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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

Docket No. 160830798-7517-02

RIN 0648-BG32

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Waterfront Construction

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

ACTION: Final rule.

SUMMARY: NMFS, upon request from the U.S. Navy (Navy), issues these regulations pursuant to the Marine Mammal Protection Act (MMPA) to govern the taking of marine mammals incidental to conducting waterfront construction at Naval Submarine Base Kings Bay, GA, over the course of five years (2017-2022). These regulations, which allow for the issuance of Letters of Authorization (LOA) for the incidental take of marine mammals during the described activities and specified timeframes, prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, and establish requirements pertaining to the monitoring and reporting of such taking.

DATES: Effective from July 12, 2017, through July 11, 2022.

ADDRESSES: A copy of Navy's 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 below (see **FOR FURTHER INFORMATION CONTACT**).

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

SUPPLEMENTARY INFORMATION:

Purpose and Need for Regulatory Action

These regulations, issued under the authority of the MMPA (16 U.S.C. 1361 *et seq.*), establish a framework for authorizing the take of marine mammals incidental to the Navy's waterfront construction activities at Naval Submarine Base Kings Bay, GA (NSB Kings Bay). The Navy plans to repair (including direct repairs and repairs by component replacement) in-water structures at NSB Kings Bay, construct a new Transit Protection System Operational Support Facility, and extend the existing Layberth Pier in order to (1) address critical damage and mission and safety requirements, (2) limit further deterioration and increase the useful life of the structures, and (3) upgrade infrastructure to meet requirements of new submarine technology. Construction will include use of impact and vibratory pile driving, including installation and removal of steel, concrete, composite, and timber piles.

We received an application from the Navy requesting five-year regulations and authorization to take bottlenose dolphins. Take is anticipated to occur by Level B harassment incidental to impact and vibratory pile installation and removal. The regulations are valid from 2017 to 2022. Please see the "Background" section below for definitions of harassment.

Legal Authority for the Action

Section 101(a)(5)(A) of the MMPA (16 U.S.C. 1371(a)(5)(A)) directs the Secretary of Commerce 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 for up to five years if, after notice and public comment, the agency makes certain findings and issues regulations that set forth permissible methods of taking pursuant to that activity, as well as monitoring and reporting requirements. Section 101(a)(5)(A) of the MMPA and the implementing regulations at 50 CFR part 216, subpart I provide the legal basis for issuing this final rule containing five-year regulations, and for any subsequent LOAs. As directed by this legal authority, this final rule contains mitigation, monitoring, and reporting requirements.

Summary of Major Provisions within the Final Rule

Following is a summary of the major provisions of this final rule regarding Navy waterfront construction activities. We have determined that the Navy's adherence to the planned mitigation, monitoring, and reporting measures listed below will achieve the least practicable adverse impact on the affected marine mammals. These measures include:

- Required monitoring of the waterfront construction areas to detect the presence of marine mammals before beginning construction activities.
- Shutdown of construction activities under certain circumstances to avoid injury of marine mammals.
- Soft start for impact pile driving to allow marine mammals the opportunity to leave the area prior to beginning impact pile driving at full power.

Background

Paragraphs 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1371 (a)(5)(A) and (D)) direct the Secretary of Commerce 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.

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).

Summary of Request

On January 19, 2016, we received an adequate and complete request from the Navy for authorization to take marine mammals incidental to waterfront construction activities. On February 17, 2016 (81 FR 8048), we published a notice of receipt of Navy’s application in the *Federal Register*, requesting comments and information related to the request for 30 days. We

did not receive any comments. The Navy provided a revised final draft incorporating minor revisions on March 17, 2017.

The Navy plans to repair in-water structures at NSB Kings Bay, as well as to construct new facilities and modify existing facilities. These repairs, upgrades, and new construction would include use of impact and vibratory pile driving, including installation and removal of steel, concrete, composite, and timber piles. Hereafter (unless otherwise specified or detailed), we use the term “pile driving” to refer to both pile installation and pile removal. The use of both vibratory and impact pile driving is expected to produce underwater sound at levels that have the potential to result in behavioral harassment of marine mammals. Only the bottlenose dolphin (*Tursiops truncatus truncatus*) is expected to be present. The regulations are valid for five years, from July 12, 2017, through July 11, 2022.

Description of the Specified Activity

Additional detail regarding the specified activity was provided in our *Federal Register* notice of proposed rulemaking (82 FR 684; January 3, 2017); please see that notice or the Navy’s application for more information.

Overview

NSB Kings Bay is the Navy’s east coast home port for ballistic missile nuclear submarines supporting the Trident II (D-5) missile. NSB Kings Bay manages, maintains, and operates Trident ballistic missile (SSBN) and guided missile (SSGN) submarines, Trident II D-5 and Tomahawk Land Attack Missiles and systems, and infrastructure and quality of life facilities and programs. In 2010, the Navy found that conditions of water-based support facilities varied widely from good to seriously deteriorated. Continuous monitoring of these conditions by Navy at NSB Kings Bay has confirmed the advanced deterioration and critical nature of some issues

that pose operational and safety risks. Additionally, other areas of initial deterioration were identified which require remedy in order to maintain the useful life of existing structures.

Damage observed includes deteriorated concrete piles, pile caps, and deck components (cracked, spalled, delaminated, exposed/corroded internal reinforcing steel structures); marine pest (marine wood borer) damage on wooden piles; broken or unmaintained mooring fittings; and corrosion on steel piles and pile caps. In some cases, it is more cost effective to demolish older structures that are deteriorated and not well configured to fit existing and upcoming assets and replace them with new structures that are specifically designed to meet new mission requirements.

To ensure the Navy can continue its mission of supporting the Fleet Ballistic Missile System and Trident Submarine Program, the Navy plans to repair (including direct repairs and repairs by component replacement) in-water structures at NSB Kings Bay, construct a new Transit Protection System Operational Support Facility, and extend the existing Layberth Pier. These repairs, upgrades, and new construction will (1) address critical damage and mission and safety requirements, (2) limit further deterioration and increase the useful life of the structures, and (3) upgrade infrastructure to meet requirements of new submarine technology. Construction will include use of impact and vibratory pile driving, including installation and removal of steel, concrete, composite, and timber piles. The specified activity is comprised of six distinct projects, four of which are comprised of multiple smaller projects.

Dates and Duration

The specified activity may occur at any time during the five-year period of validity of the regulations. Planned dates of individual projects and project components are shown in Table 1, however, project dates may shift. In-water construction activities would occur during daylight hours, defined here as one hour post-sunrise to one hour prior to sunset.

Specified Geographical Region

NSB Kings Bay is located in southeastern Georgia, approximately four miles inland (straight line distance) from the Atlantic Ocean, and approximately eight miles north of the Georgia-Florida border, along the western shore of Cumberland Sound (see Figure 2-1 in the Navy's application). NSB Kings Bay is an approximately 16,000-acre installation including the land areas and adjacent water areas along Kings Bay and Cumberland Sound between Marianna Creek to the north and Mill Creek to the south, and is restricted from general public access.

This estuarine environment receives salt water input from ocean waters through tidal exchange, and fresh water input from rivers, tributaries, and stormwater outfalls. The large tidal range and strong currents result in tidally mixed waters that are refreshed on a daily basis. Please see section 2 of the Navy's application for more information.

Detailed Description of Activities

The Navy plans to remove deteriorated timber, concrete, and steel piles and replace them with concrete, composite, and steel piles. New construction would involve installation of steel, concrete, and composite piles. Aspects of construction activities other than pile driving are not anticipated to have the potential to result in incidental take of marine mammals because they are either above water or do not produce levels of underwater sound with likely potential to result in marine mammal disturbance. Therefore, we do not discuss elements of construction activity other than pile driving. No concurrent pile driving would occur. Project specific pile totals are given in Table 1.

A vibratory hammer will be used for all pile removal work. If use of the vibratory hammer is not feasible for pile installation (*i.e.*, with steel piles), a Delmag Pile Hammer D62-22 or equivalent impact hammer will be used. The Delmag Pile Hammer D62-22 is a single acting

diesel impact hammer with energy capacity of 76,899-153,799 foot-pounds. The most effective and efficient method of pile installation available will be implemented for each project. The method fitting these criteria may vary based on specific project requirements and local conditions. In some areas of Kings Bay a limestone layer can be found relatively close to the substrate/water interface. This type of layer requires impact driving because vibratory installation will not drive the piles to a sufficient depth. Impact driving, while generally producing higher levels of sound, also minimizes the net amount of active driving time, thus reducing the amount of time during which marine mammals may be exposed to noise. Impact or vibratory pile driving could occur on any day, but would not occur simultaneously.

Table 1. Pile Driving Summary.

ID	Project start (fiscal year)	Water depth (ft)	Pile size (in)	Pile type	Total #		Installation method	Estimated # of strikes per pile	Total maximum in-water work days
					Installed	Removed			
1A	2017	24	18	Concrete	148	0	Impact	60	30
			24	Concrete	18	0	Impact	70	4
			16	Timber	0	159	n/a	n/a	31
1B	2017	15	16	Composite	2	0	Vibratory	n/a	1
			16	Timber	0	2	n/a	n/a	1
2	2017	46	14	Steel (H)	55	0	Impact	80	7
3A	2017	46	24	Steel	2	2	Impact	70	2
	2022		24	Concrete	3	3	Impact	75	2
			24	Steel	10	10	Impact	70	7
3B	2021	46	14	Steel (H)	99	99	Impact	60	15
3C	2018	46	24	Steel	6	0	Impact	70	1
			30	Steel	0	6	n/a	n/a	1
3D	2017	46	24	Steel	6	0	Impact	70	1
			30	Steel	0	6	n/a	n/a	1
3E	2018	46	24	Steel	6	0	Impact	70	1
			30	Steel	0	6	n/a	n/a	1
3F	2021	46	30	Steel	8	8	Impact	70	4
3G	2022	30	14	Steel (H)	77	77	Impact	60	16
4A	2020	35	24	Concrete	165	0	Impact	200	55
			18	Concrete	50	0	Impact	80	17
			24	Concrete	0	121	n/a	n/a	8
4B	2020	35	24	Steel	30	30	Impact	100	8
5	2017	46	18	Composite	18	0	Vibratory	n/a	3
			16	Timber	0	18	n/a	n/a	3
6A	2022	46	24	Concrete	0	649	n/a	n/a	41
6B	2022	46	24	Concrete	0	121	n/a	n/a	6

Table 2 shows total piles planned for installation (I) and removal (R) by pile type and size in total and per year. Note that no pile driving is planned for fiscal year (FY) 2019. Below we provide further detail specific to individual projects and project components. For additional detail, please see section 1 of the Navy’s application.

Table 2. Pile Totals by Type and Year.

Pile type	Size (in)	FY2017		FY2018		FY2020		FY2021		FY2022		Totals	
		I	R	I	R	I	R	I	R	I	R	I	R
Composite	16	2	0	0	0	0	0	0	0	0	0	2	0
	18	18	0	0	0	0	0	0	0	0	0	18	0
Concrete	18	148	0	0	0	50	0	0	0	0	0	198	0
	24	18	0	0	0	165	121	0	0	3	773	186	894
Steel (H)	14	55	0	0	0	0	0	99	99	77	77	231	176
Steel	24	8	2	12	0	30	30	0	0	10	10	60	42
	30	0	6	0	12	0	0	8	8	0	0	8	26
Timber	16	0	179	0	0	0	0	0	0	0	0	0	179
Totals		249	187	12	12	245	151	107	107	90	860	703	1,317

Comments and Responses

We published a notice of proposed rulemaking in the *Federal Register* on January 3, 2017 (82 FR 684). During the 30-day comment period, we received a letter from the Marine Mammal Commission (Commission) and comments from two private citizens. The comments and our responses are described below.

Comment 1: The Commission recommends that we require the Navy to conduct source level measurements during vibratory driving of a representative number of 16-inch (in) composite piles in addition to the other pile types and methods proposed to be monitored.

Response: We agree with the Commission’s recommendation, and the Navy’s monitoring plan has been revised accordingly.

Comment 2: The Commission recommends that we require the Navy to conduct sound propagation measurements in addition to source level measurements during the various activities that would be monitored acoustically to refine the extent of the Level A and B harassment zones.

Response: This was originally the intent of the acoustic monitoring plan, and the Navy's monitoring plan has been revised for clarity.

Comment 3: The Commission recommends that we require the Navy to reallocate additional monitoring effort to the first two years of activities and ensure that monitoring occurs during a representative portion of the various pile sizes, types, and methods including during impact driving of steel pipe piles.

Response: The Navy has clarified that impact and vibratory pile driving may occur interchangeably on any given day. Therefore, for example, although the description of Project 1A includes a maximum of 31 days of vibratory removal and 30 days of impact installation, these days would not likely be independent, and the much smaller disturbance zone for impact driving would be contained within the zone associated with vibratory driving. We have revised the monitoring plan to include monitoring of the disturbance on a portion of days associated with Project 2; with this addition, all projects other than 1B and the FY17 phase of Project 3A (each of which involves only two days of pile driving) incorporate some disturbance zone monitoring effort. We therefore believe that the monitoring plan achieves the goals expressed in the Commission's recommendation.

Comment 4: A private citizen, while expressing support for the Navy's proposed waterfront construction activities, suggests that the length of the project may result in long-term avoidance and have permanent adverse effects on the Western North Atlantic South Carolina/Georgia Coastal Stock of bottlenose dolphins. The commenter recommends that the opportunity be used to fill gaps in research in order to provide insight regarding the human impact on marine mammals.

Response: We appreciate the commenter's concern. While the best available information does not lead us to believe that long-term avoidance or permanent adverse effects to any potentially affected stocks of bottlenose dolphin are reasonably anticipated outcomes of the specified activity, NMFS's implementing regulations (50 CFR 216.104) do require that applicants for incidental take authorization propose the suggested means of 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. Please see "Monitoring and Reporting," later in this document, for details of planned monitoring and reporting requirements.

Comment 5: A private citizen states that protection of marine life is critical to maintaining balanced ecosystems and that mass stranding of marine life is undesirable.

Response: We agree with the sentiments expressed by the commenter and issue this final rule in accordance with the requirements of the MMPA, which address the Congressional finding that marine mammal species and population stocks should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part (16 U.S.C. 1361(2)). However, no mass stranding of marine life is anticipated to result from the specified activity, and no injury or mortality of marine mammals is anticipated or authorized.

Description of Marine Mammals in the Area of the Specified Activity

Only one species under NMFS's jurisdiction is considered to have the potential to co-occur with Navy activities: the bottlenose dolphin. However, multiple stocks of bottlenose dolphin have the potential to be present. The offshore stock of bottlenose dolphins is considered extralimital to the project area and is not discussed further in this document.

Table 3 lists all species and stocks with expected potential for occurrence in the specified geographical region where Navy plans to conduct the specified activity, and summarizes information related to the population or stock, including potential biological removal (PBR). PBR, 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, is considered in concert with known sources of ongoing anthropogenic mortality (as described in NMFS's SARs).

Table 3. Marine Mammals Potentially Present in the Vicinity of NSB Kings Bay.

Species	Stock	ESA/MMPA status; Strategic (Y/N) ¹	Stock abundance (CV, N _{min} , most recent abundance survey) ²	PBR ³	Annual M/SI ⁴	Relative occurrence in Kings Bay; season of occurrence ⁵
Superfamily Odontoceti (toothed whales, dolphins, and porpoises)						
Family Delphinidae						
Bottlenose dolphin	Western North Atlantic Coastal, South Carolina/ Georgia	D; Y	4,377 (0.43; 3,097; 2009)	31	1.2-1.6	Likely; year-round
	WNA Coastal, Northern Florida	D; Y	1,219 (0.67; 730; 2009)	7	0.4	Rare; year-round
	WNA Coastal, Southern Migratory	D; Y	9,173 (0.46; 6,326; 2009)	63	0-12	Rare; January-March
	Southern Georgia Estuarine System	-; Y	194 (0.05; 185; 2009)	1.9	Unk	Likely; year-round
	Jacksonville Estuarine System	-; Y	Unknown	Undetermined	1.2	Rare; year-round

¹ESA 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 (see footnote 3) or which is determined to be declining and likely to be listed under the ESA within the foreseeable future.

²CV is coefficient of variation; N_{min} is the minimum estimate of stock abundance. The most recent abundance survey that is reflected in the abundance estimate is presented; there may be more recent surveys that have not yet been incorporated into the estimate.

³Potential biological removal, 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 size (OSP).

⁴These values, found in NMFS's SARs, represent annual levels of human-caused mortality plus serious injury from all sources combined (*e.g.*, commercial fisheries, subsistence hunting, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a range.

⁵The Navy considers “rare” to mean that there may be a few confirmed sightings or that the distribution of the stock is near enough to the area of interest that the species could occur there, and that overall the stock may occur but only infrequently or in small numbers. “Likely” is considered to mean that confirmed and regular sightings of the species occur year-round. Extralimital stocks are those that are considered unlikely to co-occur with the activity because the action area is outside the range of normal occurrence, but for which there may be some sighting or stranding records.

We presented a detailed discussion of the status of these stocks and their occurrence in the action area in the notice of the proposed rulemaking (82 FR 684; January 3, 2017), and do not repeat the information here. Please see that document for more information. In summary, the southern Georgia estuarine system stock and the South Carolina/Georgia coastal stock are expected to be the two stocks most likely to be affected by the specified activity. Individual animals from the northern Florida and southern migratory (January to March only) coastal stocks and the Jacksonville estuarine system stock may also occur rarely.

Potential Effects of the Specified Activity on Marine Mammals and Their Habitat

We provided discussion of the potential effects of the specified activity on marine mammals and their habitat in our *Federal Register* notice of proposed rulemaking (January 3, 2017; 82 FR 684). Therefore, we do not reprint the information here but refer the reader to that document. That discussion included 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 preamble includes a quantitative analysis of the number of incidents of take expected to occur incidental to this activity. The “Negligible Impact Analysis” section includes an analysis of how this specific activity will impact marine mammals, and considers the content of the discussion of potential effects to marine mammals and their habitat, the “Estimated Take” section, and the “Mitigation” section, to draw conclusions regarding the likely impacts of these activities on the reproductive success or survivorship of individuals, and from that on the affected marine mammal populations or stocks.

Estimated Take

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).

Anticipated takes would be by Level B harassment, as pile driving activity has the potential to result in disruption of behavioral patterns for individual marine mammals. Level A harassment by auditory injury is unlikely to occur as a result of this activity for bottlenose dolphins (*i.e.*, mid-frequency hearing specialists) and, although it is unlikely that take by Level A harassment would occur even in the absence of the planned mitigation and monitoring measures, the measures are expected to further minimize such potential. The Navy has requested authorization for the incidental taking by Level B harassment of bottlenose dolphins in the vicinity of NSB Kings Bay that may result from pile driving during waterfront construction activities described previously in this document.

Sound Thresholds

We provided discussion of relevant sound thresholds in our *Federal Register* notice of proposed rulemaking (January 3, 2017; 82 FR 684) and do not reprint the information here. Please see Table 4 for those criteria.

Table 4. Acoustic Exposure Criteria.

Criterion	Definition	Threshold
Level A harassment (mid-frequency cetaceans)	Injury (onset PTS – any level above that which is known to cause TTS)	230 dB ¹ (peak pressure) or 185 dB ² (cumulative sound exposure level)
Level B harassment	Behavioral disruption	160 dB root mean square (rms) (impulse sources); 120 dB rms (non-impulsive, continuous sources)

¹Referenced to 1 µPa; unweighted within generalized hearing range

²Referenced to 1 $\mu\text{Pa}^2\text{s}$; weighted according to appropriate auditory weighting function

Based on consideration of NMFS’s 2016 “Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing,” potential injury zones are fully encompassed by Navy’s planned shutdown zones. Predicted isopleth distances for auditory injury (*i.e.*, Level A harassment) were calculated for all construction scenarios (*e.g.*, combinations of pile types, hammer types, and assumed number of piles driven per day or driving duration per day). This information was used with NMFS’s optional user spreadsheet, a tool developed to help applicants implement the new Technical Guidance. For vibratory driving, predicted zones ranged from less than 1 m to 3.6 meters (m). For impact driving, predicted zone ranged from less than 1 m to 38 m. All zones were smaller than the Navy’s proposed minimum shutdown zone of 15 m, except for impact driving of 24-in steel piles associated with project 4B in FY20 (16.6 m) and impact driving of 30-in steel piles associated with project 3F in FY 2021 (38 m). Shutdown zones associated with these projects would be increased to 20 m and 40 m, respectively, in order to encompass the predicted injury zones. In consideration of the small injury zones and the Navy’s mitigation, we believe that injury will be avoided. We have considered the new guidance and believe that the likelihood of injury is adequately addressed in this analysis, and appropriate protective measures are in place in these regulations.

Zones of Influence

Sound Propagation – 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:

$TL = B * \log_{10}(R_1/R_2)$, where

R_1 = the distance of the modeled SPL from the driven pile, and

R_2 = the distance from the driven pile of the initial measurement.

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 ($20 * \log(\text{range})$). 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 decibels (dB) in sound level for each doubling of distance from the source ($10 * \log(\text{range})$). As is common practice in coastal waters, here we assume practical spreading loss (4.5 dB reduction in sound level for each doubling of distance) here. Practical spreading is a compromise that is often used under conditions 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.

Sound Source Levels and Behavioral Zones – 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. However, there are no measurements available from the specific environment of NSB Kings Bay. Numerous studies have examined sound pressure levels (SPLs) recorded from underwater pile driving projects in California and Washington, and the Navy has conducted a few studies on the east coast. In addition, the majority of studies are focused on steel

pipe piles, with less data available for other pile types. In order to determine reasonable SPLs and their associated effects on marine mammals that are likely to result from pile driving at NSB Kings Bay, studies with similar properties to the specified activity were evaluated, and are displayed in Table 5. Where available, data from the east coast were prioritized due to the differences in bathymetry and sediment at west coast sites. For pile types for which data from the east coast were not available, averages of west coast data were used to approximate source levels. For fiberglass reinforced plastic composite piles, no measured data are available. The source level estimates for this type of pile were based on data from timber piles driven on the east coast of the U.S, assuming that this is the most similar pile material. In all cases, where data from the same pile size/type were not available, a more conservative proxy was used. Where appropriate, weighted project averages were considered. Values measured at distances greater than 10 m were normalized to 10 m before calculating averages. For full details of data considered, please see Appendix C of the Navy’s application.

Table 5. Summary of Proxy Measured Underwater Sound Pressure Levels (SPLs).

Method	Pile size and material	Proxy	Proxy source levels (dB at 10 m)		
			rms	pk	SEL
Vibratory	16” timber; 16-18” composite	12-16” timber ¹	161	n/a	n/a
Vibratory	18-24” concrete	24” steel pipe ²⁻⁵	166	n/a	n/a
Vibratory	14” steel H	14” steel H ⁶	163	n/a	n/a
Vibratory	24” steel pipe	24” steel pipe ²⁻⁵	166	n/a	n/a
Vibratory	30” steel pipe	30” steel pipe ⁷⁻⁹	166	n/a	n/a
Impact	18” concrete	18” concrete ⁴	170	184	159
Impact	24” concrete	24” concrete ^{1, 6}	174	184	165
Impact	14” steel H	14” steel H ⁴	178	196	168
Impact	24” steel pipe	24” steel pipe ^{4, 10-11}	190	206	179

Impact	30" steel pipe	30" steel pipe ^{4, 8, 10, 12}	193	209	188
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Sources: ¹Illingworth & Rodkin, 2015; ²Illingworth & Rodkin, 2010; ³Illingworth & Rodkin, 2012; ⁴Caltrans, 2012; ⁵Illingworth & Rodkin, 2013b; ⁶Illingworth & Rodkin, 2013a; ⁷Laughlin, 2010a; ⁸Laughlin, 2010b; ⁹Laughlin, 2011; ¹⁰Laughlin, 2005a; ¹¹Laughlin, 2005b; ¹²MacGillivray and Racca, 2005

We consider the values presented in Table 5 to be representative of SPLs that may be produced by the specified activity. All calculated distances to and the total area encompassed by the marine mammal sound thresholds are provided in Table 6. Calculated radial distances to the 160 dB threshold assume a field free of obstruction. However, the waters surrounding NSB Kings Bay do not represent open water conditions and the calculated zone-specific areas take landforms into consideration. Actual zones are depicted in Figures 6-1 through 6-26 of the Navy's application. Although calculated radial distances to threshold do not change, the actual zone sizes may vary depending on the specific project location.

Table 6. Distances to Relevant Sound Thresholds and Areas of Ensonification.

Project	Pile type	Distance to threshold (m) and associated area of ensonification (km ²)			
		160 dB		120 dB	
1A	16" timber	n/a	n/a	5,412	3.69
1A	18" concrete	46.4	0.01	n/a	n/a
1A	24" concrete	85.8	0.02	n/a	n/a
1B	16" timber/composite	n/a	n/a	5,412	3.12
2	14" steel H	159	0.06	n/a	n/a
3A (FY17)	24" steel pipe	1,000	0.88	11,659	3.63
3A (FY22)	24" concrete	85.8	0.02	11,659	3.63
3A (FY22)	24" steel pipe	1,000	0.88	11,659	3.63
3B	14" steel H	159	0.04	7,356	2.40
3C	24-30" steel pipe	1,000	0.75	11,659	3.32
3D	24-30" steel pipe	1,000	0.90	11,659	3.17
3E	24-30" steel pipe	1,000	0.88	11,659	3.72

3F	30" steel pipe	1,585	1.35	11,659	3.49
3G	14" steel H	159	0.07	7,356	4.00
4A	18" concrete	46.4	0.02	11,659	7.51
4A	24" concrete	85.8	0.01	11,659	7.51
4B	24" steel pipe	1,000	1.63	11,659	6.87
5	16" timber/18" composite	n/a	n/a	5,412	10.75
6A/6B	24" concrete	n/a	n/a	11,659	9.34

Areas presented take into account attenuation and/or shadowing by land. Please see Figures 6-1 to 6-26 in the Navy's application.

Marine Mammal Density

The Navy conducted marine mammal surveys at NSB Kings Bay during 2006-2007 (McKee and Latusek, 2009). Transect lines were run in the waters around NSB Kings Bay during summer and fall 2006 and during winter and spring 2007. The survey area included estuarine waters extending from the mouth of the St. Marys River north through the Cumberland Sound to approximately eight nautical miles (nmi) inland along the Satilla River. The Crooked River and the Brickhill River, which flow into Cumberland Sound, were also part of the study area, though line transects were not possible in these locations, and census counts were substituted here. The geographic limits ranged from 30°40'N to 31°00'N and inland limits to 81°40'W. Nearshore Atlantic waters were not included in the surveys.

Observations were made with 7x50 power binoculars and with the naked eye, scanning from 0-90° relative to the vessel's line of travel. Sightings, radial distance and angle to animal, and number of individuals were recorded. For census count areas, the vessel was driven along the center line of the river and distance and angle to sightings were noted. Commercially available software (Distance 5.0) was used to analyze the collected data, including area surveyed,

and calculate a seasonal density. Seasonal densities were combined to calculate an average annual density of 1.12 dolphins per square kilometer (km²).

Incidental Take Calculation

The species density described above (1.12 animals/km²) was multiplied by the activity-specific ZOIs shown in Table 6 to determine the estimated daily exposures. The Navy then rounded these daily exposure estimates to the nearest whole number before multiplying by activity-specific pile driving days, shown in Table 1, to yield the exposure estimates shown in Table 7. The Navy has requested authorization for a total of 881 incidents of Level B harassment of bottlenose dolphins over the five-year period of validity of these regulations. Table 7 displays the total take estimate broken out by project and year. However, note that year assignments reflect only the projected project start years. Projects may continue into succeeding years, but neither exact start dates nor whether a project would in fact continue into the succeeding year are known at this time.

Table 7. Incidental Take Totals.

Year	Project	Impact	Vibratory
FY17	1A	0	124
	1B	n/a	6
	2	0	n/a
	3A	1	4
	3D	1	4
	5	n/a	72
FY17 Totals	n/a	2	210
			212
FY18	3C	1	4
	3E	1	4
FY18 Totals	n/a	2	8
			10
FY19		n/a	
FY20	4A	0	64
	4B	8	32
FY20 Totals	n/a	8	96
			104
FY21	3B	0	21
	3F	4	8
FY21 Totals	n/a	4	29
			33
FY22	3A	4	16
	3G	0	32

	6A	n/a	410
	6B	n/a	60
FY22 Totals	n/a	4	518
			522
FY17-22 Totals	n/a	20	861
			881

Analyses and Determinations

Negligible Impact Analysis

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. 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 by mortality, serious injury, and Level A or Level B harassment, we consider other factors, such as the likely nature of any behavioral responses (*e.g.*, intensity, duration), the context of any such responses (*e.g.*, critical reproductive time or location, migration), as well as the number and nature of estimated Level A harassment takes (if any), and effects on habitat. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status (*i.e.*, the environmental baseline).

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 these analyses 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, sources of human-caused mortality).

Pile driving activities associated with the wharf construction projects, as described 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 individual bottlenose dolphins are present in the ensonified zone when pile driving is happening.

No serious injury or mortality would be expected even in the absence of the planned mitigation measures. No Level A harassment is anticipated given the nature of the activities and measures designed to minimize the possibility of injury. The potential for injury is small, and is expected to be essentially eliminated through implementation of the planned mitigation measures—soft start (for impact driving) and shutdown zones. Impact driving, as compared with vibratory driving, has source characteristics (short, sharp pulses with higher peak levels and much sharper rise time to reach those peaks) that are potentially injurious or more likely to produce severe behavioral reactions. Given sufficient notice through use of soft start, marine mammals are expected to move away from a sound source that is annoying prior to its becoming potentially injurious or resulting in more severe behavioral reactions. Environmental conditions in waters surrounding NSB Kings Bay are expected to generally be good, with calm sea states, albeit with high turbidity. Nevertheless, we expect conditions would allow a high marine mammal detection capability, 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; Lerma, 2014). 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 known long-term adverse consequences from behavioral harassment.

The Navy has conducted similar multi-year activities potentially affecting bottlenose dolphins in San Diego Bay and in the same general region at Mayport, Florida, that have similarly reported no apparently consequential behavioral reactions or long-term effects on bottlenose dolphin populations (Lerma, 2014; Navy, 2015). Repeated exposures of individuals to relatively low levels of sound outside of preferred habitat areas are unlikely to significantly disrupt critical behaviors. 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 adverse 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 area while the activity is occurring. While vibratory driving associated with some project components may produce sound at distances of multiple kilometers from the pile driving site, thus intruding on higher-quality habitat, the project sites themselves and the majority of sound fields produced by the specified activities are within a heavily impacted, industrialized area. Therefore, we expect that animals annoyed by project sound would simply avoid the area and use more-preferred habitats.

In summary, this negligible impact analysis is founded on the following factors: (1) the possibility of injury, serious injury, or mortality may reasonably be considered discountable; (2) the anticipated incidents of Level B harassment consist of, at worst, temporary modifications in behavior; (3) the absence of any significant habitat within the project area, including known areas or features of special significance for foraging or reproduction; and (4) the presumed efficacy of the planned mitigation measures in reducing the effects of the specified activity to the level of least practicable adverse impact. In addition, while some of the potentially affected stocks are considered depleted under the MMPA, it is unlikely that minor noise effects in a small, localized area would have any effect on the stocks' ability to recover. In combination, we believe that these factors, as well as the available body of evidence from other similar activities, demonstrate that the potential effects of the specified activities will have only minor, short-term effects on individuals. The specified activities are not expected to impact rates of recruitment or survival and will therefore not result in population-level impacts.

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 planned monitoring and mitigation measures, we find that the total marine mammal take from the Navy's waterfront construction activities will have a negligible impact on the affected marine mammal species or stocks.

Small Numbers Analysis

Please see Table 7 for information relating to this small numbers analysis; as described previously, although we provide exposure estimates broken out by year and project component, we do not have specific information about when each project would be concluded or therefore how many takes may actually accrue in any given year during the five-year period of validity of

these regulations. An average of 176 incidents of behavioral harassment of bottlenose dolphins is predicted to occur annually over the five-year effective period of these regulations; we have no information allowing us to parse the predicted incidents amongst the stocks of bottlenose dolphin that may occur in the project area. However, because they would be expected to occur only rarely and/or seasonally, we assume that only small numbers of individuals of the northern Florida coastal, southern migratory coastal, and Jacksonville estuarine system stocks would be potentially present and available to be taken as a result of the specified activities.

The South Carolina/Georgia coastal and southern Georgia estuarine system (SGES) stocks are expected to potentially be present more regularly. For the South Carolina/Georgia coastal stock, the predicted annual average number of incidents of take to be authorized is considered small—approximately four percent—even if each estimated taking was of a new individual. This is an extremely unlikely scenario as, for bottlenose dolphins in estuarine and nearshore waters, there is likely to be some overlap in individuals present day-to-day.

The total number of authorized takes for bottlenose dolphins, if assumed to accrue solely to unique individuals of the SGES stock, is higher relative to the total stock abundance, which is currently estimated at 194 individuals. As described previously, this estimate is the result of surveys covering only a portion of the stock range and is assumed to underestimate the stock abundance. Regardless, these numbers represent the estimated incidents of take, not the number of individuals taken. That is, it is highly likely that a relatively small subset of SGES bottlenose dolphins would be harassed by project activities. SGES bottlenose dolphins range from Cumberland Sound at the Georgia-Florida border north to the Altamaha Sound, Georgia, an area spanning approximately 70 linear km of coastline and including habitat consisting of complex inshore and estuarine waterways. SGES dolphins show strong site fidelity (Balmer *et al.*, 2013),

and it is likely that the majority of SGES dolphins would not occur within waters ensonified by project activities. In summary, SGES dolphins are known to exhibit strong site fidelity (*i.e.*, individuals do not generally range throughout the recognized overall SGES stock range), and the specified activity will be stationary within a relatively enclosed industrial area not recognized as an area of any special significance that would serve to attract or aggregate dolphins. We therefore believe that the estimated numbers of take, were they to occur, likely represent repeated exposures of a much smaller number of bottlenose dolphins, and that these estimated incidents of take represent small numbers of bottlenose dolphins.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, we find that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks.

Mitigation

In order to issue an incidental take authorization under section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, “and other means of effecting the least practicable adverse 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 subsistence uses.” NMFS’s implementing 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)).

The mitigation strategies described below largely follow those required and successfully implemented under previous incidental take authorizations issued in association with similar

construction activities. Measurements from similar pile driving events were coupled with practical spreading loss and other relevant information to estimate zones of influence (ZOI; see “Estimated Take” section); these ZOI values were used to develop mitigation measures for pile driving activities at NSB Kings Bay. Background discussion related to underwater sound concepts and terminology was provided in the section on “Description of Sound Sources,” in our *Federal Register* notice of proposed rulemaking (January 3, 2017; 82 FR 684, at 694-695). Practical spreading loss is discussed in further detail previously in this preamble in the section on “Zones of Influence.” The ZOIs effectively represent the mitigation zone that would be established around each pile to prevent Level A harassment to dolphins, 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 will conduct briefings for 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. All relevant personnel will watch applicable sections of the Navy’s Marine Species Awareness Training video. Relevant personnel will also follow NMFS’s “Southeast Region Marine Mammal and Sea Turtle Viewing Guidelines,” which are described in Attachment 1 of Navy’s Monitoring Plan.

Monitoring and Shutdown for Pile Driving

The following measures will apply to the Navy’s mitigation through shutdown and disturbance zones:

Shutdown Zone – 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 some undesirable outcome, such as auditory injury or behavioral disturbance of sensitive species (serious injury or death are unlikely outcomes even in the absence of mitigation measures). For all pile driving activities, the Navy will establish a minimum shutdown zone with radial distance of 15 m. This minimum zone is intended to prevent the already unlikely possibility of physical interaction with construction equipment and to establish a precautionary minimum zone with regard to acoustic effects.

As described previously in the “Estimated Take” section, we used NMFS’s user spreadsheet, an optional companion spreadsheet associated with the alternative implementation methodology provided in Appendix D of NMFS’s acoustic guidance (NMFS, 2016), to calculate project, pile type, and pile driving methodology-specific zones within which auditory injury (*i.e.*, Level A harassment) could occur. The user spreadsheet is publicly available online at www.nmfs.noaa.gov/pr/acoustics/guidelines.htm. In using the spreadsheet, we assumed practical spreading loss and used supplementary information provided by the Navy regarding assumed number of piles driven per day and number of pile strikes necessary to install a pile (for impact pile driving) and daily duration of pile driving (for vibratory pile driving). Assumed source levels are provided in Table 5.

In most cases, this minimum shutdown zone of 15 m is expected to contain the area in which auditory injury could occur. All predicted auditory injury zones are less than the minimum 15 m shutdown zone (radial distance range: 0.5-13.1 m), with the exception of impact driving of 30-in steel piles associated with Project 3F (radial distance of 38 m) and impact driving of 24-in steel piles associated with Project 4B (radial distance of 16.6 m). In all cases, predicted injury zones are calculated on the basis of cumulative sound exposure, as peak pressure source levels

are below the injury threshold for mid-frequency cetaceans. For these two scenarios we require shutdown zones of 40 m and 20 m radial distance, respectively.

Injury zone predictions generated using the optional user spreadsheet are precautionary due to a number of simplifying assumptions. For example, the spreadsheet tool assumes that marine mammals remain stationary during the activity and does not account for potential recovery between intermittent sounds. In addition, the tool incorporates the acoustic guidance's weighting functions through use of a single-frequency weighting factor adjustment intended to represent the signal's 95 percent frequency contour percentile (*i.e.*, upper frequency below which 95 percent of total cumulative energy is contained; Charif *et al.*, 2010). This will typically result in higher predicted exposures for broadband sounds, since only one frequency is being considered, compared to exposures associated with the ability to fully incorporate the guidance's weighting functions.

Disturbance Zone – Disturbance zones are the areas in which SPLs equal or exceed 160 and 120 dB root mean square (rms) (for impulsive and non-impulsive, 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 “Monitoring and Reporting”). Nominal radial distances for disturbance zones are shown in Table 6.

In order to document observed incidents of harassment, monitors record all marine mammal observations, regardless of location. The observer's location and the location of the pile being driven are known, and the location of the animal may be estimated as a distance from the observer and 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 data, and a precise accounting of observed incidents of harassment created. This information may then be used to extrapolate observed takes to reach an approximate understanding of actual total takes, in cases where the entire zone was not monitored and/or all days of activity were not monitored.

Monitoring Protocols – Monitoring would be conducted before, during, and after pile driving activities. In addition, observers will record all incidents of marine mammal occurrence, regardless of distance from activity, and monitors will 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 will 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. Observation of shutdown zones will always occur, but observation of the larger disturbance zones will occur on a subset of days associated with each specific project (see project-specific details provided in “Monitoring and Reporting,” later in this document). Please see the Monitoring Plan, developed by the Navy in agreement with NMFS, for full details of the monitoring protocols.

The following additional measures apply to visual monitoring:

(1) Monitoring will be conducted by designated observers, who will be placed at the best vantage point(s) practicable (as defined in the Monitoring Plan) to monitor for marine mammals and implement shutdown/delay procedures when applicable by calling for the shutdown to the hammer operator. Observers would have no other construction-related tasks while conducting monitoring. Observers should have the following minimum qualifications:

- 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;
- Ability to conduct field observations and collect data according to assigned protocols;
- Experience or training in the field identification of bottlenose dolphins, including the identification of behaviors;
- Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations;
- Writing skills sufficient to document 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 of marine mammals from construction noise within a defined shutdown zone; and marine mammal behavior; and
- Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

(2) Prior to the start of pile driving activity, the shutdown zone will be monitored for 15 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 fifteen minutes have passed without re-detection of the animal. Monitoring will be conducted throughout the time required to drive a pile and for thirty minutes following the conclusion of pile driving.

Soft Start

The use of a soft start procedure is believed to provide additional protection to marine mammals by warning marine mammals or providing them with 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.” The Navy will utilize soft start techniques for impact pile driving. We require an initial set of three strikes from the impact

hammer at reduced energy, followed by a 30-second waiting period, then 2 subsequent 3-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; the requirement to implement soft start for impact driving is independent of whether vibratory driving has occurred within the prior 30 minutes.

We have carefully evaluated the Navy's proposed mitigation measures and considered a range of other measures in the context of ensuring that we prescribed the means of effecting the least practicable adverse impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another: (1) the manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals, (2) the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and (3) the practicability of the measure for applicant implementation.

Any mitigation measure(s) we prescribe should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

- (1) Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).
- (2) A reduction in the number (total number or number at biologically important time or location) of individual marine mammals exposed to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing takes by behavioral harassment only).
- (3) A reduction in the number (total number or number at a biologically important time or location) of times any individual marine mammal would be exposed to stimuli expected

to result in incidental take (this goal may contribute to 1, above, or to reducing takes by behavioral harassment only).

(4) A reduction in the intensity of exposure to stimuli expected to result in incidental take (this goal may contribute to 1, above, or to reducing the severity of behavioral harassment only).

(5) Avoidance or minimization of adverse effects to marine mammal habitat, paying particular attention to the prey base, blockage or limitation of passage to or from biologically important areas, permanent destruction of habitat, or temporary disturbance of habitat during a biologically important time.

(6) For monitoring directly related to mitigation, an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation. Based on our evaluation of these measures, we have determined that the planned mitigation measures provide the means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an incidental take authorization for an activity, section 101(a)(5)(A) 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 incidental take 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.

Any monitoring requirement we prescribe should improve our understanding of one or more of the following:

- Occurrence of marine mammal species in action area (*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 responses to acute stressors, or impacts of chronic exposures (behavioral or physiological).
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of an individual; or (2) population, species, or stock.
- Effects on marine mammal habitat and resultant impacts to marine mammals.
- Mitigation and monitoring effectiveness.

The Navy provided a separate Marine Mammal Monitoring Plan, which is available online 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 observers will be trained in marine mammal identification and behaviors and are required to have no other construction-related tasks while conducting monitoring. The Navy would monitor all shutdown zones at all times, and would monitor disturbance zones during a varying subset of total project

days. Disturbance zone monitoring effort during the first two years of project activities is expected to provide verification during the early stages of the project regarding assumed numbers of bottlenose dolphins present in the area. If compliance monitoring results suggest that the actual number of incidental take events may differ significantly from the number originally authorized, the Navy would consult with NMFS. The Navy will conduct monitoring before, during, and after pile driving, with observers located at the best practicable vantage points. Based on our requirements, the Navy will implement the following procedures for pile driving:

- Marine mammal observers will 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.
- The shutdown zone around the pile will be monitored for the presence of marine mammals before, during, and after all pile driving activity, while disturbance zone monitoring will be implemented according to the schedule proposed here.

Notional marine mammal observation locations are depicted in Figures 3-14 of the Navy's monitoring plan. Total days planned for each project are provided above in Table 1. Project-specific disturbance zone monitoring is described in the following list.

- Project 1A – A minimum of three observers will be deployed to monitor the disturbance zone on a minimum of ten days of vibratory pile driving.

- Project 1B – Only two total days of work are planned as part of Project 1B, and no disturbance zone monitoring will occur.
- Project 2 – Only impact pile driving is proposed in association with Project 2; therefore, the disturbance zone would be visible during shutdown zone monitoring. However, a minimum of two observers will be deployed to monitor the zones on a minimum of three of the seven anticipated days of pile driving.
- Project 3A – This project is expected to occur in two phases, beginning in FY2017 and FY2022. During phase one, only two total days of work are planned and no disturbance zone monitoring will occur. During phase two, a minimum of three observers will be deployed to monitor the disturbance zone on a minimum of three days of vibratory pile driving.
- Project 3B – A minimum of three observers will be deployed to monitor the disturbance zone on a minimum of five days of vibratory pile driving.
- Projects 3C, 3D, and 3E – A minimum of two observers will be deployed to monitor the disturbance zone during all impact driving associated with these projects.
- Project 3F – A minimum of three observers will be deployed to monitor the disturbance zone on a minimum of two days of vibratory pile driving.
- Project 3G – A minimum of three observers will be deployed to monitor the disturbance zone on a minimum of four days of vibratory pile driving.
- Project 4A – A minimum of four observers will be deployed to monitor the disturbance zone on a minimum of eight days of vibratory pile driving.
- Project 4B – A minimum of four observers will be deployed to monitor the disturbance zone on a minimum of three days of vibratory pile driving.

- Project 5 – A minimum of four observers will be deployed to monitor the disturbance zone on a minimum of three days of vibratory pile driving.
- Projects 6A and 6B – A minimum of five observers will be deployed to monitor the disturbance zone on a minimum of twelve days of vibratory pile driving.

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

Data Collection

We require that observers use standardized 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. 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.*, wind speed, percent cloud 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 distance from pile driving activity;
- 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.

Acoustic Monitoring

The Navy will implement a sound source level verification study during activities associated with specific project components of interest. Because data is relatively lacking for these pile types, data collection would be targeted towards impact and vibratory driving of concrete, timber, and composite piles. A sample scope of work for acoustic monitoring is provided as Attachment 3 of the Navy's monitoring plan. The exact specifications of the acoustic monitoring work would be finalized in consultation with Navy personnel, subject to constraints related to logistics and security requirements. Reporting of measured sound level signals will include the average, minimum, and maximum rms value and frequency spectra for each pile monitored. Peak and single-strike SEL values would also be reported for impact pile driving. Acoustic monitoring would be conducted in association with Project 1A (impact driving of 18-24" concrete piles and vibratory removal of 16" timber piles); Project 2 (impact driving of 14" steel H piles); Project 4A (impact driving of 18-24" concrete piles and vibratory removal of 24" concrete piles); and Project 5 (vibratory removal of 18" timber piles and vibratory installation of 18" composite piles). Propagation loss measurements will also be part of the plan.

Marine Mammal Surveys

Subject to funding availability, additional work would be performed to describe the spatial and temporal distributions of bottlenose dolphins and their densities in areas that may be affected by the specified activities. Surveys would be performed as soon as practicable.

Reporting

A draft report will be submitted to NMFS within 90 days of the completion of the monitoring period for each project. 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, 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. The Navy will also submit a comprehensive summary report following conclusion of the specified activities.

Adaptive Management

The regulations governing the take of marine mammals incidental to Navy waterfront construction activities contain an adaptive management component.

The reporting requirements associated with this final rule are designed to provide NMFS with monitoring data from the previous year to allow consideration of whether any changes are appropriate. The use of adaptive management allows NMFS to consider new information from different sources to determine (with input from the Navy regarding practicability) on an annual or biennial basis if mitigation or monitoring measures should be modified (including additions or deletions). Mitigation measures could be modified if new data suggests that such modifications would have a reasonable likelihood of reducing adverse effects on marine mammals and if the measures are practicable.

The following are some of the possible sources of applicable data to be considered through the adaptive management process: (1) results from monitoring reports, as required by MMPA authorizations; (2) results from general marine mammal and sound research; and (3) any

information which reveals that marine mammals may have been taken in a manner, extent, or number not authorized by these regulations or subsequent LOAs.

Changes to the Proposed Regulations

In response to public comment, and as a result of clarifying discussions with the Navy, we made certain changes to the proposed regulations as described here. These changes are considered minor and do not affect any of our preliminary determinations.

Monitoring

We have added a requirement to conduct disturbance zone monitoring for Project 2, and have clarified that disturbance zone monitoring for Projects 3C-E would occur within the estimated 1,000-m disturbance zone associated with impact pile driving. We have also clarified that required acoustic monitoring will include measurements of propagation loss in addition to measurements of sound source levels. Finally, in order to accomplish acoustic monitoring of composite piles we have substituted Project 5 for Projects 6A-B in the acoustic monitoring plan.

Impact on Availability of Affected Species for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by these actions. Therefore, we have 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)

No marine mammal species listed under the ESA are expected to be affected by these activities. Therefore, we have determined that section 7 consultation under the ESA is not required.

National Environmental Policy Act (NEPA)

In our *Federal Register* notice of proposed rulemaking (January 3, 2017; 82 FR 684), we stated our intent to independently evaluate the Navy's draft EA and determine whether or not to adopt it. Since publication of the proposed rule, NOAA has completed revisions to NOAA's procedures for implementing NEPA and related authorities, as contained in the Companion Manual to NOAA Administrative Order (NAO) 216-6A (Companion Manual). The Companion Manual includes NOAA's revised categorical exclusions (CE) and related extraordinary circumstances.

In accordance with the Companion Manual and NAO 216-6A, we have determined that issuance of this final rule qualifies to be categorically excluded from further NEPA review. Issuance of this final rule is consistent with categories of activities identified in CE B4 of the Companion Manual and we have not identified any extraordinary circumstances listed in Chapter 4 of the Companion Manual that would preclude application of this CE. NMFS has prepared a CE memorandum for the record.

Classification

Pursuant to the procedures established to implement Executive Order 12866, the Office of Management and Budget has determined that this rule is not significant.

Pursuant to section 605(b) of the Regulatory Flexibility Act (RFA), the Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration at the proposed rule stage that this action will not have a significant economic impact on a substantial number of small entities. Navy is the sole entity that would be subject to the requirements of these regulations, and the U.S. Navy is not a small governmental jurisdiction, small organization, or small business, as defined by the RFA. No comments were received regarding this certification. As a result, a regulatory flexibility analysis

is not required and none has been prepared.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act (PRA) unless that collection of information displays a currently valid OMB control number. However, this rule does not contain a collection-of-information requirement subject to the provisions of the PRA because the applicant is a Federal agency.

List of Subjects in 50 CFR Part 217

Exports, Fish, Imports, Indians, Labeling, Marine mammals, Penalties, Reporting and recordkeeping requirements, Seafood, Transportation.

Dated: June 2, 2017.

Samuel D. Rauch, III,
Acting Assistant Administrator for Fisheries,
National Marine Fisheries Service.

For reasons set forth in the preamble, NMFS amends 50 CFR part 217 as follows:

**PART 217 – REGULATIONS GOVERNING THE TAKING AND IMPORTING OF
MARINE MAMMALS**

1. The authority citation for part 217 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq.*

Subpart Y [Reserved]

2. Add reserved subpart Y.
3. Add subpart Z to read as follows:

Subpart Z – Taking Marine Mammals Incidental to Navy Waterfront Construction

Activities at Naval Submarine Base Kings Bay

Sec.

217.250 Specified activity and specified geographical region.

217.251 Effective dates.

217.252 Permissible methods of taking.

217.253 Prohibitions.

217.254 Mitigation requirements.

217.255 Requirements for monitoring and reporting.

217.256 Letters of Authorization.

217.257 Renewals and modifications of Letters of Authorization.

217.258 [Reserved]

217.259 [Reserved]

§ 217.250 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to the U.S. Navy (Navy), and those persons it authorizes or funds to conduct activities on its behalf, for the taking of marine mammals that occurs in the area outlined in paragraph (b) of this section and that occurs incidental to waterfront construction activities.

(b) The taking of marine mammals by Navy may be authorized in a Letter of Authorization (LOA) only if it occurs within waters adjacent to Naval Submarine Base Kings

Bay and Crab Island.

§ 217.251 Effective dates.

Regulations in this subpart are effective from July 12, 2017, through July 11, 2022.

§ 217.252 Permissible methods of taking.

Under LOAs issued pursuant to § 216.106 of this chapter and § 217.256, the Holder of the LOA (hereinafter “Navy”) may incidentally, but not intentionally, take marine mammals within the area described in § 217.250(b) by Level B harassment associated with waterfront construction activities, provided the activity is in compliance with all terms, conditions, and requirements of the regulations in this subpart and the appropriate LOA.

§ 217.253 Prohibitions.

Notwithstanding takings contemplated in § 217.250 and authorized by a LOA issued under § 216.106 of this chapter and § 217.256, no person in connection with the activities described in § 217.250 may:

- (a) Violate, or fail to comply with, the terms, conditions, and requirements of this subpart or a LOA issued under § 216.106 of this chapter and § 217.256;
- (b) Take any marine mammal not specified in such LOAs;
- (c) Take any marine mammal specified in such LOAs in any manner other than as specified;
- (d) Take a marine mammal specified in such LOAs if NMFS determines such taking results in more than a negligible impact on the species or stocks of such marine mammal; or
- (e) Take a marine mammal specified in such LOAs if NMFS determines such taking results in an unmitigable adverse impact on the species or stock of such marine mammal for taking for subsistence uses.

§ 217.254 Mitigation requirements.

When conducting the activities identified in § 217.250, the mitigation measures contained in any LOA issued under § 216.106 of this chapter and § 217.256 must be implemented. These mitigation measures shall include but are not limited to:

(a) General conditions:

(1) A copy of any issued LOA must be in the possession of the Navy, its designees, and work crew personnel operating under the authority of the issued LOA.

(2) The Navy shall conduct briefings for construction supervisors and crews, marine mammal monitoring team, acoustic monitoring team, and Navy staff prior to the start of the first pile driving activity conducted pursuant to this chapter, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

(b) Except for pile driving covered under paragraphs (c) and (d) of this section, for all pile driving activity, 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.

(c) For impact pile driving associated with Project 3F (Warping Wharf with Capstan), the Navy shall implement a minimum shutdown zone of 40 m radius around the pile. If a marine mammal comes within or approaches the shutdown zone, such operations shall cease.

(d) For impact pile driving associated with Project 4B (Small Craft Berth Site VI), the Navy shall implement a minimum shutdown zone of 20 m radius around the pile. If a marine mammal comes within or approaches the shutdown zone, such operations shall cease.

(e) The Navy shall deploy marine mammal observers as indicated in the final Marine

Mammal Monitoring Plan and as described in § 217.255 of this chapter.

(1) For all pile driving activities, a minimum of one observer shall be stationed at the active pile driving rig or within reasonable proximity of the rig in order to monitor the shutdown zone.

(2) Monitoring shall take place from 15 minutes prior to initiation of pile driving activity through 30 minutes post-completion of pile driving activity. Pre-activity monitoring shall be conducted for 15 minutes to ensure that the shutdown zone is clear of marine mammals, and pile driving may commence when observers have declared the shutdown zone clear of marine mammals. 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 entire shutdown zone must be visible before it can be deemed clear of marine mammals.

(3) 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.

(4) Monitoring shall be conducted by trained observers, who shall have no other assigned tasks during monitoring periods. 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.

(f) The Navy shall use soft start techniques for impact pile driving. Soft start for impact

drivers 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.

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

§ 217.255 Requirements for monitoring and reporting.

(a) Trained observers shall complete applicable portions of the Navy's Marine Species Awareness Training, as well as a general environmental awareness briefing conducted by Navy staff. At minimum, training shall include identification of bottlenose dolphins and relevant mitigation and monitoring requirements. All observers shall have no other construction-related tasks while conducting monitoring.

(b) For shutdown zone monitoring, the Navy shall report on implementation of shutdown or delay procedures, including whether the procedures were not implemented and why (when relevant).

(c) The Navy shall deploy additional observers to monitor disturbance zones according to the minimum requirements defined in this chapter. These observers 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, and shall communicate with the shutdown zone observer as appropriate with regard to the presence of marine mammals. All observers shall be trained in identification and reporting of marine mammal behaviors.

(1) During Project 1A (Tug Pier), Navy shall deploy a minimum of three additional marine mammal monitoring observers on a minimum of ten days of vibratory pile driving activity.

(2) During Project 2 (UMC Layberth (P-661)), Navy shall deploy a minimum of two additional marine mammal monitoring observers on a minimum of three days of impact pile driving activity.

(3) During the fiscal year 2022 phase of Project 3A (Explosives Handling Wharf #2), Navy shall deploy a minimum of three additional marine mammal monitoring observers on a minimum of three days of vibratory pile driving activity.

(4) During Project 3B ((Dry Dock) Interface Wharf), Navy shall deploy a minimum of three additional marine mammal monitoring observers on a minimum of five days of vibratory pile driving activity.

(5) During Projects 3C, 3D, and 3E (Refit Wharves #1-3), Navy shall deploy a minimum of two additional marine mammal monitoring observers on all days of pile driving activity.

(6) During Project 3F (Warping Wharf with Capstan), Navy shall deploy a minimum of three additional marine mammal monitoring observers on a minimum of two days of vibratory pile driving activity.

(7) During Project 3G (Tug Pier), Navy shall deploy a minimum of three additional marine mammal monitoring observers on a minimum of four days of vibratory pile driving activity.

(8) During Project 4A (Transit Protection System (TPS) Pier), Navy shall deploy a minimum of four additional marine mammal monitoring observers on a minimum of eight days of vibratory pile driving activity.

(9) During Project 4B (Small Craft Berth Site VI), Navy shall deploy a minimum of four additional marine mammal monitoring observers on a minimum of three days of vibratory pile driving activity.

(10) During Project 5 (Magnetic Silencing Facility Repairs), Navy shall deploy a minimum of four additional marine mammal monitoring observers on a minimum of three days of vibratory pile driving activity.

(11) During Projects 6A (Demolition of TPS Pier) and 6B (Demolition of North Trestle), Navy shall deploy a minimum of five additional marine mammal monitoring observers on a minimum of twelve days of vibratory pile driving activity.

(d) The Navy shall conduct acoustic data collection (sound source verification and propagation loss), in accordance with NMFS's guidelines, in conjunction with Project 1A (Tug Pier), Project 2 (Unspecified Minor Construction Layberth Fender Pile Modification), Project 4A (TPS Pier), and Project 5 (Magnetic Silencing Facility).

(e) Reporting:

(1) Annual reporting:

(i) Navy shall submit an annual summary report to NMFS not later than ninety days following the end of in-water work for each project. Navy shall provide a final report within thirty days following resolution of comments on the draft report.

(ii) These reports shall contain, at minimum, the following:

(A) Date and time that monitored activity begins or ends;

(B) Construction activities occurring during each observation period;

(C) Weather parameters (*e.g.*, wind speed, percent cloud cover, visibility);

(D) Water conditions (*e.g.*, sea state, tide state);

(E) Species, numbers, and, if possible, sex and age class of marine mammals;

(F) Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;

(G) Distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point;

(H) Description of implementation of mitigation measures (*e.g.*, shutdown or delay);

(I) Locations of all marine mammal observations; and

(J) Other human activity in the area.

(2) Navy shall submit a comprehensive summary report to NMFS no later than 90 days following the conclusion of marine mammal monitoring efforts described in this chapter.

(3) Navy shall submit acoustic monitoring reports as necessary pursuant to § 217.255(d).

(f) Reporting of injured or dead marine mammals:

(1) In the unanticipated event that the activity defined in § 217.250 clearly causes the take of a marine mammal in a prohibited manner, Navy shall immediately cease such activity and report the incident to the Office of Protected Resources (OPR), NMFS, and to the Southeast Regional Stranding Coordinator, NMFS. 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. The report must include the following information:

(i) Time, date, and location (latitude/longitude) of the incident;

(ii) Description of the incident;

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

(iv) Description of all marine mammal observations in the 24 hours preceding the incident;

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

(vi) Fate of the animal(s); and

(vii) Photographs or video footage of the animal(s). Photographs may be taken once the animal has been moved from the waterfront area.

(2) In the event that Navy discovers an injured or dead marine mammal and 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 OPR and the Southeast Regional Stranding Coordinator, NMFS. The report must include the information identified in paragraph (f)(1) of this section. 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.

(3) In the event that Navy discovers an injured or dead marine mammal and determines that the injury or death is not associated with or related to the activities defined in § 217.250 (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, scavenger damage), Navy shall report the incident to OPR 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. Photographs may be taken once the animal has been moved from the waterfront area.

§ 217.256 Letters of Authorization.

(a) To incidentally take marine mammals pursuant to these regulations, Navy must apply for and obtain a LOA.

(b) A LOA, unless suspended or revoked, may be effective for a period of time not to exceed the expiration date of these regulations.

(c) If a LOA expires prior to the expiration date of these regulations, Navy may apply for and obtain a renewal of the LOA.

(d) In the event of projected changes to the activity or to mitigation and monitoring measures required by a LOA, Navy must apply for and obtain a modification of the LOA as described in § 217.257.

(e) The LOA shall set forth:

(1) Permissible methods of incidental taking;

(2) Means of effecting the least practicable adverse impact (*i.e.*, mitigation) on the species, its habitat, and on the availability of the species for subsistence uses; and

(3) Requirements for monitoring and reporting.

(f) Issuance of the LOA shall be based on a determination that the level of taking will be consistent with the findings made for the total taking allowable under these regulations.

(g) Notice of issuance or denial of a LOA shall be published in the *Federal Register* within thirty days of a determination.

§ 217.257 Renewals and modifications of Letters of Authorization.

(a) A LOA issued under § 216.106 of this chapter and § 217.256 for the activity identified in § 217.250 shall be renewed or modified upon request by the applicant, provided that:

(1) The proposed specified activity and mitigation, monitoring, and reporting measures, as well as the anticipated impacts, are the same as those described and analyzed for these regulations (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section), and

(2) NMFS determines that the mitigation, monitoring, and reporting measures required by

the previous LOA under these regulations were implemented.

(b) For a LOA modification or renewal requests by the applicant that include changes to the activity or the mitigation, monitoring, or reporting (excluding changes made pursuant to the adaptive management provision in paragraph (c)(1) of this section) that do not change the findings made for the regulations or that result in no more than a minor change in the total estimated number of takes (or distribution by species or years), NMFS may publish a notice of proposed LOA in the *Federal Register*, including the associated analysis of the change, and solicit public comment before issuing the LOA.

(c) A LOA issued under § 216.106 of this chapter and § 217.256 for the activity identified in § 217.250 may be modified by NMFS under the following circumstances:

(1) Adaptive Management – NMFS may modify (including augment) the existing mitigation, monitoring, or reporting measures (after consulting with Navy regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of the mitigation and monitoring set forth in the preamble for these regulations.

(i) Possible sources of data that could contribute to the decision to modify the mitigation, monitoring, or reporting measures in a LOA:

(A) Results from Navy's monitoring from previous years.

(B) Results from other marine mammal and/or sound research or studies.

(C) Any information that reveals marine mammals may have been taken in a manner, extent or number not authorized by these regulations or subsequent LOAs.

(ii) If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are substantial, NMFS will publish a notice of proposed LOA in the *Federal*

Register and solicit public comment.

(2) Emergencies – If NMFS determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in a LOA issued pursuant to § 216.106 of this chapter and § 217.256, a LOA may be modified without prior notice or opportunity for public comment. Notice would be published in the *Federal Register* within thirty days of the action.

§ 217.258 [Reserved]

§ 217.259 [Reserved]

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