

**Empire Wind LOA - Revised Take Tables**

22 September 2023

**Table 24. Calculated Exposures by Level A Harassment and Level B Harassment Resulting from Monopile and OSS Foundation Installation Impact Pile Driving (Year 1 of Offshore Foundation Installation: 2025)**

Hearing Group	Species	Calculated Take		Calculated Take	Requested Take	Requested Take
		Level A harassment		Level B harassment	Level A harassment	Level B harassment
		LE	LpK	Lp <sup>a</sup>		
LF	Fin <sup>b</sup>	1.15	0	8.78	1	133 <sup>c</sup>
	Minke	3.72	0	65.05	4	65
	Humpback	0.36	<0.01	8.12	0	60 <sup>c</sup>
	North Atlantic Right Whale <sup>b</sup>	0.10	0	2.36	0	11 <sup>f</sup>
	Sei <sup>b</sup>	0.27	<0.01	2.78	0	3
MF	Atlantic white-sided dolphin	0	0	116.00	0	416 <sup>f</sup>
	Atlantic spotted dolphin	0	0	0	0	45 <sup>d</sup>
	Short-beaked common dolphin	0	0	902.19	0	3,600 <sup>d</sup>
	Bottlenose dolphin (Western N.A. Offshore)	0	0	226.02	0	1,800 <sup>d</sup>

	Risso's dolphin	0	0	5.96	0	100 <sup>d</sup>
	Pilot whales	0	0	0	0	161 <sup>c</sup>
	Sperm whale <sup>b</sup>	0	0	0.56	0	3 <sup>d</sup>
HF	Harbor porpoise	0	0.09	133.70	0	134
PW	Gray seal	0.18	0	<del>162.46</del> <u>179.34</u>	0	<del>162</del> <u>179</u>
	Harbor seal	0	0	<del>356.44</del> <u>339.96</u>	0	<del>356</del> <u>340</u>

**Table 25. Calculated Exposures by Level A and Level B Harassment Resulting from Monopile and OSS Foundation Installation Impact Pile Driving (Year 2 of Offshore Foundation Installation: 2026)**

Hearing Group	Species	Calculated Take		Calculated Take	Requested Take	Requested Take
		Level A harassment		Level B harassment	Level A harassment	Level B harassment
		LE	LpK	Lp <sup>a</sup>		
LF	Fin <sup>b</sup>	0.52	0	4.00	1	57 <sup>c</sup>
	Minke	2.18	0	47.73	2	48
	Humpback	0.14	0	3.82	0	26 <sup>c</sup>
	North Atlantic Right Whale <sup>b</sup>	0.05	0	1.57	0 <sup>g</sup>	11 <sup>f</sup>
	Sei <sup>b</sup>	0.16	0	1.66	0	2
MF	Atlantic white-sided dolphin	0	0	59.23	0	416 <sup>f</sup>
	Atlantic spotted dolphin	0	0	0	0	45 <sup>d</sup>
	Short-beaked common dolphin	0	0	560.75	0	1,530 <sup>e</sup>
	Bottlenose dolphin (Western N.A. Offshore)	0	0	110.28	0	765 <sup>e</sup>
	Risso's dolphin	0	0	4.09	0	100 <sup>d</sup>

	pilot whales	0	0	0	0	68 <sup>c</sup>
	Sperm whale <sup>b</sup>	0	0	0.29	0	3 <sup>d</sup>
HF	Harbor porpoise	0	0	98.43	0	98
PW	Gray seal	0	0	<del>111.95</del> <u>123.58</u>	0	<del>124</del> <u>124</u>
	Harbor seal	0	0	<del>229.89</del> <u>219.26</u>	0	<del>230</del> <u>219</u>

**Table 34. Proposed Level A Harassment and Level B Harassment Takes For All Activities Proposed To Be Conducted During the Construction of Empire Wind Project Over 5 Years.**

Marine Mammal Species	NMFS Stock Abundance	Year 1		Year 2		Year 3		Year 4		Year 5	
		Level A harassment	Level B harassment	Level A harassment	Level B harassment	Level A harassment	Level B harassment	Level A harassment	Level B harassment	Level A harassment	Level B harassment
Mysticetes											
Fin Whale*	6,802	0	1	1	136	1	60	0	2	0	2
Humpback Whale	1,396	0	1	0	63	0	29	0	2	0	2
Minke Whale	21,968	0	4	4	83	2	62	0	9	0	9
North Atlantic Right Whale*	338	0	1	0	13	0	13	0	1	0	1
Sei Whale*	6,292	0	0	0	4	0	3	0	1	0	1

Odontocetes											
Atlantic Spotted Dolphin	39,921	0	45	0	90	0	90	0	45	0	45
Atlantic White-sided Dolphin	93,233	0	71	0	747	0	676	0	173	0	173
Bottlenose Dolphin <sup>a</sup>											
Western North Atlantic, Offshore	62,851	0	0	0	1,800	0	765	0	0	0	0
Western North Atlantic, Coastal	6,639	0	1,185	0	270	0	0	0	0	0	0
Western North Atlantic, Offshore		0	615	0	2,865	0	2,250	0	1,500	0	1,500

and Coastal											
Common Dolphin	172,974	0	2,130	0	9,870	0	6,030	0	3,000	0	3,000
Harbor Porpoise	95,543	0	25	0	243	0	183	0	57	0	57
Pilot Whales <sup>b</sup>	68,139	0	55	0	417	0	269	0	134	0	134
Risso's Dolphin	35,215	0	100	0	200	0	200	0	100	0	100
Sperm Whale*	1,180	0	0	0	3	0	3	0	0	0	0
Phocid (pinnipeds)											
Gray Seal <sup>c</sup>	27,300	0	445	0	<del>484501</del>	0	<del>306294</del>	0	122	0	122
Harbor Seal <sup>c</sup>	61,336	0	445	0	<del>678662</del>	0	<del>401412</del>	0	122	0	122

Harp Seal d	7.6 M	0	4	0	4	0	4	0	4	0	4
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**Table 35. Total 5-Year Proposed Takes Of Marine Mammals (By Level A Harassment And Level B Harassment) For All Activities Proposed To Be Conducted During the Construction of Empire Wind Project.**



Marine Mammal Species	NMFS Stock Abundance	5-Year Totals		
		Proposed Level A Harassment	Proposed Level B Harassment	5-year Sum (Level A Harassment + Level B Harassment)
Mysticetes				
Fin Whale*	6,802	2	201	203
Humpback Whale	1,396	0	97	97
Minke Whale	21,968	6	167	173
North Atlantic Right Whale*	336	0	29	29
Sei Whale*	6,292	0	9	9
Odontocetes				
Atlantic Spotted Dolphin	39,921	0	315	315
Atlantic White-sided Dolphin	93,221	0	1,840	1,840

Bottlenose Dolphin (WNA Offshore)	62,851	0	2,565	2,565
Bottlenose Dolphin (WNA Northern Migratory Coastal)	6,639	0	1,455	1,455
Bottlenose Dolphin (WNA Offshore and Northern Migratory Coastal)	69,490	0	8,730	8,730
Common Dolphin	172,974	0	24,030	24,030
Harbor Porpoise	95,543	0	565	565
Pilot Whales	68,139	0	1,009	1,009
Risso's Dolphin	35,215	0	700	700
Sperm Whale*	4,349	0	6	6
Phocid (pinnipeds)				
Gray Seal	27,300	0	<del>1,467</del> <u>1,496</u>	<del>1,467</del> <u>1,496</u>
Harbor Seal	61,336	0	<del>1,779</del> <u>1,752</u>	<del>1,779</del> <u>1,752</u>

Harp Seal <sup>a</sup>	UNK	0	20	20
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**Table 36. Maximum Number Of Proposed Takes (Level A Harassment and Level B Harassment) That Could Occur In Any One Year Of The Project Relative to Stock Population Size Assuming Each Take is of a Different Individual**

Marine Mammal Species	NMFS Stock Abundance	Maximum Annual Take Proposed for Authorization			
		Maximum Level A Harassment	Maximum Level B Harassment	Maximum Annual Take <sup>c</sup>	Total Percent Stock Taken Based on Maximum Annual Take <sup>d</sup>
Mysticetes					
Fin Whale*	6,802	1	136	137	2.01
Humpback Whale	1,396	0	63	63	4.51
Minke Whale	21,968	4	83	87	0.40
North Atlantic Right Whale*	336	0	13	13	3.87
Sei Whale*	6,292	0	4	4	0.06
Odontocetes					
Atlantic Spotted Dolphin	39,921	0	90	90	0.23
Atlantic White-sided Dolphin	93,221	0	747	747	0.80
Bottlenose Dolphin (WNA Offshore)	62,851	0	1,800	1,800	2.86

Bottlenose Dolphin (Northern Migratory Coastal)	6,639	0	1,185	1,185	17.85
Bottlenose Dolphin (WNA Offshore and Northern Migratory Coastal) <sup>e</sup>	69,490	0	2,865	2,865	4.12
Common Dolphin	172,974	0	9,870	9,870	5.71
Harbor Porpoise	95,543	0	243	243	0.25
Pilot Whale <i>spp.</i>	68,139	0	417	417	1.06
Risso's Dolphin	35,215	0	200	200	0.57
Sperm Whale*	4,349	0	3	3	0.07
Phocid (pinnipeds)					
Gray Seal	27,300	0	<del>484</del> <u>501</u>	<del>484</del> <u>501</u>	<del>1.77</del> <u>1.84</u>
Harbor Seal	61,336	0	<del>678</del> <u>662</u>	<del>678</del> <u>662</u>	<del>1.11</del> <u>1.08</u>
Harp Seal	UNK	0	4	4	UNK