DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 218

[Docket No. 131119976–5119–02]

RIN 0648–BD79

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to U.S. Marine Corps Training Exercises at Brant Island Bombing Target and Piney Island Bombing Range, USMC Cherry Point Range Complex, North Carolina

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

ACTION: Final rule.

SUMMARY: Upon application from the U.S. Marine Corps (Marine Corps), NMFS is issuing regulations per the Marine Mammal Protection Act (MMPA) to govern the unintentional taking of marine mammals, incidental to training operations at the Brant Island Bombing Target (BT–9) and Piney Island Bombing Range (BT–11) located within the Marine Corps' Cherry Point Range Complex in Pamlico Sound, North Carolina from March 2015 to March 2020. These regulations allow NMFS to issue a Letter of Authorization (LOA) for the incidental take of marine mammals during the Marine Corps' specified activities and timeframes, set forth the permissible methods of taking, set forth other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, and set forth requirements pertaining to the monitoring and reporting of the incidental take.

DATES: Effective March 13, 2015 through March 12, 2020.

ADDRESSES: An electronic copy of the application, our 2015 Environmental Assessment, the Marine Corps' 2009 Environmental Assessment, and our Finding of No Significant Impact (FONSI) are available on the following Web site at: *http://www.nmfs.noaa.gov/pr/permits/incidental/military.htm*. The public may also view documents cited in this final rule, by appointment, during regular business hours at 1315 East West Highway, Silver Spring, MD, 20910.

FOR FURTHER INFORMATION CONTACT: Jeannine Cody, National Marine Fisheries Service, Office of Protected Resources, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Executive Summary

This regulation, under the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1361 *et seq.*), establishes a framework for authorizing the take of marine mammals incidental to the Marine Corps' military training operations at the Brant Island Bombing Target (BT–9) and Piney Island Bombing Range (BT–11) located within the Marine Corps' Cherry Point Range Complex in Pamlico Sound, North Carolina.

The Marine Corps conducts military training to meet its statutory responsibility to organize, train, equip, and maintain combat-ready forces. The Marine Corps training activities include air-to-ground weapons delivery, weapons firing, and water-based training occurring at the BT–9 and BT–11 bombing targets located within the Marine Corps' Cherry Point Range Complex in Pamlico Sound, North Carolina. The Marine Corps' training activities are military readiness activities under the MMPA as defined by the National Defense Authorization Act for Fiscal Year 2004 (NDAA; Public Law 108–136).

Purpose and Need for this Regulatory Action

NMFS received an application from the Marine Corps requesting 5-year regulations and one 5-year Letter of Authorization to take marine mammals, specifically bottlenose dolphins (*Tursiops truncatus*), by harassment, injury, and mortality incidental to training operations at BT–9 and BT–11 bombing targets. NMFS has determined that these operations, which constitute a military readiness activity, have the potential to cause behavioral disturbance and injury to marine mammals.

Section 101(a)(5)(A) of the MMPA directs the Secretary of Commerce (Secretary) 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, after notice and public comment, the agency makes certain findings and issues regulations.

This regulation would establish a framework to authorize the take of marine mammals incidental to the Marine Corps' training exercises through NMFS' issuance of one 5-year Letter of Authorization to the Marine Corps, which would contain mitigation, monitoring, and reporting requirements.

Legal Authority for the Regulatory Action

Section 101(a)(5)(A) of the MMPA and our implementing regulations at 50 CFR part 216, subpart I provide the legal basis for issuing the 5-year regulations and subsequent Letter of Authorization. In the case of military readiness activities, such as those proposed to be conducted by the Marine Corps, the specified geographical region and small numbers provisions of section 101(a)(5)(A) do not apply.

Summary of Major Provisions Within the Final Regulation

The following provides a summary of some of the major provisions within this rulemaking for the Marine Corps' training exercises at Brant Island Bombing Target—BT–9 and Piney Island Bombing Range—BT–11 in Pamlico Sound, North Carolina. First, this final rulemaking authorizes take by harassment and injury only; it does not authorize take by mortality. Second, NMFS has determined that the Marine Corps' adherence to the proposed mitigation, monitoring, and reporting measures would achieve the least practicable adverse impact on the affected marine mammals. These measures include:

- Required pre- and post-exercise monitoring of the training areas to detect the presence of marine mammals during training exercises.
- Required monitoring of the training areas during active training exercises with required suspensions/delays of training activities if a marine mammal enters within any of the designated mitigation zones.
- Required reporting of stranded or injured marine mammals in the vicinity of the BT–9 and BT–11 bombing targets located within the Marine Corps' Cherry Point Range Complex in Pamlico Sound, North Carolina to the NMFS Marine Mammal Stranding Network.
- Required research on a real-time acoustic monitoring system to automate detection of bottlenose dolphins in the training areas.

Cost and Benefits

This final rule, specific only to the Marine Corps' training activities in BT–9 and BT–11 bombing targets, is not significant under Executive Order 12866–Regulatory Planning and Review.

Availability of Supporting Information

In 2009, the Marine Corps prepared an Environmental Assessment (EA) titled, ''Environmental Assessment MCAS Cherry Point Range Operations,'' in accordance with the National Environmental Policy Act (NEPA; 42

U.S.C. 4321 *et seq.*) and the regulations published by the Council on Environmental Quality. The EA is available at: *http://www.nmfs.noaa.gov/pr/permits/incidental/military.htm*. In 2009, the Marine Corps issued a Finding of No Significant Impact (FONSI) for its activities, which is also available at the same internet address.

After evaluating the Marine Corps' application and the 2009 EA, NMFS determined that there were changes to the proposed action (*i.e.,* increased ammunitions levels) and new environmental impacts (*i.e.,* the use of revised thresholds for estimating potential impacts on marine mammals from explosives) not addressed in the 2009 EA. In 2015, NMFS conducted a new analysis per NEPA, augmenting the information contained in the Marine Corps' 2009 EA, on the issuance of a MMPA rulemaking and subsequent LOA. In February 2015, NMFS determined that the issuance of this regulation and subsequent LOA would not have a significant effect on the quality of the human environment and issued a FONSI. In February 2015, the Marine Corps issued a new FONSI for their activities under the MMPA regulations and subsequent LOA.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5)(A) of the MMPA directs the Secretary 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, after notice and public review, NMFS makes certain findings and issues regulations.

NMFS shall grant authorization for the incidental takings if the agency finds that the total taking will have a negligible impact on the species or stock(s), and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant). Further, the authorization for incidental takings must set forth the permissible methods of taking; other means of effecting the least practicable adverse impact on the species or stock and its habitat; and requirements pertaining to the mitigation, monitoring, and reporting of such taking.

NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.''

The National Defense Authorization Act of 2004 (NDAA; Pub. L. 108–136) removed the ''small numbers'' and ''specified geographical region'' limitations indicated earlier and amended the definition of harassment as it applies to a ''military readiness activity'' to read as follows: (i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild [Level A Harassment]; or (ii) any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered [Level B Harassment].

Summary of Request

On January 28, 2013, NMFS received an application from the Marine Corps requesting a rulemaking and subsequent Letter of Authorization for the take of marine mammals incidental to training exercises conducted at Brant Island Bombing Target (BT–9) and Piney Island Bombing Range (BT–11) bombing targets at the USMC Cherry Point Range Complex located within Pamlico Sound, North Carolina.

On March 29, 2013, per the regulations at 50 CFR 216.104(b)(1)(i), NMFS began the public review process by publishing a Notice of Receipt in the **Federal Register** (78 FR 19224). After the close of the public comment period and review of comments, NMFS published a proposed rule in the **Federal Register** on July 15, 2014 (79 FR 41373) to authorize the take of marine mammals per the Marine Corps' training activities and solicited public comments.

The Marine Corps would conduct weapons delivery training exercises (air-to-surface and surface-to-surface) at the two water-based bombing targets located within the Cherry Point Range Complex in North Carolina. The military readiness activities would occur between March 2015 and March 2020, year-round, day or night. The Marine Corps proposes to use small arms, large arms, bombs, rockets, grenades, and pyrotechnics for the air-to-surface and surface-to-surface training exercises, which qualify as military readiness activities. NMFS anticipates that take, by Level B (behavioral) and Level A harassment of individuals of Atlantic bottlenose dolphin (*Tursiops truncatus*) would result from the training exercises.

The regulations would establish a framework for authorizing incidental take in a 5-year Letter of Authorization (LOA) which would authorize the take of Atlantic bottlenose dolphins (*Tursiops truncatus*) by Level A and Level B (behavioral) harassment only.

NMFS has issued three one-year Incidental Harassment Authorizations to the Marine Corps under section 101(a)(5)(D) of the MMPA for the conduct of similar training exercises from 2010 to 2014 (75 FR 72807, November 26, 2010; 77 FR 87, January 3, 2012; and 78 FR 42042, July 15, 2013). The Marine Corps' last Incidental Harassment Authorization expired in 2014.

NMFS is committed to the use of the best available science in its decision making. NMFS uses an adaptive, transparent process that allows for both timely scientific updates and public input into agency decisions regarding the use of acoustic research and thresholds. NMFS is currently in the process of re-evaluating acoustic thresholds based on the best available science, as well as how NMFS applies these thresholds under the MMPA to all activity types. This re-evaluation could potentially result in changes to the acoustic thresholds or their application as they apply to future Marine Corps training activities at BT–9 and BT–11. However, it is important to note that while changes in acoustic thresholds may affect the enumeration of ''takes,'' they do not necessarily change the evaluation of population level effects or the outcome of the negligible impact analysis. In addition, while acoustic criteria may also inform mitigation and monitoring decisions, the Marine Corps will implement an adaptive management program that will address new information allowing for the modification of mitigation and/or monitoring measures as appropriate.

Description of the Specified Activity

Overview

The Marine Corps must meet its statutory responsibility to organize, train, equip, and maintain combat-ready Marine Corps forces at the BT–9 and BT–11 bombing targets in Pamlico Sound, North Carolina. The bombing targets provide unique training environments and are of vital importance to the readiness of Marine Corps forces.

The types of ordnances proposed for use at the BT–9 and BT–11 bombing targets include gun ammunition (small and large arms), rockets, grenades, bombs, and pyrotechnics. Training for any activity may occur year-round, day or night, with no seasonal restrictions. Active sonar is not a component of these specified training exercises.

Dates and Duration

The Marine Corps' activities would occur between March 2015 and March 2020. Each type of training exercise described in more detail later in this rule may occur year-round, day or night. Approximately 15 percent of the activities would occur at night.

NMFS notes that the proposed rule in the **Federal Register** (79 FR 41373, July 15, 2014) discussed that the Marine Corps' activities would occur in a five-year period between September 2014 and September 2019. Although the dates have changed between the proposed rule and the final rule, the underlying analysis occurs on an annual basis and accounts for seasonal variation (winter and spring) over a five-year span.

Location of Proposed Activities

The Marine Corps administers and uses the BT–9 and BT–11 bombing targets (See Figure 1), located at the convergence of the Neuse River and Pamlico Sound, North Carolina, for the purpose of training military personnel in the skill of ordnance delivery by aircraft and small watercraft.

The BT–9 area is a water-based bombing target and mining exercise area located approximately 52 kilometers (km) (32.3 miles (mi)) northeast of Marine Air Corps Station Cherry Point. The U.S. Army Corps of Engineers, Wilmington District has defined a danger zone (prohibited area) by a 6 statute-mile (sm) diameter boundary around BT–9 (33 CFR 334.420). This restriction prohibits non-military vessels within the designated area. The BT–9 target area ranges in depth from 1.2 to 6.1 meters (m) (3.9 to 20 feet (ft)), with the shallow areas concentrated along the Brandt Island Shoal. The target itself consists of three ship hulls grounded on Brant Island Shoals, located approximately 4.8 km (3.0 mi) southeast of Goose Creek Island.

The BT–11 area encompasses a total of 50.6 square kilometers (km^2) (19.5 square miles (mi^2)) on Piney Island located in Carteret County, NC. The target prohibited area, at a radius of 1.8 sm, is roughly centered on Rattan Bay and includes approximately 9.3 km^2 (3.6 mi^2) of water and water depths range from 0.3 m (1.0 ft) along the shoreline to 3.1 m (10.1 ft) in the center of Rattan Bay. Water depths in the center of Rattan Bay range from approximately 2.4 to 3 m (8 to 10 ft) with bottom depths ranging from 0.3 to 1.5 m (1 to 5 ft) adjacent to the shoreline of Piney Island. The BT–11 in-water, stationary target consists of a barge and patrol boat located in roughly the center of Rattan Bay. The Marine Corps also use on an intermittent basis for strafing at water- and land-based targets, a second danger zone, with an inner radius of 1.8 sm and outer radius of 2.5 sm and also roughly centered on Rattan Bay.

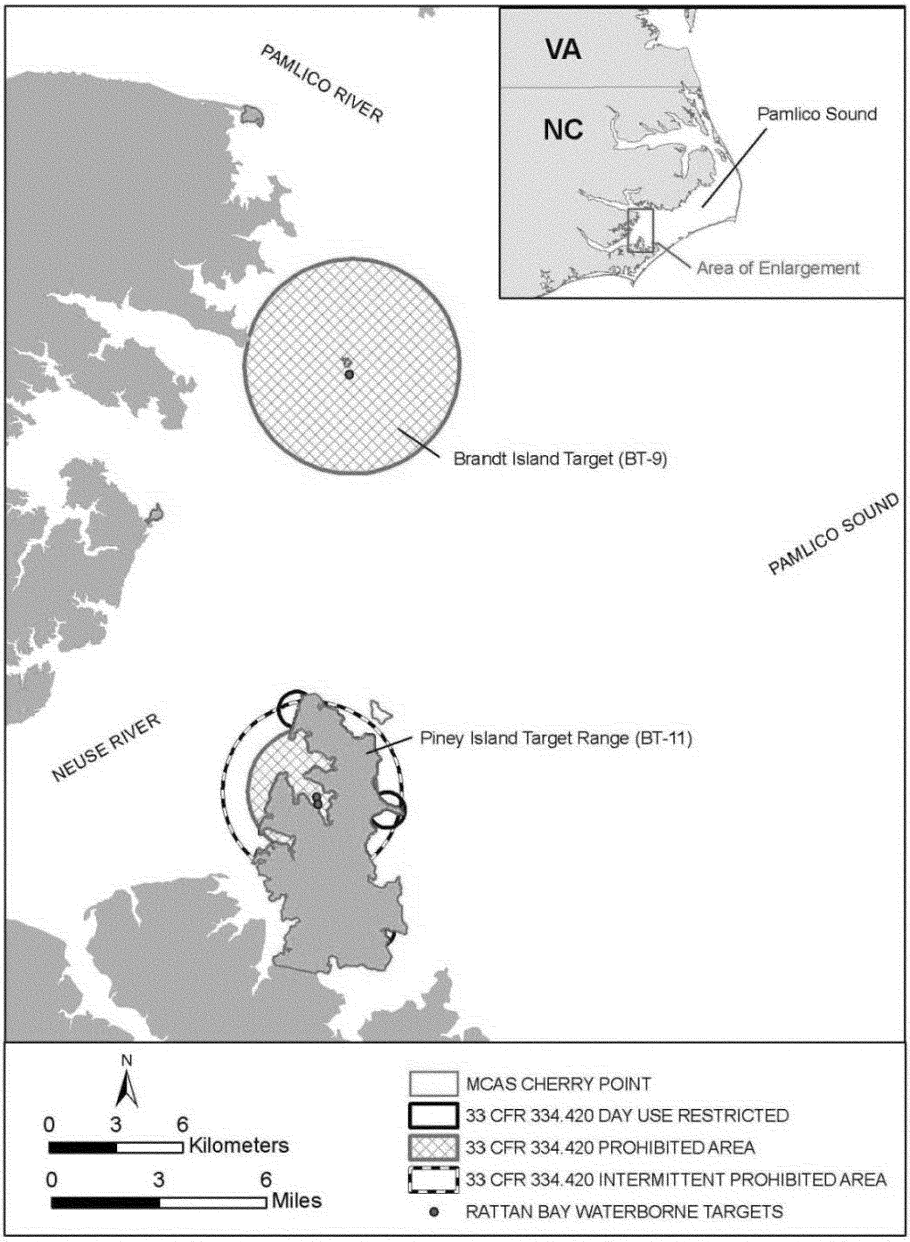

Figure 1. Brant Island Bombing Target (BT-9) and Piney Island Bombing Range (BT-11) bombing targets at the USMC Cherry Point Range Complex located within Pamlico Sound, North Carolina.

The Marine Corps conducts all inert and live-fire exercises at BT–9 and BT–11 so that all ammunition and other ordnances strike and/or fall on the land or water-based targets or within the existing danger zones or water restricted areas. The Marine Corps would close danger zones to the public on an intermittent or full-time basis for hazardous operations such as target practice and ordnance firing. They also prohibit or limit public access to water restricted areas to provide security for government property and/or to protect the public from the risks of injury or damage that could occur from the government's use of that area (33 CFR 334.2). Surface danger zones are designated areas of rocket firing, target practice, or other hazardous operations (33 CFR 334.420). The surface danger zone (prohibited area) for BT–9 is a 4.8 km (3.0 mi) radius centered on the south side of Brant Island Shoal. The surface danger zone for BT–11 is a 2.9 km (1.8 mi) radius centered on a barge target in Rattan Bay.

Detailed Description of the Activities

The following sections describe the training activities that have the potential to affect marine mammals present within the BT–9 and BT–11 bombing targets. These activities fall into two categories based on the ordnance delivery method: (1) Surface-to-surface gunnery exercises; and (2) air-to-surface bombing exercises.

Surface-to-Surface Exercises

Gunnery exercises are the only category of surface-to-surface activity currently conducted within BT–9 or BT–11. Surface-to-surface gunnery firing exercises typically involve Special Boat Team personnel firing munitions from a machine gun and 40 mm grenade

launchers at a water-based target or throwing concussion grenades into the water (*e.g.,* not at a specific target) from a small boat. The number and type of boats used depend on the unit using the boat and the particular training mission. These include: small unit river craft, combat rubber raiding craft, rigid hull inflatable boats, and patrol craft. These boats may use inboard or outboard, diesel or gasoline engines with either propeller or water jet propulsion systems.

The Marine Corps propose to use a maximum of six boats ranging in size from 7.3 to 26 m (24 to 85 ft) to conduct surface-to-surface firing activities. Each boat would travel between 0 to 20 knots (kts) (0 to 23 miles per hour (mph)) with an average of two vessels to approach and engage the intended targets. The boats typically travel in linear paths and do not operate erratically.

Boat sorties would occur in all seasons and the number of sorties conducted at each range may vary from year to year based on training needs and worldwide operational tempo. The majority of boat sorties at BT–9 originate from Marine Corps Air Station Cherry Point's boat docks, but they may also originate from the State Port in Morehead City, NC, Marine Corps Base Camp Lejeune, and U.S. Coast Guard Station Hobucken in Pamlico Sound. The majority of boat sorties at BT–11 originate from launch sites within the range complex.

There is no specific schedule associated with the use of BT–9 or BT–11 by the small boat teams. However, the Marine Corps schedules the exercises for 5-day blocks with exercises at various times throughout the year. Variables such as deployment status, range availability, and completion of crew-specific training requirements influence the exercise schedules. Table 1 in this document outlines the number of surface-to-surface exercises that occurred between 2011 and 2013 by bombing target area.

TABLE 1—COUNTS OF SURFACE-TO-SURFACE SORTIES CONDUCTED IN CALENDAR YEARS 2011, 2012, AND 2013 IN BT–9 AND BT–11

Year	BT–9	BT–11
2011	223	105
2012	322	106
2013	87	62

The direct-fire gunnery exercises (*i.e.,* all targets are within the line of sight of the military personnel) at BT–9 would typically use 7.62 millimeter (mm) or .50 caliber (cal) machine guns; 40 mm grenade machine guns; or G911 concussion hand grenades. The proposed exercises at BT–9 are usually live-fire exercises. At times, Marine Corps personnel would use blanks (inert ordnance) so that the boat crews could practice ship-handling skills during training without being concerned with the safety requirements involved with live weapons.

The Marine Corps estimates that it could conduct up to approximately 354 vessel-based sorties annually at BT–9. This estimate includes the highest number of sorties conducted during 2010 through 2013 (322) plus an additional 10 percent increase (32) in sorties to account for interannual variation based on future training needs and worldwide operational tempo.

The direct-fire gunnery exercises at BT–11 would include the use of small arms, large arms, bombs, rockets, and pyrotechnics. All munitions fired within the BT–11 range are non-explosive with the exception of the small explosives in the single charges. No live firing occurs at BT–11. The Marine Corps estimates that it could conduct up to approximately 117 vessel-based sorties annually at BT–11. This estimate includes the highest number of sorties conducted during 2010 through 2013 (106) plus an additional 10 percent increase (11) in sorties to account for interannual variation based on future training needs and worldwide operational tempo.

Air-to-Surface Exercises

Air-to-surface training exercises involve fixed-, rotary-, or tilt-wing aircraft firing munitions at targets on the water's surface or on land (as in the case of BT–11). There are four types of air-to-surface activities conducted within BT–9 and BT–11. They include: Mine laying, bombing, gunnery, or rocket exercises. Table 2 in this document outlines the number of air-to-surface exercises that occurred in 2011, 2012, and 2013 by bombing target area.

TABLE 2—COUNTS OF AIR-TO-SURFACE EXERCISES CONDUCTED IN CALENDAR YEARS 2011, 2012, AND 2013 IN BT–9 AND BT–11

Year	BT–9	BT–11
2011	1,554	4,251
2012	842	11,706
2013	407	1,177
Total	2,803	17,134

The Marine Corps estimates that it could conduct up to approximately 1,709 air-based based sorties annually at BT–9. This estimate includes the highest number of sorties conducted during 2010 through 2013 (1,554) plus an additional 10 percent increase (155) in sorties to account for interannual variation based on future training needs and worldwide operational tempo.

For the BT–11 area, the Marine Corps estimates that it could conduct up to approximately 12,877 air-based based sorties annually. This estimate includes the highest number of sorties conducted during 2010 through 2013 (11,706) plus an additional 10 percent increase (1,171) in sorties to account for interannual variation based on future training needs and worldwide operational tempo.

The following sections provide more detail on each exercise type that the Marine Corps proposes to conduct from 2015 through 2020.

Mine Laying Exercises: Aircraft With Inert Shapes

Mine laying exercises are simulations only, meaning that mine detonations would not occur during training. These exercises, regularly conducted at the BT–9 bombing target, involve the use of fixed-wing aircraft (F/A–18F Hornet Strike Fighter, P–3 Orion, or P–8 Poseidon) flying undetected to the target area using either a low- or high-altitude tactical flight pattern. When the aircraft reaches the target area, the pilot would deploy a series of inert mine shapes in an offensive or defensive pattern into the water. The aircraft would make multiple passes along a pre-determined flight azimuth dropping one or more of the inert shapes each time.

The mine-laying exercises at BT–9 would include the use of MK–62, MK–63, MK–76, BDU–45, and BDU–48 inert training shapes. Each inert shape weighs 500, 1000, 25, 500, and 10 pounds (lbs), respectively.

Bombing Exercises: Fixed-Wing Aircraft With Inert Bombs

Pilots train to destroy or disable enemy ships or boats during bombing exercises. These exercises, conducted at BT–9 or BT–11, normally involve the use of two to four fixed-wing aircraft (*i.e.,* an F/A–18F Hornet Strike Fighter or AV–8 Harrier II) approaching the target area from an altitude of approximately 152 m (500 ft) up to 4,572 m (15,000 ft). When the aircraft reach the target area, they establish a predetermined racetrack pattern relative to the target and deliver the bombs. Participating aircraft follow the same flight path during subsequent target ingress, ordnance delivery, target egress, and downwind pattern. The Marine Corps uses this type of pattern to ensure

that only one aircraft releases ordnance at any given time.

The pilots deliver the bombs against targets at BT–9 or BT–11, day or night; the average time to complete this type of exercise is approximately one hour. There is no set level or pattern of amount of sorties conducted and there are no cluster munitions authorized for use during bombing exercises.

The bombing exercises would typically use unguided MK–76, BDU–45, MK–82, and MK–83 inert training bombs (25, 500, 500, and 1,000 lbs, respectively); precision-guided munitions consisting of laser-guided bombs (inert); and laser-guided training rounds (inert, but contains a small impact-initiated spotting charge).

For unguided munitions, the typical release altitudes are 914 m (3,000 ft) or above 4,572 m (15,000 ft). The typical release altitude for precision-guided munitions is 1.8 km (1.1 mi) or greater in altitude. For laser-guided munitions, onboard laser designators, laser designators from support aircraft, or ground support personnel, use lasers to illuminate the certified targets. For either weapons delivery system, the lowest minimum altitude for ordnance delivery (inert bombs) would be 152 m (500 ft).

Gunnery Exercises: Aircraft With Cannons

During air-to-surface gunnery exercises with cannons, pilots train to destroy or disable enemy ships, boats, or floating/near-surface mines from aircraft with mounted cannons equal to or larger than 20 mm. The Marine Corps proposes to use either fixed-wing (F/A–18F Hornet Strike Fighter or an AV–8 Harrier II) or rotary-wing (AH–1 Super Cobra), tilt-rotor (V–22), and other aircraft to conduct gunnery exercises at BT–9 or BT–11. During the exercise (*i.e.,* strafing run), two aircraft would approach the target area from an altitude of approximately 914 m (3,000 ft) and within a distance of 1,219 m (4,000 ft) from the target, begin to fire a burst of approximately 30 rounds of munitions before reaching an altitude of 305 m (1,000 ft) to break off the attack. Each aircraft would reposition for another strafing run until each aircraft expends its exercise ordnance of approximately 250 rounds (approximately 8–12 passes per aircraft per exercise). This type of gunnery exercise would typically use a Vulcan M61A1/A2, 20 mm cannon or a GAU–12, 25 mm cannon. The Marine Corps proposes to use inert munitions for these exercises. The aircraft deliver the ordnance against targets at BT–9 or BT–11, day or night. The average time to complete this type of exercise is approximately one hour.

Gunnery Exercises: Aircraft With Machine Guns

During air-to-surface gunnery exercises with machine guns, pilots train to destroy or disable enemy ships, boats, or floating/near-surface mines with aircraft using mounted machine guns. The Marine Corps proposes to use rotary-wing (CH–52 Super Stallion, UH–1 Iroquois Huey, CH–46 Sea Knight, MV–22 Osprey, or H–60 Hawk series, and other types) aircraft to conduct gunnery exercises at BT–9 or BT–11. During the exercise an aircraft would fly around the target area at an altitude between 15 and 30 m (50 and 100 ft) in a 91 m (300 ft) racetrack pattern around the water-based target. Each gunner would expend approximately 400 rounds of 7.62 mm ammunition and 200 rounds of .50 cal ammunition in each exercise. The aircraft deliver the ordnance against the bombing targets at BT–9 or BT–11, day or night. The average time to complete this type of exercise is approximately one hour.

Rocket Exercises

The Marine Corps proposes to conduct rocket exercises similar to the bombing exercises. Fixed- and rotary-wing aircraft crews would launch rockets at surface maritime targets, day and night, to train for destroying or disabling enemy ships or boats. These operations employ 2.75-inch and 5-inch rockets (4.8 and 15.0 lbs net explosive weight, respectively). Generally, personnel would deliver an average of approximately 14 rockets per sortie. As with the bombing exercises, there is no set level or pattern of amount of sorties conducted.

Pyrotechnics

Pyrotechnics are non-explosive devices that use chemical reactions to produce heat, light, gas, smoke, and/or sound to simulate threat conditions during exercises (DoN, 2009). The Marine Corps proposes to use chaff, LUU–2, LUU–19, MI27 A1-parachute flare, self-protection flares, signal illuminations, simulated booby traps, Smokey Sams, artillery simulators, and ground bursts.

Munitions and Estimated Annual Expenditures

Tables 3 and 4 in this document provide a list and expenditure levels of the live and inert ordnance proposed for use at BT–9 and BT–11, respectively.

There are several varieties of ordnance and net explosive weights (for live munition used at BT–9) can vary according to type. All practice bombs are inert but simulate the same ballistic properties of service type bombs. They are either solid cast metal bodies or thin sheet metal containers. Since practice bombs contain no explosive filler, a practice bomb signal cartridge (smoke) serves as a visual observation of weapon target impact.

When a high explosive detonates, the explosive fill within the weapon case converts almost instantly into a gas at very high pressure and temperature. Under the pressure of the gases generated, the weapon case expands and breaks into fragments. The air surrounding the casing compresses and transmits a shock (blast) wave. Typical initial values for a high-explosive weapon are 200 kilobars of pressure (1 bar = 1 atmosphere) and 5,000 degrees Celsius (9,032 degrees Fahrenheit). The Marine Corps proposes to use five types of explosive sources at BT–9: 2.75-inch Rocket High Explosives, 5-inch Rocket High Explosives, 30 mm High Explosives, 40 mm High Explosives, and G911 grenades. All munitions proposed for use at BT–11 are inert (not live).

TABLE 3—TYPE OF ORDNANCE, NET EXPLOSIVE WEIGHT, AND PROPOSED LEVELS OF ANNUAL EXPENDITURES AT BT–9

Proposed ordnance	Net explosive weight in pounds (lbs)	Proposed number of rounds
Small arms excluding .50 cal (7.62 mm)	N/A, inert	525,610
.50 cal	N/A, inert	568,515
Large arms—live (30 mm)	0.1019	3,432
Large arms—live (40 mm)	0.1199	10,420
Large arms—inert (20, 25, 30, and 40 mm)	N/A	120,405
Rockets—live (2.75-inch)	4.8	220
Rockets—live (5-inch)	15.0	68

TABLE 3—TYPE OF ORDNANCE, NET EXPLOSIVE WEIGHT, AND PROPOSED LEVELS OF ANNUAL EXPENDITURES AT BT–9—Continued

Proposed ordnance	Net explosive weight in pounds (lbs)	Proposed number of rounds
Rockets—inert (2.75-inch rocket, 2.75-inch illumination, 2.75-inch white phosphorus, 2.75-inch red phosphorus; 5-inch rocket, 5-inch illumination, 5-inch white phosphorus, 5-inch red phosphorus).	N/A	844
Grenades—live (G911)	0.5	144
Bombs—inert (BDU–45 practice bomb, MK–76 practice bomb, MK–82 practice bomb, MK–83 practice bomb).	0.083800—0.1676 signal cartridge only	4,460
Pyrotechnics—inert (chaff, LUU–2, self-protection flares)	N/A	4,496

TABLE 4—TYPE OF ORDNANCE, NET EXPLOSIVE WEIGHT, AND PROPOSED LEVELS OF ANNUAL EXPENDITURES AT BT–11

Proposed ordnance	Net explosive weight in pounds (lbs)	Proposed number of rounds
Small arms excluding .50 cal (7.62 mm)	N/A, inert	610,957
.50 cal	N/A, inert	366,775
Large arms—inert (20, 25, 30, and 40 mm)	N/A	240,334
Rockets—inert (2.75-inch rocket, 2.75-inch illumination, 2.75-inch white phosphorus, 2.75-inch red phosphorus; 5-inch rocket, 5-inch illumination, 5-inch white phosphorus, 5-inch red phosphorus).	N/A	5,592
Bombs—inert (BDU–45 practice bomb, MK–76 practice bomb, MK–82 practice bomb, MK–83 practice bomb).	0.083800—0.1676 signal cartridge only	22,114
Pyrotechnics—inert (chaff, LUU–2, self-protection flares, SMD SAMS)	N/A	8,912

The Marine Corps estimates that the 5-year level of expended ordnance at BT–9 and BT–11 (both surface-to-surface and air-to-surface) would be approximately 6,193,070 and 6,273,420 rounds, respectively. The approximate annual quantities of ordnance listed in Tables 3 and 4 represent conservative figures, meaning that the volume of each type of inert and explosive ordnance proposed is the largest number that personnel could expend annually.

The Marine Corps realizes that its evolving training programs, linked to real world events, necessitate flexibility regarding the amounts of ordnance used in air-to-surface and surface-to-surface exercises. Thus, this rule would account for inter-annual variability in ordnance expenditures over the course of the five years. NMFS refers the reader to Table 2–2 of the Marine Corps' application for a complete list of munitions authorized for use at the Marine Corps Air Station Cherry Point Range Complex.

Acoustic Characteristics of Ordnance

Noise generated by live or inert ordnance impacting the water and associated detonations from live ordnance may present some risk to bottlenose dolphins. Estimates of the noise fields generated in water by the impact of non-explosive (inert) ordnance indicate that the energy radiated is about one to two percent of the total kinetic energy of the impact. This energy level (and likely peak pressure levels) is well below the thresholds for predicting potential physical impacts from underwater pressure waves, because the firing of an inert projectile does not create an explosion even at 1 m (3 ft) from the impact. Therefore, NMFS and the Marine Corps do not expect that the noise generated by the in-water impact of inert ordnance would have the potential to take marine mammals within the action area. Thus, NMFS will not consider the acoustic impacts of inert ordnance further in this document.

However, live ordnance detonated underwater introduces loud, impulsive broadband (producing sound over a wide frequency band) sounds into the marine environment and does have the potential to take marine mammals. Broadband explosives produce significant acoustic energy across several frequency decades of bandwidth. Propagation loss is sufficiently sensitive to frequency as to require model estimates at several frequencies over such a wide band. Three source parameters influence the effect of an explosive: The weight of the explosive material, the type of explosive material, and the detonation depth. The net explosive weight (or NEW) accounts for the first two parameters. The ordnance's NEW is the weight of trinitrotoluene (TNT) that produces an equivalent explosive power. The detonation depth of an explosive is particularly important due to a propagation effect known as surface-image interference. For sources located near the sea surface, a distinct interference pattern arises from the coherent sum of the two paths that differ only by a single reflection from the pressure-release surface. As the source depth and/or the source frequency decreases, these two paths increasingly and destructively interfere with each other, reaching total cancellation at the surface (barring surface-reflection scattering loss).

For this final rulemaking, the Marine Corps proposes to use five types of explosive sources: 2.75-inch rocket high explosives, 5-inch rocket high explosives, 30 mm high explosives, 40 mm high explosives, and G911 grenades.

The firing sequence for some of the munitions consists of a number of rapid bursts, often lasting a second or less. The maximum firing time is 10 to 15 second bursts. Due to the tight spacing in time, the Marine Corps considers each burst as a single detonation. For the energy metrics, the Marine Corps considers the impact area of a burst using a source energy spectrum that is the source spectrum for a single detonation scaled by the number of rounds in a burst. For the pressure metrics, the impact area for a burst is the same as the impact area of a single round. For all metrics, the cumulative impact area of an event consisting of a certain number of bursts is the product

of the impact area of a single burst and the number of bursts, as would be the case if the bursts are sufficiently spaced in time or location as to insure that each burst is affecting a different set of marine wildlife.

Table 5 provides a comparison of the live explosive ordnance proposed for use during 2015 through 2020. Table 5 lists the number of rounds per burst by ordnance; the acoustic characteristics of the proposed ordnance including the peak one-third octave (OTO) source level (SL); and the approximate frequency at which the peak occurs.

TABLE 5—PROPOSED LEVELS OF ORDNANCE, NET EXPLOSIVE WEIGHT, SOURCE LEVELS, AND CENTER FREQUENCIES

Proposed ordnance	NEW (lbs)	Rounds per burst	Source level of peak ⅓rd octave (decibels, dB)	Center frequency of peak ⅓rd octave (hertz, Hz)
Large arms—live (30 mm)	0.1019	30	207 dB re: 1μPa	4,032
Large arms—live (40 mm)	0.1199	5	208 dB re: 1μPa	4,032
Rockets—live (2.75-inch)	4.8	1	224 dB re: 1μPa	1,270
Rockets—live (5-inch)	15.0	1	229 dB re: 1μPa	1,008
Grenades—live (G911)	0.5	1	214 dB re: 1μPa	2,540

For ordnance detonated at shallow depths, often the source level of the explosion may breech the surface with some of the acoustic energy escaping the water column. The source levels presented in Table 5 do not account for possible venting of the acoustic energy through the water surface which the Marine Corps expects to be minor because of the low source net explosive weights and detonation depth of 1.2 m (3.9 ft).

Description of Marine Mammals in the Area of the Specified Activity

There is one species of marine mammal with possible or confirmed occurrence in the area of the specified activity: The Atlantic bottlenose dolphin (*Tursiops truncatus*) which routinely frequents Pamlico Sound (Lefebvre *et al,* 2001; DoN 2003). The region of influence for the proposed project includes estuarine waters, and does not include offshore waters.

Four designated coastal stocks for bottlenose dolphins may occur within the proposed activity area. They include: the Western North Atlantic Northern Migratory Coastal; Western North Atlantic Southern Migratory; Northern North Carolina Estuarine System; and the Southern North Carolina Estuarine System stocks. Dolphins encountered at BT–9 and BT–11 would most likely belong to the Northern North Carolina Estuarine System and the Southern North Carolina Estuarine System stocks.

Table 6 in this document presents information on the abundance, status, and distribution of the four stocks. The reader may also refer to Section 4 of the Marine Corps' application, their 2014 application addendum, and Chapter 3 of the Marine Corps' EA for more detailed information. NMFS summarizes this information and presents updated information on the species' abundance, status, and distribution from the 2013 NMFS Stock Assessment Report for the U.S. Atlantic and Gulf of Mexico (Waring *et al.,* 2014). The publication is available at *http://www.nmfs.noaa.gov/pr/sars/region.htm*.

TABLE 6—GENERAL INFORMATION ON THE SPECIES/STOCKS THAT COULD POTENTIALLY OCCUR IN BT–9 AND BT–11

Bottlenose dolphin stocks	Regulatory status	Stock/species abundance	Occurrence and range	Season
Western North Atlantic Northern Migratory Coastal (NMC).	MMPA—D ESA—NL	11,548 (CV=0.36)	Occasional Coastal	Winter
Western North Atlantic Southern Migratory (SMC).	MMPA—D ESA—NL	9,173 (CV=0.46)	Occasional Coastal	Winter
Northern North Carolina Estuarine System (NNCES).	MMPA—S ESA—NL	950 (CV = 0.23)	Common Estuarine	Summer–Fall
Southern North Carolina Estuarine System (SNCES).	MMPA—S ESA—NL	188 (CV=0.19)	Common Estuarine	Late Summer

[1] MMPA: D = Depleted, Strategic Stock; S = Strategic Stock only; NC = Not Classified.
[2] ESA: NL = Not listed.

Bottlenose Dolphins

The bottlenose dolphin is one of the most well-known species of marine mammals. They have a robust body and a short, thick beak. Their coloration ranges from light gray to black with lighter coloration on the belly. Inshore and offshore individuals vary in color and size. Inshore animals are smaller and lighter in color, while offshore animals are larger, darker in coloration and have smaller flippers.

Bottlenose dolphins range in lengths from 1.8 to 3.8 m (6.0 to 12.5 ft) with males slightly larger than females. Adults weight from 300–1,400 lbs (136–635 kg). Generally, the species has a lifespan of 40 to 45 years for males and more than 50 years for females.

Sexual maturity varies by population and ranges from five to 13 years for females and 9 to 14 years for males. Calves, born after a 12-month gestation period, generally wean at 18 to 20 months. On average, calving occurs every 3 to 6 years.

Bottlenose dolphins are generalists and feed on a variety of prey items ''endemic'' to their habitat, foraging individually and cooperatively. Like other dolphins, bottlenose dolphins use high frequency echolocation to locate and capture prey. Coastal animals prey on benthic invertebrates and fish, and offshore animals feed on pelagic squid and fish.

Western North Atlantic Northern Migratory Coastal (NMC) Stock: This stock is not listed as threatened or endangered under the Endangered Species Act (ESA; 16 U.S.C. 1531 *et seq.*); however, it is categorized as depleted (and thus strategic) under the MMPA. The best available abundance estimate for the NMC stock is 11,548 animals (Waring *et al.,* 2014). However, there is insufficient data to determine the population trends for this stock.

Based on aerial survey data, tag-telemetry studies, photo-identification data, and genetic studies, the NMC stock of bottlenose dolphins occurs along the North Carolina coast and as far north as Long Island, New York (CETAP, 1982; Kenney, 1990; Garrison *et al.,* 2003; Waring *et al.,* 2014). During summer months (July–September), this stock occupies coastal waters from the shoreline to approximately the 25-m (82-ft) isobath between the Chesapeake Bay mouth and Long Island, New York. During the winter months (January–March), the stock moves south to waters of North Carolina and occupies coastal waters from Cape Lookout, North Carolina to the Virginia-North Carolina border (Barco and Swingle, 1996; Waring *et al.,* 2014).

Western North Atlantic Southern Migratory Coastal (SMC) Stock: This stock is not listed as threatened or endangered under the ESA; however, it is categorized as depleted (and thus strategic) under the MMPA. The best available abundance estimate for the SMC stock is 9,173 animals (Waring *et al.,* 2014). However, there is insufficient data to determine the population trends for this stock.

Based on tag-telemetry studies, the SMC stock of bottlenose dolphins occurs in coastal waters between southern North Carolina and Georgia, but the stock's migratory movements and spatial distribution are the most poorly understood of the coastal stocks (Waring *et al.,* 2014). During the fall (October–December), this stock occupies waters of southern North Carolina (South of Cape Lookout) where it overlaps spatially with the Southern North Carolina Estuarine System stock in coastal waters. In winter months (January–March), the SMC stock moves as far south as northern Florida where it overlaps spatially with the South Carolina/Georgia and Northern Florida Coastal stocks. In spring (April–June), the stock moves north to waters of North Carolina where it overlaps with the Southern North Carolina Estuarine System stock and the Northern North Carolina Estuarine System stock. In summer months (July–September), the stock most likely occupies coastal waters north of Cape Lookout, North Carolina, to the eastern shore of Virginia (Waring *et al.,* 2014).

Northern North Carolina Estuarine System (NNCES) Stock: This stock is not listed as threatened or endangered under the ESA; however, it is categorized as strategic (but not depleted) under the MMPA. The best available abundance estimate for the NNCES stock is 950 animals (Waring *et al.,* 2014). However, there is insufficient data to determine the population trends for this stock.

Based on photo-identification studies, the NNCES stock of bottlenose dolphins occurs in the estuarine waters of Pamlico Sound (Waring *et al.,* 2014). The ranging patterns of bottlenose dolphins in those studies support the presence of a group of dolphins within these waters that are distinct from both dolphins occupying estuarine and coastal waters in southern North Carolina and animals in the NMC and SMC stocks that occupy coastal waters of North Carolina at certain times of the year (Read *et al.,* 2003; NMFS, 2001; NMFS, unpublished data).

During summer and fall months (July–October), the NNCES stock occupies waters of Pamlico Sound and nearshore coastal (less than 1 km (3,280 ft) from shore) and estuarine waters of central and northern North Carolina to Virginia Beach and the lower Chesapeake Bay (Waring *et al.,* 2014). It likely overlaps with animals from the SMC stock in coastal waters during these months. During late fall and winter (November–March), the NNCES stock moves out of estuarine waters and occupies nearshore coastal waters between the New River and Cape Hatteras (Waring *et al.,* 2013). It overlaps with the NMC stock during this period, particularly between Cape Lookout and Cape Hatteras. It appears that the region near Cape Lookout including Bogue Sound and Core Sound is an area of overlap with the Southern North Carolina Estuarine System stock during late summer (Waring *et al.,* 2014).

Southern North Carolina Estuarine System (SNCES) Stock: This stock is not listed as threatened or endangered under the ESA; however, it is categorized as strategic (but not depleted) under the MMPA. The best available abundance estimate for the SNCES stock is 188 animals (Waring *et al.,* 2014). However, there is insufficient data to determine the population trends for this stock.

Based on photo-identification studies, the SNCES stock of common bottlenose dolphins occupies estuarine and nearshore coastal waters (less than 3 km from shore) between the Little River Inlet Estuary, including the estuary and the New River (Waring *et al.,* 2014). During summer and fall months (July–October), the SNCES stock occupies estuarine and nearshore coastal waters (less than 3 km (1.7 mi) from shore) between the North Carolina-South Carolina border and Core Sound. It likely overlaps with the NNCES stock in the northern portion of its range (*i.e.,* southern Pamlico Sound) during late summer (Waring *et al.,* 2014). During late fall through spring, the SNCES stock moves south to waters near Cape Fear. In coastal waters, it overlaps with the SMC stock during this period (Waring *et al.,* 2014).

Bottlenose Dolphin Distribution Within BT–9 and BT–11

In Pamlico Sound, bottlenose dolphins concentrate in shallow water habitats along shorelines, and few, if any, individuals are present in the central portions of the sounds (Gannon, 2003; Read *et al.,* 2003a, 2003b). The dolphins utilize shallow habitats, such as tributary creeks and the edges of the Neuse River, where the bottom depth is less than 3.5 m (11.5 ft) (Gannon, 2003). Fine-scale distribution of dolphins seems to relate to the presence of topography or vertical structure, such as the steeply-sloping bottom near the shore and oyster reefs. Bottlenose dolphins may use these features to facilitate prey capture (Gannon, 2003).

In 2000, Duke University Marine Lab (Duke) conducted a boat-based mark-recapture survey throughout the estuaries, bays and sounds of North Carolina (Read *et al.,* 2003). The 2000 boat-based survey produced an estimate of 919 dolphins for the northern inshore waters divided by an estimated 5,015 km^2 (1,936 mi^2) survey area.

In a follow-on aerial study (July, 2002 to June, 2003) specifically in and around BT–9 and BT–11, Duke reported one sighting in the restricted area surrounding BT–9, two sightings in proximity to BT–11, and seven sightings in waters adjacent to the bombing targets (Maher, 2003). In total, the study observed 276 bottlenose dolphins ranging in group size from two to 70 animals.

Results of a passive acoustic monitoring effort conducted from 2006–2007 by Duke University researchers detected that dolphin vocalizations in the BT–11 vicinity were higher in August and September than vocalization detection at BT–9 (Read *et al.,* 2007). Additionally, detected vocalizations of dolphins were more frequent at night for the BT–9 area and during early morning hours at BT–11 (Read *et al.,* 2007).

Other Marine Mammals in the Proposed Action Area

The endangered West Indian manatee (*Trichechus manatus*), under the jurisdiction of the U.S. Fish and Wildlife Service, rarely occurs in the area (Lefebvre *et al.,* 2001; DoN 2003). The U.S. Fish and Wildlife Service has jurisdiction over the manatee; therefore, NMFS would not include a proposed authorization to harass manatees and does not discuss this species further in this final rule.

Based on the best available information, there are no observations of the endangered North Atlantic right whale (*Eubalaena glacialis*) or other large whales within Pamlico Sound or in vicinity of the bombing targets (Kenney, 2006). No suitable habitat exists for these species in the shallow Pamlico Sound or bombing target vicinity; therefore, because NMFS does not expect these species to be present in the action area, there is no potential for take (NMFS, 2012). Thus, NMFS will not discuss these species further.

Other dolphins, such as Atlantic spotted (*Stenella frontalis*) and the common dolphin (*Delphinus delphis*), have an oceanic distribution and do not venture into the shallow, brackish waters of southern Pamlico Sound. Because these species are rare and/or have extralimital occurrence in the bombing target area, NMFS will not discuss these species further in this final rule.

Potential Effects of the Specified Activity on Marine Mammals

The surface-to-surface and air-to-surface training exercises proposed for taking of marine mammals under these regulations have the potential to take marine mammals by exposing them to impulsive noise and pressure waves generated by live ordnance detonation at or near the surface of the water. Exposure to energy, pressure, or direct strike by ordnance has the potential to result in non-lethal injury (Level A harassment), disturbance (Level B harassment), serious injury, and/or mortality. In addition, NMFS also considered the potential for harassment from vessel and aircraft operations.

In the Potential Effects of the Specified Activity on Marine Mammals section of the proposed rule (79 FR 41373, July 15, 2014), NMFS included a qualitative discussion of the different ways that the Marine Corps' activities may potentially affect marine mammals without consideration of mitigation and monitoring measures (see 79 FR 41373, July 15, 2014; pages 41383–41391). Marine mammals may experience direct physiological effects (*e.g.,* threshold shift and non-acoustic injury, acoustic masking, impaired communication, stress responses, behavioral disturbance, stranding, behavioral responses from vessel movement, and injury or death from vessel collisions). The information contained in this section in the proposed rule has not changed and NMFS does not repeat that information here in this document.

This section did not consider the specific manner in which the Marine Corps would carry out the proposed activity, what mitigation measures the Marine Corps would implement, and how either of those would shape the anticipated impacts from this specific activity. The ''Estimated Take by Incidental Harassment, Injury, or Mortality'' section later in this document will include a quantitative analysis of the number of individuals that NMFS expects the Marine Corps to take during this activity. The ''Negligible Impact Analysis'' section will include the analysis of how this specific activity would impact marine mammals. NMFS will consider the content of the following sections: (1) Estimated Take by Incidental Harassment, Injury, or Mortality; (2) Mitigation; and (3) Anticipated Effects on Marine Mammal Habitat, to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals—and from that consideration—the likely impacts of this activity on the affected marine mammal populations or stocks.

Anticipated Effects on Habitat

In the Anticipated Effects Habitat section of the proposed rule (79 FR 41373, July 15, 2014), we included a qualitative discussion of the different ways that the Marine Corps' activities may potentially affect marine mammals marine mammal habitat (see 79 FR 41373, July 15, 2014; page 41391). The information contained in this section in the proposed rule has not changed and NMFS does not repeat that information here in this document.

Impacts on marine mammal habitat are part of the consideration in making a finding of negligible impact on the species and stocks of marine mammals. Habitat includes rookeries, mating grounds, feeding areas, and areas of similar significance. NMFS does not anticipate that the operations would result in any temporary or permanent effects on the habitats used by the marine mammals in the area, including the food sources they use (*i.e.,* fish and invertebrates). Although NMFS anticipates that the specified activity may result in marine mammals avoiding certain areas due to temporary ensonification, this impact to habitat is temporary and reversible.

Summary of Previous Monitoring

The Marine Corps complied with the mitigation and monitoring required under the previous authorizations (2010–2013). The Marine Corps submitted final monitoring reports, which described the activities conducted and observations made. For the 2010 period, the Marine Corps did not observe any marine mammals during training exercises. The only recorded observations—which were bottlenose dolphins—occurred on two occasions by maintenance vessels engaged in target maintenance. Personnel did not observe marine mammals during range sweeps, air-to-ground or surface-to-surface activities (small boats), or during ad hoc monitoring via range cameras.

For the 2012 period, the total amount of ordnance expended at BT–9 and BT–11 was 301,687 and 955,528 rounds, respectively. During the period of the 2012 IHA, the Marine Corps did not fire any high explosive (live) munitions at BT–9. The Marine Corps do not permit high explosive (live) munitions within BT–11. Maintenance vessels engaged in target maintenance observed marine mammals on two occasions during the 2012 reporting period. Flight crews conducting range sweeps identified dolphins within the confines of Rattan Bay at BT–11 on two separate occasions: February 10, 2012 and August 16, 2012. When the sightings occurred during range sweeps, the Marine Corps suspended military training until the dolphins exited the mouth of the embayment, per Marine Corps Air Station Cherry Point Range standard operating procedures. There were no observations of marine mammals during the air-to surface or surface-to-surface activities (small boats), or during ad hoc monitoring via range cameras other than during follow-up on the two occasions of sightings made during the pre-exercise range sweeps.

For the 2013 period, the total amount of ordnance expended at BT–9 and BT–11 was 821,516 and 1,217,824 rounds, respectively. During the period of the 2013 IHA, the Marine Corps did not fire any high explosive (live) munitions at BT–9. The Marine Corps do not permit high explosive (live) munitions within BT–11.

During the 2013 reporting period, a small boat crew observed a pod of eight dolphins within Rattan Bay (BT–11) while conducting surface-to-surface exercises. The Marine Corps suspended all small arms, live-fire activities until

the pod departed Rattan Bay. On one other occasion, flight crews conducting range sweeps and observed dolphins within the confines of Rattan Bay at BT–11 prior to live-fire activities. The Marine Corps suspended the start of all training activities until the dolphins exited the mouth of the embayment, per MCAS Cherry Point Range standard operating procedures. For BT–9 during the 2013 period, there were no observations of marine mammals during the air-to surface or surface-to-surface activities (small boats), or during ad hoc monitoring via range cameras or maintenance vessels.

In summary, no instances of mortality, serious injury, or Level A harassment occurred during the conduct of training activities during the course of the previous three incidental harassment authorizations.

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 the availability of such species or stock for taking for certain subsistence uses (where relevant).

The NDAA of 2004 amended the MMPA as it relates to military-readiness activities and the incidental take authorization process such that ''least practicable adverse impact'' shall include consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

NMFS and the Marine Corps have worked to identify potential practicable and effective mitigation measures, which include a careful balancing of the likely benefit of any particular measure to the marine mammals with the likely effect of that measure on personnel safety, practicality of implementation, and impact on the ''military-readiness activity.'' NMFS refers the reader to Appendix B of the Marine Corps' application for more detailed information on the proposed mitigation measures which include the following:

1. *Visual Monitoring:* Range operators will conduct or direct visual surveys to monitor BT–9 or BT–11 for protected species before and after each exercise. Range operation and control personnel would monitor the target area through tower mounted safety and surveillance cameras. The remotely operated range cameras are high-resolution cameras that allow viewers to see animals at the surface and breaking the surface, but not underwater. The camera system has night vision (IR) capabilities. Lenses on the camera system have a focal length of 250 mm to 1500 mm, with view angles of 2.2° x 1.65° (in wide-view) and 0.55° x 41° (in narrow-view) respectively. Using the night-time capabilities, with a narrow view, an observer could identify a 1-by-1 meter target out to three kilometers.

In the event that the Marine Corps sight a marine mammal within 914 m (3,000 ft) of the BT–9 target area, personnel would declare the area as fouled and cease training exercises. Personnel would commence operations in BT–9 only after the animal moves beyond and on a path away from the 914-m (3,000-ft) radius around the target area.

For BT–11, in the event that a marine mammal is sighted anywhere within the confines of Rattan Bay, personnel would declare the water-based targets within Rattan Bay as fouled and cease training exercises. Personnel would commence operations in BT–11 only after the marine mammal has left the confines of Rattan Bay.

2. *Range Sweeps:* The VMR–1 squadron, stationed at Marine Corps Air Station Cherry Point, includes three specially equipped HH–46D helicopters. The primary mission of these aircraft, known as PEDRO, is to provide search and rescue for downed 2nd Marine Air Wing aircrews. On-board are a pilot, co-pilot, crew chief, search and rescue swimmer, and a medical corpsman. Each crew member has received extensive training in search and rescue techniques, and is therefore particularly capable at spotting objects floating in the water.

The PEDRO crew would conduct a range sweep the morning of each exercise day prior to the commencement of range operations. The crew would also conduct post-exercise sweeps. The primary goal of the pre-exercise sweep is to ensure that the target area is clear of fisherman, other personnel, and protected species. Generally, the weekly monitoring events would include a maximum of five pre-exercise and four post-exercise sweeps. The maximum number of days that would elapse between pre- and post-exercise monitoring events would be approximately 3 days, and would normally occur on weekends.

The sweeps would occur at 100 to 300 meters (328 to 984 ft) above the water surface, at airspeeds between 60 to 100 knots (69 to 115 mph). The path of the sweep runs down the western side of BT–11, circles around BT–9 and then continues down the eastern side of BT–9 before leaving. The sweep typically takes 20 to 30 minutes to complete.

The PEDRO crew communicates directly with range personnel and can provide immediate notification to range operators of a fouled target area due to the presence of protected species. The PEDRO aircraft would remain in the area of a marine mammal sighting until the animal clears the area, if possible, or as mission requirements dictate.

If the crew sights marine mammals during a range sweep, they would collect sighting data and immediately provide the information to range personnel who would take appropriate management action. Range staff would relay the sighting information to training Commanders scheduled on the range after the observation. Range personnel would enter the data into the Marine Corps' sighting database, web-interface, or report generator. Sighting data includes the following (collected to the best of the observer's ability): (1) Species identification; (2) group size; (3) the behavior of marine mammals (*e.g.,* milling, travel, social, foraging); (4) location and relative distance from the bombing target; (5) date, time and visual conditions (*e.g.,* Beaufort sea state, weather) associated with each observation; (6) direction of travel relative to the bombing target; and (7) duration of the observation.

3. *Aircraft Cold Pass:* Standard operating procedures for waterborne targets require the pilot to perform a visual check prior to ordnance delivery to ensure the target area is clear of unauthorized civilian boats and personnel, and protected species such as turtles and marine mammals. This is a ''cold'' or clearing pass. Pilots requesting entry onto the BT–9 and BT–11 airspace must perform a low-altitude, cold first pass (a pass without any release of ordnance) immediately prior to ordnance delivery at the bombing targets both day and night.

Pilots would conduct the cold pass with the aircraft (helicopter or fixed-winged) flying straight and level at altitudes of 61 to 914 m (200 to 3,000 ft) over the target area. The viewing angle is approximately 15 degrees. A blind spot exists to the immediate rear of the aircraft. Based upon prevailing visibility, a pilot can see more than one mile forward upon approach. If marine mammals are present in the target area, the Range Controller may deny ordnance delivery to the target as conditions warrant. If marine mammals are not present in the target area, the Range Controller may grant ordnance delivery as conditions warrant.

4. *Delay of Exercises:* The Marine Corps would consider an active range as fouled and not available for use if a marine mammal is present within 914 m (3,000 ft) of the target area at BT–9 or anywhere within the confines of Rattan Bay (BT–11). Therefore, if Marine Corps personnel observe a marine mammal within 914 m (3,000 ft) of the target at BT–9 or anywhere within Rattan Bay at BT–11 during the cold pass or from range camera detection, they would delay training until after the animal moves beyond and on a path away from the 914-m (3,000-ft) radius around the target area at BT–9 or has moved out of Rattan Bay at BT–11. This mitigation measure applies to both air-to-surface and surface-to-surface exercises during the day or night.

5. *Vessel Operations:* All vessels used during training operations would abide by NMFS' Southeast Regional Viewing Guidelines designed to prevent harassment to marine mammals (*http://www.nmfs.noaa.gov/pr/education/southeast/*).

6. *Stranding Network Coordination:* The Marine Corps would coordinate with the local NMFS Stranding Coordinator to discuss observations of any unusual marine mammal behaviors, strandings, or any beached live/dead, or floating marine mammals at any time during training activities or within 24 hours after completion of training.

Mitigation Conclusions

NMFS has carefully evaluated the Marine Corps' mitigation measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. NMFS' evaluation of potential measures included consideration of the following factors in relation to one another:

- The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;
- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and
- The practicability of the measure for applicant implementation.

Any mitigation measure(s) prescribed by NMFS 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 here:

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 numbers of marine mammals (total number or number at biologically important time or location) exposed to training exercises that we expect to result in the take of marine mammals (this goal may contribute to goal 1 or to reducing harassment takes only).

3. A reduction in the number of times (total number or number at biologically important time or location) individuals would be exposed to training exercises that we expect to result in the take of marine mammals (this goal may contribute to goal 1 or to reducing harassment takes only).

4. A reduction in the intensity of exposures (either total number or number at biologically important time or location) to training exercises that we expect to result in the take of marine mammals (this goal may contribute to goal 1 or to reducing the severity of harassment takes only).

5. Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/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 the evaluation of the Marine Corps' mitigation measures, which includes consideration of the results from past monitoring reports required under the 2010–2013 Authorizations, NMFS has determined that the mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance while also considering personnel safety, practicality of implementation, and the impact of effectiveness of the military readiness activity.

Monitoring and Reporting

In order to issue a Letter of Authorization for an activity, section 101(a)(5)(A) of the MMPA states that we 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 an authorization must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and our expectations of the level of taking or impacts on populations of marine mammals present in the action area.

As part of its application, the Marine Corps provided a monitoring plan for assessing impacts to marine mammals from military training activities at BT–9 and BT–11 in Pamlico Sound, NC. This plan is similar, if not identical, to those conducted in previously issued Incidental Harassment Authorizations for the Marine Corps' activities from 2010–2013. The Marine Corps' suggested means of accomplishing the necessary monitoring and reporting under these regulations includes the following:

1. *Protected Species Observer Training:* Operators of small boats, and other personnel monitoring for marine mammals from watercraft shall be required to take the Department of the Navy's Marine Species Awareness Training. The Marine Corps shall instruct those pilots conducting range sweeps on marine mammal observation techniques during routine Range Management Department briefings. This training would make personnel knowledgeable of marine mammals, protected species, and visual cues related to the presence of marine mammals and protected species.

2. *Pre- and Post-Exercise Monitoring:* The Marine Corps would conduct pre-exercise monitoring the morning of an exercise and post-exercise monitoring the morning following an exercise, unless an exercise occurs on a Friday, in which case the post-exercise sweep would take place the following Monday. Weekly monitoring events would include a maximum of five pre-exercise and four post-exercise sweeps. The maximum number of days that would elapse between pre- and post-exercise monitoring events would be approximately three days, and would normally occur on weekends. If the Marine Corps observe marine mammals during this monitoring, personnel would record sighting data identical to those collected by the PEDRO crew.

3. *Long-term Monitoring:* The Marine Corps awarded Duke University Marine Lab (Duke) a contract to obtain abundance, group dynamics (*e.g.,* group size, age census), behavior, habitat use, and acoustic data on the bottlenose dolphins which inhabit Pamlico Sound, specifically those around BT–9 and BT–11. Duke began conducting boat-based surveys and passive acoustic monitoring of bottlenose dolphins in Pamlico Sound in 2000 (Read *et al.,* 2003) and specifically at BT–9 and BT–11 in 2003 (Mayer, 2003). To date, boat-based surveys indicate that bottlenose

dolphins may be resident to Pamlico Sound and use the BT–9 and BT–11 restricted areas on a frequent basis. Passive acoustic monitoring (PAM) provides more detailed insight into how dolphins use the two ranges, by monitoring for their vocalizations year-round, regardless of weather conditions or darkness. In addition to these surveys, the Marine Corps and Duke's scientists continue to test a real-time passive acoustic monitoring system at BT–9 that will allow automated detection of bottlenose dolphin whistles, providing yet another method of detecting dolphins prior to training operations.

4. *Reporting:* The Marine Corps will submit an annual report to NMFS by June 1st of each year starting in 2016. The first report will cover the time period from issuance of the March 13, 2015 Letter of Authorization through March 12, 2016. Each annual report after that time will cover the time period from March 13 through March 12, annually.

The Marine Corps will submit a draft final comprehensive report to NMFS no later than 180 days prior to expiration of these regulations. This report must summarize the findings made in all previous reports and assess both the impacts at each of the bombing targets and the cumulative impact on bottlenose dolphin from the specified activities.

The draft final comprehensive report will summarize the type and amount of training exercises conducted, all marine mammal observations made during monitoring, and if mitigation measures were implemented. The draft final comprehensive report will also address the effectiveness of the monitoring plan in detecting marine mammals. The draft comprehensive report will be subject to review and comment by NMFS. Prior to acceptance by NMFS, the Marine Corps must address any recommendations made by NMFS, within 60 days of its receipt, in the final comprehensive report.

General Notification of Injured or Dead Marine Mammals

The Marine Corps will systematically observe training operations for injured or disabled marine mammals. In addition, the Marine Corps will monitor the principal marine mammal stranding networks and other media to correlate analysis of any dolphin strandings that could potentially be associated with BT–9 or BT–11 training operations.

Marine Corps personnel will ensure that they notify NMFS immediately or as soon as clearance procedures allow if personnel find an injured, stranded, or dead marine mammal during or shortly after, and in the vicinity of, any training operations. The Marine Corps will provide NMFS with species or description of the animal(s), the condition of the animal(s) (including carcass condition if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

In the event that an injured, stranded, or dead marine mammal is found by Marine Corps personnel that is not in the vicinity of, or found during or shortly after operations, the Marine Corps personnel will report the same information as listed above as soon as operationally feasible and clearance procedures allow.

General Notification of a Vessel Strike

In the event of a vessel strike, at any time or place, the Marine Corps shall do the following:

- Immediately report to us the species identification (if known), location (lat/long) of the animal (or the strike if the animal has disappeared), and whether the animal is alive or dead (or unknown);
- Report to us as soon as operationally feasible the size and length of the animal, an estimate of the injury status (*e.g.*, dead, injured but alive, injured and moving, unknown, etc.), vessel class/type and operational status;
- Report to NMFS the vessel length, speed, and heading as soon as feasible; and
- Provide us a photo or video, if equipment is available.

Adaptive Management

NMFS has included an adaptive management component in the regulations governing the take of marine mammals incidental to the Marine Corps' activities at BT–9 and BT–11. In accordance with 50 CFR 216.105(c), NMFS must base the regulations on the best available information. As the Marine Corps develops new information, through monitoring, reporting, or research, NMFS may modify the regulations, in whole or in part, after notice and opportunity for public review. The use of adaptive management will allow NMFS to consider new information from different sources to determine if NMFS should modify mitigation or monitoring measures (including additions or deletions) if new data suggest that such modifications are appropriate for subsequent LOAs. NMFS may modify or augment the existing mitigation or monitoring measures (after consulting with the Marine Corps regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of mitigation and monitoring set forth in the preamble of these regulations. Following are some of the possible sources of new data that could contribute to the decision to modify the mitigation or monitoring measures:

1. Results from the Marine Corps' monitoring from the previous year.

2. Results from marine mammal and/or sound research or studies; or

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 Letters of Authorization.

In addition, NMFS may withdraw or suspend the LOA, if, after notice and opportunity for public comment, the Assistant Administrator finds, among other things, that the Marine Corps are not substantially complying with the regulations or the taking allowed is having more than a negligible impact on the species or stock, as allowed for in 50 CFR 216.106(e). That is, should monitoring and reporting indicate that the operations and activities from the Marine Corps' activities at BT–9 and BT–11 are having more than a negligible impact on marine mammals, then NMFS reserves the right to modify the regulations and/or withdraw or suspend an LOA after public review.

Research

The Marine Corps has funded surveys performed by Duke University researchers and provided financial support to augment surveys conducted by the NMFS Southeast Fisheries Science Center. Information and knowledge gained from the Marine Corps-funded research has contributed significantly to the understanding of bottlenose dolphin stocks, including their distribution and movement, in Pamlico Sound, NC.

The Marine Corps, in collaboration with Duke scientists, are in the process of developing and testing a real-time passive acoustic monitoring system that will allow automated detection of bottlenose dolphin whistles (Appendix C in the application). The Marine Corps and Duke have performed the work in two phases. Phase I was the development of an automated signal detector (a software program) to recognize the whistles of dolphins at BT–9 and BT–11. Phase II, currently in progress, is the assembly and deployment of a prototype real-time monitoring unit on one of the towers in the BT–9 range. The success of this effort will help direct future research initiatives and activities within the

Marine Corps Air Station Cherry Point Range Complex. As funding becomes available and research opportunities arise, the Marine Corps will continue to fund and participate in studies that will enhance the understanding of the life history of marine mammals in Pamlico Sound.

Comments and Responses

On July 15, 2014, NMFS published a proposed rule (79 FR 41374) in response to the Marine Corps' request to take marine mammals incidental to military training activities at BT–9 and BT–11 in Pamlico Sound. In that **Federal Register** notice, NMFS requested comments, information, and suggestions concerning the request. During the 30-day public comment period, we received comments from the following: The Marine Mammal Commission (Commission), the Center for Biological Diversity (CBD), and 12 comments from private citizens. Following is a summary of the substantive comments and NMFS' responses.

MMPA Concerns

Comment 1: The CBD requested that NMFS not issue regulations authorizing serious injury and mortality of up to 30 dolphins during the course of the five-year rule, stating that NMFS' analysis shows that the take of bottlenose dolphins will be more than negligible, specifically for the Southern and Northern North Carolina Estuarine System stocks.

Response: NMFS acknowledges CBD's concerns regarding the Marine Corps' training activities on the Southern and Northern North Carolina Estuarine System stocks of bottlenose dolphins. NMFS has reassessed the estimates of bottlenose dolphins that the Marine Corps could potentially take during the course of the training activities and will not authorize take of bottlenose dolphins by mortality or serious injury in these regulations.

NMFS reanalyzed the take estimates presented in the Marine Corps' 2014 application addendum and Tables 10 and 11 of the proposed rulemaking (79 FR 41374, July 14, 2014, page 41397), and has determined that these estimates overestimated the number of marine mammals that could potentially be taken by mortality and serious injury. First, in the proposed rule, NMFS rounded up the annual take estimates that were less than 0.5 to the nearest whole number (1). Instead, NMFS should have presented the annual take estimates for mortality and serious injury that were less than 0.5 as zero takes, which is the standard practice in calculating take estimates and recommended by the Marine Mammal Commission when estimating incidental take for military readiness activities (MMC, 2015). Generally, one should round down if less than 0.50 and round up if greater than or equal to 0.50.

Second, NMFS inadvertently included estimated take by slight lung injury within the annual estimated take by serious injury category in Table 10 of the proposed rulemaking (79 FR 41374, July 14, 2014, page 41397). NMFS classifies slight lung injury as Level A harassment, not serious injury. Thus, this error of commission led NMFS to inaccurately state the number of takes by serious injury that could potentially occur in the absence of mitigation. Tables 10 and 11 of this final rule present the corrected take estimates for serious injury and mortality in the absence of mitigation. In summary, NMFS now estimates that, in the absence of mitigation, the Marine Corps could potentially take up to zero animals by mortality and potentially take up to two animals by serious injury on an annual basis.

However, as stated in the proposed rule, in consideration of the effectiveness of the mitigation measures, NMFS does not expect take by serious injury or mortality to occur. NMFS believes it has sufficient information about the Marine Corp's activities and the effectiveness of the mitigation measures to reasonably conclude that the activities are not likely to result in any serious injury or mortality. NMFS notes that over the course of the previous incidental harassment authorizations issued to the Marine Corps for the same activities, there were no reported incidents of serious injury to or mortality of any marine mammal. NMFS believes that the mitigation measures that will be implemented by the Marine Corps (*e.g.,* conservative exclusion zones for marine mammals; pre- and post-exercise monitoring, range sweeps, cold passes, delay of exercises, visual monitoring with high-resolution cameras with night vision capabilities, and passive acoustic monitoring) would reduce the amount and severity of the potential impacts from the activity, making it unlikely that any take by serious injury or morality would occur. Therefore, NMFS is not authorizing take by serious injury or mortality.

In making a negligible impact determination, NMFS considers a variety of factors, including but not limited to: (1) The number of anticipated serious injuries and mortalities; (2) the number and nature of anticipated injuries (Level A harassment); (3) the number, nature, and intensity, and duration of Level B harassment; (4) the status of stock or species of marine mammals; (5) the context in which the takes occur; and (6) the effectiveness of monitoring and mitigation measures. Taking into consideration the historically low concentrations of bottlenose dolphins present within the BT–9 and BT–11 areas; the small scale and spatial footprint of the proposed detonations within the target areas; the relatively short duration and intermittent nature of the training activities; and the incorporation of proven mitigation and monitoring measures to lessen adverse effects, NMFS expects the activities to affect a small number of marine mammals on an infrequent basis to the degree that it would have a negligible impact on the one species of bottlenose dolphins or any of the four stocks of bottlenose dolphins in the action area.

Comment 2: The CBD commented that the proposed regulations would authorize mortality for the Southern and Northern North Carolina Estuarine System strategic stocks of bottlenose dolphins at a rate above the Potential Biological Removal (PBR) for the stocks under the MMPA. They further state that any additional mortalities proposed for authorization above PBR for the North Caroline Estuarine System stock would slow that stock's recovery rate and preclude the species from reaching its optimum sustainable population and that any additional mortalities authorized above PBR for the Southern North Carolina Estuarine System stock would affect annual rates of recruitment or survival.

Response: See NMFS' response to Comment 1. For reasons stated previously in the response to Comment 1, NMFS will not authorize the take of bottlenose dolphins by serious injury or mortality in these regulations. No takes by serious injury or mortality occurred during NMFS' previous authorizations to the Marine Corps. Based on the Marine Corps' compliance with previous authorizations for the same activities, NMFS expects the required mitigation and monitoring measures to minimize the potential risk for serious injury or mortality and does not expect these types of takes to occur.

In addition, NMFS has included an adaptive management component in the regulations governing the take of marine mammals incidental to the Marine Corps' activities at BT–9 and BT–11. The use of adaptive management will allow NMFS to consider new information from different sources to determine whether mitigation or monitoring measures should be modified. NMFS may modify or augment the existing mitigation or

monitoring measures (after consulting with the Marine Corps regarding the practicability of the modifications) if doing so creates a reasonable likelihood of more effectively accomplishing the goals of mitigation and monitoring set forth in the preamble of these regulations.

Effects Analyses

Comment 3: The CBD states that NMFS should not issue regulations authorizing harassment and mortality of the North Carolina Estuarine System bottlenose dolphins because the additional mortality associated with the Unusual Mortality Event (UME) in the mid-Atlantic Ocean.

Response: For reasons stated previously in the response to Comment 1, NMFS would not authorize the take of bottlenose dolphins by serious injury or mortality in these regulations. See our responses to Comments 1 and 2 regarding NMFS' determinations of the expected level of mortality and serious injury that could potentially occur in BT–9 and BT–11 given the required mitigation and monitoring measures in this final rule.

NOAA has declared an UME for bottlenose dolphins in the mid-Atlantic Ocean from early July 2013 through the present. Elevated strandings of bottlenose dolphins have occurred in North Carolina. However, none have occurred in BT–9 or BT–11.

All age classes of bottlenose dolphins are involved and strandings range from a few live animals to mostly dead animals with many very decomposed (NMFS, 2015). Based upon preliminary diagnostic testing and discussion with disease experts, the tentative cause of this UME could be cetacean morbillivirus (NMFS, 2015). However the investigation is still ongoing and additional contributory factors to the UME are under investigation including other pathogens, biotoxins, range expansion, etc. (NMFS, 2015).

Comment 4: The Commission recommends the NMFS require the Marine Corps to use either direct strike or dynamic Monte Carlo models to determine the probability of ordnance strike.

Response: NMFS considers the Marine Corps' model for direct strike to be the best available information. Although the Commission recommended ''direct strike or dynamic Monte Carlo methods,'' it noted that the result of using a new risk probability model would likely provide negligible changes from the model described in the application. Because NMFS also believes that any change would be negligible and that the Marine Corps' existing model is the best available information, NMFS disagrees that the alternative modeling suggested by the Commission is necessary.

Mitigation

Comment 5: The Commission also requested that we require the Marine Corps to implement a plan to evaluate the effectiveness of all of its sensor-based monitoring systems (*i.e.,* the remote-camera passive acoustic monitoring systems).

Response: NMFS worked closely with the Marine Corps to develop proper mitigation, monitoring, and reporting requirements designed to minimize and detect impacts from the specified activities. This includes a Marine Mammal and Protected Species Monitoring Plan (Plan) that satisfies the requirements of the MMPA.

The Marine Corps has collaborated with Duke University to develop and test a real-time passive acoustic monitoring system that will allow automated detection of bottlenose dolphin whistles. Duke University is performing the work in two phases. Phase I was the development of an automated signal detector (a software program) to recognize the whistles of dolphins at BT–9 and BT–11. Phase II, currently in progress, is the assembly and deployment of a prototype real-time monitoring unit on one of the towers in the BT–9 range. Through the adaptive management component of the regulations, NMFS and the Marine Corps will continue evaluate the effectiveness of all of the sensor-based monitoring systems in BT–9 and BT–11.

Miscellaneous Concerns

Comment 6: Several individuals expressed general opposition to the Marine Corps' activities and to NMFS' proposed issuance of MMPA regulations because of the danger of killing or harassing marine life.

Response: NMFS appreciates the commenters' concerns for the marine life in the areas of the proposed activities. We note that over the course of the previous incidental harassment authorizations issued to the Marine Corps for the same activities, there were no reported incidents of injury to or mortality of any marine mammal. NMFS does not expect take by serious injury or mortality to occur. Again, taking into consideration the historically low concentrations of bottlenose dolphins present within the BT–9 and BT–11 areas; the small scale and spatial footprint of the proposed detonations within the target areas; the relatively short duration of the activities; and the incorporation of proven mitigation and monitoring measures to lessen adverse effects, NMFS expects the activities to have a negligible impact on marine mammals.

Estimated Numbers of Marine Mammals Taken by Harassment

NMFS' analysis identified the lethal responses, physiological responses, and behavioral responses that could potentially result from exposure to underwater explosive detonations. In this section, NMFS will relate the potential effects to marine mammals from underwater detonation of explosives and direct strike by ordnance to the MMPA regulatory definitions of Level A and Level B harassment, serious injury, and mortality. This section will also quantify the effects that might occur from the military readiness activities in BT–9 and BT–11.

Definition of Harassment

The NDAA removed the ''small numbers'' and ''specified geographic region'' limitations indicated earlier in this document and amended the definition of harassment as it applies to a ''military readiness activity'' to read as follows: (i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild [Level A Harassment]; or (ii) any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered [Level B Harassment].

Level B Harassment

Of the potential effects described in the proposed rule, the following are the types of effects that fall into the Level B harassment category:

Behavioral Harassment—Behavioral disturbance that rises to the level described in the above definition, when resulting from exposures to non-impulsive or impulsive sound, is Level B harassment. Some of the lower level physiological stress responses discussed earlier would also likely co-occur with the predicted harassments, although these responses are more difficult to detect and fewer data exist relating these responses to specific received levels of sound. When predicting Level B harassment based on estimated behavioral responses, those takes may have a stress-related physiological component.

Acoustic Masking and Communication Impairment—NMFS

considers acoustic masking to be Level B harassment, as it can disrupt natural behavioral patterns by interrupting or limiting the marine mammal's receipt or transmittal of important information or environmental cues.

Temporary Threshold Shift (TTS)—As discussed previously, TTS can affect how an animal behaves in response to the environment, including conspecifics, predators, and prey. NMFS classifies TTS (when resulting from exposure to explosives and other impulsive sources) as Level B harassment, not Level A harassment (injury).

Level A Harassment

Of the potential effects that were described in the proposed rule, the following are the types of effects that fall into the Level A Harassment category:

Permanent Threshold Shift (PTS)—PTS (resulting either from exposure to explosive detonations) is irreversible and NMFS considers this to be an injury.

Physical Disruption of Tissues Resulting from Explosive Shock Wave—NMFS classifies physical damage of tissues resulting from a shock wave (from an explosive detonation) as an injury.

NMFS considers direct strike by ordnance associated with the specified activities to be serious injury or mortality.

Impulsive Sound Explosive Thresholds

NMFS has identified three potential levels of take for the Marine Corps' training exercises: Level B harassment; Level A harassment; and mortality (or serious injury leading to mortality). We present the acoustic thresholds for impulse sounds in this section.

Table 7 summarizes the marine mammal impulsive sound explosive thresholds used for the Marine Corps' acoustic impact modeling for marine mammal take in its application and 2009 EA. Several standard acoustic metrics (Urick, 1983) describe the thresholds for predicting potential physical impacts from underwater pressure waves. They are:

- Total energy flux density or Sound Exposure Level (SEL). For plane waves (as assumed here), SEL is the time integral of the instantaneous intensity, where the instantaneous intensity is defined as the squared acoustic pressure divided by the characteristic impedance of sea water. Thus, SEL is the instantaneous pressure amplitude squared, summed over the duration of the signal. Standard units are dB referenced to 1 re: μPa^2-s.
- ⅓-octave SEL. This is the SEL in a ⅓-octave frequency band. A ⅓-octave band has upper and lower frequency limits with a ratio of 21:3, creating bandwidth limits of about 23 percent of center frequency.
- Positive impulse. This is the time integral of the initial positive pressure pulse of an explosion or explosive-like wave form. Standard units are Pa-s or psi-ms.
- Peak pressure. This is the maximum positive amplitude of a pressure wave, dependent on charge mass and range. Standard units are psi, μPa, or Bar.

TABLE 7—IMPULSIVE SOUND EXPLOSIVE THRESHOLDS USED BY THE MARINE CORPS IN ITS PREVIOUS ACOUSTICS IMPACTS MODELING

Criterion	Criterion definition	Threshold
Mortality	Onset of severe lung injury (mass of dolphin calf: 12.2 kg) (1% probability of mortality).	31 psi-msec (positive impulse).
Level A harassment (injury)	50% animals would experience ear drum rupture, 30% animals exposed sustain permanent threshold shift.	205 dB re 1 μPa^2-s EFD (full spectrum energy).
Level A harassment (injury)	Onset of slight lung injury (mass of dolphin calf: 12.2 kg).	13 psi-msec (positive impulse).
Level B harassment	TTS and associated behavioral disruption	23 psi peak pressure.
Level B harassment	TTS and associated behavioral disruption (dual criteria).	182 dB re: 1 μPa^2-s EFD*, ⅓-octave band.
Level B harassment	Sub-TTS behavioral disruption (for multiple/sequential detonations only).	177 dB re: 1 μPa^2-s EFD*, ⅓-octave band.

* **Note:** In greatest ⅓-octave band above 10 Hz or 100 Hz.

NMFS previously developed the explosive thresholds for assessing impacts of explosions on marine mammals shown in Table 7 for the shock trials of the USS Seawolf and USS Winston S. Churchill. However, at NMFS' recommendation, the Marine Corps has updated the thresholds used for onset of temporary threshold shift (TTS; Level B Harassment) and onset of permanent threshold shift (PTS; Level A Harassment) to be consistent with the thresholds outlined in the Navy's report titled, ''Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis Technical Report,'' on which the Navy coordinated with NMFS. NMFS believes that the thresholds outlined in the Navy's report represent the best available science. The report is available on the Internet at: *http://aftteis.com/Portals/4/aftteis/Supporting%20Technical%20Documents/Criteria_and_Thresholds_for_US_Navy_Acoustic_and_Explosive_Effects_Analysis-Apr_2012.pdf.*

Table 8 in this document outlines the revised acoustic thresholds used by NMFS for this rulemaking when addressing noise impacts from explosives.

TABLE 8—IMPULSIVE SOUND EXPLOSIVE THRESHOLDS USED BY THE MARINE CORPS IN ITS CURRENT ACOUSTICS IMPACTS MODELING

Group	Behavior		Slight injury			Mortality
	Behavioral	TTS	PTS	Gastro-intestinal tract	Lung	
Mid-frequency Cetaceans.	167 dB SEL ..	172 dB SEL or 23 psi.	187 dB SEL or 45.86 psi.	104 psi	39.1 $M^{1/3}$ $(1+[D_{Rm}/10.081])^{1/2}$ Pa-sec. Where: M = mass of the animals in kg D_{Rm} = depth of the receiver (animal) in meters.	91.4 $M^{1/3}$ $(1+D_{Rm}/10.081])^{1/2}$ Pa-sec. Where: M = mass of the animals in kg D_{Rm} = depth of the receiver (animal) in meters.

The Marine Corps conservatively modeled that all explosives would detonate at a 1.2 m (3.9 ft) water depth despite the training goal of hitting the target, resulting in an above water or on land explosion. For sources detonated at shallow depths, it is frequently the case that the explosion may breech the surface with some of the acoustic energy escaping the water column. Table 9 provides the estimated maximum range or radius, from the detonation point to the various thresholds described in Table 8.

TABLE 9—DISTANCES (M) TO HARASSMENT THRESHOLDS FROM THE MARINE CORPS' EXPLOSIVE ORDNANCE

Proposed ordnance	NEW (lbs)	Mortality	Level A harassment		Level B harassment		
			187 dB	46 psi-msec	172 dB	23 psi	167 dB
30 mm HE	0.1019	0	297.8	8.5	677.7	70	856.7
40 mm HE	0.1199	0	168.2	9.5	467.5	64.4	604.6
2.75-inch Rocket	4.8	29.3	270.4	49.1	631.5	197.3	830.4
5-inch Rocket	15.0	39.8	346.1	63.4	778.7	233.4	1,032.4
G911 Grenade	0.5	9.6	136.4	23.3	416.2	103.5	547.3

Density Estimation

The Marine Corps bases its method to estimate the number of marine mammals potentially affected using bottlenose dolphin densities (summer and winter), the amount/type of ordnance proposed, and distances to NMFS' harassment threshold criteria.

In 2000, Duke conducted a boat-based mark-recapture survey throughout the estuaries, bays and sounds of North Carolina (Read *et al.,* 2003). The 2000 boat-based survey yielded a dolphin density of 0.183 per square kilometer (km^2) (0.071 square mile (mi^2)) based on an estimate of 919 dolphins for the northern inshore waters divided by an estimated 5,015 km^2 (1,936 mi^2) survey area.

In a follow-on aerial study (July 2002–June 2003) specifically in and around BT–9 and BT–11, Duke reported one sighting in the restricted area surrounding BT–9, two sightings in proximity to BT–11, and seven sightings in waters adjacent to the bombing targets (Maher, 2003). In total, 276 bottlenose dolphins were sighted ranging in group size from two to 70 animals with mean dolphin density in BT–11 more than twice as large as the density of any of the other areas; however, the daily densities were not significantly different (Maher, 2003). The researchers calculated the estimated dolphin density at BT–9 and BT–11 based on these surveys to be 0.11 dolphins/km^2, and 1.23 dolphins/km^2, respectively.

For the regulations, the Marine Corps chose to estimate take of dolphins based on the higher density reported from the summer 2000 surveys (0.183/km^2). Although the researchers conducted the aerial surveys year round and provided seasonal density estimates, the average year-round density from the aerial surveys is 0.0936, lower than the 0.183/km^2 density chosen to calculate take for purposes of these proposed regulations. Additionally, Goodman *et al.* (2007) acknowledged that boat based density estimates may be more accurate than the uncorrected estimates derived from the aerial surveys.

Estimated Take From Explosives at BT–9

In order to calculate take from ordnance, the Marine Corps considered the distances to which animals could be harassed along with dolphin density (0.183 km^2) and based take calculations for munitions firing on 100 percent water detonation. Because the goal of training is to hit the targets and not the water, NMFS considers these take estimates based on 100 percent water detonation of munitions to be conservative.

Table 10 presents the annual estimated take of bottlenose dolphins from exposure to explosive ordnance based on current thresholds. The Marine Corps has requested, and NMFS proposes to authorize, the incidental take of 323 bottlenose dolphins from Level B Harassment (behavioral and TTS) and 34 bottlenose dolphins from Level A Harassment (PTS) annually.

Table 10 also includes an estimated annual take of 2 bottlenose dolphins by mortality (or serious injury leading to mortality) as a result of exposure to impulsive sound explosions. However, in consideration of the effectiveness of the mitigation measures, NMFS does not expect take by serious injury or mortality related to exposure to explosive ordnance to occur, and is not authorizing serious injury or mortality. The Marine Corps has conducted gunnery and bombing training exercises at BT–9 and BT–11 for several years and, to date, the monitoring reports do not indicate that dolphin injury, serious injury, or mortality has occurred as a result of the training exercises. Also, the Marine Corps has a history of notifying the NMFS stranding network when any injured or stranded animal comes ashore or is spotted by personnel on the water. The stranding responders have examined each of the stranded animals, confirming that it was unlikely that the

Marine Corps' exercises resulted in the death or injury of the stranded marine mammal.

TABLE 10—ANNUAL AND 5-YEAR ESTIMATED TAKE OF BOTTLENOSE DOLPHINS FROM EXPOSURE TO EXPLOSIVE ORDNANCE BASED ON INDICATED THRESHOLDS AND THE ABSENCE OF MITIGATION MEASURES

Proposed ordnance	Mortality	Serious injury	Level A harassment (PTS/slight lung injury)	Level B harassment (TTS and behavior)	
		104 psi	187 dB SEL/ Positive impulse	172 dB SEL	167 dB SEL
30 mm HE	0 (0.0)	0 (0.46)	3.70	17.18	10.41
40 mm HE	0 (0.0)	2 (1.56)	24.03	153.84	95.37
2.75-inch Rocket	0 (0.06)	0 (0.34)	3.53	15.35	9.82
5-inch Rocket	0 (0.032)	0 (0.19)	1.66	7.21	4.77
G911 Grenade	0 (0.004)	0 (0.06)	0.87	4.60	2.91
Annual Totals*	0	2	34	199	124
5-Year Totals	0	10	170	1,615	

Estimates in parentheses less than or equal to 0.5 rounded to zero.

Estimated Take by Direct Strike of Ordnance

Table 11 presents the annual estimated take of bottlenose dolphins from direct strike by ordnance, which is zero for each location. In consideration of the effectiveness of the mitigation measures, NMFS does not expect take by serious injury or mortality related to direct strike to occur.

TABLE 11—ANNUAL ESTIMATED TAKE OF BOTTLENOSE DOLPHINS FROM DIRECT STRIKE BY ORDNANCE

Bombing target	Estimated annual ordnance levels	Strike probability	Estimated number of strikes	Annual estimate	5-Year estimate
BT–9	1,225,815	2.61×10^{-7}	0 (0.32)	0	0
BT–11	451,686.24[1]	9.4×10^{-8}	0 (0.042)	0	0

[1] BT–11 based on 36 percent of the total estimated ordnance levels (1,254,684) with a deployment footprint over water. In reanalyzing the data based on public comments, NMFS considered the modeled numbers less than or equal to 0.5 to be discountable for estimating take. Estimates in parentheses less than or equal to 0.5 rounded to zero.

The Marine Corps conducted modeling for the bombing targets to determine the total surface area needed to contain 99.99 percent of initial and ricochet impacts (95 percent confidence interval) for each aircraft and ordnance type. It then generated the surface area or footprints of weapon impact areas associated with air-to-ground ordnance delivery and estimated that at both BT–9 and BT–11 the probability of deployed ordnance landing in the impact footprint is essentially 1.0, since the footprints were designed to contain 99.99 percent of impacts, including ricochets. However, only 36 percent of the weapon footprint for BT–11 is over water in Rattan Bay. Water depths in Rattan Bay range from 3 m (10 ft) in the deepest part of the bay to 0.5 m (1.6 ft) close to shore.

The Marine Corps calculated the probability of hitting a bottlenose dolphin at the bombing targets by multiplying the dolphin's dorsal surface area by the density estimate of dolphins in the area. It estimated that the dorsal surface area of a bottlenose dolphin was approximately 1.425 m^2 (15.3 ft^2) with an average length and width of 2.85 m (9.3 ft) and 0.5 m (1.6 ft), respectively. Then using the density estimate of 0.183 km^2, it calculated the probability of direct strike in the waters of BT–9 as 2.61×10^{-7} and the probability of direct strike in the waters of BT–11 as 9.4×10^{-8}. The probability for BT–11 is 64 percent lower, because only 36 percent of the weapons footprint occurs over the water column. This method is the best available information for estimating the probability of ordnance striking a marine mammal in BT–9 or BT–11.

Vessel Presence

Interactions with vessels are not a new experience for bottlenose dolphins in Pamlico Sound. Pamlico Sound is heavily used by recreational, commercial (fishing, daily ferry service, tugs, etc.), and military (including the Navy, Air Force, and Coast Guard) vessels year-round. The NMFS' Southeast Regional Office has developed marine mammal viewing guidelines to educate the public on how to responsibly view marine mammals in the wild and avoid causing a take (*http://www.nmfs.noaa.gov/pr/education/southeast/*). The guidelines recommend that vessels should remain a minimum of 50 yards (45.7 m; 150 ft) from a dolphin, operate in a predictable manner, avoid excessive speed or sudden changes in speed or direction in the vicinity of animals, and not pursue, chase, or separate a group of animals. The Marine Corps would abide by these guidelines to the fullest extent practicable. The Marine Corps would not engage in high speed exercises if personnel detect a marine mammal within the immediate area of the bombing targets prior to training commencement and would never closely approach, chase, or pursue dolphins. Personnel monitoring on the vessels, marking success rate of target hits, and monitoring the remote camera would facilitate detection of marine mammals within the bombing targets.

Based on the description of the action, the other activities regularly occurring in the area, the species that may be exposed to the activity and their observed behaviors in the presence of vessel traffic, and the implementation of measures to avoid vessel strikes, NMFS has determined that it is unlikely that the small boat maneuvers during surface-to-surface maneuvers would result in the take of any marine

mammals, in the form of either behavioral harassment, injury, serious injury, or mortality.

Negligible Impact Analysis and Determinations

Negligible impact is ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival'' (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.,* population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through behavioral harassment, NMFS must consider other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, and effects on habitat.

NMFS would authorize Level A and Level B harassment only of bottlenose dolphins over the course of a 5-year period. The Marine Corps has described its specified activities based on best estimates of the number of sorties that it proposes to conduct training exercises at BT–9 and BT–11. The exact number of ordnance expenditures may vary from year to year, but will not exceed the 5-year total of ordnance expenditures based on the information in Tables 3 and 4. NMFS does not anticipate that the take totals proposed for authorization would exceed the 5-year totals indicated in Tables 10 and 11.

Tolerance

Depending on the intensity of the shock wave and size, location, and depth of the animal, an animal can exhibit tolerance from hearing the blast sound. However, tolerance effects on bottlenose dolphins within the bombing target areas are difficult to assess given their affinity for the area. Scientific boat-based surveys conducted throughout Pamlico Sound conclude that dolphins use the areas around the BTs more frequently than other portions of Pamlico Sound (Maher, 2003), despite the Marine Corps actively training in a manner identical to the specified activities described here for years. Because of the low concentration of bottlenose dolphins present within the BT–9 and BT–11 areas, the incorporation of mitigation measures to lessen effects, and the short durations of the missions, NMFS expects that tolerance effects would be minimal and would affect a small number of marine mammals on an infrequent basis.

Masking

For reasons stated previously in the proposed rule, NMFS expects masking effects from ordnance detonation to be minimal because masking is typically of greater concern for those marine mammals that utilize low frequency communications, such as baleen whales. While it may occur temporarily, NMFS does not expect auditory masking to result in detrimental impacts to an individual's or population's survival, fitness, or reproductive success. Dolphin movement is not restricted within the BT–9 or BT–11 ranges, allowing for movement out of the area to avoid masking impacts.

Disturbance

The Level B harassment takes would likely result in dolphins being temporarily affected by bombing or gunnery exercises. However, the probability that detonation events will overlap in time and space with marine mammals is low, particularly given the densities of marine mammals in the vicinity of BT–9 and BT–11 and the implementation of monitoring and mitigation measures. Moreover, NMFS does not expect animals to experience repeat exposures to the same sound source, as bottlenose dolphins would likely move away from the source after being exposed. In addition, NMFS expects that these isolated exposures, when received at distances of Level B behavioral harassment, would cause brief startle reactions or short-term behavioral modification by the animals. These brief reactions and behavioral changes would disappear when the exposures cease.

Read *et al.* (2003) concluded that dolphins rarely occur in open waters in the middle of North Carolina sounds and large estuaries, but instead are concentrated in shallow water habitats along shorelines. However, no specific areas have been identified as vital reproduction or foraging habitat.

NMFS and the Marine Corps have estimated that individuals of bottlenose dolphins may sustain some level of temporary threshold shift (TTS) from underwater detonations. TTS can last from a few minutes to days, be of varying degree, and occur across various frequency bandwidths. Although the degree of TTS depends on the received noise levels and exposure time, studies show that TTS is reversible. NMFS expects the animals' sensitivity to recover fully in minutes to hours based on the fact that the proposed underwater detonations are small in scale and isolated. In summary, we do not expect that these levels of received impulse noise from detonations would affect annual rates of recruitment or survival.

Stress Response

NMFS expects short-term effects such as stress during underwater detonations, as repeated exposure to sounds from underwater explosions may cause physiological stress that could lead to long-term consequences for the individual such as reduced survival, growth, or reproductive capacity. However, the time scale of individual explosions is very limited, and the Marine Corps disperses its training exercises in space and time.

Consequently, repeated exposure of individual bottlenose dolphins to sounds from underwater explosions is not likely and most acoustic effects are expected to be short-term and localized. NMFS does not expect long-term consequences for populations because the BT–9 and BT–11 areas continue to support bottlenose dolphins in spite of ongoing missions. The best available data do not suggest that there is a decline in the Pamlico Sound population due to these exercises.

Permanent Threshold Shift

NMFS believes that many marine mammals would deliberately avoid exposing themselves to the received levels of explosive ordnance necessary to induce injury by moving away from or at least modifying their path to avoid a close approach. Also, in the unlikely event that an animal approaches the bombing target at a close distance, NMFS believes that the mitigation measures (*i.e.,* the delay/postponement of missions) would typically ensure that animals would not be exposed to injurious levels of sound. As discussed previously, the Marine Corps utilizes both aerial and passive acoustic monitoring in addition to personnel on vessels to detect marine mammals for mitigation implementation. The potential for permanent hearing impairment and injury is low due to the incorporation of the proposed mitigation measures specified in this final rule.

Lethal Responses

As stated previously, NMFS would not authorize take by mortality (or serious injury leading to mortality). There have been no recorded incidents

of mortality or serious injury of marine mammals resulting from previous missions in BT–9 or BT–11 to date. Based on the Marine Corps' compliance with previous authorizations for the same activities, NMFS expects the proposed mitigation and monitoring measures to minimize the potential risk for serious injury or mortality and does not expect these types of takes to occur.

The Marine Corps has conducted gunnery and bombing training exercises at BT–9 and BT–11 for several years and, to date, the monitoring reports do not indicate that dolphin injury, serious injury, or mortality has occurred as a result of its training exercises. Also, the Marine Corps has a history of notifying the NMFS stranding network when any injured or stranded animal comes ashore or is spotted by personnel on the water. The stranding responders have examined each of the stranded animals, confirming that it was unlikely that the Marine Corps' exercises resulted in the death or injury of the stranded marine mammal.

Synopsis

As described in the *Affected Species* section of this final rule, bottlenose dolphin stock segregation is complex with stocks overlapping throughout the coastal and estuarine waters of North Carolina. It is not possible for the Marine Corps to determine to which stock any individual dolphin taken during training activities belongs, as this can only be accomplished through genetic testing. However, it is likely that many of the dolphins encountered would belong to the Northern or Southern North Carolina Estuarine System stocks. These stocks have abundance estimates of 950 and 188 animals, respectively, and are not listed as threatened or endangered under the ESA.

In addition, the potential for temporary or permanent hearing impairment and injury is low and through the incorporation of the proposed mitigation measures specified in this document would have the least practicable adverse impact on the affected species or stocks. The information contained in the Marine Corps' application, the 2009 EA, and this document support NMFS' finding that impacts will be mitigated by implementation of a conservative safety range for marine mammal exclusion in Rattan Bay, incorporation of platform and aerial survey monitoring efforts both prior to and after detonation of explosives, and delay/postponement/cancellation of detonations whenever marine mammals or other specified protected resources are either detected within the bombing target areas or enter the bombing target areas at the time of detonation, or if weather and sea conditions preclude adequate surveillance.

The Marine Corps has complied with the requirements of the previous incidental harassment authorizations issued for similar activities, and reported few observed takes of marine mammals incidental to these training exercises.

Based on the best available information, NMFS authorizes: take by Level B harassment of 1,615 bottlenose dolphins and take by Level A harassment of 170 bottlenose dolphins only. This represents an overestimate of the number of individuals harassed over the duration of the final rule and LOA because these totals represent much smaller numbers of individuals that may be harassed multiple times. There are no stocks known from the action area listed as threatened or endangered under the ESA. Two bottlenose dolphin stocks designated as strategic under the MMPA may be affected by the Marine Corps' activities. In this case, under the MMPA, strategic stock means a marine mammal stock for which the level of direct human-caused mortality exceeds the potential biological removal level. These include the Southern North Carolina Estuarine System and Northern North Carolina Estuarine System Stocks. NMFS does not expect the this action to result in long-term impacts such as permanent abandonment or reduction in presence at BT–9 or BT–11. No impacts are expected at the population or stock level.

Taking into account information presented in this final rule, the Marine Corps' application and 2014 application addendum, the 2009 EA, and results from previous monitoring reports, NMFS has determined that the total level of take incidental to authorized training exercises over the 5-year effective period of the regulations would have a negligible impact on the marine mammal species and stocks affected at BT–9 and BT–11 in Pamlico Sound, NC.

Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

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

Endangered Species Act (ESA)

For the reasons explained above, this action will not affect any ESA-listed species or designated critical habitat under NMFS' jurisdiction. Therefore, there is no requirement for NMFS to consult under Section 7 of the ESA on the issuance of an Authorization under section 101(a)(5)(A) of the MMPA.

National Environmental Policy Act (NEPA)

On February 11, 2009, the Marine Corps issued a Finding of No Significant Impact for its Environmental Assessment (EA) on MCAS Cherry Point Range Operations. Based on the analysis of the EA, the Marine Corps determined that the proposed action would not have a significant impact on the human environment.

After evaluating the Marine Corps' application and the 2009 EA, NMFS determined that there were changes to the proposed action (*i.e.,* increased ammunitions levels) and new environmental impacts (*i.e.,* the use of revised thresholds for estimating potential impacts on marine mammals from explosives) not addressed in the 2009 EA. In 2015, NMFS conducted a new analysis per NEPA, augmenting the information contained in the Marine Corps' 2009 EA, on the issuance of MMPA rulemaking and a subsequent LOA. In February 2015, NMFS determined that the issuance of this regulation and subsequent LOA would not have a significant effect on the quality of the human environment and issued a FONSI. In 2015, the Marine Corps issued a new FONSI for their activities under the regulations and subsequent LOA.

Classification

This action does not contain any collection of information requirements for purposes of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*).

The Office of Management and Budget has determined that this final rule is not significant for purposes of Executive Order 12866.

Pursuant to the Regulatory Flexibility Act, 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 rule, if adopted, would not have a significant economic impact on a substantial number of small entities. NMFS published the certification in the **Federal Register** notice of the proposed rulemaking on July 15, 2014. NMFS received no comments about the

certification. Accordingly, a final regulatory flexibility analysis is not required and NMFS has not prepared one for this rulemaking.

The Assistant Administrator for Fisheries has determined that there is good cause under the Administrative Procedure Act (5 U.S.C. 553(d)(3)) to waive the 30-day delay in effective date of the measures contained in the final rule. The Marine Corps has a compelling national policy reason to continue military readiness activities without interruption to the routine training at Marine Corps Air Station Cherry Point Range Complex.

This rulemaking began after our receipt of the Marine Corps' revised application for take authorization in May 2014. Since that time, NMFS has prepared an EA for the rulemaking and subsequent LOA for the Marine Corps' activities. Both agencies seriously considered all public comments and worked together to ensure an outcome that satisfied both the Marine Corps purpose and need and our statutory responsibilities under the MMPA.

The Marine Corps has a compelling national policy reason to continue military readiness activities without interruption to their military training activities. Under these circumstances, it was not possible to finalize the MMPA rulemaking and the NEPA obligations with sufficient time to allow for the 30-day delay in effectiveness date.

As discussed below, suspension/interruption of the Marine Corps' ability to conduct training exercises disrupts adequate and realistic testing of military equipment, weapons, and sensors for proper operation and suitability for combat essential to national security.

In order to meet its national security objectives, the Marine Corps must continually maintain its ability to train and operate. To meet these objectives, the Marine Corps must identify, develop, and procure defense systems by continually integrating test and evaluation support throughout the defense acquisition process and providing essential information to decision-makers. Such testing and evaluation is critical in determining that defense systems perform as expected and whether these systems are operationally effective, suitable, survivable, and safe for their intended use.

In order to effectively fulfill its national security mission, the Marine Corps has a need to conduct training activities covered by this final rule as soon as possible. A 30-day delay further reduces the amount of time the Marine Corps has available to plan for and execute an activity covered by this rule. Further, should an immediate national security issue arise; the 30-day delay would prevent the Marine Corps from meeting its mission, which would have adverse national security consequences. Waiver of the 30-day delay of the effective date of the final rule will allow the Marine Corps to continue training marines quickly, while also ensuring compliance with the MMPA.

List of Subjects in 50 CFR Part 218

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

Dated: March 4, 2015.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

For reasons set forth in the preamble, 50 CFR part 218 is amended as follows:

PART 218—REGULATIONS GOVERNING THE TAKING AND IMPORTING OF MARINE MAMMALS

■ 1. The authority citation for part 218 continues to read as follows:

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

■ 2. Subpart E is added to part 218 to read as follows:

Subpart E—Taking Marine Mammals Incidental to U.S. Marine Corps Training Exercises at Brant Island Bombing Target and Piney Island Bombing Range, Pamlico Sound, North Carolina

Sec.

Subpart E—Taking Marine Mammals Incidental to U.S. Marine Corps Training Exercises at Brant Island Bombing Target and Piney Island Bombing Range, Pamlico Sound, North Carolina

§ 218.40 Specified activity and location of specified activities.

(a) Regulations in this subpart apply only to the U.S. Marine Corps (Marine Corps) for the incidental taking of marine mammals that occurs in the area outlined in paragraph (b) of this section incidental to the activities described in paragraph (c) of this section.

(b) The taking of marine mammals by the Marine Corps is only authorized if it occurs within the Brant Island Target (BT–9) and Piney Island Bombing Range (BT–11) bombing targets at the Marine Corps Air Station Cherry Point Range Complex located within Pamlico Sound, North Carolina (as depicted in Figure 3–1 of the Marine Corps' request for regulations and Letter of Authorization). The BT–9 area is a water-based bombing target and mining exercise area located approximately 52 kilometers (km) (32.3 miles (mi)) northeast of Marine Air Corps Station Cherry Point. The BT–11 area encompasses a total of 50.6 square kilometers (km^2) (19.5 square miles (mi^2)) on Piney Island located in Carteret County, North Carolina.

(c) The taking of marine mammals by the Marine Corps is only authorized if it occurs incidental to the following activities within the annual amounts of use:

(1) The level of training activities in the amounts indicated here:

(i) Surface-to-Surface Exercises—up to 471 vessel-based sorties annually at BT–9 and BT–11; and

(ii) Air-to-Surface Exercises—up to 14,586 air-based based sorties annually at BT–9 and BT–11.

(2) The use of the following live ordnance for Marine Corps training activities at BT–9, in the total amounts over the course of the five-year rule indicated here:

(i) 30 mm HE—17,160 rounds;

(ii) 40 mm HE—52,100 rounds;

(iii) 2.75-inch Rocket—1,100 rounds;

(iv) 5-inch Rocket—340 rounds; and

(v) G911 Grenade—720 rounds.

(3) The use of the following inert ordnance for Marine Corps training activities at BT–9 and BT–11, in the total amounts over the course of the five-year rule indicated here:

(i) Small arms excluding .50 cal (7.62 mm)—2,628,050 rounds at BT–9 and 3,054,785 rounds at BT–11;

(ii) 0.50 Caliber arms—2,842,575 rounds at BT–9 and 1,833,875 rounds at BT–11;

(iii) Large arms (up to 25 mm)—602,025 rounds at BT–9 and 1,201,670 rounds at BT–11;

(iv) Rockets, inert (2.75-inch rocket, 2.75-inch illumination, 2.75-inch white phosphorus, 2.75-inch red phosphorus; 5-inch rocket, 5-inch illumination, 5-inch white phosphorus, 5-inch red phosphorus)—4,220 rounds at BT–9 and 27,960 rounds at BT–11;

(v) Bombs, inert (BDU–45 practice bomb, MK–76 practice bomb, MK–82 practice bomb, MK–83 practice bomb)—4,055 rounds at BT–9 and 22,114 rounds at BT–11; and

(vi) Pyrotechnics—4,496 rounds at BT–9 and 8,912 at BT–11.

§ 218.41 Effective dates.

Regulations in this subpart are effective from March 13, 2015 until March 12, 2020.

§ 218.42 Permissible methods of taking.

(a) Under a Letter of Authorization issued pursuant to § 216.106 of this chapter and § 218.47, the Holder of the Letter of Authorization may incidentally, but not intentionally, take marine mammals by Level A and Level B harassment only within the area described in § 218.40(b), provided the activity is in compliance with all terms, conditions, and requirements of these regulations and the appropriate Letter of Authorization.

(b) The incidental take of marine mammals under the activities identified in § 218.40(c) is limited to the following species, by the indicated method of take and the indicated number over a five-year period:

(1) Level B Harassment:

(i) Atlantic bottlenose dolphin (*Tursiops truncatus*)—1,615.

(ii) [Reserved]

(2) Level A Harassment:

(i) Atlantic bottlenose dolphin—170.

(ii) [Reserved]

§ 218.43 Prohibitions.

No person in connection with the activities described in § 218.40 shall:

(a) Take any marine mammal not specified in § 218.42(c);

(b) Take any marine mammal specified in § 218.42(c) other than by incidental take as specified in § 218.42(c)(1) and (2);

(c) Take a marine mammal specified in § 218.42(c) if such taking results in more than a negligible impact on the species or stocks of such marine mammal; or

(d) Violate, or fail to comply with, the terms, conditions, and requirements of these regulations or a Letter of Authorization issued under § 216.106 of this chapter and § 218.47.

§ 218.44 Mitigation.

(a) When conducting operations identified in § 218.40(c), the mitigation measures contained in the Letter of Authorization issued under § 216.106 of this chapter and § 218.47 must be implemented. These mitigation measures include, but are not limited to:

(b) Training Exercises at BT–9 and BT–11:

(1) Safety Zone:

(i) The Marine Corps shall establish and monitor a safety zone for marine mammals comprising the entire Rattan Bay area at BT–11.

(ii) The Marine Corps shall establish and monitor a safety zone for marine mammals comprising a radius of 914 meters (m) (3,000 feet) around the target area at BT–9.

(2) For training exercises, the Marine Corps shall comply with the monitoring requirements, including pre-mission and post-mission monitoring, set forth in § 218.45(c).

(3) When detonating explosives or delivering ordnance:

(i) If personnel observe any marine mammals within the safety zone prescribed in paragraph (b)(1) of this section, or if personnel observe marine mammals that are on a course that will put them within the designated safety zone prior to surface-to-surface or air-to-surface training exercises, the Marine Corps shall delay ordnance delivery and/or explosives detonations until all marine mammals are no longer within the designated safety zone.

(ii) If personnel cannot reacquire marine mammals detected in the safety zone after delaying training missions, the Marine Corps shall not commence activities until the next verified location of the animal is outside of the safety zone and the animal is moving away from the mission area.

(iii) If personnel are unable to monitor the safety zone prescribed in paragraph (b)(1) of this section, then the Marine Corps shall delay training exercises.

(iv) If daytime weather and/or sea conditions preclude adequate surveillance for detecting marine mammals, then the Marine Corps shall postpone training exercises until adequate sea conditions exist for adequate monitoring of the safety zone prescribed in paragraph (b)(1) of this section.

(4) Pre-Mission and Post-Mission Monitoring:

(i) Range operators shall conduct or direct visual surveys to monitor BT–9 or BT–11 for marine mammals before and after each exercise. Range operation and control personnel shall monitor the target area through two tower-mounted safety and surveillance cameras.

(ii) Range operators shall use the surveillance camera's night vision (*i.e.,* infrared) capabilities to monitor BT–9 or BT–11 for marine mammals during night-time exercises.

(iii) For BT–9, in the event that a marine mammal is sighted within the 914-m (3,000-ft) radius around the target area, personnel shall declare the area as fouled and cease training exercises. Personnel shall commence operations in BT–9 only until the marine mammal moves beyond and on a path away from the 914-m (3,000 ft) radius from the BT–9 target.

(iv) For BT–11, in the event that a marine mammal is sighted anywhere within the confines of Rattan Bay, personnel shall declare the water-based targets within Rattan Bay as fouled and cease training exercises. Personnel shall commence operations in BT–11 only after the animal has moved out of Rattan Bay.

(5) Range Sweeps for Safety Zone Monitoring and Delay of Exercises:

(i) The Marine Corps shall conduct a range sweep the morning of each exercise day prior to the commencement of range operations.

(ii) The Marine Corps shall also conduct a range sweep after each exercise following the conclusion of range operations.

(iii) Marine Corps Air Station personnel shall conduct the sweeps by aircraft at an altitude of 100 to 300 m (328 to 984 ft) above the water surface, at airspeeds between 60 to 100 knots.

(iv) The path of the sweeps shall run down the western side of BT–11, circle around BT–9, and then continue down the eastern side of BT–9 before leaving the area.

(v) The maximum number of days that shall elapse between pre- and post-exercise monitoring events shall be approximately 3 days, and will normally occur on weekends.

(6) Cold Pass by Aircraft:

(i) For waterborne targets, the pilot must perform a low-altitude visual check immediately prior to ordnance delivery at the bombing targets both day and night to ensure the target area is clear of marine mammals. This is referred to as a ''cold'' or clearing pass.

(ii) Pilots shall conduct the cold pass with the aircraft (helicopter or fixed-winged) flying straight and level at altitudes of 61 to 914 m (200 to 3,000 ft) over the target area.

(iii) If marine mammals are present in the target area during a range sweep, cold pass, or visual surveillance with the camera, the Range Controller shall deny ordnance delivery to the target as conditions warrant. If marine mammals are not present in the target area, the Range Controller may grant clearance to the pilot as conditions warrant.

(7) Vessel Operation:

(i) All vessels used during training operations shall abide by NMFS' Southeast Regional Viewing Guidelines designed to prevent harassment to marine mammals (*http://www.nmfs.noaa.gov/pr/education/southeast/).*

(ii) [Reserved]

§ 218.45 Requirements for monitoring and reporting.

(a) The Holder of the Letter of Authorization issued pursuant to § 216.106 of this chapter and § 218.47

for activities described in § 218.40(c) is required to conduct the monitoring and reporting measures specified in this section and § 218.44 and any additional monitoring measures contained in the Letter of Authorization.

(b) The Holder of the Letter of Authorization is required to cooperate with the National Marine Fisheries Service, and any other Federal, state, or local agency monitoring the impacts of the activity on marine mammals. Unless specified otherwise in the Letter of Authorization, the Holder of the Letter of Authorization must notify the Director, Office of Protected Resources, National Marine Fisheries Service, or designee, by letter or telephone (301–427–8401), at least 2 weeks prior to any modification to the activity identified in § 218.40(c) that has the potential to result in the serious injury, mortality, or Level A or Level B harassment of a marine mammal that was not identified and addressed previously.

(c) Monitoring Procedures for Missions at BT–9 and BT–11:

(1) The Holder of this Authorization shall:

(i) Designate qualified on-site individual(s) to record the effects of training exercises on marine mammals that inhabit Pamlico Sound;

(ii) Require operators of small boats, and other personnel monitoring for marine mammals from watercraft to take the Marine Species Awareness Training (Version 2), provided by the Department of the Navy.

(iii) Instruct pilots conducting range sweeps on marine mammal observation techniques during routine Range Management Department briefings. This training would make personnel knowledgeable of marine mammals, protected species, and visual cues related to the presence of marine mammals and protected species.

(iv) Continue the Long-Term Monitoring Program to obtain abundance, group dynamics (*e.g.,* group size, age census), behavior, habitat use, and acoustic data on the bottlenose dolphins which inhabit Pamlico Sound, specifically those around BT–9 and BT–11.

(v) Continue the Passive Acoustic Monitoring (PAM) Program to provide additional insight into how dolphins use BT–9 and BT–11 and to monitor for vocalizations.

(vi) Continue to refine the real-time passive acoustic monitoring system at BT–9 to allow automated detection of bottlenose dolphin whistles.

(d) Reporting:

(1) Unless specified otherwise in the Letter of Authorization, the Holder of the Letter of Authorization shall conduct all of the monitoring and reporting required under the LOA and shall submit an annual and comprehensive report to the Director, Office of Protected Resources, National Marine Fisheries Service by a date certain to be specified in the LOA. This report must include the following information:

(i) Date and time of each training exercise;

(ii) A complete description of the pre-exercise and post-exercise activities related to mitigating and monitoring the effects of the training exercises on marine mammal populations;

(iii) Results of the Marine Corps monitoring, including numbers by species/stock of any marine mammals injured or killed as a result of the training exercises and number of marine mammals (by species, if possible) that may have been harassed due to presence within the applicable safety zone;

(iv) A detailed assessment of the effectiveness of the sensor-based monitoring in detecting marine mammals in the area of the training exercises; and

(v) Results of coordination with coastal marine mammal stranding networks. The Marine Corps shall coordinate with the local NMFS Stranding Coordinator to discuss any unusual marine mammal behavior and any stranding, beached (live or dead), or floating marine mammals that may occur at any time during training activities or within 24 hours after completion of training.

(2) The Marine Corps will submit an annual report to NMFS by June 1st of each year starting in 2016. The first report will cover the time period from issuance of the March 2015 Letter of Authorization through March 12, 2016. Each annual report after that time will cover the time period from March 13 through March 12, annually.

(3) The Marine Corps shall submit a draft comprehensive report on all marine mammal monitoring and research conducted during the period of these regulations to the Director, Office of Protected Resources, NMFS at least 180 days prior to expiration of these regulations or 180 days after the expiration of these regulations if the Marine Corps will not request new regulations.

(i) The draft comprehensive report will be subject to review and comment by NMFS. Prior to acceptance by NMFS, the Marine Corps must address any recommendations made by NMFS, within 60 days of its receipt, in the final comprehensive report.

(ii) [Reserved]

(4) General Notification of Injured or Dead Marine Mammals:

(i) The Marine Corps shall systematically observe training operations for injured or disabled marine mammals. In addition, the Marine Corps shall monitor the principal marine mammal stranding networks and other media to correlate analysis of any dolphin strandings that could potentially be associated with BT–9 or BT–11 training operations.

(ii) Marine Corps personnel shall notify NMFS immediately, or as soon as clearance procedures allow, if personnel find an injured, stranded, or dead marine mammal during or shortly after, and in the vicinity of, any training operations. The Marine Corps shall provide NMFS with species or description of the animal(s), the condition of the animal(s) (including carcass condition if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

(iii) In the event that an injured, stranded, or dead marine mammal is found by Marine Corps personnel that is not in the vicinity of, or found during or shortly after operations, the Marine Corps personnel will report the same information listed above as soon as operationally feasible and clearance procedures allow.

(5) General Notification of a Ship Strike:

(i) In the event of a vessel strike, at any time or place, the Marine Corps shall do the following:

(ii) Immediately report to NMFS the species identification (if known), location (lat/long) of the animal (or the strike if the animal has disappeared), and whether the animal is alive or dead (or unknown);

(iii) Report to NMFS as soon as operationally feasible the size and length of the animal, an estimate of the injury status (*e.g.,* dead, injured but alive, injured and moving, unknown, etc.), vessel class/type, and operational status;

(iv) Report to NMFS the vessel length, speed, and heading as soon as feasible; and

(v) Provide NMFS with a photo or video, if equipment is available.

§ 218.46 Applications for Letters of Authorization.

To incidentally take marine mammals pursuant to these regulations, the U.S. citizen (as defined at § 216.103 of this chapter) conducting the activities identified in § 218.40 must apply for and obtain either an initial Letter of Authorization in accordance with

§ 216.106 of this chapter and § 218.47 or a renewal under § 218.48.

§ 218.47 Letter of Authorization.

(a) To incidentally take marine mammals pursuant to these regulations, the Marine Corps must apply for and obtain a Letter of Authorization.

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

(c) If a Letter of Authorization expires prior to the expiration date of these regulations, the Marine Corps must apply for and obtain a renewal of the Letter of Authorization.

(d) In the event of any changes to the activity or to mitigation and monitoring measures required by a Letter of Authorization, the Marine Corps must apply for and obtain a modification of the Letter of Authorization as described in § 218.48.

(e) The Letter of Authorization 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 Letter of Authorization 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 Letter of Authorization shall be published in the **Federal Register** within 30 days of a determination.

§ 218.48 Renewals and Modifications of Letters of Authorization.

(a) A Letter of Authorization issued under § 216.106 of this chapter and § 218.47 for the activity identified in § 218.40 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 § 218.47(c)(1)), and

(2) NMFS determines that the mitigation, monitoring, and reporting measures required by the previous Letter of Authorization under these regulations were implemented.

(b) For Letter of Authorization 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 § 218.47(c)(1)) that do not change the findings made for the regulations or 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 Letter of Authorization in the **Federal Register**, including the associated analysis illustrating the change, and solicit public comment before issuing the Letter of Authorization.

(c) A Letter of Authorization issued under § 216.106 of this chapter and § 218.47 for the activity identified in § 218.40 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 the Marine Corps 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 Letter of Authorization include:

(A) Results from the Marine Corps' monitoring from the previous year(s);

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

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

(ii) If, through adaptive management, the modifications to the mitigation, monitoring, or reporting measures are substantial, NMFS shall publish a notice of proposed Letter of Authorization 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 § 218.42(c), a Letter of Authorization may be modified without prior notice or opportunity for public comment. NMFS will publish a notice in the **Federal Register** within 30 days subsequent to the action.

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