

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[RTID 0648-XD407]

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Transco Lower New York Bay Lateral (LNYBL) Natural Gas Pipeline Maintenance in Sandy Hook Channel, NJ

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments on proposed authorization and possible renewal.

SUMMARY: NMFS has received a request from Transcontinental Gas Pipe Line Company LLC (Transco), a subsidiary of Williams Partners L.P., for authorization to take marine mammals incidental to pile driving associated with the LNYBL Natural Gas Pipeline Maintenance in Sandy Hook Channel, New Jersey (NJ). Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS is also requesting comments on a possible one-time, 1 year renewal that could be issued under certain circumstances and if all requirements are met, as described in **Request for Public Comments** at the end of this notice. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorization and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than [*INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER*].

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service and should be submitted via email to *ITP.Fleming@noaa.gov*. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-construction-activities*. In case of problems accessing these documents, please call the contact listed above.

Instructions: NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments, including all attachments, must not exceed a 25-megabyte file size. All comments received are a part of the public record and will generally be posted online at *https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act* without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

FOR FURTHER INFORMATION CONTACT: Kate Fleming, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

The MMPA prohibits the “take” of marine mammals, with certain exceptions. Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are proposed or, if the taking is limited to harassment, a notice of a proposed IHA is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for taking for subsistence uses (where relevant). Further, NMFS must prescribe the permissible methods of taking and other "means of effecting the least practicable adverse impact" on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stocks for taking for certain subsistence uses (referred to in shorthand as "mitigation"); and requirements pertaining to the mitigation, monitoring and reporting of the takings are set forth. The definitions of all applicable MMPA statutory terms cited above are included in the relevant sections below.

National Environmental Policy Act

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq*.) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our proposed action (*i.e.*, the issuance of an IHA) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in Categorical Exclusion B4 (IHAs with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

Summary of Request

On April 28, 2023, NMFS received a request from Transco for an IHA to take marine mammals incidental to pile driving activities associated with the LNYBL maintenance project in Sandy Hook Channel, NJ. On September 1, 2023 Transco submitted updates to the planned daily duration of pile driving and on October 27, 2023, Transco notified NMFS of changes to project timing. Following NMFS' review of the application, discussions between NMFS and Transco, and reanalysis following the aforementioned project changes, the application was deemed adequate and complete on November 2, 2023. Transco's request is for take of 11 species of marine mammals, by Level B harassment and, for a subset of 3 of these species, Level A harassment. Neither Transco nor NMFS expect serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

Description of Proposed Activity

Overview

Transco is proposing construction activities to stabilize the LNYBL natural gas pipeline that extends 34 miles (mi) [55 kilometers (km)] in Raritan Bay, Lower New York Bay, and the Atlantic Ocean from Morgan, NJ to Long Beach, New York (NY). During routine monitoring of the existing LNYBL, Transco identified seven discrete sections of the gas pipeline with either limited cover or exposure resulting from dynamic conditions. The LNYBL maintenance project is the maintenance of pipeline sections with seven corresponding "work areas" that encompass all in-water temporary work spaces within NY and NJ where project-related activities may cause sediment disturbance. To stabilize the pipeline, Transco would place rock over the pipeline at seven distinct work areas. At Work Area 3, near Sandy Hook Channel, NJ, Transco would install 960 sheet piles to provide additional stability and protection, and to mitigate future seabed lowering and erosion along the north flank of Sandy Hook Channel. Proposed activities included as part of the project with potential to affect marine mammals include vibratory and impact pile driving of steel sheet piles at Work Area 3 on 80 days between June and September 2024. Other in-water work described above would not cause take of marine mammals.

Dates and Duration

Pile driving activities are planned to occur between June 15 and September 15, 2024. Pile installation and removal activities are expected to take a total of 80 days. Additional in-water construction activities (*i.e.,* rock placement) would occur through November 2024.

Specific Geographic Region

The proposed pile driving activity will occur at Sandy Hook Channel, where Raritan Bay and Lower New York Bay meet, in NJ state waters (Figure 1) and adjacent to the northwest portion of the New York Bight. Leading to the Port of New York and New Jersey, these bays experience significant commercial and recreational vessel activity. The work area is subject to erosional forces associated with high tidal currents near Sandy Hook Peninsula resulting from sand deposition at the Sandy Hook landmass spit. Depths at Work Area 3 range from 5.3 meters (m) [17.3 feet (ft)] to 10.6 m (34.8 ft). However, the harassment zones would extend 13.6 km (8.5 mi) and reach depths greater than 20 m (66 ft).

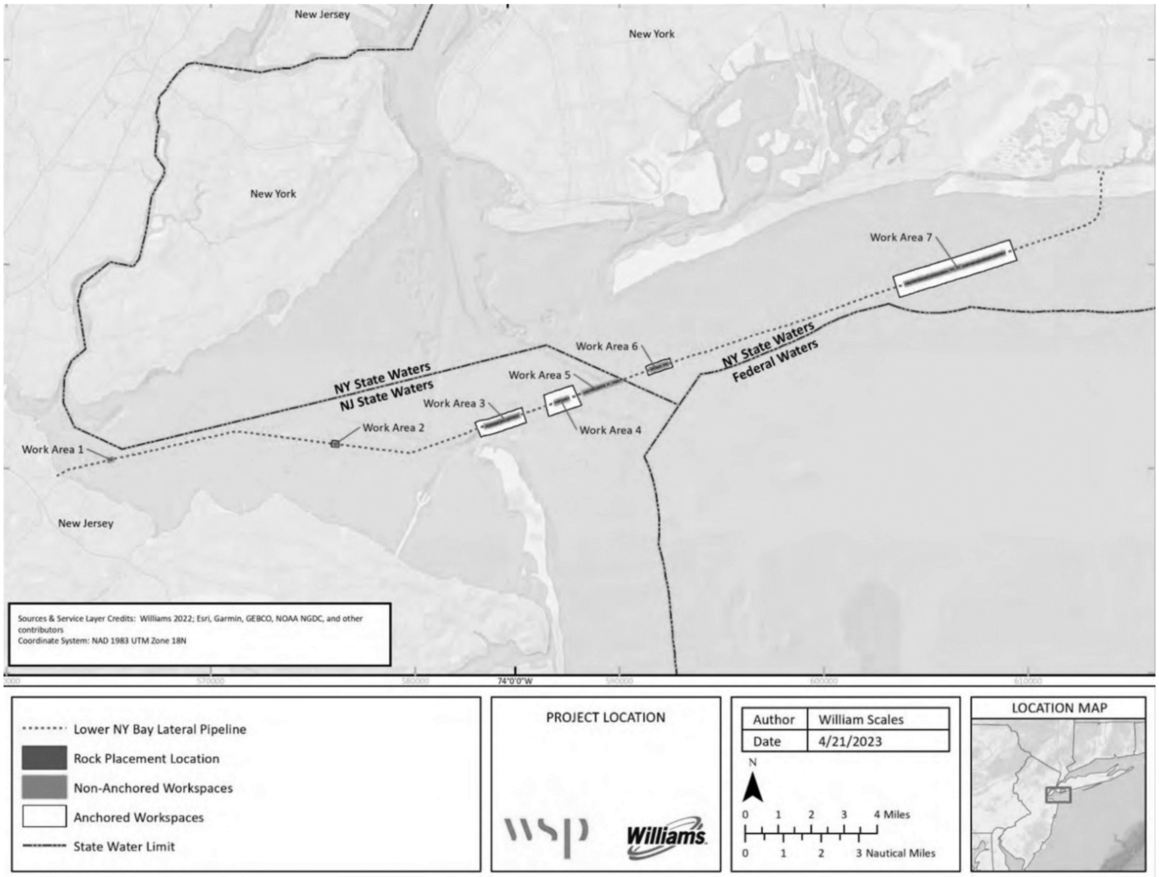

Figure 1. Map illustrating the proposed project location in Sandy Hook Channel, NJ.

Detailed Description of the Specified Activity

Transco plans to maintain the LNYBL, which is a 26-inch (in) [66 centimeter (cm)] diameter concrete coated natural gas pipeline that extends 34 miles in Raritan Bay, Lower New York Bay, and the Atlantic Ocean from Morgan, NJ to Long Beach, NY. Transco plans to install 960 36-in (91 cm) long sheet piles approximately 600 ft (183 m) north of Sandy Hook Channel, to establish a retaining wall approximately 18 ft (5.5 m) south of the pipeline that prevents the currents at Sandy Hook Channel from further eroding the underlying seabed. To reduce potential seabed erosion on the southern (channel) side of the sheet pile wall, armor rock placement will also be placed along the southern side of the sheet piles. The sheet piles will be installed using a barge-mounted vibratory hammer (vibro-hammer) and, when necessary, an impact hammer. A template will be fixed to the barge used for sheet pile installation, which will help position sheet piles and shorten the time needed for sheet pile installation compared to typical sheet pile installation methods. The sheet piles will be stored at a local port and will be brought out to the crane barge using supply barges with tugs. Sheet piles will be installed for approximately 2,400 ft (732 m). Each installed sheet pile will be surveyed for orientation to record the distance from the pipeline.

Vibro-hammers continuously vibrate the sheet pile into the substrate until the desired depth is reached. A vibro-hammer uses spinning counterweights, causing the sheet pile to vibrate at a high speed. The vibrating sheet pile causes the soil underneath it to "liquefy" and allow the sheet pile to move easily into or out of the sediment. Once refusal is reached with the vibratory hammer, Transco will switch to a hydraulic impact hammer to attain an acceptable depth. A representative hydraulic impact hammer that may be used is the IHC Hydrohammer S Series—specifically, the S-30, S-40, and S-70. The rams of these Hydrohammers range from 1.5 to 3.5 metric tons with maximum speeds from 50 to 65 blows per minute. Maximum obtainable energy for the largest of the three models (S-70) is 51,630 foot-pounds (70 kilonewton meters) at its highest setting. The minimum rated energy for the smallest hammer (S-30) is 2,213 foot-pounds (3 kilonewton meters).

Active sheet pile installation will occur during daylight hours on 80 days; daily operational time for the vibro-hammer and impact hammer is expected to be 2 hours each, for a maximum total of 4 hours (table 1). Rock placement will follow shortly after sheet pile installation at a given location while sheet piling continues at a nearby location.

Transco also plans to place rock material over six additional discrete locations along the pipeline that are exposed or poorly covered (Work areas 1, 2, 4, 5, 6 and 7), totaling 26.52 acres), using barge or vessel mounted cranes with clamshell type buckets and multibeam sonar and/or ultra-short baseline beacons to support accurate placement. Only the pile driving activities at Work Area 3 have the potential to result in take of marine mammals, thus the rock placement components of the project, including vessel operations and rock placement validation equipment, are not discussed further in this document. Please refer to Transco's application for additional information about project components that are not expected to result in the incidental take of marine mammals.

Table 1-- Pile Installation Methods and Durations

Pile Type	Number of piles	Average piles per day	Average vibratory duration per pile (minutes)	Impact strikes per pile	Estimated total number of minutes per day	Days of installation and removal
36-inch sheet piles	960	12	10	520	240	80

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see **Proposed Mitigation** and **Proposed Monitoring and Reporting**).

Description of Marine Mammals in the Area of Specified Activities

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history of the potentially affected species. NMFS fully considered all of this information, and we refer the reader to these descriptions, instead of reprinting the information. Additional information regarding population trends and threats may be found in NMFS' Stock Assessment Reports (SARs; *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*) and more general information about these species (*e.g.*, physical and behavioral descriptions) may be found on NMFS' website (*https://www.fisheries.noaa.gov/find-species)*.

Table 2 lists all species or stocks for which take is expected and proposed to be authorized for this activity, and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS' SARs). While no serious injury or mortality is anticipated or proposed to be authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species or stocks and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS' stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS' U.S. Atlantic and Gulf of Mexico SARs (Hayes *et al*., 2022; Hayes *et al.*, 2023). All values presented in table 2 are the most recent available at the time of publication and are available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments*.

Table 2 -- Species Likely Impacted by the Specified Activities

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N)[1]	Stock abundance (CV, N_{min}, most recent abundance survey)[2]	PBR	Annual M/SI[3]
Order Artiodactyla – Infraorder Cetacea – Mysticeti (baleen whales)						
Family Balaenopteridae (rorquals)						
Fin Whale	*Balaenoptera physalus*	Western N Atlantic	E, D, Y	6,802 (0.24, 5,573, 2016)	11	1.8
Humpback Whale	*Megaptera novaeangliae*	Gulf of Maine	-, -, N	1,396	22	12.15
Minke Whale	*Balaenoptera acutorostrata*	Canadian Eastern Coastal	-, -, N	21,968 (0.31, 17,002, 2016)	170	10.6
Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae						
Atlantic White-sided Dolphin	*Lagenorhynchus acutus*	Western N Atlantic	-, -, N	93,233 (0.71, 54,443, 2016)	544	27
Bottlenose Dolphin	*Tursiops truncatus*	Northern Migratory Coastal	-, -, Y	6,639, (0.41, 4,759, 2016)	48	12.2 – 21.5
		Western North Atlantic Offshore	-, -, N	62,851 (0.23, 51,914, 2016)	519	28
Common Dolphin	*Delphinus delphis*	Western N Atlantic	-, -, N	172,974 (0.21, 145,216, 2016)	1,452	390
Atlantic Spotted Dolphin	*Stenella frontalis*	Western N Atlantic	-, -, N	39,921 (0.27, 32,032, 2016)	320	0
Family Phocoenidae (porpoises)						
Harbor Porpoise	*Phocoena phocoena*	Gulf of Maine/Bay of Fundy	-, -, N	95,543 (0.31, 74,034, 2016)	851	164
Order Carnivora – Pinnipedia						
Family Phocidae (earless seals)						

Harp Seal	*Pagophilus groenlandicus*	Western N Atlantic	-, -, N	7.6M (UNK, 7.1M, 2019)	426,000	178,573
Harbor Seal	*Phoca vitulina*	Western N Atlantic	-, -, N	61,336 (0.08, 57,637, 2018)	1,729	339
Gray Seal[4]	*Halichoerus grypus*	Western N Atlantic	-, -, N	27,300 (0.22, 22,785, 2016)	1,458	4,453

[1] Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.
[2] NMFS marine mammal stock assessment reports online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports*. CV is coefficient of variation; Nmin is the minimum estimate of stock abundance.
[3] These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.*, commercial fisheries, vessel strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range.
[4] This stock abundance estimate is only for the U.S. portion of this stock. The actual stock abundance, including the Canadian portion of the population, is estimated to be approximately 424,300 animals. The PBR value listed here is only for the U.S. portion of the stock, while M/SI reflects both the Canadian and U.S. portions.

As indicated above, all 11 species (with 12 managed stocks) in table 2 temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur. All species that could potentially occur in the proposed project areas are included in Table 3-1 of the IHA application. North Atlantic right whale, short-finned pilot whale, and long-finned pilot whale could potentially occur in the area. However, the spatial and temporal occurrence of these species is rare, and the applicant would shut down pile driving if they enter the project area. In the case of North Atlantic right whale, the take estimation process resulted in calculated exposure of 0.5. Given the low likelihood of the exposure in concert with the proposed requirement to shut down pile driving activities upon observation at any distance, take is not expected to occur. As such, they are not discussed further.

On August 1, 2022, NMFS announced proposed changes to the existing North Atlantic right whale vessel speed regulations to further reduce the likelihood of mortalities and serious injuries to endangered right whales from vessel collisions, which are a leading cause of the species' decline and a primary factor in an ongoing Unusual Mortality Event (UME) (87 FR 46921). Should a final vessel speed rule be issued and become effective during the effective period of this IHA (or any other MMPA incidental take authorization), the authorization holder would be required to comply with any and all applicable requirements contained within the final rule. Specifically, where measures in any final vessel speed rule are more protective or restrictive than those in this or any other MMPA authorization, authorization holders would be required to comply with the requirements of the rule. Alternatively, where measures in this or any other MMPA authorization are more restrictive or protective than those in any final vessel speed rule, the measures in the MMPA authorization would remain in place. These changes would become effective immediately upon the effective date of any final vessel speed rule and would not require any further action on NMFS’s part.

Fin Whale

Fin whales are common in waters of the U. S. Atlantic Exclusive Economic Zone, principally from Cape Hatteras northward (Hayes *et al*., 2022). Fin whales are present north of 35-degree latitude in every season and are broadly distributed throughout the western North Atlantic for most of the year, though densities vary seasonally (Edwards *et. al.,* 2015). Fin whales are often found in small groups of up five to seven individuals (NMFS 2023). Fin whales have been observed in the waters off the eastern end of Long Island, but are more common in deeper waters.

While there is no active UME for fin whale, strandings and mortalities are occasionally reported in NJ and NY waters (Hayes *et al.,* 2021, Newman *et al*., 2012). Between 2015 and 2019, only one fin whale mortality was recorded in the vicinity of the Project area with a vessel strike reported as the likely cause (Henry *et al*., 2022).

Humpback Whale

Prior to 2016, humpback whales were listed under the ESA as an endangered species worldwide. Following a 2015 global status review (Bettridge *et al.,* 2015), NMFS delineated 14 Distinct Population Segments (DPS) with different listing statuses (81 FR 62259, September 8, 2016) pursuant to the ESA. The West Indies DPS, which is not listed under the ESA, is the only DPS of humpback whales that is expected to occur in the survey area.

Humpback whale sightings and mortalities in the New York Bight have been increasing over the last decade (Brown 2022) including in the bays that intersect with the project area. Between 2011 and 2016, there have been at least 46 humpback whale sightings within Lower New York Bay, Upper New York Bay, and Raritan Bay (Brown *et al.,* 2018). Most sightings occurred during the summer months (July to September), with no documented sightings in the winter (Brown *et al.,* 2018). A total of 617 humpback whale sightings were reported within the New York Bight based on data collected from 2011-2017 (Brown *et al.,* 2018). During winter, the majority of humpback whales from North Atlantic feeding areas mate and calve in the West Indies, where spatial and genetic mixing among feeding groups occurs, though significant numbers of animals are found in mid- and high-latitude regions at this time and some individuals have been sighted repeatedly within the same winter season, indicating that not all humpback whales migrate south every winter (Clapham *et al*., 1993).

Since January 2016, elevated humpback whale mortalities have occurred along the Atlantic coast from Maine (ME) to Florida. Partial or full necropsy examinations have been conducted on 45 percent of the 202 known cases. Of the whales examined, about 40 percent had evidence of human interaction, either ship strike or entanglement. While a portion of the whales have shown evidence of pre-mortem vessel strike, this finding is not consistent across all whales examined and more research is needed. NOAA is consulting with researchers that are conducting studies on the humpback whale populations, and these efforts may provide information on changes in whale distribution and habitat use that could provide additional insight into how these vessel interactions occurred. Three previous UMEs involving humpback whales have occurred since 2000, in 2003, 2005, and 2006. More information is available at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events.*

Minke Whale

Minke whales occur in temperate, tropical, and high-latitude waters. The Canadian East Coast stock can be found in the area from the western half of the Davis Strait (45° W) to the Gulf of Mexico (Hayes *et al.,* 2022). This species generally occupies waters less than 100 m deep on the continental shelf. There appears to be a strong seasonal component to minke whale distribution. During spring and summer, they appear to be widely distributed from just east of Montauk Point, Long Island, northeast to

Nantucket Shoals, and north towards Stellwagen Bank and Jeffrey's Ledge (CeTAP, 1982). During the fall, their range is much smaller and their abundance is reduced throughout their range (CeTAP, 1982).

Since January 2017, elevated minke whale mortalities have occurred along the Atlantic coast from ME through South Carolina, with a total of 151 strandings recorded when this document was written. This event has been declared a UME though it is currently considered non-active with closure pending. Full or partial necropsy examinations were conducted on more than 60 percent of the whales. Preliminary findings in several of the whales have shown evidence of human interactions or infectious disease, but these findings are not consistent across all of the whales examined, so more research is needed. More information is available at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events.*

Atlantic White-sided Dolphin

The Atlantic white-sided dolphin occurs throughout temperate and sub-polar waters of the North Atlantic, most prominently in continental shelf waters to depths of approximately 100 m (330 ft) (Hayes *et al*., 2022). Atlantic white-sided dolphins of the western North Atlantic stock inhabit waters from central west Greenland to North Carolina (NC) and as far east as the mid-Atlantic ridge (Hamazaki 2002; Doksaeter *et al*., 2008; Hayes *et al*., 2022). Seasonal shifts in abundance occur throughout the western North Atlantic region, where the dolphins appear to be more prevalent from Georges Bank to the lower Bay of Fundy from June through September. From October to December, they appear to occur at intermediate densities from southern Georges Bank to the southern Gulf of Maine (Payne *et al*., 1990; Hayes *et al*., 2022). Sightings of dolphins south of Georges Bank (Hudson Canyon in particular) occur year-round, but generally at lower densities (Hayes *et al*., 2022).

Based on observations made during CeTAP surveys in 1982, Atlantic white-sided dolphins were found primarily east and north of Long Island and the project area. The Atlantic white-sided dolphins observed south of Long Island were farther offshore in the deeper water of the continental shelf proper and closer to the continental shelf slope. This species was largely absent from the overall region (Cape Hatteras, NC, to the Gulf of Maine) during the winter (CeTAP 1982).

Historically, Atlantic white-sided dolphins have stranded along the coasts of NY and NJ. However, since 2015, no strandings have been reported in either state (Hayes *et al.*, 2022). During 2013, two Atlantic white-sided dolphins stranded along the Long Island coast (RFMRP 2014) in March and May.

Based on the known occurrence of this species in New England waters east and north of the Project area during the spring, summer, and fall, and the overall lack of presence throughout the region during the winter, it is possible that Atlantic white-sided dolphin could infrequently occur in the vicinity of the Project area during the in-water maintenance period.

Bottlenose Dolphin

There are two distinct bottlenose dolphin morphotypes in the western North Atlantic: The coastal and offshore forms (Hayes *et al.,* 2018). The two morphotypes are genetically distinct based upon both mitochondrial and nuclear markers (Hoelzel *et al.,* 1998; Rosel *et al.,* 2009). The offshore form is distributed primarily along the outer continental shelf and continental slope in waters greater than 40 m from Georges Bank to the Florida Keys (Hayes *et al*., 2018). The Northern Migratory Coastal stock occupies coastal waters from the shoreline to approximately the 20-m isobath between Assateague, VA, and Long Island, NY during warm water months. The stock migrates in late summer and fall and, during cold water months (best described by January and February), occupies coastal waters from approximately Cape Lookout, NC, to the NC/VA border

(Garrison *et al.,* 2017). Based on the known distribution of the Northern Migratory Coastal stock, this stock could also occur in the vicinity of the project during the proposed project; however, Sandy Hook, NJ (southeast of Raritan Bay) represents the northern extent of the stock's range (Hayes *et al.,* 2018).

From 2014 to 2018, 50 bottlenose dolphins stranded in NY and 88 stranded in NJ (Hayes *et al.*, 2020). A significant number of strandings occurred in 2013, with 38 strandings in NY and 153 strandings in NJ. The stock identity of these strandings is highly uncertain and may include individuals from the coastal and offshore stocks (Hayes *et al.*, 2020). NMFS declared a UME for bottlenose dolphins in the mid-Atlantic region beginning in early July 2013 and ending March 2015. This UME included elevated numbers of strandings in NY, NJ, Delaware, Maryland, and VA. Incidental take of dolphins proposed for authorization here may be of either the offshore or northern coastal migratory stocks.

Common Dolphin

The common dolphin is found world-wide in temperate to subtropical seas. In the North Atlantic, common dolphins are typically found over the continental shelf between the 100-m and 2,000-m isobaths and over prominent underwater topography and east to the mid-Atlantic Ridge (Doksaeter *et al.,* 2008; Waring *et al*., 2008), but may be found in shallower shelf waters as well. Common dolphins occur primarily east and north of Long Island and may occur in the project area during all seasons (CeTAP, 1982). Between 2015 and 2019, 41 common dolphins stranded in NY and 14 stranded in NJ (Hayes *et al*., 2022).

Atlantic Spotted Dolphin

Atlantic spotted dolphins are found in tropical and warm temperate waters ranging from southern New England, south to Gulf of Mexico and the Caribbean to Venezuela (Hayes *et al.,* 2020). The Western North Atlantic stock regularly occurs in continental shelf waters south of Cape Hatteras and in continental shelf edge and continental slope waters north of this region (Hayes *et al.,* 2020). There are two forms of this species, with the larger ecotype inhabiting the continental shelf and usually occurring inside or near the 200-m isobaths (Hayes *et al.,* 2020). It has been suggested that the species may move inshore seasonally during the spring, but data to support this theory is limited (Caldwell and Caldwell, 1966; Fritts *et al.,* 1983). No Atlantic spotted dolphins have been stranded along the NY or NJ coasts in recent years.

Harbor Porpoise

Harbor porpoises occur from the coastline to deep waters (>1800 m; Westgate *et al.,* 1998), although the majority of the population is found over the continental shelf in waters less than 150 m (Hayes *et al.,* 2022). In the project area, only the Gulf of Maine/Bay of Fundy stock of harbor porpoise may be present. This stock is found in U.S. and Canadian Atlantic waters and is concentrated in the northern Gulf of Maine and southern Bay of Fundy region in the summer, but they are widely dispersed from NJ to ME in the spring and fall (Hayes *et al.,* 2022). In the winter, intermediate densities of harbor porpoises can be found in waters off NJ to NC, and lower densities of harbor porpoises can be found in waters of NY to New Brunswick, Canada. In 2011, six sightings were recorded inside Long Island Sound with one sighting recorded just outside the Sound (NEFSC and SEFSC, 2011). Between 2011 and 2015, 33 harbor porpoises stranded in NY and 17 stranded in NJ (Hayes *et al.,* 2018). Additionally, between 2015 and 2019, 31 harbor porpoises stranded in NY and 32 stranded in NJ (Hayes *et al*., 2022).

Harp Seal

Harp seals are highly migratory and occur throughout much of the North Atlantic and Arctic Oceans. Breeding occurs between late-February and April and adults then assemble on suitable pack ice to undergo the annual molt. The migration then continues north to Arctic summer feeding grounds. Harp seal occurrence in the project area is considered rare. However, since the early 1990s, numbers of sightings and strandings have been increasing off the east coast of the United States from ME to NJ (Rubinstein 1994; Stevick and Fernald 1998; McAlpine 1999; Lacoste and Stenson 2000; Soulen *et al.,* 2013). These extralimital appearances usually occur in January-May (Harris *et al.,* 2002), when the western North Atlantic stock is at its most southern point of migration.

Between 2011 and 2015, 78 harp seals stranded (mortalities) in NY and 22 stranded (mortalities) in NJ (Hayes *et al.,* 2018). During 2013, eight harp seals stranded (mortalities and alive) on Long Island (RFMRP, 2014). All of those strandings occurred between January and June. Between 2015 and 2019, 86 harp seals stranded in NY and 15 stranded in NJ (Hayes *et al*., 2022).

As described above, elevated seal mortalities, including harp seals, occurred across ME, New Hampshire (NH) and Massachusetts (MA), and as far south as Virginia (VA), between July 2018 and March 2020. This event was declared a UME though it is currently non-active with closure pending, with phocine distemper virus identified as the main pathogen found in the seals. Information on this UME is available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events.*

Harbor Seal

Harbor seals are found in all nearshore waters of the North Atlantic and North Pacific Oceans and adjoining seas above about 30° N (Burns, 2009). In the western North Atlantic, harbor seals are year-round inhabitants of the coastal waters of eastern Canada and ME and occur seasonally along the coasts from southern New England to VA. Their presence in the region of the project area increases from October to March, when adults, sub-adults, and juveniles are expected to migrate south from ME. They return north to the coastal waters of ME and Canada in late spring (Katona *et al.,* 1993). The closest known haulout sites for harbor seals in the vicinity of the project area are located 2.9 km (1.8 mi) southwest of the project site (Reynolds 2022) and 16.1 km (10 statute miles) east [Coastal Research and Education Society of Long Island (CRESLI) 2023], outside of the ensonified area. There are approximately 26 haulout locations around Long Island, and CRESLI has documented a total of 31,846 pinnipeds (primarily harbor seals) during surveys since 2006 (CRESLI 2023).

Between July 2018 and March 2020, elevated numbers of harbor seal and gray seal mortalities occurred across ME, NH and MA. This event was declared a UME though it is currently non-active with closure pending. Stranded seals showed clinical signs as far south as VA, although not in elevated numbers, therefore the UME investigation encompassed all seal strandings from ME to VA. The main pathogen found in the seals was phocine distemper virus. Information on this UME is available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events.*

Gray Seal

Gray seals in the project area belong to the western North Atlantic stock and range from NJ to Labrador. Current population trends show that gray seal abundance is likely increasing in the U.S. Atlantic EEZ (Hayes *et al.,* 2022). Although the rate of increase is unknown, surveys conducted since their arrival in the 1980s indicate a steady increase in abundance in both ME and MA (Hayes *et al.,* 2022). It is believed that recolonization by Canadian gray seals is the source of the U.S. population (Wood *et al.,* 2011). The closest known haulout sites for gray seals in the vicinity of the project area are located 2.9 km (1.8 mi) southwest (Sandy Hook Beach) outside of the ensonified area (Reynolds 2022). Additional haulout sites are likely Little Gull Island in the Long Island Sound (CRESLI, 2023). Gray seals also haul out on Great Gull Island and Little Gull Island in eastern Long Island Sound (DiGiovanni *et al.,* 2015).

Between July 2018 and March 2020, elevated numbers of harbor seal and gray seal mortalities occurred across ME, NH and MA. This event was declared a UME though it is currently non-active with closure pending. Stranded seals showed clinical signs as far south as VA, although not in elevated numbers, therefore the UME investigation encompassed all seal strandings from ME to VA. The main pathogen found in the seals was phocine distemper virus. Information on this UME is available online at: *https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-unusual-mortality-events.*

Marine Mammal Hearing

Hearing is the most important sensory modality for marine mammals underwater, and exposure to anthropogenic sound can have deleterious effects. To appropriately assess the potential effects of exposure to sound, it is necessary to understand the frequency ranges marine mammals are able to hear. Not all marine mammal species have equal hearing capabilities (*e.g.*, Richardson *et al.*, 1995; Wartzok and Ketten, 1999; Au and Hastings, 2008). To reflect this, Southall *et al.,* (2007, 2019) recommended that marine mammals be divided into hearing groups based on directly measured (behavioral or auditory evoked potential techniques) or estimated hearing ranges (behavioral response data, anatomical modeling, *etc*.). Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.*, low-frequency cetaceans). Subsequently, NMFS (2018) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibel (dB) threshold from the normalized composite audiograms, with the exception for lower limits for low-frequency cetaceans where the lower bound was deemed to be biologically implausible and the lower bound from Southall *et al.,* (2007) retained. Marine mammal hearing groups and their associated hearing ranges are provided in table 3.

Table 3 -- Marine Mammal Hearing Groups (NMFS, 2018)

Hearing Group	Generalized Hearing Range*
Low-frequency (LF) cetaceans (baleen whales)	7 Hz to 35 kHz
Mid-frequency (MF) cetaceans (dolphins, toothed whales, beaked whales, bottlenose whales)	150 Hz to 160 kHz
High-frequency (HF) cetaceans (true porpoises, *Kogia*, river dolphins, Cephalorhynchid, *Lagenorhynchus cruciger* & *L. australis*)	275 Hz to 160 kHz
Phocid pinnipeds (PW) (underwater) (true seals)	50 Hz to 86 kHz
Otariid pinnipeds (OW) (underwater) (sea lions and fur seals)	60 Hz to 39 kHz
* Represents the generalized hearing range for the entire group as a composite (*i.e.,* all species within the group), where individual species' hearing ranges are typically not as broad. Generalized hearing range chosen based on ~65 dB threshold from normalized composite audiogram, with the exception for lower limits for LF cetaceans (Southall *et al.,* 2007) and PW pinniped (approximation).	

The pinniped functional hearing group was modified from Southall *et al*., (2007) on the basis of data indicating that phocid species have consistently demonstrated an extended frequency range of hearing compared to otariids, especially in the higher frequency range (Hemilä *et al*., 2006; Kastelein *et al*., 2009; Reichmuth *et al*., 2013).

For more detail concerning these groups and associated frequency ranges, please see NMFS (2018) for a review of available information.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section provides a discussion of the ways in which components of the specified activity may impact marine mammals and their habitat. The **Estimated Take of Marine Mammals** section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The **Negligible Impact Analysis and Determination** section considers the content of this section, the **Estimated Take of Marine Mammals** section, and the **Proposed Mitigation** section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and whether those impacts are reasonably expected to, or reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

Acoustic effects on marine mammals during the specified activity can occur from impact and vibratory pile driving. These effects may result in Level A or Level B harassment of marine mammals in the project area.

Description of Sound Sources

The marine soundscape is comprised of both ambient and anthropogenic sounds. Ambient sound is defined as the all-encompassing sound in a given place and is usually a composite of sound from many sources both near and far (American National Standards Institute (ANSI) 1995). The sound level of an area is defined by the total acoustical energy being generated by known and unknown sources. These sources may include physical (*e.g.,* waves, wind, precipitation, earthquakes, ice, atmospheric sound), biological (*e.g.,* sounds produced by marine mammals, fish, and invertebrates), and anthropogenic sound (*e.g.,* vessels, dredging, aircraft, construction).

The sum of the various natural and anthropogenic sound sources at any given location and time—which comprise "ambient" or "background" sound—depends not only on the source levels (as determined by current weather conditions and levels of biological and shipping activity) but also on the ability of sound to propagate through the environment. In turn, sound propagation is dependent on the spatially and temporally varying properties of the water column and sea floor, and is frequency-dependent. As a result of the dependence on a large number of varying factors, ambient sound levels can be expected to vary widely over both coarse and fine spatial and temporal scales. Sound levels at a given frequency and location can vary by 10-20 dB from day to day (Richardson *et al.,* 1995). The result is that, depending on the source type and its intensity, sound from the specified activity may be a negligible addition to the local environment or could form a distinctive signal that may affect marine mammals.

In-water construction activities associated with the project would include impact and vibratory pile driving. The sounds produced by these activities fall into one of two general sound types: impulsive and non-impulsive. Impulsive sounds (*e.g.,* explosions, gunshots, sonic booms, impact pile driving) are typically transient, brief (less than 1 second), broadband, and consist of high peak sound pressure with rapid rise time and rapid decay [ANSI 1986; National Institute of Occupational Safety and Health (NIOSH) 1998; NMFS 2018]. Non-impulsive sounds (*e.g.,* aircraft, machinery operations such as drilling or dredging, vibratory pile driving, and active sonar systems) can be broadband, narrowband or tonal, brief or prolonged (continuous or intermittent), and typically do not have the high peak sound pressure with rapid rise/decay time that impulsive sounds do (ANSI 1995; NIOSH 1998; NMFS 2018). The distinction between these two sound types is important because they have differing potential to cause physical effects, particularly with regard to hearing (*e.g.,* Ward 1997 in Southall *et al.,* 2007).

Two types of hammers would be used on this project: impact and vibratory. Impact hammers operate by repeatedly dropping a heavy piston onto a pile to drive the pile into the substrate. Sound generated by impact hammers is characterized by rapid rise times and high peak levels, a potentially injurious combination (Hastings and Popper, 2005). Vibratory hammers install piles by vibrating them and allowing the weight of the hammer to push them into the sediment. Vibratory hammers produce significantly less sound than impact hammers. Peak sound pressure levels (SPLs) may be 180 dB or greater, but are generally 10 to 20 dB lower than SPLs generated during impact pile driving of the same-sized pile (Oestman *et al.,* 2009). Rise time is slower, reducing the probability and severity of injury, and sound energy is distributed over a greater amount of time (Nedwell and Edwards, 2002; Carlson *et al.,* 2005).

The likely or possible impacts of Transco's proposed activity on marine mammals could involve both non-acoustic and acoustic stressors. Potential non-acoustic stressors could result from the physical presence of equipment and personnel; however, any impacts to marine mammals are expected to be primarily acoustic in nature.

Acoustic Impacts

The introduction of anthropogenic noise into the aquatic environment from pile driving is the means by which marine mammals may be harassed from Transco's specified activity. In general, animals exposed to natural or anthropogenic sound may experience behavioral, physiological, and/or physical effects, ranging in magnitude from none to severe (Southall *et al.,* 2007, 2019). In general, exposure to pile driving noise has the potential to result in behavioral reactions (*e.g.,* avoidance, temporary cessation of foraging and vocalizing, changes in dive behavior) and, in limited cases, auditory threshold shifts. Exposure to anthropogenic noise can also lead to non-observable physiological responses such an increase in stress hormones. Additional noise in a marine mammal's habitat can mask acoustic cues used by marine mammals to carry out daily functions such as communication and predator and prey detection. The effects of pile driving noise on marine mammals are dependent on several factors, including, but not limited to, sound type (*e.g.,* impulsive vs. non-impulsive), the species, age and sex class (*e.g.,* adult male vs. mom with calf), duration of exposure, the distance between the pile and the animal, received levels, behavior at time of exposure, and previous history with exposure (Wartzok *et al.,* 2004; Southall *et al.,* 2007). Here we discuss physical auditory effects (threshold shifts) followed by behavioral effects and potential impacts on habitat.

NMFS defines a noise-induced threshold shift (TS) as a change, usually an increase, in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). The amount of threshold shift is customarily expressed in dB. A TS can be permanent or temporary. As described in NMFS (2018), there are numerous factors to consider when examining the consequence of TS, including, but not limited to, the signal temporal pattern (*e.g.,* impulsive or non-impulsive), likelihood an individual would be exposed for a long enough duration or to a high enough level to induce a TS, the magnitude of the TS, time to recovery (seconds to minutes or hours to days), the frequency range of the exposure (*i.e.,* spectral content), the hearing and vocalization frequency range of the exposed species relative to the signal's frequency spectrum (*i.e.,* how animal uses sound within the frequency band of the signal; *e.g.,* Kastelein *et al.,* 2014), and the overlap between the animal and the source (*e.g.,* spatial, temporal, and spectral).

Permanent Threshold Shift (PTS)—NMFS defines PTS as a permanent, irreversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). Available data from humans and other terrestrial mammals indicate that a 40 dB threshold shift approximates PTS onset (see Ward *et al.,* 1958, 1959; Ward 1960; Kryter *et al.,* 1966; Miller 1974; Ahroon *et al.,* 1996; Henderson *et al.,* 2008). PTS levels for marine mammals are estimates, as with the exception of a single study unintentionally inducing PTS in a harbor seal (Kastak *et al.,* 2008), there are no empirical data measuring PTS in marine mammals largely due to the fact that, for various ethical reasons, experiments involving anthropogenic noise exposure at levels inducing PTS are not typically pursued or authorized (NMFS 2018).

Temporary Threshold Shift (TTS)—A temporary, reversible increase in the threshold of audibility at a specified frequency or portion of an individual's hearing range above a previously established reference level (NMFS 2018). Based on data from cetacean TTS measurements (see Southall *et al.,* 2007), a TTS of 6 dB is considered the minimum threshold shift clearly larger than any day-to-day or session-to-session variation in a subject's normal hearing ability (Schlundt *et al.,* 2000; Finneran *et al.,* 2000, 2002). As described in Finneran (2015), marine mammal studies have shown the amount of TTS increases with cumulative sound exposure level (SELcum) in an accelerating fashion: At low exposures with lower SELcum, the amount of TTS is typically small and the growth curves have shallow slopes. At exposures with higher SELcum, the growth curves become steeper and approach linear relationships with the noise SEL.

Depending on the degree (elevation of threshold in dB), duration (*i.e.,* recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious (similar to those discussed in *Masking*, below). For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that takes place during a time when the animal is traveling through the open ocean, where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during time when communication is critical for successful mother/calf interactions could have more serious impacts. We note that reduced hearing sensitivity as a simple function of aging has been observed in marine mammals, as well as humans and other taxa (Southall *et al.,* 2007), so we can infer that strategies exist for coping with this condition to some degree, though likely not without cost.

Currently, TTS data only exist for four species of cetaceans (bottlenose dolphin, beluga whale (*Delphinapterus leucas*), harbor porpoise, and Yangtze finless porpoise (*Neophocoena asiaeorientalis*)) and five species of pinnipeds exposed to a limited number of sound sources (*i.e.,* mostly tones and octave-band noise) in laboratory settings (Finneran 2015). TTS was not observed in trained spotted (*Phoca largha*) and ringed (*Pusa hispida*) seals exposed to impulsive noise at levels matching previous predictions of TTS onset (Reichmuth *et al.,* 2016). In general, harbor seals and harbor porpoises have a lower TTS onset than other measured pinniped or cetacean species (Finneran 2015). Additionally, the existing marine mammal TTS data come from a limited number of individuals within these species. No data are available on noise-induced hearing loss for mysticetes. For summaries of data on TTS in marine mammals or for further discussion of TTS onset thresholds, please see Southall *et al.,* (2007), Finneran and Jenkins (2012), Finneran (2015), and table 5 in NMFS (2018).

Activities for this project include impact and vibratory pile driving. There would likely be pauses in activities producing the sound during each day. Given these pauses and the fact that many marine mammals are likely moving through the project areas and not remaining for extended periods of time, the potential for threshold shift declines.

Behavioral Harassment—Exposure to noise from pile driving also has the potential to behaviorally disturb marine mammals. Available studies show wide variation in response to underwater sound; therefore, it is difficult to predict specifically how any given sound in a particular instance might affect marine mammals perceiving the signal. If a marine mammal does react briefly to an underwater sound by changing its behavior or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the stock or population. However, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period, impacts on individuals and populations could be significant (*e.g.,* Lusseau and Bejder 2007; Weilgart 2007; National Research Council (NRC) 2005).

Disturbance may result in changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where sound sources are located. Pinnipeds may increase their haul out time, possibly to avoid in-water disturbance (Thorson and Reyff 2006). Behavioral responses to sound are highly variable and context-specific and any reactions depend on numerous intrinsic and extrinsic factors (*e.g.,* species, state of maturity, experience, current activity, reproductive state, auditory sensitivity, time of day), as well as the interplay between factors (*e.g.,* Richardson *et al.,* 1995; Wartzok *et al.,* 2004; Southall *et al.,* 2007; Weilgart 2007; Archer *et al.,* 2010). Behavioral reactions can vary not only among individuals but also within an individual, depending on previous experience with a sound source, context, and numerous other factors (Ellison *et al.,* 2012), and can vary depending on characteristics associated with the sound source (*e.g.,* whether it is moving or stationary, number of sources, distance from the source). In general, pinnipeds seem more tolerant of, or at least habituate more quickly to, potentially disturbing underwater sound than do cetaceans, and generally seem to be less responsive to exposure to industrial sound than most cetaceans. Please see Appendices B and C of Southall *et al.,* (2007) for a review of studies involving marine mammal behavioral responses to sound.

Disruption of feeding behavior can be difficult to correlate with anthropogenic sound exposure, so it is usually inferred by observed displacement from known foraging areas, the appearance of secondary indicators (*e.g.,* bubble nets or sediment plumes), or changes in dive behavior. As for other types of behavioral response, the frequency, duration, and temporal pattern of signal presentation, as well as differences in species sensitivity, are likely contributing factors to differences in response in any given circumstance (*e.g.,* Croll *et al.,* 2001; Nowacek *et al.,* 2004; Madsen *et al.,* 2006; Yazvenko *et al.,* 2007; Melcón *et al.,* 2012). In addition, behavioral state of the animal plays a role in the type and severity of a behavioral response, such as disruption to foraging (*e.g.,* Sivle *et al.,* 2016). A determination of whether foraging disruptions incur fitness consequences would require information on or estimates of the energetic requirements of the affected individuals and the relationship between prey availability, foraging effort and success, and the life history stage of the animal (Goldbogen *et al.,* 2013).

Stress responses - An animal's perception of a threat may be sufficient to trigger stress responses consisting of some combination of behavioral responses, autonomic nervous system responses, neuroendocrine responses, or immune responses (*e.g.,* Seyle 1950; Moberg 2000). In many cases, an animal's first and sometimes most economical (in terms of energetic costs) response is behavioral avoidance of the potential stressor. Autonomic nervous system responses to stress typically involve changes in heart rate, blood pressure, and gastrointestinal activity. These responses have a relatively short duration and may or may not have a significant long-term effect on an animal's fitness.

Neuroendocrine stress responses often involve the hypothalamus-pituitary-adrenal system. Virtually all neuroendocrine functions that are affected by stress—including immune competence, reproduction, metabolism, and behavior—are regulated by pituitary hormones. Stress-induced changes in the secretion of pituitary hormones have been implicated in failed reproduction, altered metabolism, reduced immune competence, and behavioral disturbance (*e.g.,* Moberg 1987; Blecha 2000). Increases in the circulation of glucocorticoids are also equated with stress (Romano *et al.,* 2004).

The primary distinction between stress (which is adaptive and does not normally place an animal at risk) and "distress" is the cost of the response. During a stress response, an animal uses glycogen stores that can be quickly replenished once the stress is alleviated. In such circumstances, the cost of the stress response would not pose serious fitness consequences. However, when an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other functions. This state of distress will last until the animal replenishes its energetic reserves sufficient to restore normal function.

Relationships between these physiological mechanisms, animal behavior, and the costs of stress responses are well-studied through controlled experiments and for both laboratory and free-ranging animals (*e.g.,* Holberton *et al.,* 1996; Hood *et al.,* 1998;

Jessop *et al.,* 2003; Krausman *et al.,* 2004; Lankford *et al.,* 2005). Stress responses due to exposure to anthropogenic sounds or other stressors and their effects on marine mammals have also been reviewed (Fair and Becker 2000; Romano *et al.,* 2002b) and, more rarely, studied in wild populations (*e.g.,* Romano *et al.,* 2002a). For example, Rolland *et al.,* (2012) found that noise reduction from reduced ship traffic in the Bay of Fundy was associated with decreased stress in North Atlantic right whales. These and other studies lead to a reasonable expectation that some marine mammals will experience physiological stress responses upon exposure to acoustic stressors and that it is possible that some of these would be classified as "distress." In addition, any animal experiencing TTS would likely also experience stress responses (NRC 2003), however distress is an unlikely result of this project based on observations of marine mammals during previous, similar projects in the area.

Masking—Sound can disrupt behavior through masking, or interfering with, an animal's ability to detect, recognize, or discriminate between acoustic signals of interest (*e.g.,* those used for intraspecific communication and social interactions, prey detection, predator avoidance, navigation) (Richardson *et al.,* 1995). Masking occurs when the receipt of a sound is interfered with by another coincident sound at similar frequencies and at similar or higher intensity, and may occur whether the sound is natural (*e.g.,* snapping shrimp, wind, waves, precipitation) or anthropogenic (*e.g.,* pile driving, shipping, sonar, seismic exploration) in origin. The ability of a noise source to mask biologically important sounds depends on the characteristics of both the noise source and the signal of interest (*e.g.,* signal-to-noise ratio, temporal variability, direction), in relation to each other and to an animal's hearing abilities (*e.g.,* sensitivity, frequency range, critical ratios, frequency discrimination, directional discrimination, age or TTS hearing loss), and existing ambient noise and propagation conditions. Masking of natural sounds can result when human activities produce high levels of background sound at frequencies important to marine mammals. Conversely, if the background level of underwater sound is high (*e.g.,* on a day with strong wind and high waves), an anthropogenic sound source would not be detectable as far away as would be possible under quieter conditions and would itself be masked.

Airborne Acoustic Effects — Airborne noise would primarily be an issue for pinnipeds that are swimming or hauled out near the project site within the range of noise levels elevated above the acoustic criteria. We recognize that pinnipeds in the water could be exposed to airborne sound that may result in behavioral harassment when looking with their heads above water. Most likely, airborne sound would cause behavioral responses similar to those discussed above in relation to underwater sound. For instance, anthropogenic sound could cause hauled-out pinnipeds to exhibit changes in their normal behavior, such as reduction in vocalizations, or cause them to temporarily abandon the area and move further from the source. However, these animals would previously have been "taken" because of exposure to underwater sound above the behavioral harassment thresholds, which are in all cases larger than those associated with airborne sound. Thus, the behavioral harassment of these animals is already accounted for in these estimates of potential take. Therefore, we do not believe that authorization of incidental take resulting from airborne sound for pinnipeds is warranted, and airborne sound is not discussed further. Cetaceans are not expected to be exposed to airborne sounds that would result in harassment as defined under the MMPA.

Marine Mammal Habitat Effects

The proposed activities would not result in permanent impacts to habitats used directly by marine mammals, but may have potential short-term impacts to food sources such as forage fish. The proposed activities could also affect acoustic habitat (see masking discussion above), but meaningful impacts are unlikely. There are no known foraging hotspots, or other ocean bottom structures of significant biological importance to marine mammals present in the project area. Therefore, the main impact issue associated with the proposed activity would be temporarily elevated sound levels and the associated direct effects on marine mammals, as discussed previously. The most likely impact to marine mammal habitat occurs from pile driving effects on likely marine mammal prey (*e.g.,* fish). Impacts to the immediate substrate during installation of piles are anticipated, but these would be limited to minor, temporary suspension of sediments, which could impact water quality and visibility for a short amount of time, without any expected effects on individual marine mammals. Impacts to substrate are therefore not discussed further.

In-water Construction Effects on Potential Prey —Sound may affect marine mammals through impacts on the abundance, behavior, or distribution of prey species (*e.g.,* crustaceans, cephalopods, fish, zooplankton). Marine mammal prey varies by species, season, and location and, for some, is not well documented. Here, we describe studies regarding the effects of noise on known marine mammal prey.

Fish utilize the soundscape and components of sound in their environment to perform important functions such as foraging, predator avoidance, mating, and spawning (*e.g.,* Zelick *et al.,* 1999; Fay, 2009). Depending on their hearing anatomy and peripheral sensory structures, which vary among species, fishes hear sounds using pressure and particle motion sensitivity capabilities and detect the motion of surrounding water (Fay *et al.,* 2008). The potential effects of noise on fishes depends on the overlapping frequency range, distance from the sound source, water depth of exposure, and species-specific hearing sensitivity, anatomy, and physiology. Key impacts to fishes may include behavioral responses, hearing damage, barotrauma (pressure-related injuries), and mortality.

Fish react to sounds which are especially strong and/or intermittent low-frequency sounds, and behavioral responses such as flight or avoidance are the most likely effects.

Short duration, sharp sounds can cause overt or subtle changes in fish behavior and local distribution. The reaction of fish to noise depends on the physiological state of the fish, past exposures, motivation (*e.g.,* feeding, spawning, migration), and other environmental factors. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Additional studies have documented effects of pile driving on fish, although several are based on studies in support of large, multiyear bridge construction projects (*e.g.,* Scholik and Yan, 2001, 2002; Popper and Hastings, 2009). Several studies have demonstrated that impulse sounds might affect the distribution and behavior of some fishes, potentially impacting foraging opportunities or increasing energetic costs (*e.g.,* Fewtrell and McCauley, 2012; Pearson *et al.,* 1992; Skalski *et al.,* 1992; Santulli *et al.,* 1999; Paxton *et al.,* 2017). However, some studies have shown no or slight reaction to impulse sounds (*e.g.,* Pena *et al.,* 2013; Wardle *et al.,* 2001; Jorgenson and Gyselman, 2009; Cott *et al.,* 2012). More commonly, though, the impacts of noise on fish are temporary.

SPLs of sufficient strength have been known to cause injury to fish and fish mortality. However, in most fish species, hair cells in the ear continuously regenerate and loss of auditory function likely is restored when damaged cells are replaced with new cells. Halvorsen *et al.,* (2012a) showed that a TTS of 4-6 dB was recoverable within 24 hours for one species. Impacts would be most severe when the individual fish is close to the source and when the duration of exposure is long. Injury caused by barotrauma can range from slight to severe and can cause death, and is most likely for fish with swim bladders. Barotrauma injuries have been documented during controlled exposure to impact pile driving (Halvorsen *et al.,* 2012b; Casper *et al.,* 2013).

The most likely impact to fish from pile driving activities in the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of an area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated. In general, impacts to marine mammal prey species are expected to be minor and temporary due to the expected short daily duration of individual pile driving events and the relatively small areas being affected.

Estimated Take of Marine Mammals

This section provides an estimate of the number of incidental takes proposed for authorization through the IHA, which will inform both NMFS' consideration of "small numbers," and the negligible impact determinations.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as any act of pursuit, torment, or annoyance, which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would primarily be by Level B harassment, as use of the acoustic sources (*i.e.*, impact and vibratory pile driving) has the potential to result in disruption of behavioral patterns for individual marine mammals. There is also some potential for auditory injury (Level A harassment) to result, for phocids because predicted auditory injury zones are relatively large, and seals are expected to be relatively common and are more difficult to detect at greater distances. The proposed mitigation and monitoring measures are expected to minimize the severity of the taking to the extent practicable.

As described previously, no serious injury or mortality is anticipated or proposed to be authorized for this activity. Below we describe how the proposed take numbers are estimated.

For acoustic impacts, generally speaking, we estimate take by considering: (1) acoustic thresholds above which NMFS believes the best available science indicates marine mammals will be behaviorally harassed or incur some degree of permanent hearing impairment; (2) the area or volume of water that will be ensonified above these levels in a day; (3) the density or occurrence of marine mammals within these ensonified areas; and, (4) the number of days of activities. We note that while these factors can contribute to a basic calculation to provide an initial prediction of potential takes, additional information that can qualitatively inform take estimates is also sometimes available (*e.g.,* previous monitoring results or average group size). Below, we describe the factors considered here in more detail and present the proposed take estimates.

Acoustic Thresholds

NMFS recommends the use of acoustic thresholds that identify the received level of underwater sound above which exposed marine mammals would be reasonably expected to be behaviorally harassed (equated to Level B harassment) or to incur PTS of some degree (equated to Level A harassment).

Level B Harassment – Though significantly driven by received level, the onset of behavioral disturbance from anthropogenic noise exposure is also informed to varying degrees by other factors related to the source or exposure context (*e.g.*, frequency, predictability, duty cycle, duration of the exposure, signal-to-noise ratio, distance to the source), the environment (*e.g.*, bathymetry, other noises in the area, predators in the area), and the receiving animals (hearing, motivation, experience, demography, life stage, depth) and can be difficult to predict (*e.g.*, Southall *et al.,* 2007, 2021, Ellison *et al.*, 2012). Based on what the available science indicates and the practical need to use a threshold based on a metric that is both predictable and measurable for most activities, NMFS typically uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS generally predicts that marine mammals are likely to be behaviorally harassed in a manner considered to be Level B harassment when exposed to underwater anthropogenic noise above root-mean-squared pressure received levels (RMS SPL) of 120 dB (referenced to 1 micropascal (re 1 μPa)) for continuous (*e.g.,* vibratory pile driving, drilling) and above RMS SPL 160 dB re 1 μPa for non-explosive impulsive (*e.g.*, seismic airguns) or intermittent (*e.g.*, scientific sonar) sources. Generally speaking, Level B harassment take estimates based on these behavioral harassment thresholds are expected to include any likely takes by TTS as, in most cases, the likelihood of TTS occurs at distances from the source less than those at which behavioral harassment is likely. TTS of a sufficient degree can manifest as behavioral harassment, as reduced hearing sensitivity and the potential reduced opportunities to detect important signals (conspecific communication, predators, prey) may result in changes in behavior patterns that would not otherwise occur.

Transco's proposed activity includes the use of continuous (vibratory pile driving) and impulsive (impact pile driving) sources, and therefore the RMS SPL thresholds of 120 and 160 dB re 1 μPa is/are applicable.

Level A harassment – NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0) (Technical Guidance, 2018) identifies dual criteria to assess auditory injury (Level A harassment) to five different marine mammal groups (based on hearing sensitivity) as a result of exposure to noise from two different types of sources (impulsive or non-impulsive). Transco's proposed activity includes the use of impulsive (impact pile driving) and non-impulsive (vibratory pile driving) sources.

These thresholds are provided in the table below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS' 2018 Technical Guidance, which may be accessed at:

https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-acoustic-technical-guidance.

Table 4 -- Thresholds Identifying the Onset of Permanent Threshold Shift.

	PTS Onset Acoustic Thresholds* (Received Level)	
Hearing Group	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	*Cell 1* $L_{pk,flat}$: 219 dB $L_{E,LF,24h}$: 183 dB	*Cell 2* $L_{E,LF,24h}$: 199 dB
Mid-Frequency (MF) Cetaceans	*Cell 3* $L_{pk,flat}$: 230 dB $L_{E,MF,24h}$: 185 dB	*Cell 4* $L_{E,MF,24h}$: 198 dB
High-Frequency (HF) Cetaceans	*Cell 5* $L_{pk,flat}$: 202 dB $L_{E,HF,24h}$: 155 dB	*Cell 6* $L_{E,HF,24h}$: 173 dB
Phocid Pinnipeds (PW) (Underwater)	*Cell 7* $L_{pk,flat}$: 218 dB $L_{E,PW,24h}$: 185 dB	*Cell 8* $L_{E,PW,24h}$: 201 dB
Otariid Pinnipeds (OW) (Underwater)	*Cell 9* $L_{pk,flat}$: 232 dB $L_{E,OW,24h}$: 203 dB	*Cell 10* $L_{E,OW,24h}$: 219 dB

* Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note: Peak sound pressure (L_{pk}) has a reference value of 1 μPa, and cumulative sound exposure level (L_E) has a reference value of $1 \mu Pa^2 s$. In this Table, thresholds are abbreviated to reflect American National Standards Institute standards (ANSI 2013). However, peak sound pressure is defined by ANSI as incorporating frequency weighting, which is not the intent for this Technical Guidance. Hence, the subscript "flat" is being included to indicate peak sound pressure should be flat weighted or unweighted within the generalized hearing range. The subscript associated with cumulative sound exposure level thresholds indicates the designated marine mammal auditory weighting function (LF, MF, and HF cetaceans, and PW and OW pinnipeds) and that the recommended accumulation period is 24 hours. The cumulative sound exposure level thresholds could be exceeded in a multitude of ways (*i.e.*, varying exposure levels and durations, duty cycle). When possible, it is valuable for action proponents to indicate the conditions under which these acoustic thresholds will be exceeded.

Ensonified Area

Here, we describe operational and environmental parameters of the activity that are used in estimating the area ensonified above the acoustic thresholds, including source levels and transmission loss coefficient.

The sound field in the project area is the existing background noise plus additional construction noise from the proposed project. Marine mammals are expected to be affected via sound generated by the primary components of the project (*i.e.*, pile driving).

The project includes vibratory and impact pile driving. Source levels for these activities are based on reviews of measurements of the same or similar types and dimensions of piles available in the literature. Source levels for each pile size and activity are presented in table 5. Source levels for vibratory installation and removal of piles of the same diameter are assumed to be the same.

Table 5 -- Estimates of Mean Underwater Sound Levels Generated During Vibratory and Impact Pile Installation of 36-inch steel sheet pile

Hammer Type	dB rms	dB SEL	dB peak	Literature Source
Vibratory	182	N/A	N/A	Quijano *et al.*, 2018
Impact	190	180	205	Caltrans, 2015

Note: dB peak = peak sound level; rms = root mean square; SEL = sound exposure level.

Transmission loss (*TL*) is the decrease in acoustic intensity as an acoustic pressure wave propagates out from a source. *TL* parameters vary with frequency, temperature, sea conditions, current, source and receiver depth, water depth, water chemistry, and bottom composition and topography. The general formula for underwater *TL* is:

$$TL = B * \text{Log10} (R1/R2), \text{ where}$$

TL = transmission loss in dB

B = transmission loss coefficient

*R*1 = the distance of the modeled SPL from the driven pile, and

*R*2 = the distance from the driven pile of the initial measurement

Absent site-specific acoustical monitoring with differing measured transmission loss, a practical spreading value of 15 is used as the transmission loss coefficient in the above formula. Site-specific transmission loss data for the Raritan Bay is not available;

therefore, the default coefficient of 15 is used to determine the distances to the harassment thresholds.

The ensonified area associated with Level A harassment is more technically challenging to predict due to the need to account for a duration component. Therefore, NMFS developed an optional User Spreadsheet tool to accompany the Technical Guidance that can be used to relatively simply predict an isopleth distance for use in conjunction with marine mammal density or occurrence to help predict potential takes. We note that because of some of the assumptions included in the methods underlying this optional tool, we anticipate that the resulting isopleth estimates are typically going to be overestimates of some degree, which may result in an overestimate of potential take by Level A harassment. However, this optional tool offers the best way to estimate isopleth distances when more sophisticated modeling methods are not available or practical. For stationary sources such as pile driving, the optional User Spreadsheet tool predicts the distance at which, if a marine mammal remained at that distance for the duration of the activity, it would be expected to incur PTS. Inputs used in the optional User Spreadsheet tool, and the resulting estimated isopleths, are reported below (table 6). The resulting estimated isopleths and the calculated Level B harassment isopleths are reported in table 7.

Table 6 -- User Spreadsheet Inputs

36-inch Steel Sheet Piles		
Spreadsheet Tab Used	A.1) Vibratory Pile Driving	E.1) Impact Pile Driving
Source Level (SPL)	182 RMS	180 SEL
Transmission Loss Coefficient	15	15
Weighting Factor Adjustment (kHz)	2.5	2
Activity Duration per pile (minutes)	10	N/A
Number of strikes per pile	-	520
Number of piles per day	12	12

Distance of sound pressure level measurement	1	10

Table 7 -- Level A Harassment and Level B Harassment Isopleths

Hammer Type	Level A harassment isopleths (m) | area of harassment zone (km^2)*				Level B harassment isopleth (m) | area of harassment zone (km^2)*
	LF	MF	HF	PW	
36-inch Steel Sheet Piles					
Vibratory Pile Driving	27.2	2.4	40.3	16.6	13,594 | 426.13
Impact Pile Driving	2,135.6 | 18.99	76.0 | 0.30	2,543.9 | 25.23	1,142.9 | 7.72	1,000

*Harassment zone areas are clipped by viewshed

Marine Mammal Occurrence

In this section we provide information about the occurrence of marine mammals, including density or other relevant information which will inform the take calculations.

Transco applied the Duke University Marine Geospatial Ecology Laboratory marine mammal habitat-based density models (*https://seamap.env.duke.edu/models/Duke/EC/*) to estimate take from vibratory and impact pile driving (Roberts *et al.,* 2016; Roberts *et al*., 2023). These density data incorporate aerial and shipboard line-transect data from NMFS and other organizations and incorporate data from 8 physiographic and 16 dynamic oceanographic and biological covariates, and control for the influence of sea state, group size, availability bias, and perception bias on the probability of making a sighting. These density models were originally developed for all cetacean taxa in the U.S. Atlantic (Roberts *et al.,* 2016). Most recently, all models were updated in 2022 based on additional data as well as certain methodological improvements. More information is available online at *https://seamap.env.duke.edu/models/Duke/EC/.* Marine mammal density estimates in the project area (animals/km^2) were obtained using the most recent model results for all taxa (Roberts *et al*., 2023).

For each species, the average monthly density (June –September) near work area 3, Sandy Hook Channel, was calculated (table 8). Specifically, in a Geographic Information Systems, density rasters were clipped to polygons representing the zone of influence for Level A harassment zones for each hearing group and the largest Level B harassment zone, which applies to all hearing groups. Densities in Roberts *et al*., (2023) are provided in individuals per 100 square km, however they were converted to individuals per square km for ease of calculation. The monthly maximum density of individuals per square km for each zone of influence was averaged over the months of June to September near work area 3 to provide a single density estimate for each species or species group. The available density information provides densities for seals as a guild due to difficulty in distinguishing these species at sea. Similarly, density information for bottlenose dolphins does not differentiate between stocks. The resulting density values (table 8) were used to calculate take estimates of marine mammals for sheet pile installation activities. Note that other data sources were evaluated for pinnipeds (*e.g.,* Save Coastal Wildlife reports) but were found unsuitable due to data quality and applicability.

Table 8 -- Average Monthly Density of Species in the Project Area (June – September)

Species	Average Monthly Density (individual/km^2) used in Level B take calculations at Work Area 3, Sandy Hook Channel (June – September)	Average Monthly Density (individual/km^2) used in Level A take calculations at Work Area 3, Sandy Hook Channel (June – September)
Fin Whale	1.41361E-04	4.53952E-06
Humpback Whale	9.37889E-05	2.14387E-05
Minke Whale	2.34113E-04	3.12779E-05
Atlantic white-sided dolphin	4.97340E-05	6.98975E-07
Bottlenose dolphin	1.88295E-01	4.76450E-02
Harbor porpoise	1.64816E-04	3.27277E-05
Common dolphin	5.91282E-04	1.24663E-05

Atlantic Spotted Dolphin	2.38665E-04	8.76649E-07
Harp Seals, Gray Seals, Harbor Seals	0.11387	0.11130

Take Estimation

Here we describe how the information provided above is synthesized to produce a quantitative estimate of the take that is reasonably likely to occur and proposed for authorization.

Take estimates are the product of density, ensonified area, and number of days of pile driving work. Specifically, take estimates are calculated by multiplying the expected densities of marine mammals in the activity area(s) by the area of water likely to be ensonified above the NMFS defined threshold levels in a single day (24-hour period). Transco used the construction method that produced the largest isopleth to estimate exposure of marine mammal noise impacts (*i.e.*, the largest ensonified area estimated for vibratory pile driving was used to estimate potential takes by Level B harassment, and the hearing group-specific ensonified areas estimated for impact pile driving were used to estimate potential Level A harassment). Next, that product is multiplied by the number of days vibratory or impact pile driving is likely to occur. The exposure estimate was rounded to the nearest whole number at the end of the calculation. A summary of this method is illustrated in the following formula:

$$Estimated\ Take = D \times ZOI \times \#\ of\ construction\ days$$

Where:

D = density estimate for each species within the ZOI

ZOI = maximum daily ensonified area (km^2) to relevant thresholds

For bottlenose dolphins, the density data presented by Roberts *et al*., (2023) does not differentiate between bottlenose dolphin stocks. Thus, the take estimate for bottlenose dolphins calculated by the method described above resulted in an estimate of the total number of bottlenose dolphins expected to be taken, from all stocks (for a total of 6,419 takes by Level B harassment). However, as described above, both the Western North Atlantic Northern Migratory Coastal stock and the Western North Atlantic Offshore stock have the potential to occur in the project area. Because approximately 95% of the project area occurs in waters shallower than 20 m, we assign take to stock accordingly. Thus, we assume that 95 percent of the total proposed authorized bottlenose dolphin takes would accrue to the Western North Atlantic Offshore stock (total 6,098 takes by Level B harassment), and 5 percent to the Western North Atlantic Northern Migratory Coastal stock (total 321 takes by Level B harassment) (table 9).

Additional data regarding average group sizes from survey effort in the region was considered to ensure adequate take estimates are evaluated. Take estimates for several species were adjusted based upon average groups sizes derived from NOAA Atlantic Marine Assessment Program for Protected Species data from 2010 – 2019 shipboard distance sampling surveys (Palka *et al*., 2021). This is particularly true for uncommon or rare species with very low densities in the models. These calculated take estimates were adjusted for these species as follows:

- Atlantic white-sided dolphin*:* Only 1 take by Level B harassment was estimated but takes proposed for authorization were increased to the average number of dolphins in a group reported in Palka *et al*., 2021 (n = 12);
- Common dolphin*:* Only 26 takes were estimated but takes proposed for authorization were increased to the average number of dolphins in a group reported in Palka *et al*., 2021 (n = 30);
- Atlantic spotted dolphin*:* Only 9 takes were estimated but takes proposed for authorization were increased to the average number of dolphins in a group reported in Palka *et al.,* 2021 (n = 24);

Table 9 -- Proposed Take by Stock and Harassment Type and as a Percentage of Stock Abundance

Species	Stock	Proposed Authorized Take	Proposed take as a

		Level B harassment	Level A harassment	percentage of stock abundance*
Fin Whale	Western North Atlantic	5	0	<1
Humpback Whale	Gulf of Maine	3	0	<1
Minke Whale	Canadian East Coast	8	0	<1
Atlantic White-sided Dolphin	Western North Atlantic	12	0	<1
Bottlenose Dolphin	Northern Migratory Coastal	6,098	0	92
	Western North Atlantic Offshore	321	0	<1
Harbor Porpoise	Gulf of Maine/Bay of Fundy	6	0	<1
Common Dolphin	Western North Atlantic	30	0	<1
Atlantic Spotted Dolphin	Western North Atlantic	24	0	<1
Harbor Seal	Western North Atlantic	3,813	69	6.3
Gray Seal	Western North Atlantic			<1
Harp Seal	Western North Atlantic			<1

Proposed Mitigation

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to the activity, and other means of effecting the least practicable impact on the species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of the species or stock for taking for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting the activity or other means of effecting the least practicable adverse impact upon the affected species or stocks, and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, NMFS considers two primary factors:

(1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned), the likelihood of effective implementation (probability implemented as planned), and;

(2) The practicability of the measures for applicant implementation, which may consider such things as cost, and impact on operations.

Transco has indicated that pile driving will be conducted between June 15 and September 15, a time of year when North Atlantic Right Whales are unlikely to occur near the project area. NMFS proposes the following mitigation measures be implemented for Transco's pile installation activities.

Shutdown Zones— For all pile driving activities, Transco would implement shutdowns within designated zones. The purpose of a shutdown zone is generally to define an area within which shutdown of the activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area). Shutdown zones vary based on the activity type and marine mammal hearing group (table 10). In most cases, the shutdown zones are based on the estimated Level A harassment isopleth distances for each hearing group. However, in cases where it would be challenging to detect marine mammals at the Level A harassment isopleth and frequent shutdowns would create practicability concerns (*e.g.*, for phocids during impact pile driving), smaller shutdown zones have been proposed (table 10). Additionally, Transco has agreed to implement a minimum shutdown zone of 60 m during all pile driving activities.

Finally, construction supervisors and crews, Protected Species Observers (PSOs), and relevant Transco staff must avoid direct physical interaction with marine mammals during construction activity. If a marine mammal comes within 10 m of such activity, operations must cease and vessels must reduce speed to the minimum level required to maintain steerage and safe working conditions, as necessary to avoid direct physical interaction. If an activity is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone indicated in table 10 or 15 minutes have passed without re-detection of the animal.

Construction activities must be halted upon observation of a species for which incidental take is not authorized or a species for which incidental take has been authorized but the authorized number of takes has been met entering or within the harassment zone. In the case of North Atlantic right whale, construction activities must be halted upon observation of this species at any distance, regardless of its proximity to a harassment zone.

Table 10 -- Proposed Shutdown Zones

Activity	Pile Type	Shutdown Zones (m)				
		North Atlantic Right Whale	Low Frequency	Mid-Frequency	High Frequency	Phocid
Vibratory Installation	36-inch sheet	Any distance	60			
Impact Installation			1,000	80	200	150

Protected Species Observers (PSOs)—The number and placement of PSOs during all construction activities (described in the **Proposed Monitoring and Reporting** section) would ensure that the entire shutdown zone is visible. Transco would employ at least two PSOs for all pile driving activities.

Monitoring for Level A and Level B harassment— PSOs would monitor the shutdown zones and beyond to the extent that PSOs can see. Monitoring beyond the shutdown zones enables observers to be aware of and communicate the presence of marine mammals in the project areas outside the shutdown zones and thus prepare for a potential cessation of activity should the animal enter the shutdown zone. If a marine mammal enters either harassment zone, PSOs will document the marine mammal's presence and behavior.

Pre-Activity Monitoring—Prior to the start of daily in-water construction activity, or whenever a break in pile driving of 30 minutes or longer occurs, PSOs will observe the shutdown, Level A harassment, and Level B harassment zones for a period of 30 minutes. Pre-start clearance monitoring must be conducted during periods of visibility sufficient for the lead PSO to determine that the shutdown zones are clear of marine mammals. If the shutdown zone is obscured by fog or poor lighting conditions, in-water construction activity will not be initiated until the entire shutdown zone is visible. Pile driving may commence following 30 minutes of observation when the determination is made that the shutdown zones are clear of marine mammals. If a marine mammal is observed entering or within shutdown zones, pile driving activity must be delayed or halted. If pile driving is delayed or halted due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily exited and been visually confirmed beyond the shutdown zone or 15 minutes have passed without re-detection of the animal. If a marine mammal for which Level B harassment take is authorized is present in the Level B harassment zone, activities may begin.

Soft-Start— The use of soft-start procedures are believed to provide additional protection to marine mammals by providing warning and/or giving marine mammals a chance to leave the area prior to the hammer operating at full capacity. For impact pile driving, contractors would be required to provide an initial set of three strikes from the hammer at reduced energy, with each strike followed by a 30-second waiting period. This procedure would be conducted a total of three times before impact pile driving begins. Soft start would be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of 30 minutes or longer. Soft start is not required during vibratory pile driving activities.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth requirements pertaining to the monitoring and reporting of such taking. The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present while conducting the activities. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

● Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density);

● Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the activity; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas);

- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors;

- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks;

- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat); and,

- Mitigation and monitoring effectiveness.

Visual Monitoring —Marine mammal monitoring during pile driving activities must be conducted by NMFS-approved PSOs in a manner consistent with the following:

- PSOs must be independent of the activity contractor (for example, employed by a subcontractor), and have no other assigned tasks during monitoring periods;

- At least one PSO must have prior experience performing the duties of a PSO during construction activity pursuant to a NMFS-issued incidental take authorization;

- Other PSOs may substitute other relevant experience, education (degree in biological science or related field) or training for experience performing the duties of a PSO during construction activities pursuant to a NMFS-issued incidental take authorization.

- Where a team of three or more PSOs is required, a lead observer or monitoring coordinator will be designated. The lead observer will be required to have prior experience working as a marine mammal observer during construction activity pursuant to a NMFS-issued incidental take authorization; and,

- PSOs must be approved by NMFS prior to beginning any activity subject to this IHA.

PSOs should also have the following additional qualifications:

- Ability to conduct field observations and collect data according to assigned protocols;
- Experience or training in the field identification of marine mammals, including identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to prepare a report of observations including, but not limited to, the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates, times, and reason for implementation of mitigation (or why mitigation was note implemented when required); and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

Visual monitoring will be conducted by a minimum of two trained PSOs positioned at suitable vantage points on or near the maintenance barge. One PSO will have an unobstructed view of all water within the shutdown zone. Remaining PSOs will observe as much as the Level A and Level B harassment zones as possible.

Monitoring will be conducted 30 minutes before, during, and 30 minutes after all in water construction activities. In addition, PSOs will record all incidents of marine mammal occurrence, regardless of distance from activity, and will document any behavioral reactions in concert with distance from piles being driven or removed. Pile driving activities include the time to install or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than 30 minutes.

Reporting

Transco will submit a draft marine mammal monitoring report to NMFS within 90 days after the completion of pile driving activities, or 60 days prior to a requested date of issuance of any future IHAs for the project, or other projects at the same location, whichever comes first. The marine mammal monitoring report will include an overall description of work completed, a narrative regarding marine mammal sightings, and associated PSO data sheets. Specifically, the report will include:

- Dates and times (begin and end) of all marine mammal monitoring;
- Construction activities occurring during each daily observation period, including: (1) The number and type of piles that were driven and the method (*e.g.*, impact or vibratory); and, (2) Total duration of driving time for each pile (vibratory driving) and number of strikes for each pile (impact driving);
- PSO locations during marine mammal monitoring;
- Environmental conditions during monitoring periods (at beginning and end of PSO shift and whenever conditions change significantly), including Beaufort sea state and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon, and estimated observable distance;
- Upon observation of a marine mammal, the following information: (1) Name of PSO who sighted the animal(s) and PSO location and activity at time of sighting; (2) Time of sighting; (3) Identification of the animal(s) (*e.g.*, genus/species, lowest possible taxonomic level, or unidentified), PSO confidence in identification, and the composition of the group if there is a mix of species; (4) Distance and location of

each observed marine mammal relative to the pile being driven for each sighting; (5) Estimated number of animals (min/max/best estimate); (6) Estimated number of animals by cohort (adults, juveniles, neonates, group composition, *etc.*); (7) Animal's closest point of approach and estimated time spent within the harassment zone; (8) Description of any marine mammal behavioral observations (*e.g.*, observed behaviors such as feeding or traveling), including an assessment of behavioral responses thought to have resulted from the activity (*e.g.*, no response or changes in behavioral state such as ceasing feeding, changing direction, flushing, or breaching);

- Number of marine mammals detected within the harassment zones, by species; and,
- Detailed information about implementation of any mitigation (*e.g.*, shutdowns and delays), a description of specific actions that ensued, and resulting changes in behavior of the animal(s), if any.

A final report must be prepared and submitted within 30 calendar days following receipt of any NMFS comments on the draft report. If no comments are received from NMFS within 30 calendar days of receipt of the draft report, the report shall be considered final. All PSO data would be submitted electronically in a format that can be queried such as a spreadsheet or database and would be submitted with the draft marine mammal report.

In the event that personnel involved in the construction activities discover an injured or dead marine mammal, the Holder must report the incident to the Office of Protected Resources (OPR), NMFS (*PR.ITP.MonitoringReports@noaa.gov* and *itp.fleming@noaa.gov*) and Greater Atlantic Region New England/Mid-Atlantic Regional Stranding Coordinator (978-282-8478 or 978-281-9291) as soon as feasible. If the death or injury was clearly caused by the specified activity, the Holder must immediately cease the activities until NMFS OPR is able to review the circumstances of the incident and determine what, if any, additional measures are appropriate to ensure compliance with the terms of this IHA. The Holder must not resume their activities until notified by NMFS. The report must include the following information:

- Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable);
- Species identification (if known) or description of the animal(s) involved;
- Condition of the animal(s) (including carcass condition if the animal is dead);
- Observed behaviors of the animal(s), if alive;
- If available, photographs or video footage of the animal(s); and
- General circumstances under which the animal was discovered.

Negligible Impact Analysis and Determination

NMFS has defined negligible impact as an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be "taken" through harassment, NMFS considers other factors, such as the likely nature of any impacts or responses (*e.g.*, intensity, duration), the context of any impacts or responses (*e.g.*, critical reproductive time or location, foraging impacts affecting energetics), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS' implementing regulations (54 FR 40338, September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

To avoid repetition, the majority of our analysis applies to all the species listed in table 2, given that many of the anticipated effects of this project on different marine mammal stocks are expected to be relatively similar in nature. Where there are meaningful differences between species or stocks, or groups of species, in anticipated individual responses to activities, impact of expected take on the population due to differences in population status, or impacts on habitat, they are described independently in the analysis below.

Pile driving associated with the Transco LNYBL maintenance project, as outlined previously, has the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment and, for some species, Level A harassment, from underwater sounds generated by pile driving.

No serious injury or mortality would be expected, even in the absence of required mitigation measures, given the nature of the activities. Further, no take by Level A harassment is anticipated for low-frequency, mid-frequency, or high-frequency cetaceans. The potential for harassment would be minimized through the implementation of planned mitigation measures (see **Proposed Mitigation** section).

Take by Level A harassment is expected for pinnipeds (harbor seal, harp seal, and gray seal). Any take by Level A harassment is expected to arise from, at most, a small degree of PTS (*i.e.*, minor degradation of hearing capabilities within regions of hearing that align most completely with the energy produced by impact pile driving such as the low-frequency region below 2 kHz), not severe hearing impairment or impairment within the ranges of greatest hearing sensitivity. Animals would need to be exposed to higher levels and/or longer duration than are expected to occur here in order to incur any more than a small degree of PTS.

Further, the amount of take proposed for authorization by Level A harassment is very low for all marine mammal stocks and species. For eight species, NMFS anticipates no Level A harassment take over the duration of Transco's planned activities; for pinnipeds, NMFS expects no more than 69 takes by Level A harassment across all 3 pinniped species (harbor seal, gray seal, harp seal). If hearing impairment occurs, it is most likely that the affected animal would lose only a few decibels in its hearing sensitivity. Due to the small degree anticipated, any PTS potential incurred would not be expected to affect the reproductive success or survival of any individuals, much less result in adverse impacts on the species or stock.

Additionally, some subset of the individuals that are behaviorally harassed could also simultaneously incur some small degree of TTS for a short duration of time. However, since the hearing sensitivity of individuals that incur TTS is expected to recover completely within minutes to hours, it is unlikely that the brief hearing impairment would affect the individual's long-term ability to forage and communicate with conspecifics, and would therefore not likely impact reproduction or survival of any individual marine mammal, let alone adversely affect rates of recruitment or survival of the species or stock.

As described above, NMFS expects that marine mammals would likely move away from an aversive stimulus, especially at levels that would be expected to result in PTS, given sufficient notice through use of soft start. Transco would also shut down pile driving activities if marine mammals enter the shutdown zones (table 10) further minimizing the degree of PTS that would be incurred.

Effects on individuals that are taken by Level B harassment in the form of behavioral disruption, on the basis of reports in the literature as well as monitoring from other similar activities, would likely be limited to reactions such as avoidance, increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.*, Thorson and Reyff, 2006). Most likely, individuals would simply move away from the sound source and temporarily avoid the area where pile driving is occurring. If sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the area while the activities are occurring. We expect that any avoidance of the project areas by marine mammals would be temporary in nature and that any marine mammals that avoid the project areas during construction would not be permanently displaced. Short-term avoidance of the project areas and energetic impacts of interrupted foraging or other important behaviors is unlikely to affect the reproduction or survival of individual marine mammals, and the effects of behavioral disturbance on individuals is not likely to accrue in a manner that would affect the rates of recruitment or survival of any affected stock.

As described above, humpback whales, and gray, harbor and harp seals are experiencing ongoing UMEs. With regard to humpback whales, the UME does not yet provide cause for concern regarding population-level impacts. Despite the UME, the relevant population of humpback whales (the West Indies breeding population, or DPS) remains healthy. The West Indies DPS, which consists of the whales whose breeding range includes the Atlantic margin of the Antilles from Cuba to northern Venezuela, and whose feeding range primarily includes the Gulf of Maine, eastern Canada, and western Greenland, was delisted. The status review identified harmful algal blooms, vessel collisions, and fishing gear entanglements as relevant threats for this DPS, but noted that all other threats are considered likely to have no or minor impact on population size or the growth rate of this DPS (Bettridge *et al*., 2015). As described in Bettridge *et al*., (2015), the West Indies DPS has a substantial population size (*i.e.,* approximately 10,000;

Stevick *et al*., 2003; Smith *et al*., 1999; Bettridge *et al*., 2015), and appears to be experiencing consistent growth.

In regards to pinnipeds (harbor seals, gray seals and harp seals), we do not expect takes that may be authorized under this IHA to exacerbate or compound upon ongoing UMEs. Between July 2018 and March 2020, elevated seal mortalities occurred across ME, NH and MA, and as far south as VA due to phocine distemper virus (the UME is still active but pending closure). Since June 2022, a UME has been declared for Northeast pinnipeds in which elevated numbers of sick and dead harbor seals, gray seals, and harp seals have been documented along the southern and central coast of ME (NOAA Fisheries, 2022). Between June 1, 2022 and July 16, 2023, 65 grays seals, 379 harbor seals, and 6 harp seals have stranded. As noted previously, no injury, serious injury, or mortality is expected or will be authorized, and takes of harbor seal, gray seal, and harp seal will be minimized through the incorporation of the required mitigation measures. The population abundance for these species is 61,336, 27,300, and 7.6 million, respectively (Hayes *et al*., 2022). The 3,882 takes that may be authorized across these species represent a small proportion of each population and as such we do not expect this authorization to exacerbate or compound upon these UMEs.

The project is also not expected to have significant adverse effects on affected marine mammals' habitats. No ESA-designated critical habitat or recognized Biologically Important Areas are located within the project area. The project activities would not modify existing marine mammal habitat for a significant amount of time. The activities may cause a low level of turbidity in the water column and some fish may leave the area of disturbance, thus temporarily impacting marine mammals' foraging opportunities in a limited portion of the foraging range; but, because of the short duration of the activities and the relatively small area of the habitat that may be affected (with no known particular importance to marine mammals), the impacts to marine mammal habitat are not expected to cause significant or long-term negative consequences. The closest pinniped haulout is located 2.9 km from the work area but does not intersect with the harassment zones.

For all species and stocks, take would occur within a limited, relatively confined area (primarily Raritan Bay) of the stock's range, which is not of particular importance for marine mammals that may occur there. Given the availability of suitable habitat nearby, any displacement of marine mammals from the project areas is not expected to affect marine mammals' fitness, survival, and reproduction due to the limited geographic area that would be affected in comparison to the much larger habitat for marine mammals outside the bay along the NJ and NY coasts. Additionally, NMFS anticipates that the prescribed mitigation will minimize the duration and intensity of expected harassment events.

Some individual marine mammals in the project area, such as harbor seals or bottlenose dolphins, may be present and be subject to repeated exposure to sound from pile driving activities on multiple days. However, pile driving and extraction is not expected to occur on every day, and these individuals would likely return to normal behavior during gaps in pile driving activity within each day of construction and in between work days. As discussed above, individuals could temporarily relocate during construction activities to reduce exposure to elevated sound levels from the project. Additionally, haulout habitat available for pinnipeds does not intersect with the harassment zones. Therefore, any behavioral effects of repeated or long duration exposures are not expected to negatively affect survival or reproductive success of any individuals. Thus, even repeated Level B harassment of some small subset of an overall stock is unlikely to result in any effects on rates of reproduction and survival of the stock.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity are not expected to adversely affect any of the species or stocks through effects on annual rates of recruitment or survival:

- No serious injury or mortality is anticipated or authorized;
- The anticipated impacts of the proposed activity on marine mammals would be temporary behavioral changes due to avoidance of the project area and limited instances of Level A harassment in the form of a slight PTS for pinnipeds. Potential instances of exposure above the Level A harassment threshold are expected to be relatively low for most species;
- The availability of alternate areas of similar habitat value nearby;
- Effects on species that serve as prey species for marine mammals from the proposed project are expected to be short-term and are not expected to result in significant or long-term consequences for individual marine mammals, or to contribute to adverse impacts on their populations;
- There are no known important feeding, breeding, or calving areas in the project area.
- The proposed mitigation measures, including visual monitoring, shutdown zones, and soft start, are expected to minimize potential impacts to marine mammals.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

Small Numbers

As noted previously, only take of small numbers of marine mammals may be authorized under sections 101(a)(5)(A) and (D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. When the predicted number of individuals to be taken is fewer than one-third of the species or stock abundance, the take is considered to be of small numbers. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

We propose to authorize incidental take of 12 marine mammal stocks. The total amount of taking proposed for authorization is well below one-third of the estimated stock abundance for all species except for the western north Atlantic northern coastal migratory stock of bottlenose dolphins (table 9).

The total number of authorized takes for bottlenose dolphins, if assumed to accrue solely to new individuals of the northern migratory coastal stock, is > 90 percent of the total stock abundance, which is currently estimated as 6,639. However, these numbers represent the estimated incidents of take, not the number of individuals taken. That is, it is highly likely that a relatively small subset of these bottlenose dolphins will be harassed by project activities.

Western North Atlantic Northern Migratory Coastal bottlenose dolphins make broadscale, seasonal migrations in coastal waters of the Western north Atlantic. During the warm months, when the project is planned, their range extends from the shoreline to the 20 m isobaths between Assateague, VA to Long Island, NY (Garrison *et al.,* 2017b), an area spanning approximately 300 linear km of coastline. It is likely that the majority of the Western North Atlantic Northern Migratory Coastal bottlenose dolphins would not occur within waters ensonified by project activities.

In summary, the Western North Atlantic Northern Migratory Coastal bottlenose dolphins are not expected to occur in a significant portion of the larger ZOI. Given that the specified activity will be stationary within an area not recognized as any special significance that would serve to attract or aggregate dolphins, we therefore believe that the estimated numbers of takes, were they to occur, likely represent repeated exposures of a much smaller number of bottlenose dolphins and that these estimated incidents of take represent small numbers of bottlenose dolphins.

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals would be taken relative to the population size of the affected species or stocks.

Unmitigable Adverse Impact Analysis and Determination

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq*.) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally whenever we propose to authorize take for endangered or threatened species, in this case with the NMFS Greater Atlantic Regional Fisheries Office (GARFO).

NMFS is proposing to authorize take of the fin whale, which is listed under the ESA. The NMFS Office of Protected Resources has requested initiation of section 7 consultation with GARFO for the issuance of this IHA. NMFS will conclude the ESA consultation prior to reaching a determination regarding the proposed issuance of the authorization.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to Transco for conducting the LNYBL Maintenance Project in Sandy Hook Channel, New Jersey (NJ) between June and August 2024, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. A draft of the proposed IHA can be found at: *https:www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act*.

Request for Public Comments

We request comment on our analyses, the proposed authorization, and any other aspect of this notice of proposed IHA for the proposed construction project. We also request comment on the potential renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform decisions on the request for this IHA or a subsequent renewal IHA.

On a case-by-case basis, NMFS may issue a one-time, 1-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 **Description of Proposed Activity** section of this notice is planned or (2) the activities as described in the **Description of Proposed Activity** 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 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 1 year from expiration of the initial IHA).

● The request for renewal must include the following:

(1) 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).

(2) 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.

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.

Dated: November 30, 2023.

Kimberly Damon-Randall,

Director, Office of Protected Resources,

National Marine Fisheries Service.

[FR Doc. 2023-26704 Filed: 12/5/2023 8:45 am; Publication Date: 12/6/2023]