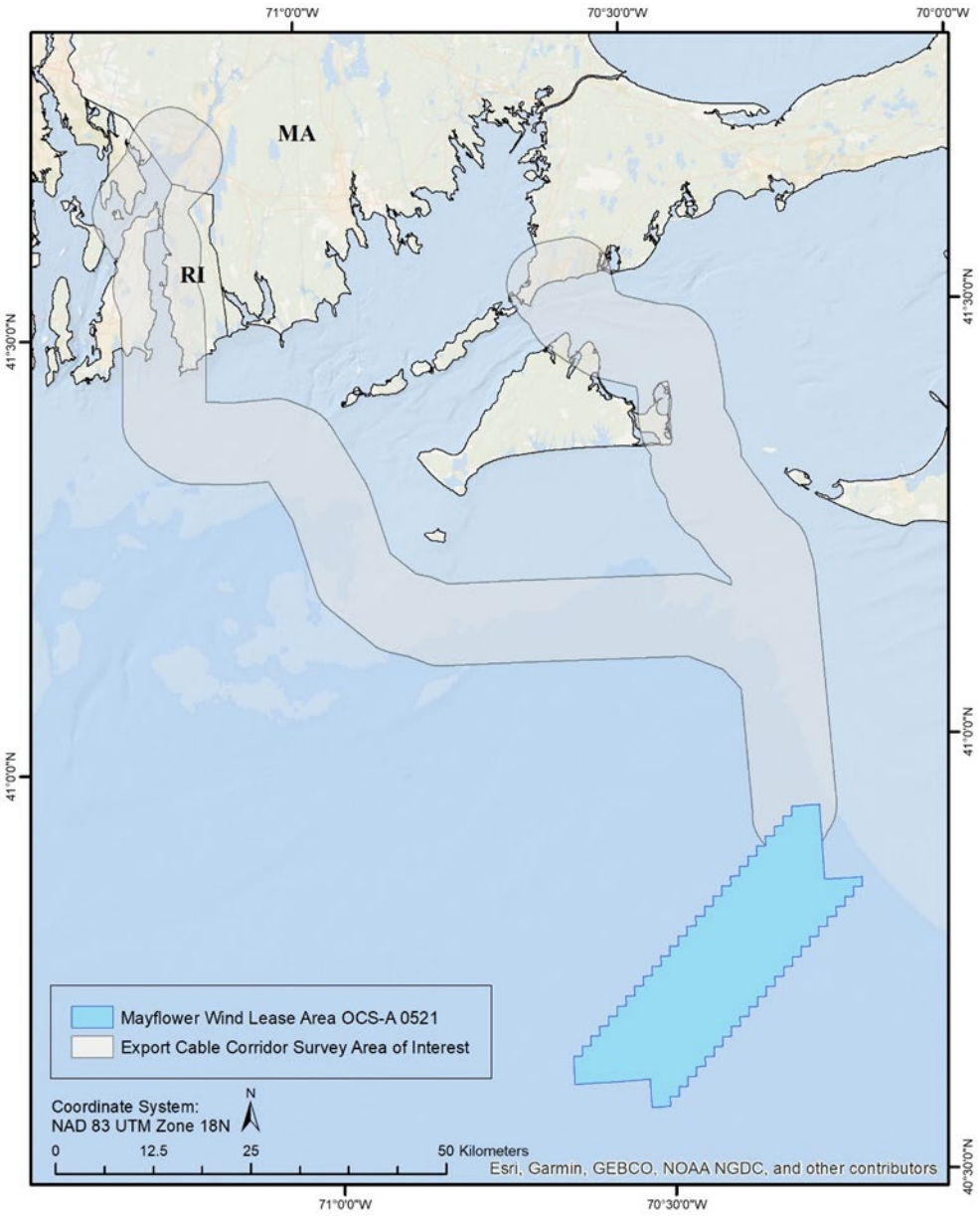

FIGURE 1: MAP OF MAYFLOWER WIND LEASE AREA OCS-A 0521 WITHIN THE MASSACHUSETTS WIND ENERGY AREA AND THE PROPOSED EXPORT CABLE CORRIDORS TO FALMOUTH, MA AND TO BRAYTON POINT, SOMERSET, MA.

Table 1. Maximum and second highest average monthly marine mammal densities within the Lease Area (Roberts et al. 2016; Roberts 2022).

Species	Maximum Monthly Density (Ind./km^2)	Maximum Density Month	2nd Highest Monthly Density (Ind./km^2)	2nd Highest Density Month
Mysticetes				
Blue Whale*	0.0000	Annual	0.0000	Annual
Fin Whale*	0.0047	July	0.0036	August
Humpback Whale	0.0035	June	0.0031	May
Minke Whale	0.0175	June	0.0151	May
North Atlantic Right Whale*	0.0060	February	0.0054	March
Sei Whale*	0.0019	May	0.0012	April
Odontocetes				
Atlantic Spotted Dolphin	0.0068	October	0.0043	September
Atlantic White-Sided Dolphin	0.0380	June	0.0368	May
Bottlenose Dolphin	0.0200	August	0.0198	September
Common Dolphin	0.3334	September	0.3331	October
Harbor Porpoise	0.1135	February	0.1081	March
Pilot Whales	0.0029	Annual	0.0029	Annual
Risso's Dolphin	0.0035	September	0.0028	August
Sperm Whale*	0.0017	August	0.0009	September
Pinnipeds				
Gray Seal	0.0594	January	0.0585	February
Harbor Seal	0.1335	January	0.1314	February

* Denotes species listed under the Endangered Species Act

Table 2. Maximum and second highest average monthly marine mammal densities along the ECCs.

Species	Maximum Monthly Density (Ind./km^2)	Maximum Density Month	2nd Highest Monthly Density (Ind./km^2)	2nd Highest Density Month	3rd Highest Monthly Density (Ind./km^2)	3rd Highest Density Month
Mysticetes						
Blue Whale*	0.0000	Annual	0.0000	Annual	0.0000	Annual
Fin Whale*	0.0013	January	0.0013	May	0.0012	December
Humpback Whale	0.0012	May	0.0011	November	0.0008	June
Minke Whale	0.0107	May	0.0069	June	0.0058	April
North Atlantic Right Whale*	0.0057	February	0.0052	March	0.0048	January
Sei Whale*	0.0007	May	0.0006	April	0.0005	December
Odontocetes						
Atlantic Spotted Dolphin	0.0002	September	0.0001	October	0.0000	January
Atlantic White-Sided Dolphin	0.0102	May	0.0076	November	0.0065	December
Bottlenose Dolphin	0.0042	August	0.0040	July	0.0038	September
Common Dolphin	0.0358	December	0.0335	November	0.0328	June
Harbor Porpoise	0.0508	January	0.0496	February	0.0468	April
Pilot Whales	0.0002	Annual	0.0002	Annual	0.0002	Annual
Risso's Dolphin	0.0006	December	0.0004	November	0.0001	August
Sperm Whale*	0.0003	August	0.0002	September	0.0002	June
Pinnipeds						
Gray Seal	0.1051	May	0.0973	June	0.0803	January
Harbor Seal	0.2362	May	0.2187	June	0.1804	January

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Table 3. The number of individual marine mammals observed, with and without inclusion of unidentified individuals, and the estimated number of individuals observed per vessel day during HRG and GT surveys from April 2020 through December 2021.

Species	Identified Individuals	Proportion of Total Individuals Identified to Species Within Each Species Group	Unidentified Individuals Assigned to Species	Total Individuals Including Proportion of Unidentified	Individuals Observed Per Vessel Day
Mysticetes	**436**				
Blue Whale*	0	-	-	-	-
Fin Whale*	38	0.09	5.9	43.9	0.06
Humpback Whale	321	0.74	50.1	371.1	0.49
Minke Whale	70	0.16	10.9	80.9	0.11
North Atlantic Right Whale*	1	0.00	0.2	1.2	0.00
Sei Whale*	6	0.01	0.9	6.9	0.0
Unidentified Mysticetes	**68**				
Unidentified Baleen Whale	27				
Unidentified Whale	41				-
Odontocetes	**14343**				
Atlantic Spotted Dolphin	0	-	-	-	-
Atlantic White-Sided Dolphin	0	-	-	-	-
Bottlenose Dolphin	968	0.07	51.2	1019.2	1.33
Common Dolphin	13,344	0.93	706.1	14050.1	18.37
Harbor Porpoise	1	0.00	0.1	1.1	0.00
Pilot Whales	28	0.00	1.5	29.5	0.0
Risso's Dolphin	0	-	-	-	-
Sperm Whale*	2	0.00	0.1	2.1	0.0
Unidentified Odontocetes	**759**				
Unidentified Dolphin	759				-
Pinnipeds	**265**				
Harbor Seal	15	0.06	0.6	15.6	0.02
Gray Seal	250	0.94	9.4	259.4	0.34
Unidentified Pinniped	**10**				
Unidentified Pinniped	10				

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Table 4. Number of Level B takes requested and percentages of each stock abundance.

Species	Density-based Take by Survey Region		Total Density-based Calculated Takes	Rounded Calculated Take	PSO Data Take Estimate	Mean Group Size	Requested Take	Abundance NMFS[a]	Percent of NMFS[a] Stock Abundance
	Lease Area	Export Cable Routes							
Mysticetes									
Blue Whale*	0.0	0.0	0.0	1	-	1	3	402	0.7
Fin Whale*	2.5	0.6	3.0	4	6.5	1.8	7	6,802	0.1
Humpback Whale	1.9	0.5	2.3	3	55.3	2.0	56	1,396	4.0
Minke Whale	9.4	3.5	12.9	13	12.1	1.2	13	21,968	0.1
North Atlantic Right Whale*	3.2	2.3	5.5	6	0.2	2.4	8	368	2.2
Sei Whale*	1.0	0.3	1.3	2	1.0	1.6	5	6,292	0.1
Odontocetes									
Atlantic Spotted Dolphin	3.4	0.1	3.5	4	-	29	87	39,921	0.2
Atlantic White-Sided Dolphin	20.9	3.6	24.4	25	-	27.9	84	93,233	0.1
Common Bottlenose Dolphin	11.0	1.7	12.8	13	151.9	7.8	152	62,851	0.2
Common Dolphin	184.1	14.7	198.8	199	2,093.7	34.9	2,094	172,947	1.2
Harbor Porpoise	62.0	21.2	83.2	84	0.2	2.7	84	95,543	0.1
Pilot Whales	1.6	0.1	1.7	2	4.4	8.4	26	68,139	0.0
Risso's Dolphin	1.9	0.2	2.0	3	-	5.4	17	35,215	0.0
Sperm Whale*	0.8	0.1	0.9	1	0.3	1.5	5	4,349	0.1
Pinnipeds									
Harbor Seal	32.7	41.5	74.2	75	2.3	1.4	75	61,366	0.1
Gray Seal	73.5	93.3	166.7	167	38.7	1.4	167	27,300	0.6

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[a] Based on latest NMFS Stock Assessment Report

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Literature Cited

Roberts, J. J. 2022. Habitat-based Marine Mammal Density Models for the U.S. Atlantic: Latest Versions. Marine Geospatial Ecology Laboratory/Duke University.

Roberts, J. J., B. D. Best, L. Mannocci, E. Fujioka, P. N. Halpin, D. L. Palka, L. P. Garrison, K. D. Mullin, T. V. N. Cole, C. B. Khan, W. A. McLellan, D. A. Pabst, and G. G. Lockhart. 2016. Habitat-based cetacean density models for the U.S. Atlantic and Gulf of Mexico. Scientific Reports **6**:22615.