

Updated Marine Mammal Density and Take Estimates for the Sunrise Wind Offshore Wind Farm

Submitted To:

**National Marine Fisheries Service
Office of Protected Resources
Silver Spring, MD**

Submitted By

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Project Design Envelope (PDE) Updates

HDD Reduction

There has been a reduction of the Project Design Envelope from two Landfall HDD boreholes to a single Landfall HDD borehole, and thus a reduction from two casing pipes to one casing pipe installed at the cable landfall location. As described in Section 1.1.4 of the ITR Application, installation of the single casing pipe may take up to 3 hours of pneumatic hammering on each of two days for installation. Removal of the casing pipe is anticipated to require approximately the same amount of pneumatic hammering and overall time, or less, meaning the pneumatic pipe ramming tool may be used for up to 3 hours per day on up to 4 days.

Up to 6 goal posts may be installed to support the casing pipe between the barge and the penetration point on the seabed. Each goal post would be composed of 2 vertical sheet piles installed using a vibratory hammer such as an American Piledriving Equipment (APE) model 300 (or similar). A horizontal cross beam connecting the two sheet piles would then be installed to provide support to the casing pipe. Up to 10 additional sheet piles may be installed to help anchor the barge and support the construction activities. This results in a total of up to 22 sheet piles. Installation of the goal posts would require up to 6 days. Sheet pile may require up to 2 hours of vibratory piling and up to 4 sheet piles may be installed per day (total of 8 hours of vibratory pile driving per day). Removal of the goal posts may also involve the use of a vibratory hammer and likely require approximately the same amount of time as installation (6 days total). Thus, use of a vibratory pile driver to install and remove sheet piles may occur on up to 12 days at the landfall location.

Take estimates have been revised below in Table 31 to reflect the reduction of HDDs, casing pipes, and sheet piles for the Project, resulting in a 50% reduction. An updated HDD landfall design is seen below in Figure 5.

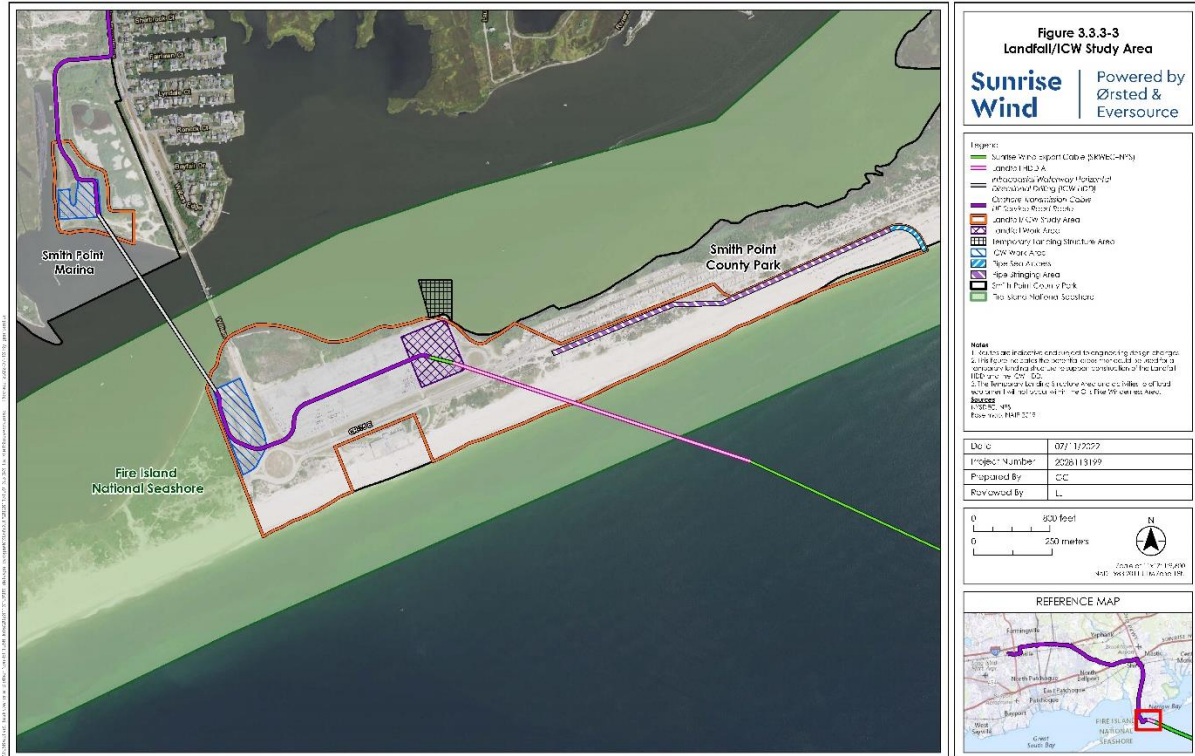


Figure 5: HDD Landfall Design (Sunrise-Wind 2022).

Addition of Habcam Surveys

Habcam surveys will be utilized for fisheries monitoring using a towed video survey conducted for sea scallops and other benthic organisms in the Sunrise Wind Lease Area and a nearby control area. The intent of the survey is to assess the impacts of offshore wind activities in Sunrise Wind on the abundance and distribution of sea scallops and other benthic organisms compared to the control area. No catch will be associated with the habcam survey activities. Minimal risk is anticipated as a result of this activity. Vessel mitigation measures described in Section 1.1.9 (Fisheries and Benthic Monitoring) will be employed while retrieving optical equipment. There is no potential take requested as a result of habcam surveys. Detailed information has been added to Table 2 of the ITR Application as seen below.

Table 2: Summary of Fisheries Monitoring Plan Survey Types and Marine Mammal Harassment Potentials

Activity/Type	Description	Potential Take Requested	Risk Assessment and Mitigation Measures
Habcam Survey	Towed video survey will be conducted for sea scallops and other benthic organisms in the Sunrise Wind Lease Area and a nearby control area. There will be no catch associated with the survey activities. The intent is to assess the impacts of offshore wind activities in Sunrise Wind on the abundance and distribution of sea scallops and other benthic organisms compared to the control area.	None	Minimal risk is anticipated due to this activity. Vessel mitigation measures described in this section will be employed while deploying and retrieving optical equipment.

Updated Vessel Trips

Section 1.1.7 of the ITR Application described the anticipated vessel activity associated with construction of the Sunrise Wind Farm and included a summary table. Some additions and updates to those estimates are included in the revised version of Table 1 below.

Table 1. Type and number of vessels and number of vessel trips anticipated during construction activities over the effective period of the requested ITRs.

Vessel Type	Maximum Number of Simultaneous Vessels	Maximum Number of Return Trips
Monopile Installation		
Heavy Lift Installation Vessel	2	20
Heavy Transport Vessels	4	50
Platform Supply Vessel	2	80
In-Field Support tug	2	50
Vessel for Bubble Curtain	1	30
Crew Transport Vessel	1	50
SFV/ PSO Noise Monitoring Vessel	4	102
Completions Vessel	1	50
Fall Pipe Vessel	1	6
Turbine Installation		
Installation Vessel	1	26
Support Vessels	1	9

Vessel Type	Maximum Number of Simultaneous Vessels	Maximum Number of Return Trips
Array Cable Installation		
Pre-Lay Grapnel Run	1	5
Boulder Clearance Vessel	1	5
Sandwave Clearance Vessel	1	3
Cable Laying Vessel	3	3
Cable Burial Vessel	2	3
Walk to Work Vessel (SOV)	1	6
Crew Transfer Vessel (CTV)	1	260
Survey Vessel	4	8
Construction Vessel	2	4
Fall Pipe Vessel	2	10
Offshore Converter Station Installation		
Primary Installation Vessel	3	3
Transport Vessel	2	2
Support vessels	11	5
Fall Pipe Vessel	1	2
Offshore Export Cable Installation		
Pre-Lay Grapnel Run	1	1
Boulder Clearance Vessel	1	1
Sandwave Clearance Vessel	1	1
Cable Laying Vessel	3	6
Cable Burial Vessel	2	4
Tug	4	8
Crew Transport Vessel	1	260
Guard Vessel/Scout Vessel	5	9
Survey Vessel	2	6
Fall Pipe Vessel	1	2
Construction Vessel	2	2
All Construction Activities		
Safety Vessel	2	114

Vessel Type	Maximum Number of Simultaneous Vessels	Maximum Number of Return Trips
Crew Transport Vessel	3	300
Jack Up / Lift Boat	1	1
Supply Vessel	1	10
Service Operation Vessel	1	6
Helicopter	2	350
O&M Activities*		
Crew Transport Vessel	3	300
Service Operation Vessel	1	40

*O&M activities assumed to be Years 3, 4, and 5 of the LOA

Revised Densities and Take Estimates

The following tables and figures reflect the latest marine mammal habitat-based density models released by Roberts et al. on June 24, 2022. They also incorporate revisions to how the density data were selected from the model output for each activity as discussed with NMFS. Specifically, the width of the perimeter around the activity area used to select density data was based on the largest exposure range (typically the Level B range) applicable to that activity and then rounded up to the nearest 5 km increment, which reflects the spatial resolution of the Roberts et al. density model output. For example, if the largest exposure range was 7.1 km, a 10 km perimeter around the activity area was created and used to select densities for all species from the Roberts et al. 2022 model output.

In addition to the density-based take estimates, the take estimates based on PSO data collected during previous HRG and GT surveys in and around the lease area were also revised. The primary reason for this change was because the PSO data used to calculate the daily detection rate used in the take calculations (“number of individuals observed per vessel day” shown in Table 7 of the ITR Application and described in the associated text on pages 64-65) was not limited to detections within a certain distance of the survey vessel. This means that the detections could have occurred at any distance from the HRG or GT vessels and therefore the calculated daily detection rates are most applicable to activities with larger distances to take thresholds, including foundation installations, landfall construction, and UXO detonations. For HRG surveys, the distance to the Level B take threshold is only 141 m. To calculate daily detection rates applicable to this shorter threshold distance, we limited the PSO data used in the calculations to those detections with a closest point of approach of 200 m or less. The resulting detections and calculation of a daily detection rate “Individuals Observed Per Vessel Day” are shown below in Table 7b and result in lower daily detection rates for each species. These values were used in calculating the PSO Data Take Estimates for HRG surveys shown in Tables 38, 39, and 40, which are also incorporated into the revised Total Take Request in Table 50 resulting in reduced estimates of Level B take for some species.

Secondary to this revised approach to calculating the daily detection rate specific to HRG surveys, several corrections to the overall PSO data analysis were made which resulted in a reduction in the daily detection rate applicable to the other activities as well. The updated version of Table 7 in the ITR Application is provided below and the values shown in the “Individuals Observed Per Vessel Day” column of that table were used to calculate the PSO Data Take Estimates for foundation installations, landfall construction, and UXO detonations as described in the ITR Application.

Lastly, based on discussions with NMFS, the number of Level A takes from foundation installations has been revised. Previously, the only Level A take that was requested as a result of foundation installations was for humpback whales. This was because humpback whales had one of the largest predicted exposure ranges as well as precedent from a similar request in a prior project. Application of the new density estimates resulted in an increase in predicted Level A takes, in the absence of mitigation measures or aversive behaviors by the animals, for several species. This led to a re-evaluation of how we determined the amount of Level A take to be requested and a more uniform approach across species was decided upon. Since extensive monitoring and mitigation measures will be implemented to avoid Level A take and most animals will likely avoid areas where sound levels are strong enough to cause such take, few of the model predicted Level A takes are likely to actually occur. Nonetheless, it is possible that some animals could occur within the necessary distances for a long enough period of time without being detected. We assume any such cases would occur as a result of animals going undetected near the outer perimeter (within ~500 m) of the largest modeled exposure ranges. The area of water represented by a 500-m wide band on the inside of those modeled exposure ranges represents approximately 20-25% of the total area within the exposure ranges. In addition, there may be rare instances where pile driving of a foundation cannot be stopped when an animal is observed within the shutdown zone. Although we believe any Level A take is unlikely given the planned mitigation measures and behavioral responses by marine mammals, we estimate the combination of these two cases could result in at most 20% of the model-predicted Level A takes not being prevented. Therefore, 20% of the modeled Level A take of each species from foundation installations has been requested. Due to the added mitigation measures applicable to NARW, we do not anticipate any Level A take for that species and are not requesting any.

The table and figure numbers shown below are the same as the corresponding tables and figures in the ITR Application.

Table 6: Marine mammal density model version number, release date, and report citation for densities used in the density-based calculations.

Species	Scientific Name	Density Model Version Used	Model Release Date	Report Citation
Mysticetes				
Blue Whale*	<i>Balaenopter musculus</i>	2	06-20-2022	Roberts et al. 2022
Fin Whale*	<i>Balaenoptera physalus</i>	12	06-20-2022	Roberts et al. 2022
Humpback Whale	<i>Megaptera novaeangliae</i>	11	06-20-2022	Roberts et al. 2022
Minke Whale	<i>Balaenoptera acutorostrata</i>	10	06-20-2022	Roberts et al. 2022
North Atlantic Right Whale*	<i>Eubalaena glacialis</i>	12	06-20-2022	Roberts et al. 2022
Sei Whale*	<i>Balaenoptera borealis</i>	10	06-20-2022	Roberts et al. 2022
Odontocetes				
Atlantic Spotted Dolphin	<i>Stenella frontalis</i>	9	06-20-2022	Roberts et al. 2022
Atlantic White-Sided Dolphin	<i>Lagenorhynchus acutus</i>	4	06-20-2022	Roberts et al. 2022
Bottlenose Dolphin	<i>Tursiops truncatus</i>	6	06-20-2022	Roberts et al. 2022
Common Dolphin	<i>Delphinus delphis</i>	5	06-20-2022	Roberts et al. 2022
Harbor Porpoise	<i>Phocoena phocoena</i>	6	06-20-2022	Roberts et al. 2022
Pilot Whales	<i>Globicephala</i> spp.	7	06-20-2022	Roberts et al. 2022
Risso's Dolphin	<i>Grampus griseus</i>	5	06-20-2022	Roberts et al. 2022
Sperm Whale*	<i>Physeter macrocephalus</i>	8	06-20-2022	Roberts et al. 2022
Pinnipeds				
Seals (Harbor and Gray)	<i>Phocidae</i> spp.	5	06-20-2022	Roberts et al. 2022

*Denotes species listed under the Endangered Species Act

Table 7. 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 in 2018-2021.

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
<i>Mysticetes</i>	196				
Blue Whale*	0	-	-	-	-
Fin Whale*	44	0.22	35.5	79.5	0.20
Humpback Whale	131	0.67	105.6	236.6	0.58
Minke Whale	16	0.08	12.9	28.9	0.07
North Atlantic Right Whale*	4	0.02	3.2	7.2	0.02
Sei Whale*	1	0.01	0.8	1.8	0.00
<i>Unidentified Mysticetes</i>	158				
Unidentified Mysticete Whale	124				-
Unidentified Whale	34				-
<i>Odontocetes</i>	5328				
Atlantic Spotted Dolphin	0	-	-	-	-
Atlantic White-Sided Dolphin	18	0.00	5.3	23.3	0.06
Bottlenose Dolphin	200	0.04	58.4	258.4	0.63
Common Dolphin	5091	0.96	1485.8	6576.8	16.16
Harbor Porpoise	5	0.00	1.5	6.5	0.02
Pilot Whales	0	-	-	-	-
Risso's Dolphin	14	0.00	4.1	18.1	0.04
Sperm Whale*	0	-	-	-	-
<i>Unidentified Odontocetes</i>	1555				
Unidentified Dolphin	1545				-
Unidentified Dolphin or Porpoise	10				-
<i>Pinnipeds</i>	23				
Harbor Seal	10	0.43	7.8	17.8	0.04
Gray Seal	13	0.57	10.2	23.2	0.06
<i>Unidentified Pinniped</i>	18				
Unidentified Pinniped	18				-

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Table 7b. The number of individual marine mammals observed within 200 m of HRG and GT survey vessels, with and without inclusion of unidentified individuals, and the estimated number of individuals observed per vessel day during HRG surveys in 2018-2021.

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	44				
Blue Whale*	0	-	-	-	-
Fin Whale*	10	0.23	2.3	12.3	0.03
Humpback Whale	25	0.57	5.7	30.7	0.08
Minke Whale	9	0.20	2.0	11.0	0.03
North Atlantic Right Whale*	0	-	-	-	-
Sei Whale*	0	-	-	-	-
Unidentified Mysticetes	10				
Unidentified Mysticete Whale	3				-
Unidentified Whale	7				-
Odontocetes	4244				
Atlantic Spotted Dolphin	0	-	-	-	-
Atlantic White-Sided Dolphin	0	-	-	-	-
Bottlenose Dolphin	173	0.04	13.3	186.3	0.46
Common Dolphin	4067	0.96	313.4	4380.4	10.76
Harbor Porpoise	0	-	-	-	-
Pilot Whales	0	-	-	-	-
Risso's Dolphin	4	0.00	0.3	4.3	0.01
Sperm Whale*	0	-	-	-	-
Unidentified Odontocetes	327				
Unidentified Dolphin	325				-
Unidentified Dolphin or Porpoise	2				-
Pinnipeds	18				
Harbor Seal	7	0.39	6.2	13.2	0.03
Gray Seal	11	0.61	9.8	20.8	0.05
Unidentified Pinniped	16				
Unidentified Pinniped	16				-

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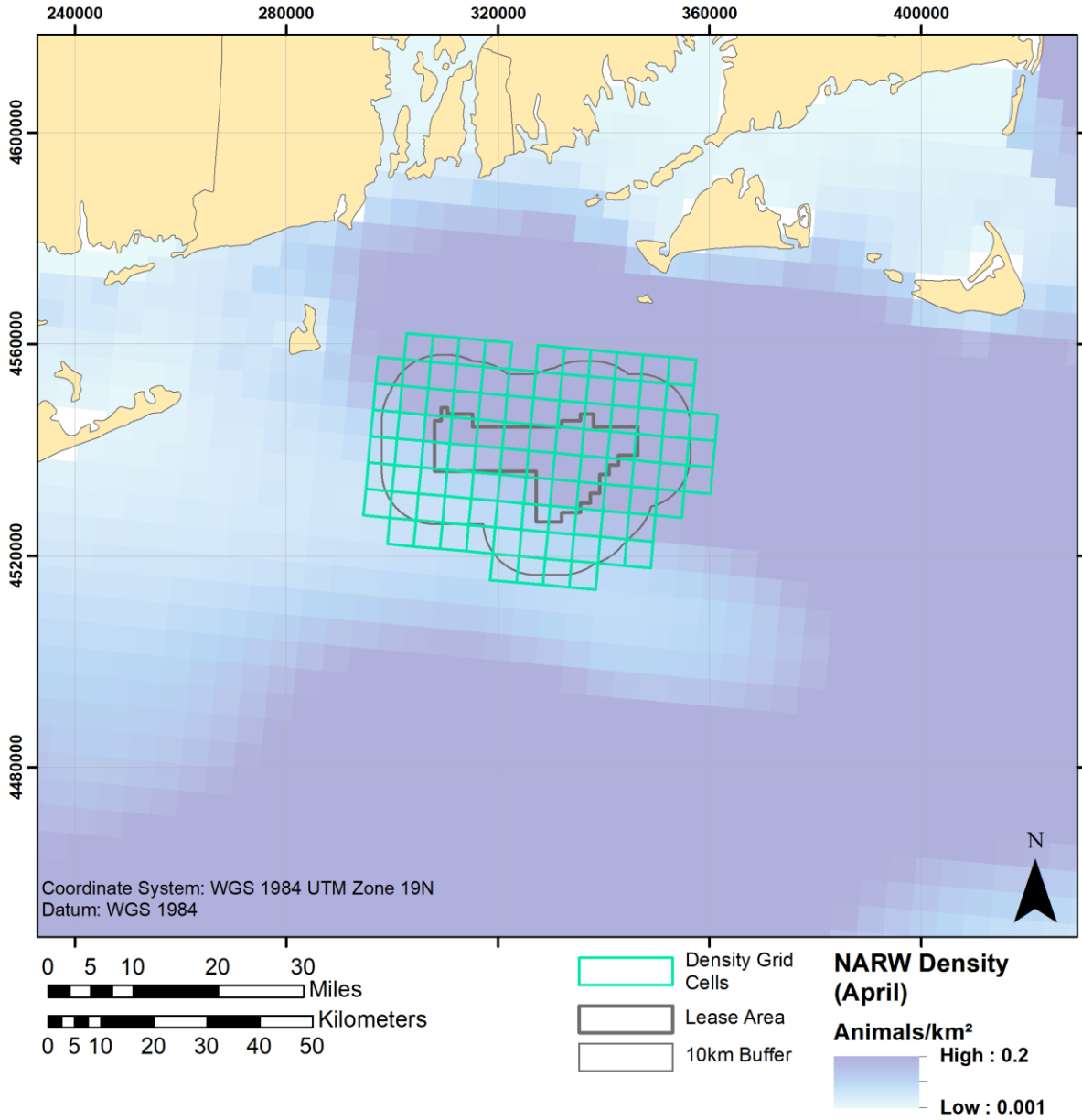


Figure 7: North Atlantic right whale density map showing highlighted grid cells from Roberts et al. (2022) used to calculate mean monthly density estimates within 10 km of OCS-A 0487.

Table 12: Average monthly marine mammal densities within 10 km of the SRWF perimeter.

Species	Monthly Average Densities (Individuals/1 km ²)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mysticetes												
Blue Whale*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fin Whale*	0.0020	0.0019	0.0010	0.0018	0.0025	0.0026	0.0043	0.0037	0.0019	0.0004	0.0006	0.0014
Humpback Whale	0.0004	0.0003	0.0004	0.0012	0.0025	0.0024	0.0013	0.0010	0.0014	0.0018	0.0015	0.0003
Minke Whale	0.0011	0.0012	0.0012	0.0073	0.0180	0.0137	0.0059	0.0040	0.0041	0.0037	0.0005	0.0008
North Atlantic Right Whale*	0.0030	0.0040	0.0041	0.0039	0.0018	0.0004	0.0001	0.0001	0.0002	0.0004	0.0005	0.0015
Sei Whale*	0.0003	0.0002	0.0004	0.0010	0.0017	0.0003	0.0001	0.0001	0.0002	0.0003	0.0007	0.0006
Odontocetes												
Atlantic Spotted Dolphin	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0003	0.0015	0.0030	0.0014	0.0002
Atlantic White-Sided Dolphin	0.0158	0.0095	0.0066	0.0103	0.0270	0.0234	0.0103	0.0049	0.0130	0.0177	0.0134	0.0183
Bottlenose Dolphin	0.0050	0.0012	0.0006	0.0014	0.0076	0.0127	0.0160	0.0162	0.0134	0.0118	0.0113	0.0110
Common Dolphin	0.0712	0.0234	0.0146	0.0277	0.0484	0.1029	0.0741	0.0965	0.1816	0.1564	0.0869	0.0991
Harbor Porpoise	0.0811	0.0885	0.0832	0.0729	0.0529	0.0027	0.0026	0.0025	0.0026	0.0033	0.0041	0.0451
Pilot Whales	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018	0.0018
Risso's Dolphin	0.0006	0.0000	0.0000	0.0001	0.0006	0.0002	0.0004	0.0005	0.0008	0.0005	0.0010	0.0021
Sperm Whale*	0.0002	0.0001	0.0001	0.0000	0.0001	0.0002	0.0002	0.0006	0.0004	0.0003	0.0002	0.0001
Pinnipeds												
Seals (Harbor and Gray)	0.1867	0.2012	0.1521	0.0944	0.1712	0.0410	0.0056	0.0054	0.0112	0.0297	0.0515	0.1668

*Denotes species listed under the Endangered Species Act

Table 13: Maximum and second highest average monthly marine mammal densities within 10 km of the SRWF perimeter excluding the months of January through April when foundation installations will not occur.

Species	Maximum Monthly Density (Ind./km ²)	Maximum Density Month	2nd Highest Monthly Density (Ind./km ²)	2nd Highest Density Month
Mysticetes				
Blue Whale*	N/A	Annual	N/A	Annual
Fin Whale*	0.0043	July	0.0037	August
Humpback Whale	0.0025	May	0.0024	June
Minke Whale	0.0180	May	0.0137	June
North Atlantic Right Whale*	0.0018	May	0.0015	December
Sei Whale*	0.0017	May	0.0007	November
Odontocetes				
Atlantic Spotted Dolphin	0.0030	October	0.0015	September
Atlantic White-Sided Dolphin	0.0270	May	0.0234	June
Bottlenose Dolphin	0.0162	August	0.0160	July
Common Dolphin	0.1816	September	0.1564	October
Harbor Porpoise	0.0529	May	0.0451	December
Pilot Whales	0.0018	Annual	0.0018	Annual
Risso's Dolphin	0.0021	December	0.0010	November
Sperm Whale*	0.0006	August	0.0004	September
Pinnipeds				
Seals (Harbor and Gray)	0.1712	May	0.1668	December

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Table 22: Estimated Level A and Level B take from installation of 102, 7/12 m WTG monopile foundations and 1 OCS-DC piled jacket foundation using an IHC-4000 hammer assuming 10 dB of noise attenuation. Level B exposure modeling take estimates are based on the unweighted distances to the 160 dB level. “Static” Level B take estimates are from the standard density x area method described in the text, not from exposure modeling.

Species	Exposure Modeling Take Estimates		Static Level B Take Estimates	PSO Data Take Estimate	Mean Group Size	Highest Level B Take
	Level A (SPL _{cum})	Level B (SPL _{rms})				
Mysticetes						
Blue Whale*	N/A	N/A	0.2	-	1.0	1
Fin Whale*	17.8	38.3	57.7	20.3	1.8	58
Humpback Whale	13.6	27.3	34.4	60.5	2.0	61
Minke Whale	114.6	354.6	237.0	7.4	1.2	355
North Atlantic Right Whale*	7.8	21.1	24.5	1.8	2.4	25
Sei Whale*	6.0	16.3	20.8	0.5	1.6	21
Odontocetes						
Atlantic Spotted Dolphin	0.0	8.2	37.1	-	29.0	38
Atlantic White-Sided Dolphin	0.0	533.3	363.0	5.9	27.9	534
Bottlenose Dolphin	0.0	237.6	222.0	66.0	7.8	238
Common Dolphin	0.0	5,049.4	2,750.6	1,680.6	34.9	5,050
Harbor Porpoise	3.9	631.2	726.2	1.7	2.7	727
Pilot Whales	0.0	33.4	25.3	-	8.4	34
Risso's Dolphin	0.0	28.5	25.8	4.6	5.4	29
Sperm Whale*	0.0	7.1	7.9	-	1.5	8
Pinnipeds						
Gray Seal	2.1	453.9	765.4	4.6	1.4	766
Harbor Seal	7.5	1,261.7	1,719.7	5.9	1.4	1,720

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Table 23: Estimated Level A and Level B take from three different concurrent installation scenarios of 102, 7/12 m WTG monopile foundations and 1 OCS-DC piled jacket foundation using an IHC S-4000 hammer assuming 10 dB of noise attenuation. Level B exposure modeling take estimates are based on the unweighted distances to the 160 dB level.

Species	Proximal WTG Monopiles 4-Piles/Day		Distal WTG Monopiles 4-Piles/Day		2 WTG Monopiles and 4 OCS-DC Jacket pin-piles		Maximum Among 3 Scenarios	
	Level A (SPL _{cum})	Level B (SPL _{rms})	Level A (SPL _{cum})	Level B (SPL _{rms})	Level A (SPL _{cum})	Level B (SPL _{rms})	Level A (SPL _{cum})	Level B (SPL _{rms})
Mysticetes								
Blue Whale*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fin Whale*	18.9	33.2	18.5	37.1	18.7	37.7	18.9	37.7
Humpback Whale	13.2	22.1	11.9	24.4	13.8	25.8	13.8	25.8
Minke Whale	130.1	287.1	118.4	363.2	122.5	361.6	130.1	363.2
North Atlantic Right Whale*	8.4	16.8	8.3	21.8	7.3	20.1	8.4	21.8
Sei Whale*	6.6	14.7	6.6	17.4	6.3	17.5	6.6	17.5
Odontocetes								
Atlantic Spotted Dolphin	0.0	18.9	0.0	18.2	0.0	10.2	0.0	18.9
Atlantic White-Sided Dolphin	0.0	421.6	0.0	537.0	0.0	522.7	0.0	537.0
Bottlenose Dolphin	0.0	191.5	0.0	226.3	0.0	233.0	0.0	233.0
Common Dolphin	0.0	4,109.4	0.0	5,151.1	0.0	5,196.9	0.0	5,196.9
Harbor Porpoise	3.9	522.5	3.9	628.1	4.0	621.1	4.0	628.1
Pilot Whales	0.0	26.5	0.0	33.0	0.0	32.5	0.0	33.0
Risso's Dolphin	0.0	23.7	0.0	31.4	0.0	29.8	0.0	31.4
Sperm Whale*	0.0	5.8	0.0	6.9	0.0	7.1	0.0	7.1
Pinnipeds								
Gray Seal	1.6	354.1	2.0	409.9	1.7	416.6	2.0	416.6
Harbor Seal	6.9	1,068.9	8.7	1,238.2	7.8	1,157.5	8.7	1,238.2

*Denotes species listed under the Endangered Species Act

Table 24: Maximum estimated Level A and Level B take from installation of 102, 7/12 m WTG monopile foundations and 1 OCS-DC piled jacket foundation using an IHC S-4000 hammer assuming 10 dB of noise attenuation among the 5 modeled installation scenarios. Level A take is 20% of modeled Level A exposures. Level B exposure modeling take estimates are based on the unweighted distances to the 160 dB level. “Static” Level B take estimates are from the standard density x area method described in the text, not from exposure modeling.

Species	Exposure Modeling Take Estimates		Static Level B Take Estimates	PSO Data Take Estimate	Mean Group Size	Requested Level A Take	Requested Level B Take
	Level A (SPL _{cum})	Level B (SPL _{rms})					
Mysticetes							
Blue Whale*	N/A	N/A	0.2	-	1.0	-	1
Fin Whale*	18.9	37.7	59.3	20.3	1.8	4	60
Humpback Whale	13.8	25.8	34.8	60.5	2.0	3	61
Minke Whale	130.1	363.2	247.1	7.4	1.2	27	364
North Atlantic Right Whale*	8.4	21.8	24.6	1.8	2.4	0	25
Sei Whale*	6.6	17.5	23.3	0.5	1.6	2	24
Odontocetes							
Atlantic Spotted Dolphin	0.0	18.9	40.6	-	29.0	0	41
Atlantic White-Sided Dolphin	0.0	537.0	371.7	5.9	27.9	0	537
Bottlenose Dolphin	0.0	237.6	222.4	66.0	7.8	0	238
Common Dolphin	0.0	5,196.9	2,876.9	1,680.6	34.9	0	5,197
Harbor Porpoise	4.0	628.1	728.5	1.7	2.7	1	729
Pilot Whales	0.0	33.4	25.3	-	8.4	0	34
Risso's Dolphin	0.0	31.4	28.5	4.6	5.4	0	32
Sperm Whale*	0.0	7.1	8.4	-	1.5	0	9
Pinnipeds							
Gray Seal	2.0	449.8	765.4	4.6	1.4	1	766
Harbor Seal	8.7	1,242.1	1,719.7	5.9	1.4	2	1,720

*Denotes species listed under the Endangered Species Act

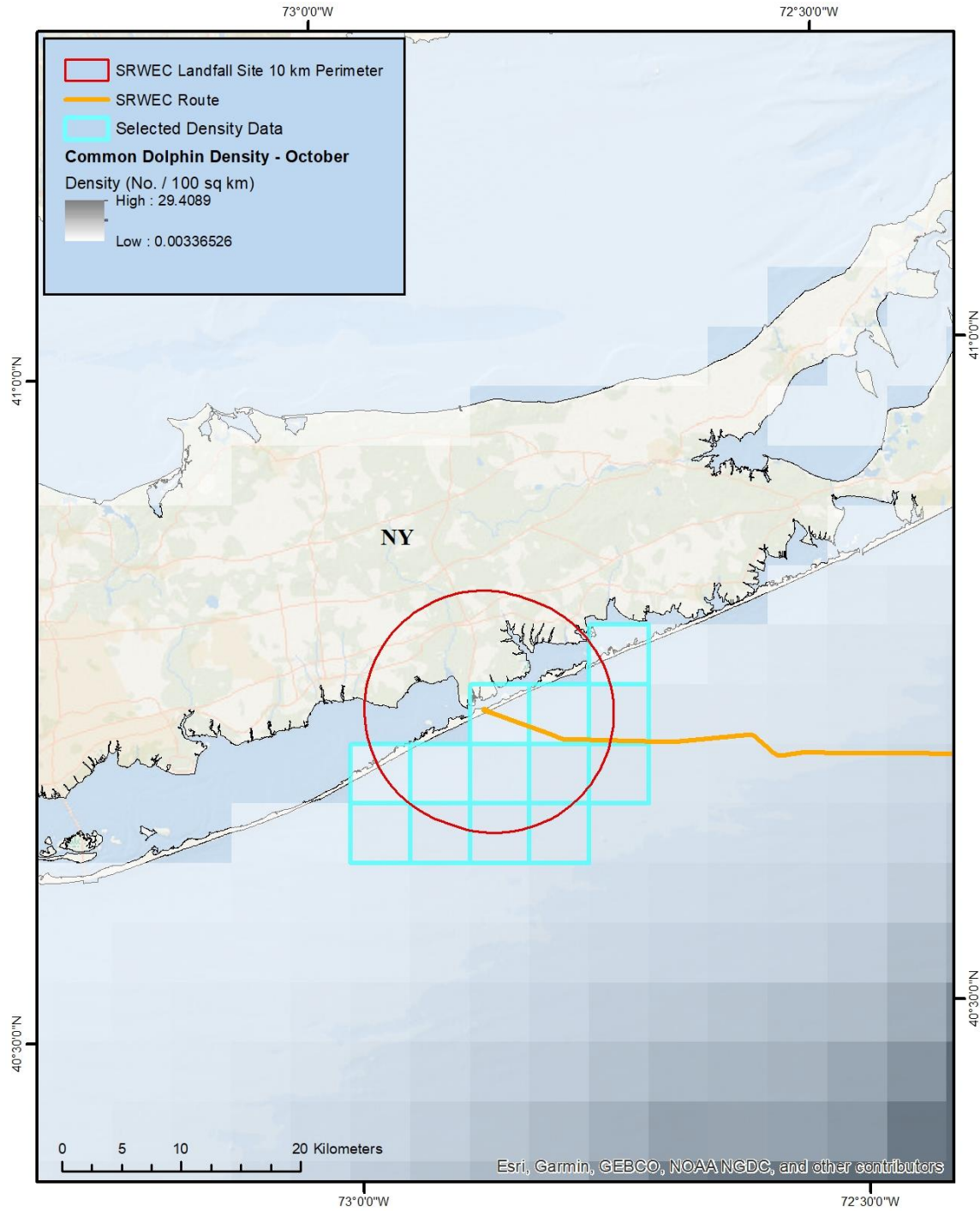


Figure 10. Location of the SRWEC landfall site and marine mammal density grid cells from Roberts et al. (2016; 2022) used for calculating representative marine mammal densities.

Table 25. Average monthly marine mammal densities within 10 km of the SRWEC landfall site.

Species	Monthly Average Densities (Individuals/km ²)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mysticetes												
Blue Whale*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fin Whale*	0.0013	0.0005	0.0004	0.0007	0.0006	0.0003	0.0004	0.0004	0.0003	0.0002	0.0003	0.0009
Humpback Whale	0.0010	0.0006	0.0006	0.0005	0.0004	0.0003	0.0001	0.0001	0.0002	0.0003	0.0005	0.0016
Minke Whale	0.0004	0.0006	0.0005	0.0043	0.0072	0.0030	0.0007	0.0002	0.0002	0.0006	0.0002	0.0003
North Atlantic Right Whale*	0.0007	0.0009	0.0009	0.0007	0.0002	0.0001	0.0000	0.0000	0.0000	0.0001	0.0001	0.0005
Sei Whale*	0.0002	0.0001	0.0003	0.0005	0.0002	0.0001	0.0000	0.0000	0.0000	0.0001	0.0003	0.0006
Odontocetes												
Atlantic Spotted Dolphin	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Atlantic White-Sided Dolphin	0.0019	0.0012	0.0012	0.0026	0.0040	0.0028	0.0007	0.0002	0.0010	0.0023	0.0035	0.0037
Bottlenose Dolphin	0.0055	0.0016	0.0023	0.0093	0.0306	0.0516	0.0540	0.0387	0.0417	0.0501	0.0433	0.0308
Common Dolphin	0.0097	0.0029	0.0038	0.0095	0.0116	0.0050	0.0024	0.0012	0.0012	0.0100	0.0336	0.0295
Harbor Porpoise	0.0384	0.0367	0.0334	0.0279	0.0106	0.0019	0.0015	0.0006	0.0002	0.0008	0.0020	0.0313
Pilot Whales	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Risso's Dolphin	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
Sperm Whale*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0002	0.0001
Pinnipeds												
Seals (Harbor and Gray)	0.2216	0.1903	0.1331	0.0880	0.1791	0.3789	0.0441	0.0214	0.0453	0.1334	0.0902	0.1954

*Denotes species listed under the Endangered Species Act

Table 26: Annual average and maximum monthly average marine mammal densities within 10 km of the SRWEC landfall site and the month in which the maximum density occurs.

Species	Annual Average Density (Ind/km²)	Maximum Monthly Density (Ind/km²)	Maximum Density Month
<i>Mysticetes</i>			
Blue Whale*	0.0000	0.0000	Annual
Fin Whale*	0.0005	0.0013	January
Humpback Whale	0.0005	0.0016	December
Minke Whale	0.0015	0.0072	May
North Atlantic Right Whale*	0.0004	0.0009	February
Sei Whale*	0.0002	0.0006	December
<i>Odontocetes</i>			
Atlantic Spotted Dolphin	0.0000	0.0000	September
Atlantic White-Sided Dolphin	0.0021	0.0040	May
Bottlenose Dolphin	0.0300	0.0540	July
Common Dolphin	0.0100	0.0336	November
Harbor Porpoise	0.0154	0.0384	January
Pilot Whales	0.0000	0.0000	Annual
Risso's Dolphin	0.0000	0.0001	December
Sperm Whale*	0.0000	0.0002	November
<i>Pinnipeds</i>			
Seals (Harbor and Gray)	0.1434	0.3789	June

*Denotes species listed under the Endangered Species Act

Table 31. Estimated Level B take from SRWEC landfall construction.

Species	Density-based Take by Landfall Installation Activity		Total Density-based Take Estimate	PSO Data Take Estimate	Mean Group Size	Highest Level B Take
	Sheet Pile	Casing Pipe				
Mysticetes						
Blue Whale*	0.0	0.0	0.0	-	1.0	1
Fin Whale*	2.3	0.0	2.3	3.1	1.8	4
Humpback Whale	2.9	0.0	2.9	9.3	2.0	10
Minke Whale	12.8	0.1	12.9	1.1	1.2	13
North Atlantic Right Whale*	1.7	0.0	1.7	0.3	2.4	3
Sei Whale*	1.0	0.0	1.0	0.1	1.6	2
Odontocetes						
Atlantic Spotted Dolphin	0.1	0.0	0.1	-	29.0	29
Atlantic White-Sided Dolphin	7.2	0.0	7.2	0.9	27.9	28
Bottlenose Dolphin	96.6	0.6	97.2	10.2	7.8	98
Common Dolphin	60.0	0.4	60.4	258.5	34.9	259
Harbor Porpoise	68.7	0.4	69.1	0.3	2.7	70
Pilot Whales	0.0	0.0	0.0	-	8.4	9
Risso's Dolphin	0.2	0.0	0.2	0.7	5.4	6
Sperm Whale*	0.3	0.0	0.3	-	1.5	2
Pinnipeds						
Gray Seal	208.7	1.2	209.9	0.7	1.4	210
Harbor Seal	468.9	2.8	471.7	0.9	1.4	472

*Denotes species listed under the Endangered Species Act

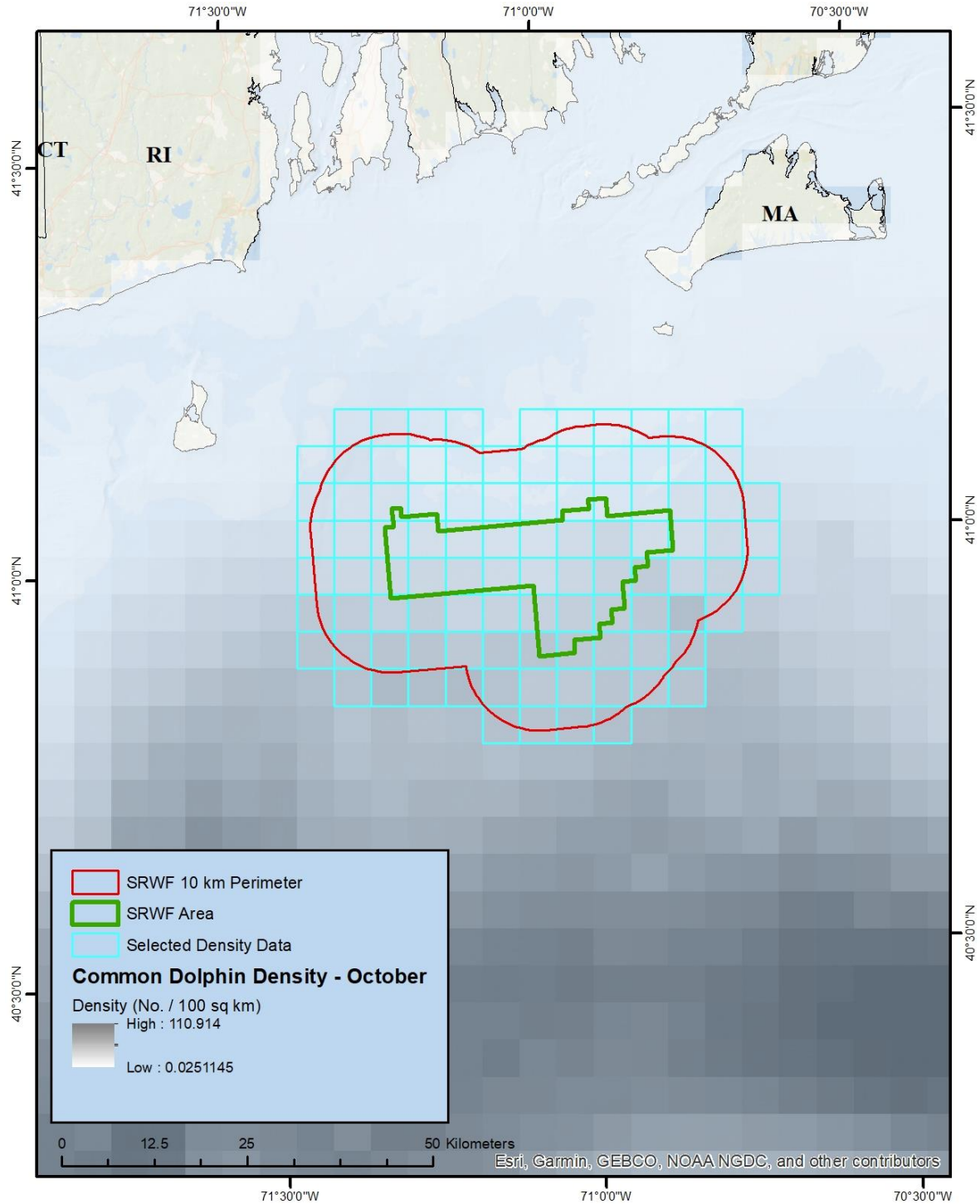


Figure 11: Location of the SRWF and marine mammal density grid cells from Roberts et al. (2016; 2022) used for calculating representative monthly marine mammal densities.

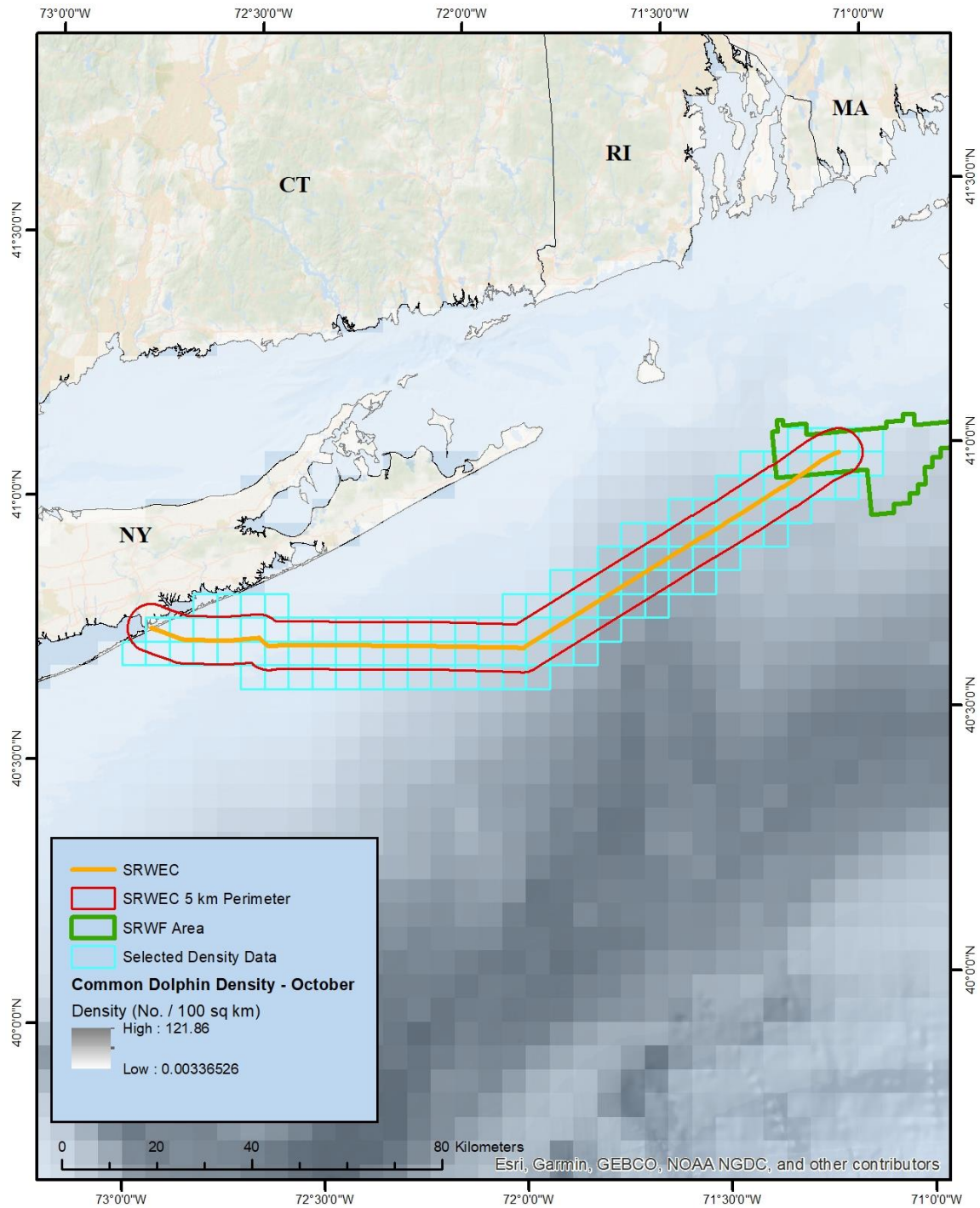


Figure 12: Location of the SRWEC and marine mammal density grid cells from Roberts et al. (2016; 2022) used for calculating representative monthly marine mammal densities.

Table 32. Average monthly marine mammal densities from within 5 km of the SRWF.

Species	Monthly Average Densities (Individuals/km ²)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mysticetes												
Blue Whale*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fin Whale*	0.0020	0.0019	0.0010	0.0018	0.0025	0.0026	0.0044	0.0038	0.0019	0.0004	0.0006	0.0014
Humpback Whale	0.0004	0.0003	0.0004	0.0011	0.0025	0.0023	0.0012	0.0010	0.0014	0.0018	0.0015	0.0003
Minke Whale	0.0010	0.0011	0.0011	0.0072	0.0179	0.0137	0.0059	0.0040	0.0041	0.0035	0.0005	0.0007
North Atlantic Right Whale*	0.0028	0.0038	0.0038	0.0038	0.0017	0.0003	0.0001	0.0001	0.0002	0.0004	0.0005	0.0013
Sei Whale*	0.0003	0.0002	0.0003	0.0010	0.0017	0.0003	0.0001	0.0001	0.0002	0.0003	0.0007	0.0006
Odontocetes												
Atlantic Spotted Dolphin	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0002	0.0003	0.0015	0.0026	0.0014	0.0002
Atlantic White-Sided Dolphin	0.0160	0.0094	0.0066	0.0103	0.0273	0.0234	0.0106	0.0051	0.0134	0.0183	0.0135	0.0186
Bottlenose Dolphin	0.0050	0.0012	0.0006	0.0014	0.0077	0.0128	0.0163	0.0164	0.0136	0.0118	0.0113	0.0112
Common Dolphin	0.0697	0.0225	0.0142	0.0268	0.0475	0.1023	0.0744	0.0968	0.1826	0.1466	0.0829	0.0963
Harbor Porpoise	0.0820	0.0898	0.0844	0.0742	0.0542	0.0026	0.0024	0.0024	0.0025	0.0031	0.0039	0.0447
Pilot Whales	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021
Risso's Dolphin	0.0005	0.0000	0.0000	0.0001	0.0006	0.0002	0.0004	0.0005	0.0007	0.0004	0.0009	0.0021
Sperm Whale*	0.0002	0.0001	0.0001	0.0000	0.0001	0.0002	0.0002	0.0006	0.0004	0.0003	0.0002	0.0001
Pinnipeds												
Seals (Harbor and Gray)	0.1855	0.2019	0.1533	0.0938	0.1697	0.0338	0.0044	0.0043	0.0094	0.0249	0.0485	0.1708

*Denotes species listed under the Endangered Species Act

Table 33. Average monthly marine mammal densities from within 5 km of the SRWEC.

Species	Monthly Average Densities (Individuals/km ²)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mysticetes												
Blue Whale*	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Fin Whale*	0.0019	0.0019	0.0016	0.0018	0.0022	0.0032	0.0046	0.0037	0.0026	0.0007	0.0007	0.0014
Humpback Whale	0.0006	0.0004	0.0005	0.0011	0.0023	0.0023	0.0009	0.0008	0.0011	0.0014	0.0013	0.0007
Minke Whale	0.0011	0.0012	0.0011	0.0071	0.0176	0.0150	0.0059	0.0037	0.0042	0.0039	0.0005	0.0008
North Atlantic Right Whale*	0.0007	0.0010	0.0010	0.0009	0.0004	0.0001	0.0000	0.0000	0.0000	0.0001	0.0001	0.0003
Sei Whale*	0.0002	0.0002	0.0003	0.0009	0.0013	0.0002	0.0001	0.0000	0.0001	0.0002	0.0005	0.0005
Odontocetes												
Atlantic Spotted Dolphin	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0001	0.0003	0.0016	0.0040	0.0012	0.0001
Atlantic White-Sided Dolphin	0.0132	0.0081	0.0059	0.0099	0.0230	0.0229	0.0071	0.0025	0.0086	0.0129	0.0114	0.0153
Bottlenose Dolphin	0.0066	0.0019	0.0011	0.0027	0.0108	0.0190	0.0236	0.0194	0.0173	0.0173	0.0172	0.0161
Common Dolphin	0.0892	0.0341	0.0181	0.0309	0.0470	0.0766	0.0587	0.0816	0.1613	0.1839	0.0970	0.1146
Harbor Porpoise	0.0668	0.0701	0.0677	0.0627	0.0376	0.0022	0.0023	0.0016	0.0015	0.0020	0.0031	0.0384
Pilot Whales	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011
Risso's Dolphin	0.0008	0.0001	0.0000	0.0001	0.0005	0.0002	0.0003	0.0003	0.0006	0.0004	0.0008	0.0019
Sperm Whale*	0.0002	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.0003	0.0002	0.0001	0.0002	0.0001
Pinnipeds												
Seals (Harbor and Gray)	0.1718	0.1779	0.1335	0.0851	0.1491	0.0867	0.0117	0.0064	0.0150	0.0433	0.0501	0.1613

*Denotes species listed under the Endangered Species Act

Table 34. Annual average marine mammal densities within 5 km of the SRWF.

Species	Annual Average Density (Ind./km²)	Maximum Monthly Density (Ind./km²)	Maximum Density Month
<i>Mysticetes</i>			
Blue Whale*	0.0000	0.0000	Annual
Fin Whale*	0.0020	0.0044	July
Humpback Whale	0.0012	0.0025	May
Minke Whale	0.0051	0.0179	May
North Atlantic Right Whale*	0.0016	0.0038	February
Sei Whale*	0.0005	0.0017	May
<i>Odontocetes</i>			
Atlantic Spotted Dolphin	0.0005	0.0026	October
Atlantic White-Sided Dolphin	0.0144	0.0273	May
Bottlenose Dolphin	0.0091	0.0164	August
Common Dolphin	0.0802	0.1826	September
Harbor Porpoise	0.0372	0.0898	February
Pilot Whales	0.0021	0.0021	Annual
Risso's Dolphin	0.0005	0.0021	December
Sperm Whale*	0.0002	0.0006	August
<i>Pinnipeds</i>			
Seals (Harbor and Gray)	0.0917	0.2019	February

*Denotes species listed under the Endangered Species Act

Table 35. Annual average marine mammal densities within 5 km of the SRWEC.

Species	Annual Average Density (Ind/km²)	Maximum Monthly Density (Ind/km²)	Maximum Density Month
<i>Mysticetes</i>			
Blue Whale*	0.0000	0.0000	Annual
Fin Whale*	0.0022	0.0046	July
Humpback Whale	0.0011	0.0023	May
Minke Whale	0.0052	0.0176	May
North Atlantic Right Whale*	0.0004	0.0010	February
Sei Whale*	0.0004	0.0013	May
<i>Odontocetes</i>			
Atlantic Spotted Dolphin	0.0006	0.0040	October
Atlantic White-Sided Dolphin	0.0117	0.0230	May
Bottlenose Dolphin	0.0127	0.0236	July
Common Dolphin	0.0827	0.1839	October
Harbor Porpoise	0.0297	0.0701	February
Pilot Whales	0.0011	0.0011	Annual
Risso's Dolphin	0.0005	0.0019	December
Sperm Whale*	0.0001	0.0003	August
<i>Pinnipeds</i>			
Seals (Harbor and Gray)	0.0910	0.1779	February

*Denotes species listed under the Endangered Species Act

Table 38. Estimated Level B take from HRG surveys during year 1 of the construction phase of the Project. SRWF = Sunrise Wind Farm, SRWEC = Sunrise Wind Export Cable.

Species	Year 1 Construction Phase Take by Survey Area		Total Density- based Take Estimate	PSO Data Take Estimate	Mean Group Size	Highest Level B Take
	SRWF	SRWEC				
Mysticetes						
Blue Whale*	0.0	0.0	0.0	-	1.0	1
Fin Whale*	3.6	3.7	7.3	5.3	1.8	8
Humpback Whale	2.1	1.9	4.0	13.2	2.0	14
Minke Whale	9.0	8.7	17.8	4.8	1.2	18
North Atlantic Right Whale*	2.8	0.7	3.5	-	2.4	4
Sei Whale*	0.9	0.7	1.5	-	1.6	2
Odontocetes						
Atlantic Spotted Dolphin	0.9	1.1	2.0	-	29.0	29
Atlantic White-Sided Dolphin	25.6	19.8	45.4	-	27.9	46
Bottlenose Dolphin	16.2	21.5	37.8	80.3	7.8	81
Common Dolphin	143.0	139.8	282.8	1,887.3	34.9	1,888
Harbor Porpoise	66.3	50.1	116.4	-	2.7	117
Pilot Whales	3.7	1.9	5.6	-	8.4	9
Risso's Dolphin	1.0	0.9	1.8	1.9	5.4	6
Sperm Whale*	0.4	0.2	0.6	-	1.5	2
Pinnipeds						
Gray Seal	50.3	47.4	97.7	5.7	1.4	98
Harbor Seal	113.1	106.4	219.5	9.0	0.0	220

*Denotes species listed under the Endangered Species Act

Table 39. Estimated Level B take from HRG surveys during year 2 of the construction phase of the Project. SRWF = Sunrise Wind Farm, SRWEC = Sunrise Wind Export Cable.

Species	Year 2 Construction Phase Take by Survey Area		Total Density- based Take Estimate	PSO Data Take Estimate	Mean Group Size	Highest Level B Take
	SRWF	SRWEC				
Mysticetes						
Blue Whale*	0.0	0.0	0.0	-	1.0	1
Fin Whale*	3.6	3.7	7.3	5.3	1.8	8
Humpback Whale	2.1	1.9	4.0	13.2	2.0	14
Minke Whale	9.0	8.7	17.8	4.8	1.2	18
North Atlantic Right Whale*	2.8	0.7	3.5	-	2.4	4
Sei Whale*	0.9	0.7	1.5	-	1.6	2
Odontocetes						
Atlantic Spotted Dolphin	0.9	1.1	2.0	-	29.0	29
Atlantic White-Sided Dolphin	25.6	19.8	45.4	-	27.9	46
Bottlenose Dolphin	16.2	21.5	37.8	80.3	7.8	81
Common Dolphin	143.0	139.8	282.8	1,887.3	34.9	1,888
Harbor Porpoise	66.3	50.1	116.4	-	2.7	117
Pilot Whales	3.7	1.9	5.6	-	8.4	9
Risso's Dolphin	1.0	0.9	1.8	1.9	5.4	6
Sperm Whale*	0.4	0.2	0.6	-	1.5	2
Pinnipeds						
Gray Seal	50.3	47.4	97.7	5.7	1.4	98
Harbor Seal	113.1	106.4	219.5	9.0	0.0	220

*Denotes species listed under the Endangered Species Act

Table 40. Estimated Level B take from HRG surveys during operations. SRWF = Sunrise Wind Farm, SRWEC = Sunrise Wind Export Cable.

Species	Annual Operations Phase Take by Survey Area		Annual Total Density-based Take Estimate	Annual PSO Data Take Estimate	Mean Group Size	Highest Annual Level B Take	3-year Level B Take
	SRWF	SRWEC					
Mysticetes							
Blue Whale*	0.0	0.0	0.0	-	1.0	1	3
Fin Whale*	1.6	2.1	3.7	2.7	1.8	4	12
Humpback Whale	1.0	1.1	2.0	6.8	2.0	7	21
Minke Whale	4.2	5.0	9.1	2.4	1.2	10	30
North Atlantic Right Whale*	1.3	0.4	1.7	-	2.4	3	9
Sei Whale*	0.4	0.4	0.8	-	1.6	2	6
Odontocetes							
Atlantic Spotted Dolphin	0.4	0.6	1.0	-	29.0	29	87
Atlantic White-Sided Dolphin	11.8	11.3	23.1	-	27.9	28	84
Bottlenose Dolphin	7.5	12.3	19.8	41.3	7.8	42	126
Common Dolphin	65.8	79.9	145.7	970.4	34.9	971	2,913
Harbor Porpoise	30.5	28.6	59.1	-	2.7	60	180
Pilot Whales	1.7	1.1	2.8	-	8.4	9	27
Risso's Dolphin	0.4	0.5	0.9	1.0	5.4	6	18
Sperm Whale*	0.2	0.1	0.3	-	1.5	2	6
Pinnipeds							
Gray Seal	23.2	27.1	50.2	2.9	1.4	51	153
Harbor Seal	52.0	60.8	112.8	4.6	1.4	113	339

*Denotes species listed under the Endangered Species Act

Table 41. Maximum average monthly marine mammal densities in the SRWF from only May through November and the month in which the maximum density occurs.

Species	Maximum Monthly Density (Ind./km²)	Maximum Density Month
<i>Mysticetes</i>		
Blue Whale*	0.0000	Annual
Fin Whale*	0.0042	July
Humpback Whale	0.0025	May
Minke Whale	0.0178	May
North Atlantic Right Whale*	0.0018	May
Sei Whale*	0.0017	May
<i>Odontocetes</i>		
Atlantic Spotted Dolphin	0.0033	October
Atlantic White-Sided Dolphin	0.0268	May
Bottlenose Dolphin	0.0160	August
Common Dolphin	0.1824	September
Harbor Porpoise	0.0517	May
Pilot Whales	0.0018	Annual
Risso's Dolphin	0.0020	December
Sperm Whale*	0.0006	August
<i>Pinnipeds</i>		
Seals (Harbor and Gray)	0.1730	May

*Denotes species listed under the Endangered Species Act

Table 48. Estimated Level A and Level B take from potential UXO/MEC detonations in SRWF assuming 10 dB of mitigation.

Species	Level A Density-based Take Estimate	Level B Density-based Take Estimate	PSO Data Take Estimate	Mean Group Size	Requested Level A Take	Requested Level B Take
Mysticetes						
Blue Whale*	0.0	0.0	-	1.0	0	1
Fin Whale*	0.5	5.5	0.6	1.8	0	6
Humpback Whale	0.3	3.3	1.7	2.0	0	4
Minke Whale	2.2	23.4	0.2	1.2	0	24
North Atlantic Right Whale*	0.2	2.3	0.1	2.4	0	3
Sei Whale*	0.2	2.2	0.0	1.6	0	3
Odontocetes						
Atlantic Spotted Dolphin	0.0	0.2	-	29.0	0	29
Atlantic White-Sided Dolphin	0.0	1.6	0.2	27.9	0	28
Bottlenose Dolphin	0.0	0.9	1.9	7.8	0	8
Common Dolphin	0.3	10.6	48.5	34.9	0	49
Harbor Porpoise	18.7	91.4	0.0	2.7	19	92
Pilot Whales	0.0	0.1	-	8.4	0	9
Risso's Dolphin	0.0	0.1	0.1	5.4	0	6
Sperm Whale*	0.0	0.0	-	1.5	0	2
Pinnipeds						
Gray Seal	1.1	24.8	0.1	0.4	2	25
Harbor Seal	2.5	55.6	0.2	1.0	3	56

*Denotes species listed under the Endangered Species Act

Table 49. Estimated Level A and Level B take from potential UXO/MEC detonations in the SRWF assuming no mitigation.

Species	Level A Density-based Take Estimate	Level B Density-based Take Estimate	PSO Data Take Estimate	Mean Group Size	Highest Level B Take
<i>Mysticetes</i>					
Blue Whale*	0.0	0.0	-	1.0	1
Fin Whale*	2.9	14.7	0.6	1.8	15
Humpback Whale	1.7	8.9	1.7	2.0	9
Minke Whale	12.3	62.6	0.2	1.2	63
North Atlantic Right Whale*	1.2	6.3	0.1	2.4	7
Sei Whale*	1.2	5.9	0.0	1.6	6
<i>Odontocetes</i>					
Atlantic Spotted Dolphin	0.1	1.1	-	29.0	29
Atlantic White-Sided Dolphin	0.6	8.6	0.2	27.9	28
Bottlenose Dolphin	0.3	5.1	1.9	7.8	8
Common Dolphin	3.8	58.6	48.5	34.9	59
Harbor Porpoise	57.9	198.8	0.0	2.7	199
Pilot Whales	0.0	0.6	-	8.4	9
Risso's Dolphin	0.0	0.7	0.1	5.4	6
Sperm Whale*	0.0	0.2	-	1.5	2
<i>Pinnipeds</i>					
Gray Seal	10.3	88.8	0.1	0.4	89
Harbor Seal	23.1	199.6	0.2	1.0	200

*Denotes species listed under the Endangered Species Act

Table 50. Summary of the estimated Level A and B take from all activities during each of the 5 years.

Species	Year 1 (Maximum)		Year 2		Year 3		Year 4		Year 5	
	Requested Level A Take	Requested Level B Take	Requested Level A Take	Requested Level B Take	Requested Level A Take	Requested Level B Take	Requested Level A Take	Requested Level B Take	Requested Level A Take	Requested Level B Take
Mysticetes										
Blue Whale*	0	4	-	1	-	1	-	1	-	1
Fin Whale*	4	78	-	8	-	4	-	4	-	4
Humpback Whale	3	89	-	14	-	7	-	7	-	7
Minke Whale	27	419	-	18	-	10	-	10	-	10
North Atlantic Right Whale*	0	35	-	4	-	3	-	3	-	3
Sei Whale*	2	31	-	2	-	2	-	2	-	2
Odontocetes										
Atlantic Spotted Dolphin	0	114	-	15	-	29	-	29	-	29
Atlantic White-Sided Dolphin	0	639	-	46	-	28	-	28	-	28
Bottlenose Dolphin	0	425	-	81	-	42	-	42	-	42
Common Dolphin	0	7,393	-	1,888	-	971	-	971	-	971
Harbor Porpoise	20	1,008	-	117	-	60	-	60	-	60
Pilot Whales	0	58	-	6	-	9	-	9	-	9
Risso's Dolphin	0	47	-	3	-	6	-	6	-	6
Sperm Whale*	0	14	-	1	-	2	-	2	-	2
Pinnipeds										
Gray Seal	3	1,099	-	98	-	51	-	51	-	51
Harbor Seal	5	2,468	-	220	-	113	-	113	-	113

*Denotes species listed under the Endangered Species Act

Table 51. Total 5-year requested Level A and Level B take from all activities. The percent of NMFS stock abundance is calculated from the 5-year total Level A and Level B requested take.

Species	NMFS Stock Abundance ^a	5-Year Total		Percent of NMFS Stock Abundance ^a
		Requested Level A Take	Requested Level B Take	
Mysticetes				
Blue Whale*	402	0	7	1.7
Fin Whale*	6,802	4	97	1.5
Humpback Whale	1,396	3	123	9.0
Minke Whale	21,968	27	467	2.2
North Atlantic Right Whale*	368	0	47	12.8
Sei Whale*	6,292	2	39	0.7
Odontocetes				
Atlantic Spotted Dolphin	39,921	0	215	0.5
Atlantic White-Sided Dolphin	93,233	0	768	0.8
Bottlenose Dolphin	62,851	0	631	1.0
Common Dolphin	172,974	0	12,193	7.0
Harbor Porpoise	95,543	20	1,304	1.4
Pilot Whales	68,139	0	91	0.1
Risso's Dolphin	35,215	0	68	0.2
Sperm Whale*	4,349	0	21	0.5
Pinnipeds				
Gray Seal	27,300	3	1,350	5.0
Harbor Seal	61,336	5	3,027	4.9

*Denotes species listed under the Endangered Species Act