This notice is issued and published pursuant to section 733(c)(2) of the Act and 19 CFR 351.205(f)(1).

Dated: November 20, 2017.

Gary Taverman,

Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, performing the non-exclusive functions and duties of the Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2017–25536 Filed 11–24–17; 8:45 am]

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DEPARTMENT OF COMMERCE

International Trade Administration

[A–570–972; A–583–848]

Certain Stilbenic Optical Brightening Agents From the People's Republic of China and Taiwan: Continuation of Antidumping Duty Orders

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce.

DATES: Applicable November 27, 2017.

SUMMARY: As a result of the determinations by the Department of Commerce (the Department) and the U.S. International Trade Commission (ITC) that revocation of the antidumping duty orders on certain stilbenic optical brightening agents (stilbenic OBAs) from the People's Republic of China (PRC) and Taiwan would likely lead to continuation or recurrence of dumping and material injury to an industry in the United States, the Department is publishing a notice of continuation of the antidumping duty orders.

FOR FURTHER INFORMATION CONTACT: Eli Lovely, AD/CVD Operations, Office IV, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230; telephone (202) 482–1593.

SUPPLEMENTARY INFORMATION: On April 3, 2017, the Department published the notice of initiation of the first sunset reviews of the antidumping duty orders on stilbenic OBAs from the PRC and Taiwan pursuant to section 751(c) of the Tariff Act of 1930, as amended (the Act).[1]

As a result of its review, the Department determined that revocation of the antidumping duty orders on certain stilbenic OBAs from the PRC and Taiwan would likely lead to continuation or recurrence of dumping and, therefore, notified the ITC of the magnitude of the margins of dumping likely to prevail should the orders be revoked.[2]

On October 27, 2017, the ITC published its determination, pursuant to section 751(c)(1) of the Act, that revocation of the antidumping duty orders on certain stilbenic OBAs from the PRC and Taiwan would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[3]

Scope of the Orders

The stilbenic OBAs covered by the orders are all forms (whether free acid or salt) of compounds known as triazinylaminostilbenes (*i.e.,* all derivatives of 4,4′-bis [1,3,5-triazin-2-yl][4] amino-2,2′-stilbenedisulfonic acid), except for compounds listed in the following paragraph. The stilbenic OBAs covered by the orders include final stilbenic OBA products, as well as intermediate products that are themselves triazinylaminostilbenes produced during the synthesis of stilbenic OBA products.

Excluded from the orders are all forms of 4,4′-bis[4-anilino-6-morpholino-1,3,5-triazin-2-yl][5] amino-2,2′-stilbenedisulfonic acid, $C_{40}H_{40}N_{12}O_8S_2$ (Fluorescent Brightener 71). The orders cover the above-described compounds in any state (including but not limited to powder, slurry, or solution), of any concentrations of active stilbenic OBA ingredient, as well as any compositions regardless of additives (*i.e.,* mixtures or blends, whether of stilbenic OBAs with each other, or of stilbenic OBAs with additives that are not stilbenic OBAs), and in any type of packaging.

These stilbenic OBAs are classifiable under subheading 3204.20.8000 of the Harmonized Tariff Schedule of the United States (HTSUS), but they may also enter under subheadings 2933.69.6050, 2921.59.4000 and 2921.59.8090. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise is dispositive.

Continuation of the Orders

As a result of these determinations by the Department and the ITC that revocation of the antidumping duty orders would be likely to lead to continuation or recurrence of dumping and material injury to an industry in the United States, pursuant to section 751(d)(2) of the Act, the Department hereby orders the continuation of the antidumping orders on certain stilbenic OBAs from the PRC and Taiwan. U.S. Customs and Border Protection will continue to collect antidumping duty cash deposits at the rates in effect at the time of entry for all imports of subject merchandise. The effective date of the continuation of these orders will be the date of publication in the **Federal Register** of this notice of continuation. Pursuant to section 751(c)(2) of the Act, the Department intends to initiate the next five-year review of the orders not later than 30 days prior to the fifth anniversary of the effective date of continuation.

This five-year (sunset) review and this notice are in accordance with section 751(c) of the Act and published pursuant to section 777(i)(1) of the Act.

Dated: November 20, 2017.

Gary Taverman,

Deputy Assistant Secretary for Antidumping and Countervailing Duty Operations, performing the non-exclusive functions and duties of the Assistant Secretary for Enforcement and Compliance.

[FR Doc. 2017–25537 Filed 11–24–17; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XF582

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Bravo Wharf Recapitalization Project, Year 2

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

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received a request from Naval Facilities Engineering Command Southeast and Naval Facilities Engineering Command Atlantic (the Navy) for authorization to take marine mammals incidental to Bravo Wharf Recapitalization, Year 2 in Naval Station Mayport (NSM), Jacksonville, Florida. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental

[1] *See Initiation of Five-Year (Sunset) Reviews,* 82 FR 16159 (April 3, 2017).

[2] *See Certain Stilbenic Optical Brightening Agents from the People's Republic of China and Taiwan: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders,* 82 FR 36732 (August 7, 2017).

[3] *See USITC Publication 4737* (October 2017), entitled *Certain Stilbenic Optical Brightening Agents from China and Taiwan: Investigation Nos. 731–TA–1186–1187* (Review).

[4] The brackets in this sentence are part of the chemical formula.

[5] *Id.*

harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

DATES: Comments and information must be received no later than December 27, 2017.

ADDRESSES: Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service. Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.elliott@noaa.gov.*

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 received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at *www.nmfs.noaa.gov/pr/permits/incidental/construction.htm* 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: Brianna Elliott, Office of Protected Resources, NMFS, (301) 427–8401. 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 *www.nmfs.noaa.gov/pr/permits/incidental/construction.htm.* In case of problems accessing these documents, please call the contact listed above.

SUPPLEMENTARY INFORMATION:

Background

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 issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

NMFS has defined ''negligible impact'' in 50 CFR 216.103 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.

The MMPA states that the term ''take'' means to harass, hunt, capture, kill or attempt to harass, hunt, capture, or kill any marine mammal.

Except with respect to certain activities not pertinent here, 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).

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 incidental harassment authorization) with respect to potential impacts on the human environment.

This action is consistent with categories of activities identified in CE B4 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 July 12, 2017, NMFS received a request from the Navy for an IHA to take marine mammals incidental to pile driving in association with the Bravo Wharf recapitalization project at NSM, FL. The Navy's request is for take of bottlenose dolphins (*Tursiops truncatus truncatus)* by Level B harassment only. Neither the Navy nor NMFS expect mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS previously issued IHAs to the Navy for similar work at Bravo Wharf (81 FR 52637, 1 December 2016; revised IHA for this activity: 82 FR 11344, 13 March 2017) and Wharf C–2, also located within NSM (80 FR 55598, 8 September 2015; 78 FR 71566, 1 December 2013 and revised IHA for this activity: 79 FR 27863, 1 September 2014). The Navy complied with all the requirements (*e.g.,* mitigation, monitoring, and reporting) of previous IHAs at Wharf C–2 (80 FR 55598, 8 September 2015; 79 FR 27863, 1 September 2014) and information regarding their monitoring results may be found at *http://www.nmfs.noaa.gov/pr/permits/incidental/construction.htm.*

This proposed IHA would cover one year of a larger project for which the Navy obtained a prior IHA at Bravo Wharf. The larger project involves recapitalization of Bravo Wharf at three berths in NSM spread across Phase I and Phase II, which involves installing 880 single sheet piles through the two phases. The majority of construction activity is occurring in the first year of the project, with Phase I estimated to be fully complete and Phase II estimated to be 60 percent complete by March 13, 2018, the proposed start date for this proposed IHA; therefore, this IHA is for the remaining work at Bravo Wharf.

Description of Proposed Activity

Overview

Bravo Wharf is a medium draft, general purpose berthing wharf that was constructed in 1970 and lies at the western edge of the NSM turning basin. Bravo Wharf is approximately 2,000 feet (ft) long, 125 ft wide, and has a berthing depth of 50 ft mean lower low water. The wharf is one of two primary deep draft berths at the basin and is capable of berthing ships up to and including large amphibious ships; it is one of three primary ordnance handling berths at the basin. The wharf is a diaphragm steel sheet pile cell structure with a concrete apron, partial concrete encasement of the piling, and asphalt paved deck. The

wharf is currently in poor condition due to advanced deterioration of the steel sheeting and lack of corrosion protection. This structural deterioration has resulted in the institution of load restrictions within 60 ft of the wharf face. The purpose of the second year of this project is to finish installing remaining sheet piles by vibratory pile driving, though contingency impact driving may be necessary, in order to complete necessary repairs to Bravo Wharf. Please refer to the Navy's application for a schematic of the project plan.

Both vibratory and impact pile driving could result in take, by Level B harassment only, of bottlenose dolphins through exposure to the sound source in waters surrounding NSM. Activity will be confined to forty days, including 30 days for vibratory pile driving and 10 contingency days for impact pile driving.

Dates and Duration

The total project, including the first year of construction for which an IHA was issued (82 FR 11344; 22 February 2017) is expected to require a maximum of 130 days of in-water pile driving. The second year of the project, reflected in this proposed IHA, will involve a maximum of 40 days of in-water construction. Vibratory pile driving is expected to take 30 days, with a contingent 10 days of impact pile driving. Operators would only conduct pile driving during daylight hours as determined by NOAA data, and no in-water construction activities could occur between 10 p.m. to 6 a.m. at any point during the year. The specified activities are expected to occur between March 13, 2018 and March 12, 2019.

Specific Geographic Region

NSM is located in northeastern Florida, at the mouth of the St. Johns River and adjacent to the Atlantic Ocean (see Figures 1–1, 2–1, and 2–2 of the Navy's application). The St. Johns River is the longest river in Florida, with the final 35 miles (mi) flowing through the city of Jacksonville. This portion of the river is significant for commercial shipping and military use. At the mouth of the river, near the action area, the Atlantic Ocean is the dominant influence and typical salinities are above 30 parts per million. Outside the river mouth, in nearshore waters, moderate oceanic currents tend to flow southward parallel to the coast. Sea surface temperatures range from around 16 °C in winter to 28 °C in summer.

The specific action area consists of the NSM turning basin, an area of approximately 2,000 by 3,000 ft containing ship-berthing facilities at sixteen locations along wharves around the basin perimeter. The basin was constructed during the early 1940s by dredging the eastern part of Ribault Bay (at the mouth of the St. Johns River), with dredge material from the basin used to fill parts of the bay and other low-lying areas in order to elevate the land surface. The basin is currently maintained through regular dredging at a depth of 50 ft, with depths at the berths ranging from 30–50 ft. The turning basin, connected to the St. Johns River by a 500-ft-wide entrance channel, will largely contain sound produced by project activities, with the exception of sound propagating east into nearshore Atlantic waters through the entrance channel (see Figure 2–2 of the Navy's application). Bravo Wharf is located in the western corner of the Mayport turning basin.

Detailed Description of Specific Activity

In order to rehabilitate Bravo Wharf, the Navy proposes to install a new steel sheet pile bulkhead at Bravo Wharf. The entire recapitalization project consists of installing a total of approximately 880 single sheet piles. By March 2018, it is estimated that Phase I will be 100 percent complete and Phase II will be 60 percent complete, with 234 piles remaining to be installed. The wall will be anchored at the top and fill consisting of clean gravel and concrete fill will be placed behind the wall. A concrete cap will be formed along the top and outside face of the wall to tie the entire structure together and provide a berthing surface for vessels. The new bulkhead will be designed for a 50-year service life.

All piles would be driven by vibratory hammer, although impact pile driving may be used as a contingency in cases when vibratory driving is not sufficient to reach the necessary depth. In the unlikely event that impact driving is required, either impact or vibratory driving could occur on a given day, but concurrent use of vibratory and impact drivers would not occur. The Navy estimates that a total of 40 in-water work days may be required to complete pile driving activity, which includes 10 days for contingency impact driving, if necessary.

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

There are four marine mammal species which may inhabit or transit through the waters nearby NSM at the mouth of the St. Johns River and in nearby nearshore Atlantic waters. These include the bottlenose dolphin (*Tursiops truncatus truncatus),* Atlantic spotted dolphin (*Stenella frontalis*), North Atlantic right whale (*Eubalaena glacialis*), and humpback whale (*Megaptera novaeangliae*). Multiple additional cetacean species occur in south Atlantic waters but would not be expected to occur in shallow nearshore waters of the action area.

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. Additional information regarding population trends and threats may be found in NMFS's Stock Assessment Reports (SAR; *www.nmfs.noaa.gov/pr/sars/*) and more general information about these species (*e.g.,* physical and behavioral descriptions) may be found on NMFS's Web site (*www.nmfs.noaa.gov/pr/species/mammals/*). Please also refer to the Navy's Marine Resource Assessment for the Charleston/Jacksonville Operating Area, which documents and describes the marine resources that occur in Navy operating areas of the Southeast (DoN 2008). The document is publicly available at *www.navfac.navy.mil/products_and_services/ev/products_and_services/marine_resources/marine_resource_assessments.html* (accessed October 12, 2017).

Table 1 lists all species with expected potential for occurrence in the vicinity of NSM and summarizes information related to the population or stock, including regulatory status under the MMPA and ESA and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2016). 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's SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species 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's 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's U.S. 2016 SARs (Hayes *et al.,* 2016). All values presented in Table 1 are the most recent available at the time of publication and are available in the 2016 SARs (Hayes *et al.,* 2016).

In addition, the West Indian manatees may be found in the vicinity of NSM. However, West Indian manatees are managed by the U.S. Fish and Wildlife Service and are not considered further in this document.

TABLE 1—MARINE MAMMALS POTENTIALLY PRESENT IN THE VICINITY OF NSM

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 Cetartiodactyla—Cetacea—Superfamily Mysticeti (baleen whales)						
Family Eschrichtiidae						
North Atlantic Right Whale.	*Eubalaena glacialis*	Western North Atlantic ..	E/D; Y	440 (0; 440; 2013)	1	5.66
Humpback whale	*Megaptera novaeangliae*	Gulf of Maine	-; N	823 (0; 823; 2011)	13	9.05
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae						
Atlantic Spotted Dolphin	*Stenella frontalis*	Western North Atlantic ..	-; N	44,715 (0.43; 31,610; 2011).	316	0
Common bottlenose dolphin.	*Tursiops truncatus truncatus.*	Jacksonville Estuarine System.	-; Y	412 (0.06; unk; 1994–97) [4].	unk	1.2
Common bottlenose dolphin.	*Tursiops truncatus truncatus.*	Western North Atlantic, northern Florida coastal.	-/D; Y	1,219 (0.67; 730; 2010–11).	7	0.4
Common bottlenose dolphin.	*Tursiops truncatus truncatus.*	Western North Atlantic, offshore.	-; N	77,532 (0.40; 56,053; 2011).	63	0–12
Common bottlenose dolphin.	*Tursiops truncatus truncatus.*	Western North Atlantic, southern migratory coastal.	-/D; Y	9,173 (0.46; 6,326; 2010–11).	63	0–12

[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: *www.nmfs.noaa.gov/pr/sars/.* CV is coefficient of variation; Nmin is the minimum estimate of stock abundance. In some cases, CV is not applicable.

[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, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

[4] This abundance estimate is considered an overestimate because it includes non- and seasonally-resident animals.

Note—*Italicized species are not expected to be taken or proposed for authorization.*

All species that could potentially occur in the proposed survey areas are included in Table 1. However, the temporal and/or spatial occurrence of North Atlantic right whales, humpback whales, and Atlantic spotted dolphins is such that take is not expected to occur.

Regarding North Atlantic right whales, an estimate of potential exposures shows that there is potential for two Level B exposures of North Atlantic right whales from vibratory pile driving. However, the North Atlantic right whale density used in this analysis reflects their expected occurrence in waters outside of the St. Johns River, as there is no applicable density for waters affected by the specified activity. We consider the likelihood of occurrence to be extremely low, given that the only known sighting of a North Atlantic right whale in the St. Johns River occurred in 2011, resulting in a disruption of all boat traffic (Gibbons 2011; Cravey 2016). Therefore, the potential for interaction with this species is unlikely and NMFS does not believe take authorization is warranted for right whales. The Navy has not requested, and NMFS is not proposing to authorize, incidental take of right whales.

The likelihood of encountering a humpback whale in NSM or around the mouth of the river is similarly considered discountable. In the winter, some humpback whales migrate from their summer foraging grounds in the Gulf of Maine to their winter breeding habitat around the Cape Verde Islands and West Indies (Stevick *et al.,* 1998; Wenzel *et al.,* 2009, Stevick *et al.,* 2016). Significant numbers of whales do not migrate to these wintering grounds, and there have been a number of humpback whale sightings and detections in the southeastern U.S. during the winter (Wiley *et al.,* 1995; Laerm *et al.,* 1997; Norris *et al.,* 2013; Waring *et al.,* 2014). When considering the low frequency of occurrence, small size of ensonified area, short duration (40 days total), and proposed monitoring and mitigation (see *Proposed Mitigation* and *Proposed Monitoring and Reporting* below), we consider the possibility for harassment of humpback and right whales to be discountable.

Concerning Atlantic spotted dolphins, no acoustic exposures were predicted and, from recent observation reports from the Navy from previous construction activity at Naval Station Mayport, no spotted dolphins were observed. Similarly, dolphin research studies that have been conducted in the area also reported zero observed spotted dolphins in the project area (Q. Gibson, pers. comm. with L. McCue, NMFS Office of Protected Resources, 2015). We

consider the likelihood of Atlantic spotted dolphins being impacted by the construction activities to be discountable based on this information, combined with the zero estimated exposures. Therefore, the North Atlantic right whale, humpback whale, and Atlantic spotted dolphins are excluded from further analysis and are not discussed further in this document.

Bottlenose Dolphins

Bottlenose dolphins are found worldwide in tropical to temperate waters and can be found in all depths from estuarine inshore to deep offshore waters. Temperature appears to limit the range of the species, either directly, or indirectly, for example, through distribution of prey. Off North American coasts, common bottlenose dolphins are found where surface water temperatures range from about 10 °C to 32 °C. In many regions, including the southeastern U.S., separate coastal and offshore populations are known. There is significant genetic, morphological, and hematological differentiation evident between the two ecotypes (*e.g.,* Walker 1981; Duffield *et al.,* 1983; Duffield 1987; Hoelzel *et al.,* 1998), which correspond to shallow, warm water and deep, cold water. Both ecotypes have been shown to inhabit the western North Atlantic (Hersh and Duffield 1990; Mead and Potter 1995), where the deep-water ecotype tends to be larger and darker. In addition, several lines of evidence, including photo-identification and genetic studies, support a distinction between dolphins inhabiting coastal waters near the shore and those present in the inshore waters of bays, sounds and estuaries. This complex differentiation of bottlenose dolphin populations is observed throughout the Atlantic and Gulf of Mexico coasts where bottlenose dolphins are found, although estuarine populations have not been fully defined.

In the Mayport area, four stocks of bottlenose dolphins are currently managed, none of which are protected under the ESA. Of the four stocks—offshore, southern migratory coastal, northern Florida coastal, and Jacksonville estuarine system—only the latter three are likely to occur in the action area. Bottlenose dolphins typically occur in groups of 2–15 individuals (Shane *et al.,* 1986; Kerr *et al.,* 2005). Although significantly larger groups have also been reported, smaller groups are typical of shallow, confined waters. In addition, such waters typically support some degree of regional site fidelity and limited movement patterns (Shane *et al.,* 1986; Wells *et al.,* 1987). Observations made during marine mammal surveys conducted during 2012–2013 in the Mayport turning basin show bottlenose dolphins typically occurring individually or in pairs, or less frequently in larger groups. The maximum observed group size during these surveys was six, while the mode was one. Navy observations indicate that bottlenose dolphins rarely linger in a particular area in the turning basin, but rather appear to move purposefully through the basin and then leave, which likely reflects a lack of biological importance for these dolphins in the basin. Based on currently available information, it is not possible to determine the stock to which the dolphins occurring in the action area may belong. These stocks are described in greater detail below.

Western North Atlantic Offshore—This stock, consisting of the deep-water ecotype or offshore form of bottlenose dolphin in the western North Atlantic, is distributed primarily along the outer continental shelf and continental slope, but has been documented to occur relatively close to shore (Waring *et al.,* 2014). The separation between offshore and coastal morphotypes varies depending on location and season, with the ranges overlapping to some degree south of Cape Hatteras. Based on genetic analysis, Torres *et al.* (2003) found a distributional break at 34 km from shore, with the offshore form found exclusively seaward of 34 km and in waters deeper than 34 m. Within 7.5 km of shore, all animals were of the coastal morphotype. More recently, coastwide, systematic biopsy collection surveys were conducted during the summer and winter to evaluate the degree of spatial overlap between the two morphotypes. South of Cape Hatteras, spatial overlap was found although the probability of a sampled group being from the offshore morphotype increased with increasing depth, and the closest distance for offshore animals was 7.3 km from shore, in water depths of 13 m just south of Cape Lookout (Garrison *et al.,* 2003). The maximum radial distance for the largest ZOI is approximately 1.2 km (Table 2); therefore, it is unlikely that any individuals of the offshore morphotype would be affected by project activities. In terms of water depth, the affected area is generally in the range of the shallower depth reported for offshore dolphins by Garrison *et al.* (2003), but is far shallower than the depths reported by Torres *et al.* (2003). South of Cape Lookout, the zone of spatial overlap between offshore and coastal ecotypes is generally considered to occur in water depths between 20–100 m (Waring *et al.,* 2014), which is generally deeper than waters in the action area. This stock is thus excluded from further analysis.

Western North Atlantic, southern migratory coastal—The coastal morphotype of bottlenose dolphin is continuously distributed from the Gulf of Mexico to the Atlantic and north approximately to Long Island (Waring *et al.,* 2014). On the Atlantic coast, Scott *et al.* (1988) hypothesized a single coastal stock, citing stranding patterns during a high mortality event in 1987–88 and observed density patterns. More recent studies demonstrate that there is instead a complex mosaic of stocks (Zolman 2002; McLellan *et al.,* 2002; Rosel *et al.,* 2009). The coastal morphotype was managed by NMFS as a single stock until 2009, when it was split into five separate stocks, including northern and southern migratory stocks. The original, single stock of coastal dolphins recognized from 1995–2001 was listed as depleted under the MMPA as a result of a 1987–88 mortality event. That designation was retained when the single stock was split into multiple coastal stocks. Therefore, all coastal stocks of bottlenose dolphins are listed as depleted under the MMPA, and are also considered strategic stocks.

According to the Scott *et al.* (1988) hypothesis, a single stock was thought to migrate seasonally between New Jersey (summer) and central Florida (winter). Instead, it was more recently determined that a mix of resident and migratory stocks exists, with the migratory movements and spatial distribution of the southern migratory stock the most poorly understood of these. Stable isotope analysis and telemetry studies provide evidence for seasonal movements of dolphins between North Carolina and northern Florida (Knoff 2004; Waring *et al.,* 2014), and genetic analyses and tagging studies support differentiation of northern and southern migratory stocks (Rosel *et al.,* 2009; Waring *et al.,* 2014). Although there is significant uncertainty regarding the southern migratory stock's spatial movements, telemetry data indicates that the stock occupies waters of southern North Carolina (south of Cape Lookout) during the fall (October-December). In winter months (January–March), the stock moves as far south as northern Florida where it overlaps spatially with the northern Florida coastal and Jacksonville estuarine system stocks. In spring (April-June), the stock returns north to waters of North Carolina, and is presumed to remain north of Cape Lookout during the summer months. Therefore, the

potential exists for harassment of southern migratory dolphins, most likely during the winter only.

Bottlenose dolphins are ubiquitous in coastal waters from the mid-Atlantic through the Gulf of Mexico, and therefore interact with multiple coastal fisheries, including gillnet, trawl, and trap/pot fisheries. Stock-specific total fishery-related mortality and serious injury cannot be directly estimated because of the spatial overlap among stocks of bottlenose dolphins, and because of unobserved fisheries. The primary known source of fishery mortality for the southern migratory stock is the mid-Atlantic gillnet fishery (Waring *et al.,* 2014). Between 2004 and 2008, 588 bottlenose dolphins stranded along the Atlantic coast between Florida and Maryland that could potentially be assigned to the southern migratory stock, although the assignment of animals to a particular stock is impossible in some seasons and regions due to spatial overlap amongst stocks (Waring *et al.,* 2014). Many of these animals exhibited some evidence of human interaction, such as line/net marks, gunshot wounds, or vessel strike. In addition, nearshore and estuarine habitats occupied by the coastal morphotype are adjacent to areas of high human population and some are highly industrialized. It should also be noted that stranding data underestimate the extent of fishery-related mortality and serious injury because not all of the marine mammals that die or are seriously injured in fishery interactions are discovered, reported or investigated, nor will all of those that are found necessarily show signs of entanglement or other fishery interaction. The level of technical expertise among stranding network personnel varies widely as does the ability to recognize signs of fishery interactions. Finally, multiple resident populations of bottlenose dolphins have been shown to have high concentrations of organic pollutants (*e.g.,* Kuehl *et al.,* 1991) and, despite little study of contaminant loads in migrating coastal dolphins, exposure to environmental pollutants and subsequent effects on population health is an area of concern and active research.

Western North Atlantic, Northern Florida Coastal—Please see above for description of the differences between coastal and offshore ecotypes and the delineation of coastal dolphins into management stocks. The northern Florida coastal stock is one of five stocks of coastal dolphins and one of three known resident stocks (other resident stocks include South Carolina/Georgia and central Florida dolphins). The spatial extent of these stocks, their potential seasonal movements, and their relationships with estuarine stocks are poorly understood. During summer months, when the migratory stocks are known to be in North Carolina waters and further north, bottlenose dolphins are still seen in coastal waters of South Carolina, Georgia and Florida, indicating the presence of additional stocks of coastal animals. Speakman *et al.* (2006) documented dolphins in coastal waters off Charleston, South Carolina, that are not known resident members of the estuarine stock, and genetic analyses indicate significant differences between coastal dolphins from northern Florida, Georgia and central South Carolina (NMFS 2001; Rosel et al., 2009). The northern Florida stock is thought to be present from approximately the Georgia-Florida border south to 29.4° N. (Waring *et al.,* 2014).

The northern Florida coastal stock ventures into the St. Johns River in large numbers, but rarely moves past NSM. The mouth of the St. Johns River may serve as a foraging area for this stock and the Jacksonville estuarine stock (Q. Gibson, pers. comm. with L. McCue, NMFS Office of Protected Resources, 2015).

The northern Florida coastal stock is susceptible to interactions with similar fisheries as those described above for the southern migratory stock, including gillnet, trawl, and trap/pot fisheries. From 2004–08, 78 stranded dolphins were recovered in northern Florida waters, although it was not possible to determine whether there was evidence of human interaction for the majority of these (Waring *et al.,* 2014). The same concerns discussed above regarding underestimation of mortality hold for this stock and, as for southern migratory dolphins, pollutant loading is a concern.

Western North Atlantic, Jacksonville Estuarine System—Please see above for description of the differences between coastal and offshore ecotypes and the delineation of coastal dolphins into management stocks primarily inhabiting nearshore waters. The coastal morphotype of bottlenose dolphin is also resident to certain inshore estuarine waters (Caldwell 2001; Gubbins 2002; Zolman 2002; Gubbins *et al.,* 2003). Multiple lines of evidence support demographic separation between coastal dolphins found in nearshore waters and those in estuarine waters, as well as between dolphins residing within estuaries along the Atlantic and Gulf coasts (*e.g.,* Wells *et al.,* 1987; Scott *et al.,* 1990; Wells *et al.,* 1996; Cortese 2000; Zolman 2002; Speakman *et al.* 2006; Stolen *et al.,* 2007; Balmer *et al.,* 2008; Mazzoil *et al.,* 2008). In particular, a study conducted near Jacksonville demonstrated significant genetic differences between coastal and estuarine dolphins (Caldwell 2001; Rosel *et al.,* 2009). Despite evidence for genetic differentiation between estuarine and nearshore populations, the degree of spatial overlap between these populations remains unclear. Photo-identification studies within estuaries demonstrate seasonal immigration and emigration and the presence of transient animals (*e.g.,* Speakman *et al.,* 2006). In addition, the degree of movement of resident estuarine animals into coastal waters on seasonal or shorter time scales is poorly understood (Waring *et al.,* 2014).

The Jacksonville estuarine system (JES) stock has been defined as separate primarily by the results of photo-identification and genetic studies. The stock range is considered to be bounded in the north by the Georgia-Florida border at Cumberland Sound, extending south to approximately Jacksonville Beach, Florida. This encompasses an area defined during a photo-identification study of bottlenose dolphin residency patterns in the area (Caldwell 2001), and the borders are subject to change upon further study of dolphin residency patterns in estuarine waters of southern Georgia and northern/central Florida. The habitat is comprised of several large brackish rivers, including the St. Johns River, as well as tidal marshes and shallow riverine systems. Three behaviorally different communities were identified during Caldwell's (2001) study: The estuarine waters north (Northern) and south (Southern) of the St. Johns River and the coastal area, all of which differed in density, habitat fidelity and social affiliation patterns. The coastal dolphins are believed to be members of a coastal stock, however (Waring *et al.,* 2014). Although Northern and Southern members of the JES stock show strong site fidelity, members of both groups have been observed outside their preferred areas. Dolphins residing within estuaries south of Jacksonville Beach down to the northern boundary of the Indian River Lagoon Estuarine System (IRLES) stock are currently not included in any stock, as there are insufficient data to determine whether animals in this area exhibit affiliation to the JES stock, the IRLES stock, or are simply transient animals associated with coastal stocks. Further research is needed to establish affinities of dolphins in the area between the ranges, as currently understood, of the JES and IRLES stocks.

The JES stock is susceptible to similar fisheries interactions as those described

above for coastal stocks, although only trap/pot fisheries are likely to occur in estuarine waters frequented by the stock. Only one dolphin carcass bearing evidence of fisheries interaction was recovered during 2003–07 in the JES area, and an additional 16 stranded dolphins were recovered during this time, but no determinations regarding human interactions could be made for the majority (Waring *et al.,* 2014). Nineteen bottlenose dolphins died in the St. Johns River (SJR), Florida between May 24 and November 7, 2010, all of which came from the JES stock. The cause of these deaths was undetermined. The same concerns discussed above regarding underestimation of mortality hold for this stock and, as for stocks discussed above, pollutant loading is a concern. Although no contaminant analyses have yet been conducted in this area, the JES stock inhabits areas with significant drainage from industrial and urban sources, and as such is exposed to contaminants in runoff from these. In other estuarine areas where such analyses have been conducted, exposure to anthropogenic contaminants has been found to likely have an effect (Hansen *et al.* 2004; Schwacke *et al.,* 2004; Reif *et al.,* 2008).

The original, single stock of coastal dolphins recognized from 1995–2001 was listed as depleted under the MMPA as a result of a 1987–88 mortality event. That designation was retained when the single stock was split into multiple coastal stocks. However, Scott *et al.* (1988) suggested that dolphins residing in the bays, sounds and estuaries adjacent to these coastal waters were not affected by the mortality event and these animals were explicitly excluded from the depleted listing (Waring *et al.,* 2014). Gubbins *et al.* (2003), using data from Caldwell (2001), estimated the stock size to be 412 (CV = 0.06). However, NMFS considers abundance unknown because this estimate likely includes an unknown number of non-resident and seasonally-resident dolphins. It nevertheless represents the best available information regarding stock size. Because the stock size is likely small, and relatively few mortalities and serious injuries would exceed PBR, the stock is considered to be a strategic stock (Waring *et al.,* 2014).

A UME occurred between 2013 and 2015 spanning the Atlantic coast, which impacted all stocks of bottlenose dolphins in the area. Over 1,800 dolphins stranded in this time period. The preliminary conclusion of the cause of this UME was morbillivirus. The bottlenose dolphin stocks in this area (SJR and coastal areas) may be considered vulnerable to impacts from future activities due to this recent event.

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. Current data indicate that 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) recommended that marine mammals be divided into functional hearing groups based on directly measured or estimated hearing ranges on the basis of available behavioral response data, audiograms derived using auditory evoked potential techniques, anatomical modeling, and other data. Note that no direct measurements of hearing ability have been successfully completed for mysticetes (*i.e.,* low-frequency cetaceans). Subsequently, NMFS (2016) described generalized hearing ranges for these marine mammal hearing groups. Generalized hearing ranges were chosen based on the approximately 65 decibels (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. The functional groups and the associated frequencies are indicated below (note that these frequency ranges correspond to the range for the composite group, with the entire range not necessarily reflecting the capabilities of every species within that group):

- Low-frequency cetaceans (mysticetes): Generalized hearing is estimated to occur between approximately 7 hertz (Hz) and 35 kilohertz (kHz), with best hearing estimated to be from 100 Hz to 8 kHz;
- Mid-frequency cetaceans (larger toothed whales, beaked whales, and most delphinids): Generalized hearing is estimated to occur between approximately 150 Hz and 160 kHz, with best hearing from 10 to less than 100 kHz;
- High-frequency cetaceans (porpoises, river dolphins, and members of the genera Kogia and Cephalorhynchus; including two members of the genus Lagenorhynchus, on the basis of recent echolocation data and genetic data): Generalized hearing is estimated to occur between approximately 275 Hz and 160 kHz.

For more detail concerning these groups and associated frequency ranges, please see NMFS (2016) for a review of available information. Bottlenose dolphins, the species that could co-occur with proposed survey activities and for which take is estimated, are are classified as mid-frequency cetaceans.

Potential Effects of Specified Activities on Marine Mammals and Their Habitat

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The *Estimated Take* 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* 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 how those impacts on individuals are likely to impact marine mammal species or stocks.

We provided discussion of the potential effects of the specified activity on marine mammals and their habitat in our **Federal Register** notice of proposed authorization associated with the first IHA for recapitalization at Bravo Wharf (80 FR 75978; 7 December 2015). The specified activity associated with this proposed IHA is substantially similar to that considered for the first IHA, and the potential effects of the specified activity are nearly the same as those identified in those documents. In the aforementioned **Federal Register** notice, we also provided general background information on sound and a description of sound sources and ambient sound and refer the reader to those documents. Therefore, we briefly summarize potential effects here, but refer the reader to that document (80 FR 75978; 7 December 2015).

An increase in noise levels from pile driving in waters surrounding NSM is the primary means by which marine mammals and their habitat could be impacted. Marine mammals exposed to elevated sound levels could experience physical and behavioral effects, though the magnitude of potential impact depends on a range of factors on the physical environment and biological state of marine mammals, such as sound type (*e.g.* impulsive sounds of impact driving or non-impulsive sound of vibratory pile driving), bottom profile characteristics, species, age and sex

class, duration of exposure, and many other factors (Wartzok *et al.,* 2003; Southall *et al.,* 2007; Hildebrand 2009). Potential effects include potential behavioral harassment (*e.g.* avoidance behavior or temporary displacement), masking—or interference, with marine mammals' ability to receive other sounds vital for biological functioning, and increased stress.

Marine Mammal Habitat Effects

There are no known foraging hotspots or other ocean bottom structure of significant biological importance to marine mammals present in the marine waters of the project area, though the surrounding areas may be foraging habitat for the dolphins. The most likely impact to marine mammal habitat occurs from pile driving effects on likely marine mammal prey (*i.e.,* fish) within NSM. Hastings and Popper (2005) identified several studies that suggest fish may relocate to avoid certain areas of sound energy. Furthermore, sound pulses at received levels of 160 dB re 1 µPa (all dB values in this document are referenced to a pressure of 1 µPa) may cause subtle changes in fish behavior, while SPLs of 180 dB may cause noticeable changes in behavior (Pearson *et al.,* 1992; Skalski *et al.,* 1992). SPLs of sufficient strength have been known to cause injury to fish and fish mortality, though the most likely impact to fish from pile driving activities at the project area would be temporary behavioral avoidance of the area. The duration of fish avoidance of this area after pile driving stops is unknown, but a rapid return to normal recruitment, distribution and behavior is anticipated.

The Mayport turning basin itself is a man-made basin with significant levels of industrial activity and regular dredging, and is unlikely to harbor significant amounts of forage fish. Thus, any impacts to marine mammal habitat are not expected to cause significant or long-term consequences for individual marine mammals or their populations. In summary, given the short daily duration of sound associated with individual pile driving events and the relatively small areas being affected, pile driving activities associated with the proposed action are not likely to have a permanent, adverse effect on marine mammal prey or their habitat.

Estimated Take

This section provides an estimate of the number of incidental takes proposed for authorization through this IHA, which will inform both NMFS's consideration of whether the number of takes is ''small'' and the negligible impact determination.

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 be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to vibratory and impact pile driving. Based on the nature of the activity, Level A harassment is neither anticipated nor proposed to be authorized.

In order to estimate the potential incidents of take that may occur incidental to the specified activity, we must first estimate the extent of the sound field that may be produced by the activity and then consider in combination with information about marine mammal density or abundance in the project area. Below we describe how the take is estimated.

Described in the most basic way, 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) and the number of days of activities. Below, we describe these components in more detail and present the proposed take estimate.

Acoustic Thresholds

Using the best available science, NMFS has developed 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) (Table 2).

Level B Harassment for non-explosive sources—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 (*e.g.,* frequency, predictability, duty cycle), the environment (*e.g.,* bathymetry), and the receiving animals (hearing, motivation, experience, demography, behavioral context) and can be difficult to predict (Southall *et al.,* 2007, Ellison *et al.,* 2011). NMFS uses a generalized acoustic threshold based on received level to estimate the onset of behavioral harassment. NMFS predicts that marine mammals are likely to be behaviorally harassed in a manner we consider Level B harassment when exposed to underwater anthropogenic noise above received levels of 120 dB re 1 micro Pascal (µPa) root mean square (rms) for continuous (*e.g.* vibratory pile-driving, drilling) and above 160 dB re 1 µPa (rms) for non-explosive impulsive (*e.g.,* seismic airguns) or intermittent (*e.g.,* scientific sonar) sources.

Recapitalization of Bravo Wharf includes the use of continuous (vibratory pile driving) and impulsive (impact pile driving) sources, and therefore the 120 and 160 dB re 1 µPa (rms) thresholds are applicable.

Level A harassment for non-explosive sources—NMFS' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Technical Guidance, 2016) 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) (Table 2). The Navy's proposed recapitalization of Bravo Wharf includes the use of impulsive (impact pile driving) and non-impulsive (vibratory pile driving) sources.

These thresholds were developed by compiling and synthesizing the best available science and soliciting input multiple times from both the public and peer reviewers to inform the final product, and are provided in the table below. The references, analysis, and methodology used in the development of the thresholds are described in NMFS 2016 Technical Guidance, which may be accessed at *http://www.nmfs.noaa.gov/pr/acoustics/guidelines.htm.*

TABLE 2—THRESHOLDS IDENTIFYING THE ONSET OF PERMANENT THRESHOLD SHIFT

Hearing group	PTS Onset thresholds	
	Impulsive	Non-impulsive
Low-Frequency (LF) Cetaceans	$L_{pk,flat}$: 219 dB; $L_{E,LF,24h}$: 183 dB	$L_{E,LF,24h}$: 199 dB.
Mid-Frequency (MF) Cetaceans	$L_{pk,flat}$: 230 dB; $L_{E,MF,24h}$: 185 dB	$L_{E,MF,24h}$: 198 dB.
High-Frequency (HF) Cetaceans	$L_{pk,flat}$: 202 dB; $L_{E,HF,24h}$: 155 dB	$L_{E,HF,24h}$: 173 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 (Lpk) has a reference value of 1 µPa, and cumulative sound exposure level (LE) has a reference value of 1µPa2s. 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 will feed into identifying the area ensonified above the acoustic thresholds.

Distance to Sound Thresholds

Underwater Sound Propagation Formula—Pile driving generates underwater noise that can potentially result in disturbance to marine mammals in the project area. 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:

$TL = B * \log10 (R1/R2)$,

Where:

R1 = the distance of the modeled SPL from the driven pile, and

R2 = the distance from the driven pile of the initial measurement.

This formula neglects loss due to scattering and absorption, which is assumed to be zero here. The degree to which underwater sound propagates away from a sound source is dependent on a variety of factors, most notably the water bathymetry and presence or absence of reflective or absorptive conditions including in-water structures and sediments. Spherical spreading occurs in a perfectly unobstructed (free-field) environment not limited by depth or water surface, resulting in a 6 dB reduction in sound level for each doubling of distance from the source (20*log[range]). Cylindrical spreading occurs in an environment in which sound propagation is bounded by the water surface and sea bottom, resulting in a reduction of 3 dB in sound level for each doubling of distance from the source (10*log[range]). A practical spreading value of fifteen is often used under conditions, such as at the NSM turning basin, where water increases with depth as the receiver moves away from the shoreline, resulting in an expected propagation environment that would lie between spherical and cylindrical spreading loss conditions. Practical spreading loss (4.5 dB reduction in sound level for each doubling of distance) is assumed here.

Underwater Sound—The intensity of pile driving sounds is greatly influenced by factors such as the type of piles, hammers, and the physical environment in which the activity takes place. A number of studies, primarily on the west coast, have measured sound produced during underwater pile driving projects. However, these data are largely for impact driving of steel pipe piles and concrete piles as well as vibratory driving of steel pipe piles. Vibratory driving of steel sheet piles was monitored during the first year of construction at the nearby Wharf C–2 at Naval Station Mayport during 2015. Measurements were conducted from a small boat in the turning basin and from the construction barge itself. Average SPLs for steel sheet piles ranged from 135 to 158 dB (DoN 2015) and SPLs for a 10-second period of driving averaged 156 dB re 1µPa rms (DoN, 2017a). No impact driving was measured at this location; therefore, proxy levels for impact driving have been calculated from other available source levels.

In order to determine reasonable SPLs and their associated effects on marine mammals that are likely to result from impact pile driving at NSM, we considered existing measurements from similar physical environments (sandy sediments and water depths greater than 15 ft) for driving of steel sheet piles (all measured at 10 m; *e.g.,* Laughlin, 2005a, 2005b; Illingworth and Rodkin, 2010, 2012, 2013; CalTrans 2012; CalTrans 2015). Proxy source values based on similarity to the physical environment at NSM and measurement location in the mid-water column were selected for acoustic modeling: 156 dB for vibratory driving (DoN 2017a) and 190 dB for impact driving (CalTrans 2015). All calculated distances to and the total area encompassed by the marine mammal sound thresholds are provided in Table 3.

TABLE 3—DISTANCE TO RELEVANT UNDERWATER SOUND TRESHOLDS AND AREAS OF ENSONIFICATION

Pile type	Method	Threshold	Distance (m)	Area (km^2)
Steel sheet piles	Vibratory	MF Level A (injury): 198 dB SELcum	0.1	0
		Level B (behavior): 120 dB re 1µPa rms	2,512	1.3550776
	Impact (contingency only)	MF Level A (injury): 185 dB SELcum	7.7	0.004
		Level B (behavior): 160 dB re 1µPa rms	1,000	0.5313217

[1] Sound pressure levels used for calculations are 156 dB rms and 190 dB rms for vibratory and impact driving, respectively.

The Mayport turning basin does not represent open water, or free field, conditions. Therefore, sounds would attenuate as per the confines of the basin, and may only reach the full estimated distances to the harassment thresholds via the narrow, east-facing entrance channel. Distances shown in Table 3 are estimated for free-field conditions, but areas are calculated per the actual conditions of the action area. See Figures 6–1 and 6–2 of the Navy's application for a depiction of areas in which each underwater sound threshold is predicted to occur at the project area due to pile driving.

Marine Mammal Occurrence

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations.

Marine Mammal Densities

For all species, the best scientific information available was considered for use in the marine mammal take assessment calculations. All densities for marine mammals with the possibility of occurring in the project area were calculated from the Navy's Marine Species Density Database and Technical Report (DoN 2017b). Density for bottlenose dolphins is derived from site-specific surveys conducted by the Navy (see Appendix C of the Navy's application for more information); it is not currently possible to identify observed individuals to stock. This survey effort consists of 24 half-day observation periods covering mornings and afternoons during four seasons (December 10–13, 2012, March 4–7, 2013, June 3–6, 2013, and September 9–12, 2013). During each observation period, two observers (a primary observer at an elevated observation point and a secondary observer at ground level) monitored for the presence of marine mammals in the turning basin (0.712 km^2) and an additional grid east of the basin entrance. Observers tracked marine mammal movements and behavior within the observation area, with observations recorded for five-minute intervals every half-hour. Morning sessions typically ran from 7:00–11:30 and afternoon sessions from 1:00 to 5:30.

Most observations of bottlenose dolphins were of individuals or pairs, although larger groups were occasionally observed (median number of dolphins observed ranged from 1–3.5 across seasons). Densities were calculated using observational data from the primary observer supplemented with data from the secondary observer for grids not visible by the primary observer. Season-specific density was then adjusted by applying a correction factor for observer error (*i.e.,* perception bias). The seasonal densities range from 1.98603 (winter) to 4.15366 (summer) dolphins/km^2. We conservatively use the largest density value to assess take, as the Navy does not have specific information about when in-water work may occur during the proposed period of validity.

Take Calculation and Estimation

Here we describe how the information provided above is brought together to produce a quantitative take estimate.

The following assumptions are made when estimating potential incidents of take:

- All marine mammal individuals potentially available are assumed to be present within the relevant area, and thus incidentally taken;
- An individual can only be taken once during a 24-h period;
- There will be 30 total days of vibratory driving and 10 days of contingency of impact pile driving;
- Exposures to sound levels at or above the relevant thresholds equate to take, as defined by the MMPA.

The estimation of marine mammal takes typically uses the following calculation:

Exposure estimate (rounded to the nearest whole number) = n * ZOI * total activity days

Where:

n = density estimate used for each species/season

ZOI = sound threshold ZOI area; the area encompassed by all locations where the SPLs equal or exceed the threshold being evaluated

The ZOI impact area is estimated using the relevant distances in Table 3, taking into consideration the possible affected area with attenuation due to the constraints of the basin. Because the basin restricts sound from propagating outward, with the exception of the east-facing entrance channel, the radial distances to thresholds are not generally reached.

There are a number of reasons why estimates of potential incidents of take may be conservative, assuming that available density or abundance estimates and estimated ZOI areas are accurate. We assume, in the absence of information supporting a more refined conclusion, that the output of the calculation represents the number of individuals that may be taken by the specified activity. In fact, in the context of stationary activities such as pile driving and in areas where resident animals may be present, this number more realistically represents the number of incidents of take that may accrue to a smaller number of individuals. While pile driving can occur any day throughout the in-water work window, and the analysis is conducted on a per day basis, only a fraction of that time (typically a matter of hours on any given day) is actually spent pile driving. The potential effectiveness of mitigation measures in reducing the number of takes is typically not quantified in the take estimation process. For these reasons, these take estimates may be conservative.

The quantitative exercise described above indicates that no incidents of Level A harassment would be expected, independent of the implementation of required mitigation measures. See Table 4 for total estimated incidents of take.

TABLE 4—CALCULATIONS FOR INCIDENTAL TAKE ESTIMATION

Species	n (animals/km^2)	Activity	n * ZOI [1]	Proposed authorized takes [2]
Phase II (40 days)				
Bottlenose dolphin [1]	4.15366	Vibratory driving (30 days)	6	169
Bottlenose dolphin [3]	4.15366	Contingency impact driving (10 days)	2	22
Total exposures				191

[1] See Table 3 for relevant ZOIs. The product of this calculation is rounded to the nearest whole number.
[2] The product of n * ZOI * total activity days (rounded to the nearest whole number) is used to estimate the number of takes.
[3] It is impossible to estimate from available information which stock these takes may accrue to.

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 such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such 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 such 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, we carefully consider 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, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Measurements from similar pile driving events were coupled with practical spreading loss to estimate zones of influence (ZOI; see *Estimated Take*); these values were used to develop mitigation measures for pile driving activities at NSM. The ZOIs effectively represent the mitigation zone that would be established around each pile to prevent Level A harassment to marine mammals, while providing estimates of the areas within which Level B harassment might occur. In addition to the specific measures described later in this section, the Navy would conduct briefings between construction supervisors and crews, marine mammal monitoring team, and Navy staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

Monitoring and Shutdown for Pile Driving

Shutdown Zone—For all pile driving activities, the Navy will establish a shutdown zone intended to contain the area in which SPLs equal or exceed the acoustic injury criteria for mid-frequency hearing specialists (*e.g.* bottlenose dolphins) at 198 dB SEL_{cum} for vibratory driving and 185 dB SEL_{cum} for impact driving. The purpose of a shutdown zone is to define an area within which shutdown of activity would occur upon sighting of a marine mammal (or in anticipation of an animal entering the defined area), thus preventing injury of marine mammals (as described previously under *Potential Effects of the Specified Activity on Marine Mammals,* serious injury or death are unlikely outcomes even in the absence of mitigation measures). Modeled radial distances for shutdown zones are shown in Table 3. However, a minimum shutdown zone of 15 m (which is larger than the maximum predicted injury zone) will be established during all pile driving activities, regardless of the estimated zone. Vibratory pile driving activities are not predicted to produce sound exceeding 198 dB SEL_{cum} threshold, but these precautionary measures are intended to prevent the already unlikely possibility of physical interaction with construction equipment and to further reduce any possibility of acoustic injury.

Disturbance Zone—Disturbance zones are the areas in which SPLs equal or exceed 160 and 120 dB rms (for impulse and continuous sound, respectively). Disturbance zones provide utility for monitoring conducted for mitigation purposes (*i.e.,* shutdown zone monitoring) by establishing monitoring protocols for areas adjacent to the shutdown zones. Monitoring of disturbance zones enables observers to be aware of and communicate the presence of marine mammals in the project area but outside the shutdown zone and thus prepare for potential shutdowns of activity. However, the primary purpose of disturbance zone monitoring is for documenting incidents of Level B harassment; disturbance zone monitoring is discussed in greater detail later (see *Proposed Monitoring and Reporting*). Nominal radial distances for disturbance zones are shown in Table 3. Given the size of the disturbance zone for vibratory pile driving, it is impossible to guarantee that all animals would be observed or to make comprehensive observations of fine-scale behavioral reactions to sound, and only a portion of the zone (*e.g.,* what may be reasonably observed by visual observers stationed within the turning basin) would be observed.

In order to document observed incidents of harassment, monitors record all marine mammal observations, regardless of location. The observer's location, as well as the location of the pile being driven, is known from a GPS. The location of the animal is estimated as a distance from the observer, which is then compared to the location from the pile. It may then be estimated whether the animal was exposed to sound levels constituting incidental harassment on the basis of predicted distances to relevant thresholds in post-processing of observational and acoustic data, and a precise accounting of observed incidences of harassment created. This information may then be used to extrapolate observed takes to reach an approximate understanding of actual total takes.

Monitoring Protocols—Monitoring would be conducted before, during, and after pile driving activities. In addition, observers shall record all incidents of marine mammal occurrence within the ZOI and shall document any behavioral reactions in concert with distance from piles being driven. Observations made outside the shutdown zone will not result in shutdown; that pile segment would be completed without cessation, unless the animal approaches or enters the shutdown zone, at which point all pile driving activities would be halted. Monitoring will take place from 15 minutes prior to initiation through 30 minutes post-completion of pile driving activities. 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 thirty minutes. Please see the Monitoring Plan (*www.nmfs.noaa.gov/pr/permits/incidental/construction.htm*), developed by the Navy in agreement with NMFS, for full details of the monitoring protocols.

The following additional measures apply to visual monitoring:

(1) Marine mammal observer (MMO) requirements for this construction action are as follows:

(a) At least one observer must have prior experience working as an observer.

(b) Other observers may substitute education (undergraduate degree in biological science or related field) or training for experience.

(c) Where a team of three or more observers are required, one observer should be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer.

(2) Qualified MMOs are trained biologists, and need the following additional minimum qualifications:

(a) Visual acuity in both eyes (correction is permissible) sufficient for discernment of moving targets at the water's surface with ability to estimate target size and distance; use of binoculars may be necessary to correctly identify the target;

(b) Ability to conduct field observations and collect data according to assigned protocols

(c) Experience or training in the field identification of marine mammals, including the identification of behaviors;

(d) Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;

(e) 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 and times when in-water construction activities were suspended to avoid potential incidental injury from construction sound of marine mammals observed within a defined shutdown zone; and marine mammal behavior; and

(f) 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.

(2) Prior to the start of pile driving activity, the shutdown zone will be monitored for fifteen minutes to ensure that it is clear of marine mammals. Pile driving will only commence once observers have declared the shutdown zone clear of marine mammals; animals will be allowed to remain in the shutdown zone (*i.e.,* must leave of their own volition) and their behavior will be monitored and documented. The shutdown zone may only be declared clear, and pile driving started, when the entire shutdown zone is visible (*i.e.,* when not obscured by dark, rain, fog, *etc.*). In addition, if such conditions should arise during impact pile driving that is already underway, the activity would be halted.

(3) If a marine mammal approaches or enters the shutdown zone during the course of pile driving operations, activity will be halted and delayed until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes (30 minutes in the case of a large whale) have passed without re-detection of the animal. Should any marine mammal not authorized for Level B harassment in this IHA enter the ensonified area, pile driving will cease until the animal(s) leaves the area and will resume after the observer has determined through re-sighting or by waiting 15 minutes that the animal moved outside the ensonified area. Monitoring will be conducted throughout the time required to drive a pile.

(4) Monitoring of the shutdown zone will continue for 30 minutes following completion of construction activity.

Soft-Start—The use of a soft start procedure is believed to provide additional protection to marine mammals by warning or providing a chance to leave the area prior to the hammer operating at full capacity, and typically involves a requirement to initiate sound from the hammer at reduced energy followed by a waiting period. This procedure is repeated two additional times. It is difficult to specify the reduction in energy for any given hammer because of variation across drivers and, for impact hammers, the actual number of strikes at reduced energy will vary because operating the hammer at less than full power results in ''bouncing'' of the hammer as it strikes the pile, resulting in multiple ''strikes.'' For impact driving, we require an initial set of three strikes from the impact hammer at reduced energy, followed by a 30-second waiting period, then two subsequent three strike sets. Soft start will be required at the beginning of each day's impact pile driving work and at any time following a cessation of impact pile driving of thirty minutes or longer.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means 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 in the proposed action area. 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 action; 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);
- Mitigation and monitoring effectiveness.

The Navy's proposed monitoring and reporting is also described in their Marine Mammal Monitoring Plan, on the Internet at *www.nmfs.noaa.gov/pr/permits/incidental/construction.htm*.

Visual Marine Mammal Observations

The Navy will collect sighting data and behavioral responses to construction for marine mammal species observed in the region of activity during the period of activity. All marine mammal observers (MMOs) will be trained in marine mammal

identification and behaviors and are required to have no other construction-related tasks while conducting monitoring. The Navy will monitor the shutdown zone and disturbance zone before, during, and after pile driving, with observers located at the best practicable vantage points. Based on our requirements, the Navy would implement the following procedures for pile driving:

- MMOs would be located at the best vantage point(s) in order to properly see the entire shutdown zone and as much of the disturbance zone as possible;
- During all observation periods, observers will use binoculars and the naked eye to search continuously for marine mammals;
- If the shutdown zones are obscured by fog or poor lighting conditions, pile driving at that location will not be initiated until that zone is visible. Should such conditions arise while impact driving is underway, the activity would be halted; and
- The shutdown and disturbance zones around the pile will be monitored for the presence of marine mammals before, during, and after any pile driving or removal activity.

Individuals implementing the monitoring protocol will assess its effectiveness using an adaptive approach. The monitoring biologists will use their best professional judgment throughout implementation and seek improvements to these methods when deemed appropriate. Any modifications to protocol will be coordinated between NMFS and the Navy.

Data Collection

We require that observers use approved data forms. Among other pieces of information, the Navy will record detailed information about any implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any. In addition, the Navy will attempt to distinguish between the number of individual animals taken and the number of incidences of take. We require that, at a minimum, the following information be collected on the sighting forms:

- Date and time that monitored activity begins or ends;
- Construction activities occurring during each observation period;
- Weather parameters (*e.g.,* percent cover, visibility);
- Water conditions (*e.g.,* sea state, tide state);
- Species, numbers, and, if possible, sex and age class of marine mammals;
- Description of any observable marine mammal behavior patterns, including bearing and direction of travel, and if possible, the correlation to SPLs;
- Duration of marine mammals within the shutdown area;
- Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;
- Description of implementation of mitigation measures (*e.g.,* shutdown or delay);
- Locations of all marine mammal observations; and
- Other human activity in the area.

Reporting

A draft report would be submitted to NMFS within 90 days of the completion of marine mammal monitoring, or sixty days prior to the requested date of issuance of any future IHA for projects at the same location, whichever comes first. The report will include marine mammal observations pre-activity, during-activity, and post-activity during pile driving days, and will also provide descriptions of any behavioral responses to construction activities by marine mammals and a complete description of all mitigation shutdowns and the results of those actions and an extrapolated total take estimate based on the number of marine mammals observed during the course of construction. A final report must be submitted within thirty days following resolution of comments on the draft report.

Prior Monitoring

The Navy met all monitoring requirements for similar construction activity at nearby Wharf C–2 in NSM (80 FR 55598, 8 September 2015; 78 FR 71566, 1 December 2013 and revised IHA for this activity: 79 FR 27863, 1 September 2014). During the course of both IHAs, the Navy did not exceed authorized take levels. The first IHA (covering the period of May 26 to August 17, 2015) authorized incidental take of 365 bottlenose dolphins and 95 Atlantic spotted dolphins by Level B harassment. Observers documented 272 bottlenose dolphins based on derived correction factors, and no Atlantic spotted dolphins were observed (DoN 2015b). As mentioned in the *Estimated Take* section, the Navy also monitored underwater acoustics during vibratory installation of king piles and steel sheet piles during the period of this IHA at NSM; the sound pressure level average ranged from 135 to 158 dB and averaged 21 seconds to install a sheet pile (DoN 2015b). Collection of underwater sound and production of a subsequent report was not required under the respective IHA, and is thus not discussed below for the second IHA at Wharf C–2.

An IHA for the second year of construction (covering a period from September 8, 2015 to September 7, 2016) authorized incidental take of 304 total bottlenose dolphins. After applying correction factors to derive a total number of estimated takes, estimated Level B takes were calculated to be 128 bottlenose dolphins (DoN 2016).

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 responses (*e.g.,* intensity, duration), the context of any responses (*e.g.,* critical reproductive time or location, migration), 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's 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 environmental 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).

Pile driving activities associated with the wharf construction project, as outlined previously, have the potential to disturb or displace marine mammals. Specifically, the specified activities may result in take, in the form of Level B harassment (behavioral disturbance) only, from underwater sounds generated from pile driving. Potential takes could occur if individuals of these species are present in the ensonified zone when pile driving is happening.

No injury, serious injury, or mortality is anticipated given the nature of the

activities and measures designed to minimize the possibility of injury to marine mammals. The potential for these outcomes is minimized through the construction method and the implementation of the planned mitigation measures. Specifically, vibratory hammers will be the primary method of installation (impact driving is included only as a contingency). Vibratory pile driving does have the potential to cause injury to marine mammals, but sound pressure levels in this activity (156 dB rms) do not exceed the threshold for injury in mid-frequency cetaceans. Impact pile driving produces short, sharp pulses with higher peak levels and much sharper rise time to reach those peaks. If impact driving is necessary, implementation of soft start and shutdown zones significantly reduces any possibility of injury. Given sufficient ''notice'' through use of soft start (for impact driving), marine mammals are expected to move away from a sound source that is annoying prior to it becoming potentially injurious. Environmental conditions in the confined and protected Mayport turning basin mean that marine mammal detection ability by trained observers is high, enabling a high rate of success in implementation of shutdowns to avoid injury.

Effects on individuals that are taken by Level B harassment, on the basis of reports in the literature as well as monitoring from other similar activities, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring) (*e.g.,* Thorson and Reyff 2006; HDR Inc. 2012). Most likely, individuals will simply move away from the sound source and be temporarily displaced from the areas of pile driving, although even this reaction has been observed primarily only in association with impact pile driving. The pile driving activities analyzed here are similar to, or less impactful than, numerous other construction activities conducted in San Francisco Bay and in the Puget Sound region, which have taken place with no reported injuries or mortality to marine mammals, and no known long-term adverse consequences from behavioral harassment. These activities are also nearly identical to the pile driving activities that took place at Wharf C–2 at NSM, which also reported zero injuries or mortality to marine mammals and no known long-term adverse consequences from behavioral harassment. Repeated exposures of individuals to levels of sound that may cause Level B harassment are unlikely to result in hearing impairment or to significantly disrupt foraging behavior. Thus, even repeated Level B harassment of some small subset of the overall stock is unlikely to result in any significant realized decrease in viability for the affected individuals, and thus would not result in any adverse impact to the stock as a whole. Level B harassment will be reduced to the level of least practicable impact through use of mitigation measures described herein and, if sound produced by project activities is sufficiently disturbing, animals are likely to simply avoid the turning basin while the activity is occurring.

The turning basin is not considered important habitat for marine mammals, as it is a man-made, semi-enclosed basin with frequent industrial activity and regular maintenance dredging. The surrounding waters may be an important foraging habitat for the dolphins, but the small area of ensonification does not extend outside of the turning basin and into this foraging habitat (see Figure 6–1 in the Navy's application). Therefore, behavioral disturbances that could result from anthropogenic sound associated with these activities are expected to affect only a relatively small number of individual marine mammals that may venture near the turning basin, although those effects could be recurring over the life of the project if the same individuals remain in the project vicinity. 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 the species or stock through effects on annual rates of recruitment or survival:

- No mortality or injury is anticipated or authorized;
- Behavioral disturbance is possible, but the significance to the affected stocks is expected to be minimal due to:
  - No more than 40 days of pile driving during the proposed authorized year;
  - The time required to drive each pile is brief, with no more than 60 seconds per pile via vibratory driving and no more than 10 minutes per pile via impact driving;
  - Proposed mitigation (*e.g.* shut-downs and soft start) would reduce acoustic impacts to species in the area of activities;
- The absence of any significant habitat within the project area, including known areas or features of special significance for foraging or reproduction; Noise associated with pile driving will ensonify relatively small areas, the majority of which are within the industrialized turning basin.

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 above, only small numbers of incidental take may be authorized under Section 101(a)(5)(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. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

Of the 191 incidents of behavioral harassment proposed to be authorized for bottlenose dolphins, we have no information allowing us to parse the predicted incidents amongst the four stocks that may occur in the project area. Therefore, we assessed the total number of predicted incidents of take against the best abundance estimate for each stock, as though the total would occur for the stock in question. For two of the bottlenose dolphin stocks—Western North Atlantic Southern Migratory Coastal and Western North Atlantic Northern Florida coastal stock—the total predicted number of incidents of take authorized would be considered small at 2.82 percent and 15.67 percent, respectively. This estimate assumes that estimated take occurs to a new individual, which is an extremely unlikely scenario and therefore a conservative estimate, as there is likely to be some overlap in both bottlenose dolphin stocks and individuals from day to day. Likelihood of actual take to the latter Northern Florida coastal stock is relatively low, and this estimate assumes all takes would occur to this one stock. In the western North Atlantic, the Northern Florida Coastal Stock is present in coastal Atlantic waters from the Georgia/Florida border south to 29.4° N. (Waring *et al.,* 2014), a span of more than 90 miles. There is no obvious

boundary defining the offshore extent of this stock. They occur in waters less than 20 m deep; however, they may also occur in lower densities over the continental shelf (waters between 20 m and 100 m depth) and overlap spatially with the offshore morphotype (Waring *et al.,* 2014).

For the other stock, the Jacksonville Estuarine System stock, if all takes occurred to this one stock, this could take 46.36 percent of the stock (n=412). It is, however, highly unlikely that all takes would occur to this one stock due to their distribution relative to Bravo Wharf and social patterns within stock range. JES bottlenose dolphins range from Cumberland Sound at the Georgia-Florida border south to approximately Jacksonville Beach, FL, an area consisting of coastline and complex estuarine habitat of riverines and tidal marshes. Three behaviorally different communities exist within the JES stock: In estuarine waters north of St. Johns River (termed the Northern area), estuarine waters south of St. Johns River to Jacksonville Beach (the Southern area), and the coastal area (Caldwell 2001). Caldwell (2001) found that dolphins in the northern area exhibit year-round site fidelity and are the most isolated of the three communities. They are also not known to socialize with dolphins in the Southern area, which show summer site fidelity but traverse in and out of the Jacksonville area each year (Caldwell 2001). Dolphins in the coastal area are much more mobile, exhibit fluid social patterns, and show no long-term site fidelity. Furthermore, genetic analysis also supports differentiation from JES dolphins between the Northern and Southern areas (Caldwell 2011). Although members of both groups have been observed outside their preferred areas, it is likely that the majority of JES dolphins would not occur within waters ensonified by project activities. In summary, JES dolphins largely comprise two predominant groups and exhibit strong site fidelity to those areas, which does not significantly overlap with the larger ZOI, which is almost entirely confined within NSM.

Furthermore, assessing potential impacts to individuals or stocks based on take estimates alone, in the absence of further context (*e.g.* quality of surrounding habitat, site fidelity, etc.), has limitations. It is common practice to estimate how many animals are likely to be present within a particular distance of a given activity, or exposed to a particular level of sound, given the many uncertainties in predicting the quantity and types of impacts of sound on marine mammals. In practice, depending on the amount of information available to characterize daily and seasonal movement and distribution of affected marine mammals, it can be difficult to distinguish between the number of individuals harassed and the instances of harassment and, when duration of the activity is considered, it can result in a take estimate that overestimates the number of individuals harassed. In particular, for stationary activities, it is more likely that some smaller number of individuals may accrue a number of incidences of harassment per individual than for each incidence to accrue to a new individual, especially if those individuals display some degree of residency or site fidelity and the impetus to use the site (*e.g.,* because of foraging opportunities) is stronger than the deterrence presented by the harassing activity. Given stock distribution, site fidelity, social patterns, the small likelihood that all takes would occur to new individuals within this stock, and that fact that NSM does not include any particularly unique habitat to aggregate dolphins, the majority of JES dolphins are not expected to occur within ensonified waters of project activities. Therefore, proposed takes are not expected to exceed small numbers relative to stock abundance.

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 will 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 (ESA)

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.

No incidental take of ESA-listed species is proposed for authorization or expected to result from this activity. Therefore, NMFS has determined that consultation under Section 7 of the ESA is not required for this action.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to the U.S. Navy for conducting pile driving associated with recapitalization of Bravo Wharf at NSM, Jacksonville, FL from March 13, 2018 to March 12, 2019, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. This section contains a draft of the IHA itself. The wording contained in this section is proposed for inclusion in the IHA (if issued).

1. This Incidental Harassment Authorization (IHA) is valid for one year from March 13, 2018 to March 12, 2019.

2. This IHA is valid only for pile driving activities associated with the Bravo Wharf Recapitalization Project at Naval Station Mayport, Florida.

3. General Conditions

(a) A copy of this IHA must be in the possession of the Navy, its designees, and work crew personnel operating under the authority of this IHA.

(b) The species authorized for taking is the bottlenose dolphin (*Tursiops truncatus).*

(c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b). See Table 1 for numbers of take authorized.

TABLE 1—AUTHORIZED TAKE NUMBERS

Species	Proposed authorized take	
	Level B	Level A
Bottlenose dolphin	191	0

(d) The taking by injury (Level A harassment), serious injury, or death of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.

(e) The Navy shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and Navy staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

4. Mitigation measures

The holder of this Authorization is required to implement the following mitigation measures:

(a) For all pile driving, the Navy shall implement a minimum shutdown zone of 15 m radius around the pile. If a marine mammal comes within or approaches the shutdown zone, such operations shall cease;

(b) The Navy shall establish monitoring locations as described below. Please also refer to the Marine Mammal Monitoring Plan (*see www.nmfs.noaa.gov/pr/permits/incidental/construction.htm*);

i. For all pile driving activities, a minimum of two observers shall be deployed, with one positioned to achieve optimal monitoring of the shutdown zone and the second positioned to achieve optimal monitoring of surrounding waters of the turning basin, the entrance to that basin, and portions of the Atlantic Ocean. If practicable, the second observer should be deployed to an elevated position, preferably opposite Bravo Wharf and with clear sight lines to the wharf and out the entrance channel;

ii. These observers shall record all observations of marine mammals, regardless of distance from the pile being driven, as well as behavior and potential behavioral reactions of the animals. Observations within the turning basin shall be distinguished from those in the entrance channel and nearshore waters of the Atlantic Ocean; and

iii. All observers shall be equipped for communication of marine mammal observations amongst themselves and to other relevant personnel (*e.g.,* those necessary to effect activity delay or shutdown);

(c) Monitoring shall take place from fifteen minutes prior to initiation of pile driving activity through thirty minutes post-completion of pile driving activity. In the event of a delay or shutdown of activity resulting from marine mammals in the shutdown zone, animals shall be allowed to remain in the shutdown zone (*i.e.,* must leave of their own volition) and their behavior shall be monitored and documented. Monitoring shall occur throughout the time required to drive a pile. The shutdown zone must be determined to be clear during periods of good visibility (*i.e.,* the entire shutdown zone and surrounding waters must be visible to the naked eye);

(d) If a marine mammal approaches or enters the shutdown zone, all pile driving activities at that location shall be halted. If pile driving is halted or delayed due to the presence of a marine mammal, the activity may not commence or resume until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or fifteen minutes have passed without re-detection of the animal. No pile driving may occur if any whale is detected within the Level B harassment zone (*e.g.* pile driving must be delayed or cease until the animal leaves the ZOI for at least 30 minutes).

(e) Monitoring shall be conducted by qualified observers, as described in the Monitoring Plan. Trained observers shall be placed from the best vantage point(s) practicable to monitor for marine mammals and implement shutdown or delay procedures when applicable through communication with the equipment operator. Observer training must be provided prior to project start and in accordance with the monitoring plan, and shall include instruction on species identification (sufficient to distinguish the species listed in 3(b)), description and categorization of observed behaviors and interpretation of behaviors that may be construed as being reactions to the specified activity, proper completion of data forms, and other basic components of biological monitoring, including tracking of observed animals or groups of animals such that repeat sound exposures may be attributed to individuals (to the extent possible);

(f) The Navy shall use soft start techniques recommended by NMFS for impact pile driving. Soft start requires contractors to provide an initial set of strikes at reduced energy, followed by a thirty-second waiting period, then two subsequent reduced energy strike sets. Soft start shall 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 thirty minutes or longer; and

(g) Pile driving shall only be conducted during daylight hours.

5. Monitoring

The holder of this Authorization is required to conduct marine mammal monitoring during pile driving activity. Marine mammal monitoring and reporting shall be conducted in accordance with the Monitoring Plan.

(a) The Navy shall collect sighting data and behavioral responses to pile driving for marine mammal species observed in the region of activity during the period of activity. All observers shall be trained in marine mammal identification and behaviors, and shall have no other construction-related tasks while conducting monitoring.

(b) For all marine mammal monitoring, the information shall be recorded as described in the Monitoring Plan.

6. Reporting

The holder of this Authorization is required to:

(a) Submit a draft report on all monitoring conducted under the IHA within ninety days of the completion of marine mammal monitoring, or sixty days prior to the issuance of any subsequent IHA for projects at NSM, whichever comes first. A final report shall be prepared and submitted within thirty days following resolution of comments on the draft report from NMFS. This report must contain the informational elements described in the Monitoring Plan, at minimum, and shall also include:

i. Detailed information about any implementation of shutdowns, including the distance of animals to the pile and description of specific actions that ensued and resulting behavior of the animal, if any;

ii. Description of attempts to distinguish between the number of individual animals taken and the number of incidents of take, such as ability to track groups or individuals; and

iii. An estimated total take estimate extrapolated from the number of marine mammals observed during the course of construction activities, if necessary;

(b) Reporting injured or dead marine mammals:

i. In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as an injury (Level A harassment), serious injury, or mortality, Navy shall immediately cease the specified activities and report the incident to the Office of Protected Resources, NMFS, and the Southeast Regional Stranding Coordinator, NMFS. The report must include the following information:

A. Time and date of the incident;

B. Description of the incident;

C. Environmental conditions (*e.g.,* wind speed and direction, Beaufort sea state, cloud cover, and visibility);

D. Description of all marine mammal observations in the 24 hours preceding the incident;

E. Species identification or description of the animal(s) involved;

F. Fate of the animal(s); and

G. Photographs or video footage of the animal(s).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with Navy to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. Navy may not resume their activities until notified by NMFS.

ii. In the event that Navy discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.,* in less than a moderate state of decomposition), Navy shall immediately report the incident to the Office of Protected Resources, NMFS, and the Southeast Regional Stranding Coordinator, NMFS.

The report must include the same information identified in 6(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with Navy to determine whether additional mitigation measures or modifications to the activities are appropriate; and

iii. In the event that Navy discovers an injured or dead marine mammal, and the lead observer determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, scavenger damage), Navy shall report the incident to the Office of Protected Resources, NMFS, and the Southeast Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. Navy shall provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

Request for Public Comments

We request comment on our analyses, the draft authorization, and any other aspect of this Notice of Proposed IHA for the proposed construction activities. Please include with your comments any supporting data or literature citations to help inform our final decision on the request for MMPA authorization.

Dated: November 20, 2017.

Donna S. Wieting,

Director, Office of Protected Resources, National Marine Fisheries Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XF857

Mid-Atlantic Fishery Management Council (MAFMC); Public Meetings

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

ACTION: Notice of public meetings.

SUMMARY: The Mid-Atlantic Fishery Management Council (Council) will hold public meetings of the Council and its Committees.

DATES: The meetings will be held Monday, December 11, 2017 through Thursday, December 14, 2017. For agenda details, see **SUPPLEMENTARY INFORMATION**.

ADDRESSES: The meeting will be held at: The Westin Annapolis, 100 Westgate Circle, Annapolis, MD 21401, telephone: (410) 972–4300.

Council address: Mid-Atlantic Fishery Management Council, 800 N. State St., Suite 201, Dover, DE 19901; telephone: (302) 674–2331.

FOR FURTHER INFORMATION CONTACT: Christopher M. Moore, Ph.D., Executive Director, Mid-Atlantic Fishery Management Council; telephone: (302) 526–5255. The Council's Web site, *www.mafmc.org* also has details on the meeting location, proposed agenda, webinar listen-in access, and briefing materials.

SUPPLEMENTARY INFORMATION: The following items are on the agenda, though agenda items may be addressed out of order (changes will be noted on the Council's Web site when possible.)

Monday, December 11, 2017

Ecosystem Approach to Fisheries Management Risk Assessment
  Review and approve EAFM based assessment
Risk Policy Framework—Meeting 2
  Review and approve recommended modifications to Council's Risk Policy
Magnuson-Stevens Act Reauthorization
  Review proposed MSA reauthorization legislation and CCC Working Paper
Tilefish Survey Project Report
  Update of the fisheries-independent pilot survey for tilefish

Tuesday, December 12, 2017

Executive Committee—CLOSED SESSION
  Ricks E Savage Award
Squid Buffer Zone Framework—Meeting 1
  Discuss framework goals and review and approve preliminary alternatives
Chub Mackerel Amendment
  Review scoping comments and discuss next steps
Law Enforcement Reports
  Reports will be received from the NOAA Office of Law Enforcement and the U.S. Coast Guard
Scup Recreational Specifications
  Review Monitoring Committee and Advisory Panel recommendations and adopt recommendations for 2018 Federal waters management measures
Summer Flounder Recreational Specifications
  Review Monitoring Committee and Advisory Panel recommendations and recommend Conservation Equivalency or coastwide management and associated measures for 2018
Summer Flounder Amendment
  Review and approve November 2017 Demersal Committee recommendations for further staff analysis

Wednesday, December 13, 2017

Black Sea Bass Recreational Specifications
  Review Monitoring Committee and Advisory Panel recommendations and adopt recommendations for 2018 Federal waters management measures. Review Wave 1 fishery implementation. Board Addendum XXX
Black Sea Bass Wave 1 Letter of Authorization Framework
  Review background and provide guidance for development of draft alternatives
Black Sea Bass Amendment
  Review initiation of black sea bass amendment (December 2015 motion)
Bluefish Amendment
  Initiate Bluefish Amendment and discuss next steps
Bureau of Ocean Energy Management Presentation
  Updates of Atlantic Offshore Renewable Projects and Atlantic