

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*	*	*
Penguin, erect-crested	<i>Eudyptes sclateri</i>	New Zealand, Bounty Islands and Antipodes Islands	Entire	T	771	NA	NA
Penguin, Fiordland crested	<i>Eudyptes pachyrhynchus</i>	New Zealand, South Island and offshore islands	Entire	T	771	NA	NA
*	*	*	*	*	*	*	*
Penguin, Humboldt	<i>Spheniscus humboldti</i>	Eastern Pacific Ocean—Chile, Peru	Entire	T	771	NA	NA
Penguin, white-flippered	<i>Eudyptula minor albosignata</i>	New Zealand, South Island	Entire	T	771	NA	NA
Penguin, yellow-eyed	<i>Megadyptes antipodes</i>	New Zealand, South Island and offshore islands	Entire	T	771	NA	NA
*	*	*	*	*	*	*	*

\* \* \* \* \*

Dated: July 12, 2010

**Wendi Weber,**

*Acting Director, U.S. Fish and Wildlife Service.*

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**BILLING CODE 4310-55-S**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 218

[Docket No. 0907281180-0269-02]

**RIN 0648-AX90**

#### Taking and Importing Marine Mammals; Military Training Activities and Research, Development, Testing and Evaluation Conducted Within the Mariana Islands Range Complex

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

**ACTION:** Final rule.

**SUMMARY:** NMFS, upon application from the U.S. Navy (Navy) on behalf of the Department of Defense (including the

Navy, the U.S. Air Force (USAF), and the U.S. Marine Corps (USMC)), is issuing regulations to govern the unintentional taking of marine mammals incidental to activities conducted in the Mariana Islands Range Complex (MIRC) study area for the period of July 2010 through July 2015. The Navy's activities are considered military readiness activities pursuant to the Marine Mammal Protection Act (MMPA), as amended by the National Defense Authorization Act for Fiscal Year 2004 (NDAA). These regulations, which allow for the issuance of "Letters of Authorization" (LOAs) for the incidental take of marine mammals during the described activities and specified timeframes, prescribe the permissible methods of taking and other means of effecting the least practicable adverse impact on marine mammal species or stocks and their habitat, as well as requirements pertaining to the monitoring and reporting of such taking. **DATES:** Effective August 3, 2010 through August 3, 2015.

**ADDRESSES:** A copy of the Navy's application (which contains a list of the references used in this document), NMFS' Record of Decision (ROD), and other documents cited herein may be obtained by writing to Michael Payne, Chief, Permits, Conservation and Education Division, Office of Protected

Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3225 or by telephone via the contact listed here (*see FOR FURTHER INFORMATION CONTACT*).

**FOR FURTHER INFORMATION CONTACT:** Jolie Harrison, Office of Protected Resources, NMFS, (301) 713-2289, ext. 166.

#### SUPPLEMENTARY INFORMATION:

##### Availability of Supporting Information

Extensive Supplementary Information was provided in the proposed rule for this activity, which was published in the **Federal Register** on October 20, 2009 (74 FR 53796). This information will not be reprinted here in its entirety; rather, all sections from the proposed rule will be represented herein and will contain either a summary of the material presented in the proposed rule or a note referencing the page(s) in the proposed rule where the information may be found. Any information that has changed since the proposed rule was published will be addressed herein. Additionally, this final rule responds to the comments received during the public comment period.

##### Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (Secretary) to allow, upon request, the incidental, but not intentional taking of marine

mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) during periods of not more than five consecutive years each if certain findings are made and regulations are issued or, if the taking is limited to harassment, notice of a proposed authorization is provided to the public for review.

Authorization shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses, and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such taking are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as:

An impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.

The National Defense Authorization Act of 2004 (NDAA) (Pub. L. 108-136) modified the MMPA by removing the "small numbers" and "specified geographical region" limitations and amended the definition of "harassment" as it applies to a "military readiness activity" to read as follows (Section 3(18)(B) of the MMPA):

(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

In August 2008, NMFS received an application from the Navy requesting authorization for the take of individuals of 26 species of marine mammals incidental to upcoming Department of Defense (including Navy, USMC, and USAF) training and research, development, testing, and evaluation (RDT&E) activities to be conducted from June 2010 through June 2015 within the MIRC study area, which encompasses a 501,873-square-nautical mile (nm<sup>2</sup>) area around the islands, including Guam, Tinian, Saipan, Rota, Farallon de Medinilla, and also includes ocean areas in both the Pacific Ocean and the

Philippine Sea. These training activities are military readiness activities under the provisions of the NDAA. The Navy states, and NMFS concurs, that these military readiness activities may incidentally take marine mammals present within the MIRC study area by exposing them to sound from mid-frequency or high frequency active sonar (MFAS/HFAS) or underwater detonations. After submitting supplemental applications, the Navy requested authorization to take individuals of 26 species of marine mammals by Level B Harassment, 2 individuals of 2 species by Level A Harassment annually, and 10 individual beaked whales by mortality over the course of the 5-year regulations. The Navy's model, which did not factor in any potential benefits of mitigation measures, predicted that 2 individual marine mammals would be exposed to levels of sound or pressure that would result in injury; thus, NMFS is authorizing the take, by Level A Harassment of 2 individuals per year. However, NMFS and the Navy have determined that injury can most likely be avoided through the implementation of the Navy's proposed mitigation measures. Further, although it does not anticipate that it will occur, the Navy requested, and NMFS is authorizing the take, by injury or mortality, up to 10 beaked whales over the course of the 5-year regulations.

### Background of Request

The proposed rule contains a description of the Navy's mission, their responsibilities pursuant to Title 10 of the United States Code, and the specific purpose and need for the activities for which they requested incidental take authorization. The description contained in the proposed rule has not changed (74 FR 53795, pages 53796–53797).

### Overview of the MIRC Study Area

The proposed rule contains a description of the MIRC study area. It also includes a discussion of the Marianas Trench Marine National Monument (MTMNM), where the MTMNM overlaps with the MIRC study area, and protected resources within the MTMNM. These descriptions have not changed (74 FR 53795, pages 53797–53798).

### Description of Specified Activities

The proposed rule contains a complete description of the Navy's

specified activities that are covered by these final regulations, and for which the associated incidental take of marine mammals will be authorized in the related LOAs. The proposed rule describes the nature and number of anti-submarine warfare (ASW) training exercises and RDT&E activities, involving both mid- and high-frequency active sonar (MFAS and HFAS), explosive detonations, and vessel movement. It also describes the sound sources and explosive types used (74 FR 53795, pages 53798–53807). It also briefly describes the limited use of low frequency active (LFA) sonar in conjunction with the MIRC training, which has also been analyzed in a separate MMPA rule and EIS. The narrative description of the action contained in the proposed rule has not changed, with the exception of a few clarifications, which have been indicated in *italics* in tables 1 and 2, which list the types of sonar sources and the estimated yearly use and summarize the characteristics of the exercise types. Of note, the Navy indicated in the proposed rule that they will conduct one multi-strike group type exercise in the summer each calendar year. This fact remains true, however, if NMFS' annual LOAs for this action are issued in July (as currently planned), it is possible that 2 multi-strike group exercises could occur within the coverage period of one LOA (for example if a multi-strike group exercise occurred in early August one year and late June the next). The Navy would still not conduct more than 5 of these multi-strike group exercises within the life of the 5-year regulations, however, and this clerical issue does not impact our analyses of the effects on marine mammals.

The Navy has carefully characterized the training activities planned for the MIRC over the 5 years covered by these regulations; however, evolving real-world needs necessitate flexibility in annual activities. NMFS has attempted to bound this flexibility with updated language in the regulatory text (see § 218.100(d) and § 218.102(c)). This language allows for flexibility in activities, as long as the resulting impacts to marine mammals do not vary beyond those contemplated in the effects analysis, which has been also been updated accordingly in this document.

**BILLING CODE 3510-22-P**

Sonar Sources	Freq- uency (kHz)	Source Level (dB) re 1 µPa @ 1 m	Emission Spacing (m)*	Vertical Direct- ivity	Horizon- tal Direct- ivity	Associated Platform	System Description	Annual Amount	Unit
AN/SQS-53	3.5	235	154	Omni	240° forward- looking	Cruiser (CG) and Destroyer (DDG) hull mounted sonar	ASW search, detection, & localization (approximately 120 pings per hour)	1989-summer / 184- winter**	Hours
AN/SQS-56	7.5	225	129	13°	30°	Frigate (FFG) hull-mounted sonar	ASW search, detection, & localization (approximately 120 pings per hour)	109-summer/ 32-winter	Hours
AN/AQS-22	Classified (MF)	Classified				Helicopter Dipping sonar	ASW search, detection, & localization (10 pings/dip, 30 seconds between pings), also used to represent AN/AQS-13	440-summer/ 152-winter	Dips
AN/BQQ-10	Classified (MF)	Classified				Submarine hull-mounted sonar	ASW search and attack (approximately <i>two pings per hour</i> when in use)	6-summer/ 6-winter	Hours
AN/SSQ-62 DICASS (sonobuoy, tonal)	8	201	450	Omni	Omni	Helicopter and maritime patrol aircraft (P3 and P8 MPA) dropped sonobuoy	Remotely commanded expendable sonar- equipped buoy (approximately 12 pings per use, 30 secs between pings, 8 buoys per hour)	1568-summer / 86-winter	Buoys
MK-48 torpedo sonar	Classified (>10)	Classified	144	Omni	Omni	Submarine (SSN) launched torpedo (used during TORPEX)	Recoverable and non-explosive exercise torpedo; sonar is active approximately 15 min per torpedo run	20-summer/ 20-winter	Torpedoes
AN/SSQ-110A (IEER)	Classified (impulsive, broadband)	Classified	n/a	Omni	Omni	MPA deployed	ASW system consists of explosive acoustic source buoy (contains two 4.1 lb charges) and expendable passive receiver sonobuoy	102-summer/ 4-winter	Buoys
AN/SSQ-125 (AIEER)	1	Classified	n/a	Omni	Omni	MPA deployed	ASW system consists of active sonobuoy and expendable passive receiver sonobuoy	102-summer/ 4-winter	Buoys
MK-34 Range Pingers	12.9 or 37 (rare)	194	Ping dur. 15 msec / ping every 2 sec	90°		Ships, submarines, weapons, targets, and UUV (8-10 knot platform)	4 pingers max used during a PUTR TORPEX or TRACKEX exercise. Surface ship pingers are at 7 m depth / target or sub pingers at 100 m depth, 8 hours total event duration each during PUTR operational days.	280	Hours
PUTR Transponder	8.8 or 40	186 or 190	n/a		180 upward looking	Portable Undersea Tracking Range, deployed on ocean floor	<i>System is a 7 transponder field used in an 8hr event. When a pinger heard, transponder produces transponder report. Pinger rate is variable depends: # pingers, ping rates, platform speed, depth and orientation. Each report lasts 1.5 ms.</i>	280	Hours

**Table 1.** Active sonar sources in the MIRC and parameters used for modeling them. Many of the actual parameters and capabilities of these sonars are classified. Parameters used for modeling were derived to be as representative as possible. When, however, there were a wide

range of potential modeling values, a nominal parameter likely to result in the most impact was used so that the model would err towards overestimation.

\*Spacing means distance between pings at the nominal speed

CG – Guided Missile Cruiser; DDG – Guided Missile Destroyer; DICASS – Directional Command-Activated Sonobuoy System; FFG – Fast Frigate;

HF – High-Frequency; MF – Mid-Frequency.

\*\* As modeled, summer is mid-May through mid-November, winter is mid-November through mid-May

EXERCISE TYPE	SINKEX	EER/IEER	DEMO	BOMBEX [A-S]	GUNEX [S-S]	MISSILEX [A-S]	ASW TRACKEX /TORPEX/ OTHER	(Major Ex.) Joint Expendit.	(Major Ex.) MAGTF	MULTI-STRIKE GROUP
Sources/Weapons/Rounds	See SINKEX Ordinance Table	SSQ-110A (4.1 pound [lb] NEW)	10 lb NEW	MK 82/83/84 Series General Purpose Bombs - GBU 38/32/31 JDAM	5 in gun  76 mm gun	HELLFIRE	AN/SQS-53 MFA Sonar AN/SQS-56 MFA Sonar  BQQ-10 Submarine Sonar AN/SSQ-62 DICASS Sonobuoy AN/SSQ-125 AEER Sonobuoy AN/ASQ-22Track Mode (Dipping Sonar) MK-48 Torpedo HFA Sonar PUTR: transponders and MK-84 tracking pinger	AN/SQS-53 MFA Sonar AN/SQS-56 MFA Sonar  BQQ-10 Submarine Sonar AN/SSQ-62 DICASS Sonobuoy AN/SSQ-125 AEER Sonobuoy AN/ASQ-22Track Mode (Dipping Sonar) MK-48 Torpedo HFA Sonar	AN/SQS-53 MFA Sonar AN/SQS-56 MFA Sonar  BQQ-10 Submarine Sonar AN/SSQ-62 DICASS Sonobuoy AN/SSQ-125 AEER Sonobuoy AN/ASQ-22 Track Mode (Dipping Sonar) MK-48 Torpedo HFA Sonar	
Explosion in or on water	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Length of Exercise	4-8 hrs over 1-2 days	6 hours	Variable	Variable	1 to 2 hours	2 – 4 hours	8 hours	10 days	10 days	10 days
Detonations/shots/rounds/sonobuoys or torpedo deployments, or helicopter sonar dips per exercise or year	See SINKEX Ordinance Table	106 deploy/yr (non SINKEX)	50/yr (10 lb)	Delivery of up to (1) bomb/quarter; up to 4 bombs/year	5" - 320 Rounds 76mm - 120 Rounds	2 HELFIRE Missiles	SQS-53 (Search) = 368 hrs/yr SQS-53 (Kingfisher) = 0 hrs/yr SQS-56 = 64 hrs/yr BQQ-10 = 12 hrs/yr SSQ-62 DICASS = 172 Sonobuoys/yr AN/SSQ-125 AEER = 8 ASQ-22 Track Mode = 304 Dips/yr MK-48 Torpedo = 40 torpedoes/yr PUTR: 8 hours/exercise ASW TRACKEX: 66 ASW TORPEX: 17 PUTR: 35	Joint Expeditionary and MAGTF exercises are separate events supported by amphibious ships and surface and subsurface combatants with Marine Corps expeditionary elements. These exercises may occur year around, but will not affect the total estimated projected sonar use in table 1 (including winter/summer ratio)	SQS-53 (Search) = 1,705 hrs/exercise SQS-53 Kingfisher = 0hrs/exercise SQS-56 = 77 hrs/exercise BQQ-10 = 0 hrs/exercise SSQ-62 DICASS = 1,282 Sonobuoys/exercise AN/SSQ-125 AEER = 98 ASQ-22Track Mode = 288 Dips/exercise MK-48 Torpedo = 0/exercise	
Number Exercises per Year	2	N/A	N/A	4	5" - 8/yr 76mm-4/yr	2	ASW TRACKEX: 66 ASW TORPEX: 17 PUTR: 35	1	4	1*
Area Used	W-517; maritime areas > 50 nm from land, ATCAAs	General	Piti Floating Mine Neutralization Site, Outer Apra Harbor Deep Agat Bay Mine Neutralization	W-517, maritime areas > 12 nm from land	W-517, maritime areas > 12nm from land, > 3 nm for small arms	W-517 > 12 nm from land, > 12 nm from land, > 3 nm for small arms	Maritime areas > 3 nm from land, W-517	General MIRC	General MIRC	General MIRC
Months of Yr	Year Round	Year	Year Round	Year Round	Year Round	Year Round	Year round	Year Round	Year Round	Summer

Table 2. Summary of exercises in MIRC Study Area

\* Note that one multi-strike group exercise may occur once per summer in every calendar year. Due to potential summer issuance of LOAs, though, two multi-strike group exercises could occur under the coverage of one LOA, though no more than 5 would occur over the course of the rule.

### Description of Marine Mammals in the Area of the Specified Activities

Thirty-two marine mammal species or populations/stocks have confirmed or possible occurrence within the MIRC,

including seven species of baleen whales (mysticetes), 22 species of toothed whales (odontocetes), two species of seals and sea lions (pinnipeds), and the dugong (sirenian).

Table 3 summarizes their abundance, Endangered Species Act (ESA) status, population trends, and occurrence in the area. Eight of the species are ESA-listed and considered depleted under

the MMPA: Blue whale; fin whale; humpback whale; sei whale; sperm whale; North Pacific right whale; Hawaiian monk seal; and dugong. The dugong is managed by the U.S. Fish and Wildlife Service and will not be addressed further here. The proposed rule contains a discussion of five species that are not considered further

in the analysis because of their rarity in the MIRC (North Pacific right whale, Hawaiian monk seal, Hubb's beaked whale, Indo-Pacific bottlenose dolphin, and northern elephant seal). The proposed rule also contains a discussion of important spinner dolphin resting areas. The proposed rule also includes a discussion of marine mammal

vocalizations. Last, the proposed rule includes a discussion of the methods used to estimate marine mammal density in the MIRC. The Description of Marine Mammals in the Area of the Specified Activities section has not changed from what was in the proposed rule (74 FR 53795, pages 53807–53813).

Common Name	Species Name	IUCN/ ES A/	Occurrence		Density
		MMPA Status	Summer	Winter	
			July-Nov	Dec-June	
Mysticetes					
Blue whale	<i>Balaenoptera musculus</i>	E, D, S	Rare	Rare	0.0001***
Fin whale	<i>Balaenoptera physalus</i>	E, D, S	Rare	Regular	0.0003***
Sei whale	<i>Balaenoptera borealis</i>	E, D, S	Rare	Regular	.00029*
Bryde's whale	<i>Balaenoptera edeni</i>		Regular	Regular	.00041*
Minke whale	<i>Balaenoptera acutorostrata</i>		Rare	Regular	.0003***
Humpback whale	<i>Megaptera novaeangliae</i>	E, D, S	Rare	Regular	.0069***
North Pacific right whale	<i>Eubalaena japonica</i>	E, D, S	Rare	Rare	n/a
Odontocetes					
Sperm whale	<i>Physeter macrocephalus</i>	E, D, S	Regular	Regular	.00123*
Blainville's beaked whale	<i>Mesoplodon densirostris</i>		Regular	Regular	.00117**
Bottlenose dolphin	<i>Tursiops truncatus</i>		Regular	Regular	.00021*
Cuvier's beaked whale	<i>Ziphius cavirostris</i>		Regular	Regular	.00621**
Dwarf sperm whale	<i>Kogia sima</i>		Regular	Regular	.00714**
False killer whale	<i>Pseudorca crassidens</i>		Regular	Regular	.00111*
Fraser's dolphin	<i>Lagenodelphis hosei</i>		Regular	Regular	.00417**
Ginkgo-tooth beaked whale	<i>Mesoplodon ginkgodens</i>		Rare	Rare	.0005***
Hubbs beaked whale	<i>Mesoplodon carlhubbsi</i>		Extra-limital	Extra-limital	n/a
Indo-Pacific bottlenose dolphin	<i>Tursiops aduncus</i>		Extra-limital	Extra-limital	n/a
Killer whale offshore	<i>Orcinus orca</i>		Regular	Regular	.00014**
Longman's beaked whale	<i>Indopacetus pacificus</i>		Regular	Rare	.00041**
Melon-headed whale	<i>Peponocephala electra</i>		Regular	Regular	.00428*
Pantropical spotted dolphin	<i>Stenella attenuata</i>		Regular	Regular	.0226*
Pygmy killer whale	<i>Feresa attenuata</i>		Regular	Regular	.00014*
Pygmy sperm whale	<i>Kogia breviceps</i>		Regular	Regular	.00291**
Risso's dolphin	<i>Grampus griseus</i>		Regular	Regular	.00097**
Rough-toothed dolphin	<i>Steno bredanensis</i>		Regular	Regular	.00029*
Short-beaked common dolphin	<i>Delphinus delphis</i>		Rare	Rare	.0021***
Short-finned pilot whale	<i>Globicephala macrorhynchus</i>		Regular	Regular	.00159*
Spinner dolphin	<i>Stenella longirostris</i>		Regular	Regular	.00314*
Striped dolphin	<i>Stenella coeruleoalba</i>		Regular	Regular	.00616*
Pinniped					
Northern elephant seal	<i>Mirounga angustirostris</i>		Extra-limital	Extra-limital	n/a
Hawaiian Monk Seal	<i>Monachus schauinslandi</i>	T, D, S	Extra-limital	Extra-limital	n/a
Sirenia					
Dugong	<i>Dugong dugon</i>	E, V	Extra-limital	Extra-limital	n/a

Table 3. Marine Mammals of known or possible occurrence in MIRC. Table includes status, occurrence, and density.

\* Density derived from 2007 Mariana Islands Survey (MISTCS Report - DoN 2007)

\*\*Density derived from Hawaii Offshore Report (Barlow 2006)

\*\*\* Density derived from Eastern Tropical Pacific (Ferguson and Barlow 2001, 2003)

E = Endangered under the ESA; T = Threatened under the ESA; D = Depleted under the MMPA; S = Strategic Stock under the MMPA;

V = Vulnerable under the International Union for the Conservation of Nature (ICUN) Red List (Reeves et al. 2003)

Extralimital: Species that has occurred rarely in the past, may be only one or several documented sightings or may occur based on general distribution patterns.

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### Brief Background on Sound

The proposed rule contains a section that provides a brief background on the principles of sound that are frequently referred to in this rulemaking (74 FR 53795, pages 53813–53814). This section also includes a discussion of the functional hearing ranges of the different groups of marine mammals (by frequency) as well as a discussion of the two main sound metrics used in NMFS analysis (sound pressure level (SPL) and sound energy level (SEL)). The information contained in the proposed rule has not changed.

### Potential Effects of Specified Activities on Marine Mammals

With respect to the MMPA, NMFS' effects assessment serves four primary purposes: (1) To prescribe the permissible methods of taking (*i.e.*, Level B Harassment (behavioral harassment), Level A Harassment (injury), or mortality, including an identification of the number and types of take that could occur by Level A or B harassment or mortality) and to prescribe other means of effecting the least practicable adverse impact on such species or stock and its habitat (*i.e.*, mitigation); (2) to determine whether the specified activity will have a negligible impact on the affected species or stocks of marine mammals (based on the likelihood that the activity will adversely affect the species or stock through effects on annual rates of recruitment or survival); (3) to determine whether the specified activity will have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (however, there are no subsistence communities that would be affected in the MIRC, so this determination is inapplicable for this rulemaking); and (4) to prescribe requirements pertaining to monitoring and reporting.

In the Potential Effects of Specified Activities on Marine Mammals section of the proposed rule NMFS included a qualitative discussion of the different ways that MFAS/HFAS and underwater explosive detonations may potentially affect marine mammals (some of which NMFS would not classify as harassment), as well as a discussion of the potential effects of vessel movement and collision. It also briefly describes the anticipated impacts of limited use of low frequency active (LFA) sonar in conjunction with the MIRC training, which has also been analyzed in a separate MMPA rule and EIS. Marine mammals may experience direct physiological effects (such as threshold

shift), acoustic masking, impaired communications, stress responses, and behavioral disturbance. This section also included a discussion of some of the suggested explanations for the association between the use of MFAS and marine mammal strandings (such as behaviorally-mediated bubble growth) that have been observed a limited number of times in certain circumstances (the specific events are also described). The information contained in Potential Effects of Specified Activities on Marine Mammals section from the proposed rule has not changed. *See* 74 FR 53795, pages 53814–53831.

Later, in the Estimated Take of Marine Mammals Section of this final rule, NMFS relates and quantifies the potential effects to marine mammals from MFAS/HFAS and underwater detonation of explosives discussed here to the MMPA definition of take, which includes Level A and Level B Harassment, as well as mortality.

### Mitigation

In order to issue an incidental take authorization (ITA) 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.” The NDAA of 2004 amended the MMPA as it relates to military-readiness activities and the ITA 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.” The training activities described in the MIRC application are considered military readiness activities.

NMFS reviewed the proposed MIRC activities and the proposed MIRC mitigation measures as described in the Navy's LOA application to determine if they would result in the least practicable adverse effect on marine mammals, which includes 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 effectiveness of the “military-readiness activity.” NMFS determined that further discussion was necessary regarding the potential relationship between the operation of MFAS/HFAS and marine mammal strandings.

NMFS worked with the Navy to identify potential additional practicable and effective mitigation measures, which included 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 and the Navy developed a Stranding Response Plan to address the concern listed above.

NMFS' proposed rule includes a list of the Navy's proposed mitigation measures (74 FR 53795, pages 53831–53836), which have been included in the regulatory text of this document. Some of the measures have been refined for increased clarity, but without a change in substance. Additionally, in the interest of further minimizing the likelihood of vessel collision, the following mitigation measure has been added since the publication of the proposed rule:

Naval vessels will maneuver to keep at least 1,500 ft (500 yds) away from any observed whale in the vessel's path and avoid approaching whales head-on. These requirements do not apply if a vessel's safety is threatened, such as when change of course will create an imminent and serious threat to a person, vessel, or aircraft, and to the extent vessels are restricted in their ability to maneuver. Restricted maneuverability includes, but is not limited to, situations when vessels are engaged in dredging, submerged activities, launching and recovering aircraft or landing craft, minesweeping activities, replenishment while underway and towing activities that severely restrict a vessel's ability to deviate course. Vessels will take reasonable steps to alert other vessels in the vicinity of the whale. Given rapid swimming speeds and maneuverability of many dolphin species, naval vessels would maintain normal course and speed on sighting dolphins unless some condition indicated a need for the vessel to maneuver.

Based on our evaluation of the proposed measures and other measures considered by NMFS or recommended by the public, NMFS has determined that the Navy's proposed mitigation measures, including the Adaptive Management component (see Adaptive Management below), are adequate means of effecting the least practicable adverse impacts on marine mammals 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 impact on the effectiveness of the military readiness activity. The proposed rule contains further support for this finding in the

Mitigation Conclusion section (74 FR 53795, pages 53836–53837). During the public comment period, a few mitigation measures not previously considered were recommended and NMFS' analysis of these measures is included in the Response to Public Comment section.

### Research

The Navy provides a significant amount of funding and support to marine research. In the past five years the agency funded over \$100 million (\$26 million in FY08 alone) to universities, research institutions, federal laboratories, private companies, and independent researchers around the world to study marine mammals. The U.S. Navy sponsors 70 percent of all U.S. research concerning the effects of human-generated sound on marine mammals and 50 percent of such research conducted worldwide. Major topics of Navy-supported research include the following:

- Better understanding of marine species distribution and important habitat areas,
- Developing methods to detect and monitor marine species before and during training,
- Understanding the effects of sound on marine mammals, sea turtles, fish, and birds, and
- Developing tools to model and estimate potential effects of sound.

This research is directly applicable to Fleet training activities, particularly with respect to the investigations of the potential effects of underwater noise sources on marine mammals and other protected species. Proposed training activities employ active sonar and underwater explosives, which introduce sound into the marine environment.

The Marine Life Sciences Division of the Office of Naval Research currently coordinates six programs that examine the marine environment and are devoted solely to studying the effects of noise and/or the implementation of technology tools that will assist the Navy in studying and tracking marine mammals. The six programs are as follows:

- Environmental Consequences of Underwater Sound,
- Non-Auditory Biological Effects of Sound on Marine Mammals,
- Effects of Sound on the Marine Environment,
- Sensors and Models for Marine Environmental Monitoring,
- Effects of Sound on Hearing of Marine Animals, and
- Passive Acoustic Detection, Classification, and Tracking of Marine Mammals.

The Navy has also developed the technical reports referenced within this document, which include the Marine Resource Assessments and the Mariana Islands Sea Turtle and Cetacean Survey density report. Furthermore, research cruises by NMFS and by academic institutions have received funding from the U.S. Navy.

The Navy has sponsored several workshops to evaluate the current state of knowledge and potential for future acoustic monitoring of marine mammals. The workshops brought together acoustic experts and marine biologists from the Navy and other research organizations to present data and information on current acoustic monitoring research efforts and to evaluate the potential for incorporating similar technology and methods on instrumented ranges. However, acoustic detection, identification, localization, and tracking of individual animals still requires a significant amount of research effort to be considered a reliable method for marine mammal monitoring. The Navy supports research efforts on acoustic monitoring and will continue to investigate the feasibility of passive acoustics as a potential mitigation and monitoring tool.

Overall, the Navy will continue to request funding for ongoing marine mammal research, and is implementing long term monitoring/studies of marine mammals on various established ranges and operating areas. The Navy will continue to request funding for research and contribute to university/external research to improve the state of the science regarding marine species biology and acoustic effects. These efforts include mitigation and monitoring programs; data sharing with NMFS and via the literature for research and development efforts; and future research as described previously.

### *Memorandum of Agreement (MOA) for Navy Assistance With Stranding Investigations*

The Navy and NMFS are currently developing a nationwide Memorandum of Understanding (MOU) (or other mechanism consistent with Federal fiscal law requirements and all other applicable laws), that will establish a framework whereby the Navy can assist NMFS with stranding investigations in certain circumstances.

### *Long-Term Prospective Study*

Apart from this final rule, NMFS, with input and assistance from the Navy and several other agencies and entities, will perform a longitudinal observational study of marine mammal strandings to systematically observe for

and record the types of pathologies and diseases and investigate the relationship with potential causal factors (e.g., active sonar, seismic, weather). The study will not be a true "cohort" study, because NMFS will be unable to quantify or estimate specific active sonar or other sound exposures for individual animals that strand. However, a cross-sectional or correlational analyses, a method of descriptive rather than analytical epidemiology, can be conducted to compare population characteristics, e.g., frequency of strandings and types of specific pathologies between general periods of various anthropogenic activities and non-activities within a prescribed geographic space. In the long-term study, NMFS will more fully and consistently collect and analyze data on the demographics of strandings in specific locations and consider anthropogenic activities and physical, chemical, and biological environmental parameters. This approach in conjunction with true cohort studies (tagging animals, measuring received sounds, and evaluating behavior or injuries) in the presence of activities and non-activities will provide critical information needed to further define the impacts of major training exercises (MTEs) and other anthropogenic and non-anthropogenic stressors. In coordination with the Navy and other Federal and non-Federal partners, the comparative study will be designed and conducted for specific sites during intervals of the presence of anthropogenic activities such as active sonar transmission or other sound exposures and absence to evaluate demographics of morbidity and mortality, lesions found, and cause of death or stranding. Additional data that will be collected and analyzed in an effort to control potential confounding factors include factors such as average sea temperature (or just season), meteorological or other environmental variables (e.g., seismic activity), fishing activities, etc. All efforts will be made to include appropriate controls (i.e., no active sonar or seismic sounds); environmental variables may complicate the interpretation of "control" measurements. The Navy and NMFS along with other partners are evaluating mechanisms for funding this study.

### Monitoring

In order to issue an ITA for an activity, Section 101(a)(5)(A) of the MMPA states that NMFS must set forth "requirements pertaining to the monitoring and reporting of such taking." The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for LOAs must



include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present.

*Proposed Monitoring Plan for the MIRC*

The Navy's final Monitoring Plan for the MIRC may be viewed at NMFS' Web site: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>. Based on input received during the public comment period, the Navy has refined the goals of the monitoring plan to include more effort put towards obtaining better density and distribution information for the marine mammals present in the MIRC study area. Primarily, the Navy plans to conduct

summer and winter visual surveys using a small boat and/or plane with Marine Mammal Observers (MMOs) around Guam, Tinian, and Saipan in cooperation with NMFS' Pacific Islands Fisheries Science Center or Guam's Division of Aquatic Wildlife and Resources (DAWR). Visual surveys would integrate methods such as photographic ID to provide additional data to be used for distribution and abundance estimates.

The research elements in the modified plan include:

—Passive acoustic monitoring (PAM) including both the deployment of 4 new PAM devices as well as the analysis of an existing dataset that was collected during the 2007 MISTCS survey.

—Visual monitoring utilizing marine mammal observers (MMOs) in small boats and/or planes.

Table 5 contains a general summary of the Monitoring effort planned for each year and has been refined since the draft Monitoring Plan. The amount of each type of monitoring may vary from the summary table or Monitoring Plan based on annual discussions between NMFS and the Navy regarding previous monitoring results and effectiveness and in accordance with the Adaptive Management component of this rule, but, the overall effort over the 5-year period will remain approximately equal to that laid out in the table and monitoring plan.

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	FY10			FY11			FY12			FY13			FY14			FY15		
	ADAPTIVE MANAGEMENT REVIEW (AMR)			AMR			AMR			AMR			AMR			AMR		
<b>Passive Acoustic Monitoring</b>				Deploy four passive acoustic monitoring devices around the Mariana Islands that are capable of gathering data throughout the year.			Continue recording from PAM devices and begin data analysis.			Continue recording from PAM devices and conduct data analysis.			Continue recording from PAM devices and conduct data analysis.			Continue recording from PAM devices and conduct data analysis.		
<b>Acoustic Data Analysis</b>				Analyze existing acoustic data set which was collected during Navy's 2007 MISTCS survey.														
<b>Visual Surveys</b>	- Small boat surveys around Guam, Tinian and Saipan.  - Visual observations using marine species observers aboard NMFS/PIFSC oceanographic survey in the Region, as well as during transits between Hawaii and Guam.			Conduct summer and winter visual surveys using a small boat and/or airplane around Guam, Tinian, Rota and Saipan in cooperation with NMFS and/or DAWR. Visual surveys would integrate methods such as photo ID that provide data that can be used for distribution and abundance. 45 days total.			Conduct summer and winter visual surveys using a small boat and/or airplane around Guam, Tinian, Rota and Saipan in cooperation with NMFS and/or DAWR. Visual surveys would integrate methods such as photo ID that provide data that can be used for distribution and abundance. 45 days total.			Conduct summer and winter visual surveys using a small boat and/or airplane around Guam, Tinian, Rota and Saipan in cooperation with NMFS and/or DAWR. Visual surveys would integrate methods such as photo ID that provide data that can be used for distribution and abundance. 45 days total.			Conduct summer and winter visual surveys using a small boat and/or airplane around Guam, Tinian, Rota and Saipan in cooperation with NMFS and/or DAWR. Visual surveys would integrate methods such as photo ID that provide data that can be used for distribution and abundance. 45 days total.			Conduct summer and winter visual surveys using a small boat and/or airplane around Guam, Tinian, Rota and Saipan in cooperation with NMFS and/or DAWR. Visual surveys would integrate methods such as photo ID that provide data that can be used for distribution and abundance. 45 days total.		

Table 4. Planned monitoring effort in MIRC

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In addition to the Monitoring Plan for MIRC, the Navy has completed an Integrated Comprehensive Monitoring Program (ICMP) Plan.

The ICMP will be used both as: (1) A planning tool to focus Navy monitoring

priorities (pursuant to ESA/MMPA requirements) across Navy Range Complexes and Exercises; and (2) an adaptive management tool, through the consolidation and analysis of the Navy's monitoring and watchstander data, as well as new information from other

Navy programs (e.g., R&D), and other appropriate newly published information. The Navy finalized a 2009 ICMP Plan outlining the program on December 22, 2009, as required by the 2009 LOAs for the Hawaii Range Complex, the Southern California

Range, and Atlantic Fleet Active Sonar Training. The ICMP may be viewed at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>.

The ICMP is a developing program that will be in place for the length of this rule, and beyond, and NMFS and Navy will evaluate it annually to determine if it needs to be updated in order to keep pace with advances in science and technology and the collection of new data. In the 2009 ICMP Plan, the Navy outlines three areas of targeted development for 2010, including:

- Identifying more specific monitoring sub-goals under the major goals that have been identified.
- Characterizing Navy Range Complexes and Study Areas within the context of the prioritization guidelines described here.
- Continuing to Develop Data Management, Organization and Access Procedures.

The Navy shall comply with the 2009 ICMP Plan and continue to improve the program in consultation with NMFS. Changes and improvements to the program made during 2010 (as prescribed in the 2009 ICMP and otherwise deemed appropriate by the Navy and NMFS) will be described in an updated 2010 ICMP and submitted to NMFS by October 31, 2010, for review. An updated 2010 ICMP will be finalized by December 31, 2010.

#### *Monitoring Workshop*

The Navy, with guidance and support from NMFS, will convene a Monitoring Workshop, including marine mammal and acoustic experts as well as other interested parties, in 2011. The Monitoring Workshop participants will review the monitoring results from previous monitoring pursuant to the MIRC rule as well as monitoring results from other Navy rules and LOAs (*e.g.*, the Southern California Range Complex (SOCAL), Hawaii Range Complex (HRC), etc.). The Monitoring Workshop participants will provide their individual recommendations to the Navy and NMFS on the monitoring plan(s) after also considering the current science (including Navy research and development) and working within the framework of available resources and feasibility of implementation. NMFS and the Navy will then analyze the input from the Monitoring Workshop participants and determine the best way forward from a national perspective. Subsequent to the Monitoring Workshop, modifications would be applied to monitoring plans as appropriate.

#### **Adaptive Management**

Our understanding of the effects of MFAS/HFAS and explosives on marine mammals is still in its relative infancy, and yet the science in this field is evolving fairly quickly. These circumstances make the inclusion of an adaptive management component both valuable and necessary within the context of 5-year regulations for activities that have been associated with marine mammal mortality in certain circumstances and locations (though not the MIRC in the Navy's over 60 years of use of the area for testing and training). NMFS has included an adaptive management component in the regulations, which will allow NMFS to consider new data from different sources to determine (in coordination with the Navy) on an annual basis if mitigation or monitoring measures should be modified or added (or deleted) if new data suggest that such modifications are appropriate (or are not appropriate) for subsequent annual LOAs.

Following are some of the possible sources of new data:

- Results from the Navy's monitoring from the previous year (either from MIRC or other locations).
- Findings of the Workshop that the Navy will convene in 2011 to analyze monitoring results to date, review current science, and recommend modifications, as appropriate to the monitoring protocols to increase monitoring effectiveness.
- Compiled results of Navy funded research and development (R&D) studies (presented pursuant to the ICMP, which is discussed elsewhere in this document).
- Results from specific stranding investigations (either from MIRC or other locations, and involving coincident MFAS/HFAS of explosives training or not involving coincident use).
- Results from the Long Term Prospective Study described above.
- Results from general marine mammal and sound research (funded by the Navy (described above) or otherwise).
- Any information which reveals that marine mammals may have been taken in a manner, extent or number not anticipated by these regulations or subsequent Letters of Authorization.

Mitigation measures could be modified or added (or deleted) if new data suggest that such measures would have (or do not have) a reasonable likelihood of accomplishing the goals of mitigation laid out in this final rule and if the measures are practicable. NMFS

would also coordinate with the Navy to modify or add to (or delete) the existing monitoring requirements if the new data suggest that the addition of (or deletion of) a particular measure would more effectively accomplish the goals of monitoring laid out in this final rule. The reporting requirements associated with this final rule are designed to provide NMFS with monitoring data from the previous year to allow NMFS to consider the data and issue annual LOAs. NMFS and the Navy will meet annually, prior to LOA issuance, to discuss the monitoring reports, Navy R&D developments, and current science and whether mitigation or monitoring modifications are appropriate.

#### **Reporting**

In order to issue an ITA for an activity, Section 101(a)(5)(A) of the MMPA states that NMFS must set forth "requirements pertaining to the monitoring and reporting of such taking." Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring. The proposed rule contains the reporting requirements for the Navy (74 FR 53795, pages 53843–53845), and these requirements remain unchanged with the following exception. The requirements as written in the proposed rule include specific due dates for each of the reports. NMFS and the Navy are coordinating a workload plan to determine the best times during every year to submit all of the reports that Navy is responsible for under multiple final rules for multiple Range Complexes and training exercises. Although the reports described will always be submitted every year at a time that allows for adequate analysis by NMFS prior to the issuance of the subsequent LOA, we want to allow flexibility to change those dates yearly. Therefore, the regulatory text below will not specify the specific dates that the reports are due, but each annual LOA will.

#### **Comments and Responses**

On October 20, 2009 (74 FR 53795), NMFS published a proposed rule in response to the Navy's request to take marine mammals incidental to military readiness training, maintenance, and RDT&E activities in the MIRC and requested comments, information and suggestions concerning the request. During the 30-day public comment period, NMFS received comments from 4 private individuals, the Marine Mammal Commission (MMC) and the Natural Resources Defense Council (NRDC). NMFS has responded to those comments below.

*Comment 1:* The MMC recommended that the MIRC final rule and any Letter of Authorization issued under that rule include all marine mammal species that may be taken as a result of the proposed activities. Specifically, the MMC suggested that NMFS and/or the Navy should consult with the U.S. Fish and Wildlife Service (USFWS) to determine if authorization also is needed to take dugongs, which, according to the proposed rule, could occur within the Mariana Islands Range Complex.

*Response:* The Navy has consulted on the MIRC action under Section 7 of the ESA with the USFWS, which has jurisdiction over dugongs. The Navy and the USFWS coordinated regarding the list of species, and dugongs were not included. Dugongs have not been observed in the action area since 1985. Palau, over 1000 miles away, is the closest location that they have been seen recently.

*Comment 2:* The MMC notes that the Navy, in its applications and related documents, generally has done a commendable job of reviewing the existing literature on marine mammal density, distribution, behavior, and habitat use for the areas under consideration, but expressed concern that the manner in which the Navy is using that information to form conclusions about density, distribution, behavior, and habitat use has not been subjected to the normal scientific review process. The MMC recommends that NMFS require the Navy to conduct an external peer review of its marine mammal density estimates, the data upon which those estimates are based, and the manner in which those data are being used.

*Response:* Both NMFS and the Navy use peer-reviewed science whenever it is available and applicable, and NMFS has encouraged the Navy to get the models they use and data they gather peer-reviewed. However, neither the NEPA, the MMPA, nor the ESA require that data or calculations used in the analyses pursuant to these statutes be peer-reviewed prior to making a decision. Rather, NMFS and the Navy are required to use the best available science to inform our analyses.

The Navy proactively funded a baseline survey for the Mariana Islands in 2007 (the "Mariana Islands Sea Turtle and Cetacean Survey" or MISTCS) to gather data on the distribution and density of marine mammals and sea turtles. This survey is the first and only systematic survey to be conducted in the region and not only generated density estimates but added sei whales to the confirmed species in the area. Because it is the only data of this kind

collected specifically around the Mariana Islands, it is considered the best available science. The Navy primarily used that data to derive their density estimates, and laid out a systematic approach for using other existing Pacific data when there was not enough MISTCS data to calculate a density for a particular species. Most of the densities estimated in the MIRC are not notably different than those estimated in Hawaii or the Eastern Tropical Pacific.

Also, while it is not the same as a peer review, both the NEPA and MMPA processes include a comment period in which the public can specifically recommend better ways to use the data to estimate density, and which the Navy and NMFS would need to address.

While it will not be published until after this final rule is complete, the Navy is preparing for publication an article presenting the MISTCS data that was used to inform their density estimates, and it will be peer-reviewed. Additionally, the Navy is developing a new systematic framework (that includes a hierarchy of preferred methodologies based on the data available in an area) to estimate density in the analyses for the rule renewals that will follow the expiration of the rules issued in 2009, 2010, and 2011 (*i.e.*, rules that would, if appropriate, be issued in 2014 and later). The Navy has indicated that they may pursue a peer review of this framework and NMFS has encouraged them to do so.

*Comment 3:* The MMC recommends that NMFS require that a sufficient level of monitoring be conducted during all training activities to ensure that marine mammals are not being taken in unanticipated ways and numbers. They further note that, according to the Navy's monitoring plan, "major exercises may undergo significant schedule changes in reaction to higher-priority commitments and such changes may limit monitoring opportunities \* \* \* [or] extreme weather precludes effective sampling." The plan further states that, in case of such monitoring delay(s), "monitoring will be re-scheduled to the next available opportunity \* \* \* [and] \* \* \* may have to be made up in the subsequent year." The MMC further states that they assume that, although it is not clear in either the monitoring plan or the proposed rule, if monitoring associated with the focused studies cannot take place during a major training exercise, other standard types of monitoring will be conducted for mitigation and documentation purposes.

*Response:* The Commission's assumption is correct. There are two

different types of monitoring required pursuant to the MIRC training exercises. One type is the monitoring outlined in the Monitoring Plan (which has been modified since the proposed rule, see Comment 10 below), which consists of different study methods designed to collect density and distribution data and is conducted by MMOs. This monitoring includes systematic sampling conducted at a different time and place than the training exercises. The Navy feels this monitoring may need to be rescheduled as appropriate. This is the monitoring that the Navy may need to reschedule.

Separately, monitoring is routinely conducted by watchstanders on surface vessels (and opportunistically by personnel on other platforms). This monitoring is used to detect animals so the necessary mitigation can be implemented. Behavioral data which allow for a general assessment of impacts are collected with other information (such as the status of sonar sources) that help verify the Navy's mitigation implementation. This data-gathering requirement is described in § 218.105 Requirements for monitoring and reporting.

*Comment 4:* The MMC requested that NMFS require that, upon its completion, the plan for the Navy's Integrated Comprehensive Monitoring Program (ICMP) be made available for Commission review and comment.

*Response:* The 2009 ICMP was completed and is posted on NMFS' Web site at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>. The ICMP is an iterative outline of an ongoing program, and NMFS and the Navy will evaluate the potential need to update it annually. NMFS made some specific recommendations on how to improve the 2009 ICMP, which are outlined in Section 6 of that document. Pursuant to the AFAST, HRC and SOCAL 2010 LOAs, the Navy will submit an updated version addressing those recommended improvements and any others, as appropriate, to NMFS at the end of 2010. NMFS has provided the MMC with a copy of the 2009 ICMP and notified them that NMFS and the Navy will consider any comments provided by August 15, 2010 in the development of the 2010 ICMP.

*Comment 5:* The MMC recommends that NMFS advise the Navy and specify in the final rule and Letter of Authorization that any and all data that the Navy collects as part of monitoring and reporting requirements are essential for documenting compliance with the requirements of the Marine Mammal Protection Act, the incidental take regulations, and the terms and conditions of the Letter of Authorization

and, unless subject to national security restrictions, should be considered as public information. The MMC further notes that the draft Monitoring Plan indicated that “[a]ll data will be considered “pre-decisional” and proprietary and will be shared among the Navy and NMFS (at a minimum) during the five-year period of the LOA.”

*Response:* NMFS concurs with the MMC and clarified this point with the Navy. The language the MMC cited has been removed in the Final Monitoring Plan. As specified in the final regulations (and in the LOAs), the Navy includes all of the information specified as part of the monitoring and reporting requirements in their annual reports (which are posted on NMFS Web site) unless the information is classified or the analysis has not been completed (*i.e.*, passive acoustic data).

*Comment 6:* The MMC recommends that NMFS require that, in the event of the death or serious injury of a marine mammal during activities associated with any of the training exercises or other activities covered by this authorization, those activities be suspended, pending an investigation and determination that further serious injuries or deaths are unlikely or until authorization for such taking has been obtained. The MMC specifically notes that there is no shutdown measure in place for non-major sonar activities. The MMC further recommends that NMFS require that the Navy, in conjunction with the NMFS, investigate any injury or death of a marine mammal to determine the cause, assess the full impact of the activity or activities (*e.g.*, the total number of animals involved), and determine how activities should be modified to avoid future injuries or deaths. If the death or serious injury involves a marine mammal not included in the authorization for such takes, NMFS should allow the activity to proceed only if it has reviewed the circumstances and determined that additional serious injuries or deaths are unlikely or the Navy has obtained authorization for such taking. Lastly, the MMC recommends that prior to issuing the final regulations, NMFS ensure that it can provide oversight of and response to an uncommon stranding event in the Mariana Islands Range Complex Study Area sufficient to meet in full the monitoring and reporting requirements of the Marine Mammal Protection Act.

*Response:* NMFS and the Navy have developed a detailed Stranding Response Plan for MIRC that outlines protocols for, and describes the underlying rationale for, shutdown (in very specific circumstances) and investigation in the event that dead or

stranded animals are found in the vicinity of major sonar exercises. The regulations also include a provision for “General notification of injured or dead marine mammals,” under which Navy personnel shall ensure that NMFS is notified immediately (or as soon as clearance procedures allow) if an injured, stranded, or dead marine mammal is found during or shortly after, and in the vicinity of, any Navy training exercise (including non-major ones) utilizing MFAS, HFAS, or underwater explosive detonations. The provision further requires the Navy to 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 of the animals (if available).

All but one of the small number of strandings that have been associated with MFAS exercises occurred concurrent to exercises that would be considered “major”, which typically involve multiple surface vessels and last for a much longer duration than non-major exercises. It can take months to years to complete the necessary tests and analyses required to determine, with a reasonable amount of certainty, the cause of a marine mammal death—and sometimes it is not possible to determine it. In consideration of these facts, NMFS (with input from the Navy) determined that it was beneficial and practicable to preemptively outline an explicit plan (that includes a shutdown requirement in certain circumstances) for how to deal with a stranding that occurs during a major exercise. Alternatively, for non-major exercises, the general stranding provisions apply, which means that the Navy would contact NMFS as soon as clearance procedures allow and we would determine how best to proceed then. In light of the fact that so few strandings have been definitively associated with MFAS training in the 60+ years that the U.S. and other countries that share information have been conducting MFAS training, it is not reasonable or practicable to require the Navy to shut down pending the results of an investigation that could take years to conduct.

However, NMFS and the Navy will implement the Stranding Response Plan as written and, as in the past, will work together on a case-by-case basis within the constraints of our available resources to investigate the causes should a stranding or death occur during a non-major exercise. Once investigations are completed and determinations made (as feasible),

NMFS would use the available information to help reduce the likelihood that a similar event would recur and would work with the Navy on the necessary steps to ensure compliance by the Navy with the MMPA. NMFS and the Navy are near finalizing an MOU that will streamline and improve the way that the Navy is able to assist NMFS during a stranding investigation. Lastly, the Stranding Response Plan includes a provision for stranding debriefs/lessons learned meetings between NMFS and the Navy following a stranding response, and the MIRC rule includes an adaptive management provision that allows for the modification of mitigation or monitoring measures based on new information (like that which might be gathered during a stranding response/investigation), as appropriate.

*Comment 7:* The MMC recommended that NMFS work with the Navy to analyze the cumulative effects of adding LFA sonar to the other activities planned for the Mariana Islands Range Complex before using LFA sonar as a component of the proposed training exercises and, if appropriate, add authorization for the use of LFA to the final rule and Letter of Authorization. The NRDC had similar concerns, including the fact that the mitigation used with LFA sonar was not discussed.

*Response:* As noted, the impacts of LFA sonar (alone) have been analyzed in the Navy’s SURTASS LFA Sonar EISs and take of marine mammals incidental to that activity has been authorized in LOAs pursuant to NMFS’ Final Rule for LFA Sonar, both of which include required mitigation measures. As described in the proposed rule, the military intends to conduct three exercises (multi-strike group exercises) during the five-year duration of the rule that may include both SURTASS LFA and MFA sonar sources. The expected duration of these combined exercises is approximately 14 days. Based on an exercise of this length, an LFA sonar system would be active (*i.e.*, actually transmitting) for no more than approximately 25 hours. Tactical and technical considerations dictate that the LFA sonar ship would typically be tens of miles from the MFA sonar ship when using active sonar. It is unlikely, but possible, that both LFA and MFA sonar would be active at exactly the same time during a major exercise. In the unlikely event that both systems were operating simultaneously, the likelihood of more than a relatively small number of individual marine mammals being physically present at a time, location, and depth to be able to receive both LFA and MFA sonar signals at levels of

concern at the same time is even smaller as the sound from both signals would have attenuated when they reached the marine mammal in question, so even a simultaneous exposure would not be at the full signal of either system. Additionally, few species have maximum sensitivity to both the low and middle frequencies.

That said, pursuant to this rule, NMFS worked with the Navy to more specifically analyze impacts that might result from animals being exposed to both the LFAS and the MFAS at the same time. The Navy developed a model to evaluate the likelihood of an animal being exposed to both sources based on the operational parameters of the two systems and the propagation characteristics of the two sound sources. Assuming an LFA and MFA sonar source transmitting at the same time over a 25-hour period and based on the fact that the two sources transmit at very different duty cycles, the overlap of the actual signals would be approximately 3.2%, or 0.8 hours (assuming that there is only one MFA sonar ship transmitting). But the possibility of even that overlap must consider the other factors discussed above.

Based on the fact that an LFA sonar ship would be tens of miles away from an MFA ship when using active sonar and that the overlap of the signals would only be about 50 minutes at attenuated levels, as well as the other information discussed above, the exposure of marine mammals simultaneously to both MFA and LFA sonars would be limited, and the impacts would not be expected to result in a detectable increase in the number or severity of the takes already analyzed and estimated in this rule.

*Comment 8:* The MMC recommended that NMFS limit the authorization to avoid Navy operations within the Marianas Trench Marine National Monument (MTMNM) to the extent possible. Further, if the Navy must conduct activities within the Monument, the Service should include in the final rule and Letter of Authorization a description of the measures that the Navy will adopt to minimize adverse impacts and to comply with the intent of the presidential proclamation establishing the Monument.

*Response:* The MTMNM was established to protect the submerged lands and waters of the Mariana Archipelago and was designated with the purpose of protecting the submerged volcanic areas of the Mariana Ridge (which include chemosynthetic features and hydrothermal vents), the coral reef ecosystem of the waters of surrounding

islands, and the Marianas Trench. The Monument includes the submerged lands of the "Volcano Unit" and the water column and submerged lands within the "Island Unit". The MTMNM contains no areas specifically designated as important to marine mammal protection in the MTMNM. The presidential proclamation establishing the Monument indicates that the prohibitions required by the proclamation shall not apply to activities and exercises of the Armed Forces, but also indicates the Armed Forces shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities, that its vessels and aircraft act in a manner consistent, so far as is reasonable and practicable, with the proclamation.

Pursuant to the MMPA, NMFS makes decisions regarding required mitigation based on biological information pertaining to the potential impacts of an activity on marine mammals and their habitat (and the practicability of the measure), not management designations intended for the broad protection of various other marine resources. A portion of the MTMNM overlaps with the MIRC Study Area; however, there are no areas within this area of special importance to marine mammals for which restricting sonar use would afford a notable benefit. If training or exercises occur in this area, the Navy would be required to follow the general mitigation protocols established in the final rule and LOA. For example, powering or shutting down sonar when marine mammals are detected within ranges where the received sound level is likely to result in temporary threshold shift (TTS) or injury and using exclusion zones that avoid exposing marine mammals to levels of explosives likely to result in injury or death of marine mammals. NMFS expects the mitigation measures employed in the MTMNM will reduce the number of marine mammals exposed to levels of sound expected to result in TTS or more severe behavioral responses in these areas.

*Comment 9:* The NRDC suggests that NMFS should not issue an MMPA authorization because the information on species densities and distributions of marine mammals in the Marianas region is inadequate for NMFS to be able to effectively analyze the environmental impacts, and that the Navy should have obtained the information before requesting an MMPA authorization. They further suggest that because of this lack of information, the NEPA analysis is inadequate both for the Navy and for NMFS to adopt. They note that there has only been one comprehensive survey

conducted in the area (during one single season) and that the sea states were high during this survey (making detection difficult), which, combined with the detection probabilities used, likely resulted in an underestimate of the density of animals in the area. They further noted that off-shore data were used to estimate density across both the inshore and offshore areas, even though there are often density differences across inshore and offshore areas (some species are more dense inshore).

*Response:* Both NMFS and the Navy have a responsibility to use the best available science to support our analysis and decisions under both NEPA and the MMPA. In 2007, the Navy funded a baseline survey for the Mariana Islands (the "Mariana Islands Sea Turtle and Cetacean Survey" or MISTCS) to gather data on the distribution and density of marine mammals and sea turtles. This survey is the first and only systematic survey to be conducted in the region and not only generated density estimates, but also added sei whales to the confirmed species in the area. In this case, the Navy has generated the best available science and both NMFS and the Navy are using it. The limitations of the data were acknowledged by the Navy in the MISTCS report, and the Navy plans to improve upon this information moving forward as more data are gathered. The sea states in the MIRC are comparatively higher than in other areas, so scientists will continue to deal with this challenge. As more surveys are conducted, data will be collected across more seasons and areas (inshore and offshore), which will allow for the calculation of more spatially and temporally explicit density estimates. The collection of additional data will allow scientists to determine whether the development of MIRC-specific detection probabilities is appropriate. In the meantime, the density estimates from the MISTCS surveys are not unexpected and are similar to those for the Hawaii offshore areas and the eastern tropical Pacific and will allow NMFS to make reasonable predictions regarding the number of marine mammals that might be exposed to particular levels of sound.

Regarding the comment that take estimates are likely underestimates, for comparison we use data collected in Hawaii, where surveys are more robust. For naval exercises in Hawaii, there are more survey data, across different seasons, incorporating both inshore and offshore data, and using specific detection probability factors. The Navy estimated approximately 28,000 Level B harassment takes for a total of about 1670 hours of hull-mounted MFAS (the

most powerful source, which accounts for the vast majority of takes). In MIRC, the Navy estimated approximately 80,000 Level B harassment takes to result from the operation of approximately 2320 hours of hull-mounted MFAS. At a broad level, these

estimates (the ratio of the two) do not suggest the Navy is likely underestimating take in MIRC. Similarly, below is an overview of the watchstander data collected during major exercises in Hawaii and MIRC, which, while not a systematic

comparison, broadly suggests the number of animals encountered in the vicinity of an exercise in MIRC is not much different than the numbers encountered in Hawaii.

Location	hours sonar	# sightings	# animals sighted
MIRC (August, 2007)	1208	25	235
Hawaii (RIMPAC, July 2006)	472	26	70 individuals + 8 pods
Hawaii (April, 2007)	265	0	0
Hawaii (April, 2007)	50	1	1
Hawaii (November, 2007)	77	0	0
Hawaii (January, 2009)	918	24	135

**Table 5.** Marine mammal sightings by watchstanders during major exercises in MIRC and Hawaii since 2006.

Lastly, the animals that watchstanders have detected during exercises have not exhibited any observable behavioral effects. In summary, using the density estimates generated from the Navy's survey and the take estimates modeled by the Navy, NMFS has considered the best available science. Additionally, taking into consideration other data/literature related to the likely impacts of MFAS exposure on marine mammals (see proposed rule) combined with data from the Navy regarding the number of marine mammal detections and observed behaviors that have been recorded during other Navy exercises, NMFS has sufficient information to make the findings required under the MMPA.

*Comment 10:* The NRDC recommends that to meet its responsibilities under the MMPA and NEPA, NMFS should require the Navy, as a condition of any future permit, to sponsor a multiyear survey effort within the Marianas Islands Range Complex that can serve as a reasonable basis of both geographic mitigation and improved environmental assessment. NRDC recommends (1) that NOAA scientists participate in the survey design, including the design of tracklines and the determination of detection probabilities; (2) that surveys are conducted consistently and across multiple seasons, given the presence of migratory species, and for more than 1 year, given the potential for interannual variability and the typically high sea states around the Marianas; and (3) that surveys are designed, at least in part, to aid in identifying areas of importance to marine mammals (e.g., gathering oceanographic data relevant to marine mammal distribution). Finally, (4) the survey results should be integrated into habitat suitability models available for other regions, such as Hawaii or the

Eastern Tropical Pacific (NMFS interprets this to mean that habitat suitability models from these other areas should be used in conjunction with MIRC data to predict density in the MIRC).

*Response:* NMFS agrees with NRDC regarding the importance of gathering more density, distribution, and abundance data in the MIRC and has recommended the Navy refocus their Monitoring Plan. In response to this recommendation, the Navy has modified their draft Monitoring Plan to focus completely on gathering density and distribution data that can be used to better inform our analyses of the impacts of the action as well as to inform decisions regarding the development of areas of special protection and, further, the Navy has increased the amount of survey effort that they had committed to in the draft Monitoring Plan. The Navy has now committed to conduct 45 days of visual surveys annually (over the 5 years of the rule) using a small boat and/or airplane around Guam, Tinian, Rota and Saipan. These surveys will be conducted over both summer and winter and will be developed in coordination with NMFS scientists and conducted in cooperation with NMFS and/or DAWR. Visual surveys will integrate methods such as photo ID which provide data that can be used for estimating distribution and abundance. Additionally, as already discussed in the proposed rule, the Navy will deploy four passive acoustic devices to collect data throughout the years. Lastly, the Navy has also committed to additional analysis of acoustic data gathered during the 2007 MISTCS survey that have not yet been analyzed.

Earlier this year, NMFS's Pacific Islands Fisheries Science Center (PIFSC)

and the Navy collaborated to conduct cetacean observations in conjunction with an oceanographic survey aboard NOAA Research Vessel Oscar Elton Sette. Coverage was between Honolulu and Guam and within the Exclusive Economic Zones (EEZs) of Guam and the Commonwealth of the Northern Mariana Islands between January and May 2010. The goal was to monitor the presence and distribution of cetaceans on the high seas and within the Guam/Commonwealth of the Northern Mariana Islands EEZs. PIFSC performed four data collection projects during the outward bound and early arrival portion of the survey:

(1) Cetacean visual and acoustic observations during daylight hours on the high seas survey between Honolulu and Guam, 20 January–4 February.

(2) Cetacean visual and acoustic observations conducted from small boats chartered in Guam, Rota, Tinian, and/or Saipan, 10 February–4 March.

(3) Cetacean visual observations during daylight hours during an oceanography survey around Guam and southern CNMI, 18 March–14 April.

(4) Cetacean visual and acoustic observations during daylight hours on the high seas survey between Guam and Honolulu, 18 April–4 May.

The goal of the vessel-based visual surveys was to monitor cetacean presence, distribution and diversity in Hawaii, Marianas and the high seas. These surveys were conducted by experienced marine mammal observers aboard a capable vessel using established NMFS PIFSC protocols for conducting and recording sighting data. The observers recorded marine mammal sightings as well as environmental data (Beaufort Sea state, wind speed/direction, swell height/direction, visibility, etc.). Digital photographs were taken to assist in species

identification. In addition to visual sightings, a towed acoustic array was used to detect animal calls. Using both visual and acoustic methods provides a more complete assessment for the presence of marine mammals in the survey area.

The MIRC rule has an adaptive management provision that requires the Navy and NMFS to review new information (such as monitoring results) on an annual basis and allows that mitigation or monitoring measures could be modified, if appropriate. NMFS and the Navy will consider the results of any required monitoring, as well as the voluntary 2010 monitoring, in our annual assessment of mitigation and monitoring measures. Additionally, NOAA has committed to convene a workshop of marine mammal experts in 2010/2011 to identify cetacean hotspots (areas of specifically important use or high density) using both field data and habitat modeling, as appropriate. The data that the Navy gathers this year in MIRC pursuant to their modified monitoring plan (see above) will inform the cetacean hotspot workshop. The workshop results, in turn, could potentially support the need to designate protected areas in which Navy activities could potentially be limited, depending on NMFS' analysis of the benefit to the species of limiting activities in the area, the likely effectiveness of the measure, and the practicability of implementation. The adaptive management provisions would allow for the application of these protected areas, if appropriate.

With respect to using habitat suitability models from other regions in conjunction with the MIRC data to inform density estimates, while habitat suitability models can be helpful in predicting marine mammal presence/density in an area, the less actual information that is available to inform a model, the less robust the model is likely to be—especially if one extrapolates from one region to another where there is not necessarily a basic understanding of the regional ecological processes in play (e.g., sea surface temperature or salinity can mean completely different things in different areas). Additionally, it is very difficult to validate a model in areas with little information. In short, a model would not necessarily increase the accuracy of the density estimates in the MIRC area, given the amount of data that is currently available in the MIRC. That said, the Navy is exploring (and NMFS supports this exploration) incorporating habitat modeling into their density estimates, as appropriate, as they

develop the environmental analysis for their training actions moving forward.

*Comment 11:* NRDC states that within the scientific community, there is general consensus that protecting important habitat represents the most effective means currently available to reduce the impacts of mid-frequency sonar on marine mammals. They further state that “Nonetheless, no portion of this vast 501,000 nm<sup>2</sup> range was excluded by the Pacific Fleet from sonar training, and neither the Navy’s DEIS nor its take application—nor NMFS’ Proposed Rule—considers establishing any protection areas in which sonar training would be limited or excluded.” NRDC then recommends that certain protection areas, in which sonar training should not be conducted, should be established. Those areas include:

(1) Waters surrounding Saipan and Tinian Islands to the 1000m isobath (particularly but not exclusively the northwest coast of Saipan)—for humpback whales.

NRDC notes that the Navy’s MISTCS identified waters around Saipan and Tinian Islands as “probable” humpback whale breeding grounds, based on both acoustic and sighting data. Singing males were detected acoustically, and social interactions between individuals were detected visually. Concentrations were especially high around the northwest coast of Saipan.

They further note that the MISTCS report indicates that whaling data from the 1700s and 1800s indicate concentrations of humpback whales around the Northern Mariana Islands and it is likely that the area around Saipan and Tinian represents a formerly important breeding ground now being recolonized as the population slowly recovers from whaling.

(2) West Mariana Ridge—for False killer whale; Short-finned pilot whales; *Mesoplodon* spp.; Bryde’s whale.

NRDC notes that a chain of conical seamounts (extinct volcanoes) comprises the West Mariana Ridge, on the far side of the Mariana Basin. Some seamounts (including the Pathfinder, Arakane, and Suruga Seamounts between 142°–143°E) rise to summits less than 50m below sea level (Miller *et al.* 2008). These seamounts support a rich diversity of coral reef and continental slope species, and previous surveys have shown dense concentrations of biological productivity (high planktonic production, large schools of small and predatory fishes including skipjack and other species of tuna) (Miller *et al.* 2008; Tsukamoto 2006). Consistent with this, multiple sightings of several cetacean species known to prefer high

bathymetric relief were made by the MISTCS on or near the West Mariana Ridge, including two of the survey’s three beaked whale sightings.

(3) Western edge of the Mariana Trench with high bathymetric relief (roughly 4000–8000m)—for Sei and Bryde’s whale; minke whale, and

(4) Western side of the main Mariana Islands to 5000m—for Sperm whales.

NRDC indicates that the potential for concentrations of species exists in these areas (3 and 4), but also that systematic analysis is needed.

*Response:* NMFS acknowledges protecting important habitat (i.e., areas where there is robust evidence animals are predictably gathering in higher densities, or are known to display important behaviors such as breeding and calving and could potentially be disrupted by the proximity of MFAS activities), can be one of the more effective ways to minimize impacts (both in number and severity) to marine mammals.

The first paragraph of NRDC’s comment seems to express surprise that, despite the importance of habitat protection, no protective areas have been established in MIRC. Before discussing the specific areas that NRDC has recommended, NMFS must explain that we do not begin with the assumption that any particular area contains areas that warrant special protection for marine mammals. Rather, we analyze the existing data to determine whether there is suitable evidence indicating that conditions exist in which the limitation of activity in an area would afford a notable reduction (either in quantity or potential severity) in the take of marine mammals. If there is suitable evidence indicating that a protective measure of this nature is, in fact, warranted, then we must review the measure in the context of personnel safety, practicality of implementation, and impact on the effectiveness of the “military readiness activity” to determine whether it would result in the “least practicable adverse impact.”

Unfortunately, the supporting data do not support the recommendations that NRDC proposes, specifically:

(1) Waters surrounding Saipan and Tinian Islands to the 1000m isobaths—During the MISTCS survey, over the course of approximately 2 months, the survey had 11 acoustic detections of singing humpback whales (primarily to the north and west of Saipan) and sighted one group of approximately 8 animals. The acoustic detections were of singing males and the visually detected group was exhibiting behaviors consistent with a group of males



competing for females. Although the detected behaviors were consistent with breeding behaviors, the number of animals observed is too small to draw a robust conclusion, and also does not seem indicative of the high density of humpbacks seen in other known breeding/calving areas. By contrast, in Hawaii (where a protective area was designated for the Navy), humpback whales and calves concentrate in densities up to 3.6 animals/mile<sup>2</sup>.

(2) West Mariana Ridge—While these sea mounts may be generally associated with higher productivity, there is not enough evidence to suggest the area will predictably have a higher density of marine mammals, or that it is a specifically important feeding area, such that it is appropriate to limit activities in the area. During MISTCS, only one false killer whale, 3 short-finned pilot whales, 2 beaked whales, and 4 Brydes whales were sighted on the Western Mariana Ridge.

For (3) Western Edge of Mariana Trench and (4) Western Side of Main Mariana Islands, NRDC acknowledges that systematic analysis is needed before recommending these areas as protected areas, and NMFS concurs that there is not enough information to support protected areas in these spots. That said, as noted in NMFS' response to Comment 10, the Navy has modified their monitoring plan to collect exactly the sort of density and distribution data that we have noted above is limited in MIRC. Further, as noted above, the adaptive management provision in this rule will allow NMFS to use this new information (or other information, such as that generated from the cetacean hotspot workshop) to inform modifications to mitigation or monitoring measures, as appropriate.

*Comment 12:* NRDC included a copy of their comments on the Navy's EIS and suggested that some of those comments also pertained to the MMPA authorization.

*Response:* NMFS has addressed the issues that apply to our issuance of the MMPA authorization below:

(1) Additional Mitigation—NRDC recommends a suite of additional mitigation measures for the Navy to consider to protect various resources, including marine mammals. NMFS and the Navy have previously discussed either the specific measures listed in NRDC's comments on the Navy's EIS, or the general class of mitigation contemplated and have developed a section for the EIS that discusses the benefits of the proposed measure to marine mammals, the likely effectiveness of the measure, and the practicability of the measure for Navy

implementation. Section 5.1.8 (begin page 5–18) of the MIRC EIS, entitled Alternative Mitigation Measures Considered But Eliminated, explains why these measures are not included in NMFS MMPA regulations and is hereby incorporated by reference.

(2) Dr. Bain's Critique of Risk Function—NRDC includes a comprehensive critique of the risk function that the Navy (and NMFS) uses to calculate takes. NMFS responded to Dr. Bain's comments in the Atlantic Fleet Active Sonar Training final rule (74 FR 4865) and hereby incorporates those comments by reference.

*Comment 13:* A few commenters expressed general opposition to Navy activities and NMFS' issuance of an MMPA authorization, because of the danger to marine mammals, and one suggested a proposed alternative to MFAS that would be less impactful and involved replacing the current technology with the use of a transponder.

*Response:* NMFS appreciates the commenters' concern for the marine mammals that live in the area of the proposed activities. The MMPA directs NMFS to issue an incidental take authorization if certain findings can be made. Under the MMPA, NMFS must make the decision of whether or not to issue an authorization based on the specified activity that the applicant submits; the MMPA does not contain a mechanism for NMFS to question the need for the action that the applicant has proposed. Similarly, any U.S. citizen (including the Navy) can request and receive a MMPA authorization as long as all of the necessary findings can be made. NMFS has determined that the Navy's MIRC training activities will have a negligible impact on the affected species or stocks and, therefore, we are issuing the necessary governing regulations and plan to issue the requested MMPA authorization.

#### **Estimated Take of Marine Mammals**

As mentioned previously, one of the main purposes of NMFS' effects assessments is to identify the permissible methods of taking: What caused the take (e.g., exposure to anthropogenic noise vs. ship strike); the regulatory level of take (i.e., mortality vs. Level A or Level B harassment) and the amount of take. In the Potential Effects of Exposure of Marine Mammal to MFAS/HFAS and Underwater Detonations section of the proposed rule, NMFS identified the lethal responses, physical trauma, sensory impairment (permanent and temporary threshold shifts and acoustic masking), physiological responses (particular

stress responses), and behavioral responses that could potentially result from exposure to MFAS/HFAS or underwater explosive detonations. In this section, we will relate the potential effects to marine mammals from MFAS/HFAS and underwater detonation of explosives to the MMPA statutory definitions of Level A and Level B Harassment and attempt to quantify the effects that might occur from the specific training activities that the Navy is proposing in the MIRC study area.

In the Estimated Take of Marine Mammals section of the proposed rule, NMFS relates the potential effects to marine mammals from MFAS/HFAS and underwater detonations (discussed in the Potential Effects of Specified Activities on Marine Mammals Section) to the MMPA regulatory definitions of Level A and Level B Harassment and quantified (estimated) the effects on marine mammals that could result from the specific activities that the Navy intends to conduct. The subsections of that analysis are discussed individually below.

#### *Definition of Harassment*

The Definition of Harassment section of the proposed rule contains the definitions of Level A and Level B Harassment, and a discussion of which of the previously discussed potential effects of MFAS/HFAS or explosive detonations fall into the categories of Level A Harassment (permanent threshold shift (PTS), acoustically mediated bubble growth, behaviorally mediated bubble growth, and physical disruption of tissues resulting from explosive shock wave) or Level B Harassment (temporary threshold shift (TTS), acoustic masking and communication impairment, and behavioral disturbance rising to the level of harassment). See (74 FR 53795, page 53846). No changes have been made to the discussion contained in this section of the proposed rule.

#### *Acoustic Take Criteria*

In the Acoustic Take Criteria section of the proposed rule, NMFS described the development and application of the acoustic criteria for both MFAS/HFAS and explosive detonations (74 FR 53795, pages 53846–53852). No changes have been made to the discussion contained in this section of the proposed rule.

#### **Estimates of Potential Marine Mammal Exposure**

The proposed rule describes in detail how the Navy estimated the take that will result from their proposed activities (74 FR 53795, pages 53836–53837), which entails the following three

general steps: (1) A propagation model using marine mammal densities estimates animals exposed to sources at different levels; (2) further modeling determines number of exposures to levels indicated in criteria above (*i.e.*, number of takes); and (3) post-modeling corrections refine estimates to make them more accurate. More information regarding the models used, the assumptions used in the models, and the process of estimating take is available in Appendix F of the Navy's DEIS for MIRC.

Table 4 which is identical to the take table (Table 8) in the proposed rule with a few minor corrections (indicated in italics—differences of less than 7 Level B harassment, non-TTS, takes in all cases), indicates the number of takes

that were modeled and that are being authorized yearly incidental to the Navy's activities, with the following allowances. The Navy has carefully characterized the training activities planned for the MIRC study area over the 5 years covered by these regulations; however, evolving real-world needs necessitate flexibility in annual activities, which in turn is reflected in annual variation in the potential take of marine mammals. Where it was mentioned more generally in the proposed rule, NMFS has now included language bounding this flexibility in the regulatory text (*see* § 218.102(c)). These potential annual variations were considered in the negligible impact analysis and the analysis in the

proposed rule remains applicable. The new language indicates the following:

- That modeled annual takes (which must be provided with annual LOA applications) of any individual species may not exceed the annual amount indicated in the rule (*i.e.*, in Table 4, below) by more than 25% in any year;
- That modeled takes over the course of 5 years will not ultimately exceed the indicated 5-year total for that species indicated by the rule (Table 4) by more than 10%; and
- That modeled total annual take of all species combined may vary but will not exceed the combined amount for all species indicated in the rule (Table 4) by more than 10%.

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NMFS Proposed Annual Take Authorization										
Modeled Sonar Exposures to Indicated Thresholds			Modeled Explosive Exposures to Indicated Thresholds							
Species	Level B Exposures		Level A Exposures (PTS)	Level B Exposures		Level A Exposures	Mortality	Level B Harassment	Level A Harassment	Mortality
	Risk Function (Behavioral)	TTS		Sub-TTS	TTS					
ESA Species										
Blue whale	128	2	0	0	0	0	0	130	0	
Fin whale	180	2	0	0	0	0	0	182	0	
Humpback whale	795	10	0	0	0	0	0	805	0	
Sei whale	319	6	0	0	0	0	0	325	0	
Sperm whale	806	10	1	6	2	0	0	824	1	
Sei/Bryde's whale	61	1	0	0	0	0	0	62	0	
Unidentified Balaenopterid whale	71	1	0	0	0	0	0	72	0	
Mysticetes										
Bryde's whale	449	8	0	0	0	0	0	457	0	
Minke whale	438	7		0	0	0	0	445	0	
Odontocetes										
Blainville's beaked whale	758	12	0	0	0	0	0	770	0	10 over the course of 5-yr rule
Cuvier's beaked whale	3,567	44	0	12	5	0	0	3628	0	
Ginkgo-toothed beaked whale	423	7	0	0	0	0	0	430	0	
Longman's beaked whale	204	2	0	0	0	0	0	206	0	
Bottlenose dolphin	168	3	0	0	0	0	0	171	0	
Bottlenose/Rough-toothed dolphin	72	1	0					73	0	
Fraser's dolphin	4,525	74	0	12	4	0	0	4615	0	
Pantropical spotted dolphin	31,970	510	1	12	7	0	0	32499	1	
Rough-toothed dolphin	236	5	0	0	0	0	0	241	0	
Risso's dolphin	6,629	108	0	26	10	0	0	6773	0	
Short-beaked common dolphin	918	17	0	6	2	0	0	943	0	
Spinner dolphin	2,100	36	0	6	2	0	0	2144	0	
Striped dolphin	8,715	139	0	3	1	0	0	8858	0	
Unidentified delphinid	1,514	24	0	0	0	0	0	1538	0	
Dwarf/Pygmy sperm whale	6,576	103	0	20	7	0	0	6706	0	
False killer whale	1,266	23	0	0	0	0	0	1289	0	
Killer whale	226	4	0	0	0	0	0	230	0	
Melon-headed whale	2,809	46	0	6	2	0	0	2863	0	
Pygmy killer whale	158	2	0	0	0	0	0	160	0	
Short-finned pilot whale	2,238	36	0	0	0	0	0	2274	0	
total	78,319	1,243	2	109	42	0	0	79713	2	

Table 6. Navy's estimated marine mammal exposures to the thresholds and NMFS proposed take authorization (changes from proposed rule noted in italics).

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*Mortality*

Evidence from five beaked whale strandings, all of which have taken place outside the MIRC study area, and have occurred over approximately a decade, suggests that the exposure of beaked whales to MFAS in the presence of certain conditions (e.g., multiple units using active sonar, steep bathymetry, constricted channels, strong surface ducts, etc.) may result in strandings, potentially leading to mortality. Although these physical factors believed to have contributed to the likelihood of beaked whale strandings are not present, in the aggregate, in the MIRC study area, scientific uncertainty exists regarding what other factors, or combination of factors, may contribute to beaked whale strandings. Accordingly, to allow for scientific uncertainty regarding contributing causes of beaked whale strandings and the exact behavioral or physiological mechanisms that can lead to the ultimate physical effects (stranding and/or death), NMFS is authorizing take, by injury or mortality, of 10 beaked whales over the course of the 5-year regulations. Although the Navy has requested take by injury or mortality, the Navy's model did not predict injurious takes of beaked whales and neither NMFS nor the Navy anticipates that marine mammal strandings or mortality will result from the operation of MFAS during Navy exercises within the MIRC study area.

**Effects on Marine Mammal Habitat**

NMFS' proposed rule includes a section that addresses the effects of the Navy's activities on Marine Mammal Habitat (74 FR 53795, pages 53855–53857). The analysis preliminarily concluded that the Navy's activities would have minimal effects on marine mammal habitat. No changes have been made to the discussion contained in this section of the proposed rule and NMFS has concluded there would be minimal effects on marine mammal habitat.

**Analysis and Negligible Impact Determination**

Pursuant to NMFS' regulations implementing the MMPA, an applicant is required to estimate the number of animals that will be "taken" by the specified activities (i.e., takes by Level B harassment only, Level A harassment, and/or death). This estimate informs the analysis that NMFS must perform to determine whether the activity will have a "negligible impact" on the affected species or stock. Level B (behavioral) harassment occurs at the

level of the individual(s) and does not assume any resulting population-level consequences, though there are known avenues through which behavioral disturbance of individuals can result in population-level effects (for example: pink-footed geese (*Anser brachyrhynchus*) in undisturbed habitat gained body mass and had about a 46-percent reproductive success compared with geese in disturbed habitat (being consistently scared off the fields on which they were foraging), which did not gain mass and had 17-percent reproductive success). 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. Generally speaking, and especially with other factors being equal, the Navy and NMFS anticipate more severe effects from takes resulting from exposure to higher received levels (though this is in no way a strictly linear relationship throughout species, individuals, or circumstances) and less severe effects from takes resulting from exposure to lower received levels.

In the Analysis and Negligible Impact Determination section of the proposed rule, NMFS addressed the issues identified in the preceding paragraph in combination with additional detailed analysis regarding the severity of the anticipated effects, and including species (or group)-specific discussions, to determine that Navy training will have a negligible impact on the marine mammal species and stocks present in MIRC study area. No changes have been made to the discussion contained in this section of the proposed rule (74 FR 33828, pages 33884–33892), with the following exception.

As mentioned previously in the Estimated Take section, to allow for more flexibility in operations, NMFS has added language bounding the flexibility in annual variation of potential take of individual marine mammal species into the regulatory text (see § 218.102(c)). The new language indicates that modeled annual takes

(which must be provided with annual LOA application) of any individual species may vary but will not ultimately exceed the indicated 5-year total for that species (indicated by Table 6) by more than 10% and will not exceed the indicated annual total by more than 25% in any given year; and that modeled total yearly take of all species combined may vary but will not exceed the combined amount indicated below in any given year by more than 10%. NMFS has considered these limitations in our negligible impact determination and the findings described in the proposed rule remain applicable.

**Determination***Negligible Impact*

Based on the analysis contained here and in the proposed rule (and other related documents) of the likely effects of the specified activity on marine mammals and their habitat and dependent upon the implementation of the mitigation and monitoring measures, NMFS finds that the total taking from Navy training exercises utilizing MFAS/HFAS and underwater explosives in the MIRC study area will have a negligible impact on the affected species or stocks. NMFS has proposed regulations for these exercises that prescribe the means of effecting the least practicable adverse impact on marine mammals and their habitat and set forth requirements pertaining to the monitoring and reporting of that taking.

*Subsistence Harvest of Marine Mammals*

There is no subsistence harvest of marine mammals in the Mariana Islands and, therefore, NMFS has determined that the issuance of 5-year regulations and subsequent LOAs for Navy training exercises in the MIRC would not have an unmitigable adverse impact on the availability of the affected species or stocks for subsistence use.

**ESA**

There are five marine mammal species and two sea turtle species that are listed as endangered under the ESA with confirmed or possible occurrence in the study area: Humpback whale, sei whale, fin whale, blue whale, sperm whale, hawksbill sea turtle and leatherback sea turtle. An additional three species of sea turtles are also listed as threatened under the ESA: green sea turtle, loggerhead sea turtle, and olive ridley sea turtle.

Pursuant to Section 7 of the ESA, the Navy has consulted with NMFS on this action. NMFS has also consulted internally on the issuance of regulations

under section 101(a)(5)(A) of the MMPA for this activity. In a Biological Opinion (BiOp), NMFS concluded that the Navy's activities in the MIRC and NMFS' issuance of these regulations are not likely to jeopardize the continued existence of threatened or endangered species or destroy or adversely modify any designated critical habitat.

Because of the difference between the statutes, it is possible that ESA analysis of the applicant's action could produce a take estimate that is different than the takes requested by the applicant (and analyzed for authorization by NMFS under the MMPA process), despite the fact that the same proposed action (i.e. number of sonar hours and explosive detonations) was being analyzed under each statute. When this occurs, NMFS staff coordinate to ensure that the most appropriate number of takes are authorized. For the Navy's proposed MIRC training, coordination with the Endangered Species Division indicates that they will likely allow for a lower level of take of ESA-listed marine mammals than were requested by the applicant (because their analysis indicates that fewer will be taken than estimated by the applicant). Therefore, the number of authorized takes in NMFS' LOA(s) will reflect the lower take numbers from the ESA consultation, though the specified activities (*i.e.*, number of sonar hours, etc.) will remain the same. Alternately, these regulations indicate the maximum number of takes that may be authorized under the MMPA.

The ITS(s) issued for each LOA will contain implementing terms and conditions to minimize the effect of the marine mammal take authorized through the 2010 LOA (and subsequent LOAs in 2011, 2012, 2013, and 2014). With respect to listed marine mammals, the terms and conditions of the ITSs will be incorporated into the LOAs.

## NEPA

NMFS has participated as a cooperating agency on the Navy's Draft Environmental Impact Statement (DEIS) for MIRC, which was published on January 30, 2009. NMFS subsequently adopted the Navy's EIS for the purpose of complying with the MMPA.

## Classification

This action does not contain any collection of information requirements for purposes of the Paperwork Reduction Act.

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 has certified to the Chief Counsel for Advocacy of the Small Business Administration that this final rule, if adopted, would not have a significant economic impact on a substantial number of small entities. The Regulatory Flexibility Act requires Federal agencies to prepare an analysis of a rule's impact on small entities whenever the agency is required to publish a notice of proposed rulemaking. However, a Federal agency may certify, pursuant to 5 U.S.C. 605 (b), that the action will not have a significant economic impact on a substantial number of small entities. Because the action described in this rule involves the tactical use of mid-frequency active sonar sources and explosives on Navy ranges, and the Navy is the sole entity that may conduct these activities on the MIRC, only the Navy will be directly affected by this rulemaking, not small governmental jurisdictions, small organizations, or small businesses, as defined by the Regulatory Flexibility Act (RFA). Any requirements imposed by a Letter of Authorization issued pursuant to these regulations, and any monitoring or reporting requirements imposed by these regulations, will be applicable only to the Navy. NMFS does not expect the issuance of these regulations or the associated LOAs to result in any impacts to small entities pursuant to the RFA. Because this action, if adopted, would directly affect the Navy and not a small entity, NMFS concludes the action would not result in a significant economic impact on a substantial number of small entities.

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 the effective date of the measures contained in the final rule. Navy, as the permittee, has informed NMFS that any delay of enacting the final rule would result in either: (1) A suspension of ongoing or planned naval training (including a major exercise currently scheduled for 2010 within the MIRC), which would disrupt vital training essential to national security; or (2) the Navy's procedural non-compliance with the MMPA (should the Navy conduct training/exercises without an LOA), thereby resulting in the potential for unauthorized takes of marine mammals. Moreover, the Navy is ready to implement the rule immediately.

Accordingly, these measures will become effective upon publication.

## List of Subjects in 50 CFR Part 218

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

Dated: July 20, 2010.

**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.*

## Subparts D through K [Reserved]

■ 2. Add and reserve Subparts D through K to part 218.

■ 3. Subpart L is added to part 218 to read as follows:

## Subpart L—Taking and Importing Marine Mammals; U.S. Navy's Mariana Islands Range Complex (MIRC)

Sec.

- 218.100 Specified activity and geographical area.
- 218.101 Effective dates.
- 218.102 Permissible methods of taking.
- 218.103 Prohibitions.
- 218.104 Mitigation.
- 218.105 Requirements for monitoring and reporting.
- 218.106 Applications for Letters of Authorization.
- 218.107 Letters of Authorization.
- 218.108 Renewal of Letters of Authorization and adaptive management.
- 218.109 Modifications to Letters of Authorization.

## Subpart L—Taking and Importing Marine Mammals; U.S. Navy's Mariana Islands Training Range Complex (MIRC)

### § 218.100 Specified activity and specified geographical area.

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

(b) The taking of marine mammals by the Navy may be authorized in a Letter of Authorization (LOA) if it occurs within the Mariana Islands Range Complex (MIRC) Study Area (as

depicted in Figure 1–1 in the Navy's application for MIRC), which is bounded by a pentagon with the following five corners: 16°46'29.3376" N. lat., 138°00'59.835" E. long.; 20°02'24.8094" N. lat., 140°10'13.8642" E. long.; 20°3'27.5538" N. lat., 149°17'41.0388" E. long.; 7°0'30.0702" N. lat., 149°16'14.8542" E. long.; and 6°59'24.633" N. lat., 138°1'29.7228" E. long.

(c) The taking of marine mammals by the Navy may be authorized in an LOA if it occurs incidental to the following activities within the designated amounts of use:

(1) The use of the following mid-frequency active sonar (MFAS) and high frequency active sonar (HFAS) sources for U.S. Navy anti-submarine warfare (ASW) training, maintenance, and research, development, testing and evaluation (RDT&E):

(i) AN/SQS–53 (hull-mounted active sonar)—up to 10865 hours over the course of 5 years (an average of 2173 hours per year);

(ii) AN/SQS–56 (hull-mounted active sonar)—up to 705 hours over the course of 5 years (an average of 141 hours per year);

(iii) AN/SSQ–62 (Directional Command Activated Sonobuoy System (DICASS) sonobuoys)—up to 8270 sonobuoys over the course of 5 years (an average of 1654 sonobuoys per year);

(iv) AN/AQS–22 (helicopter dipping sonar)—up to 2,960 dips over the course of 5 years (an average of 592 dips per year);

(v) AN/BQQ–10 (submarine hull-mounted sonar)—up to 60 hours over the course of 5 years (an average of 12 hours per year);

(vi) MK–48, MK–46, or MK–54 (torpedoes)—up to 200 torpedoes over the course of 5 years (an average of 40 torpedoes per year);

(vii) AN/SSQ–110 (IEER)—up to 530 buoys deployed over the course of 5 years (an average of 106 per year);

(viii) AN/SSQ–125 (AEER)—up to 530 buoys deployed over the course of 5 years (an average of 106 per year);

(ix) Range Pingers—up to 1,400 hours over the course of 5 years (an average of 280 hours per year); and

(x) PUTR Transponder—up to 1,400 hours over the course of 5 years (an average of 280 hours per year).

(2) The detonation of the underwater explosives indicated in this paragraph (c)(2)(i) conducted as part of the training events indicated in this paragraph (c)(2)(ii):

(i) Underwater Explosives (Net Explosive Weight (NEW)):

- (A) 5" Naval Gunfire (9.5 lbs NEW);
- (B) 76 mm rounds (1.6 lbs NEW);

(C) Maverick (78.5 lbs NEW);

(D) Harpoon (448 lbs NEW);

(E) MK–82 (238 lbs NEW);

(F) MK–83 (574 lbs NEW);

(G) MK–84 (945 lbs NEW);

(H) MK–48 (851 lbs NEW);

(I) Demolition Charges (10 lbs NEW);

(J) AN/SSQ–110A (IEER explosive sonobuoy—5 lbs NEW);

(K) Hellfire (16.5 lbs NEW);

(L) GBU 38/32/31.

(ii) Training Events:

(A) Gunnery Exercises (S–S GUNEX)—up to 60 exercises over the course of 5 years (an average of 12 per year);

(B) Bombing Exercises (BOMBEX)—up to 20 exercises over the course of 5 years (an average of 4 per year);

(C) Sinking Exercises (SINKEX)—up to 10 exercises over the course of 5 years (an average of 2 per year);

(D) Extended Echo Ranging and Improved Extended Echo Ranging (EER/IEER) Systems—up to 530 deployments over the course of 5 years (an average of 106 per year);

(E) Demolitions—up to 250 over the course of 5 years (an average of 50 per year); and

(F) Missile exercises (A–S MISSILEX)—up to 10 exercises over the course of 5 years (an average of 2 per year).

(d) The taking of marine mammals may also be authorized in an LOA for the activities and sources listed in § 218.100(c) should the amounts (*i.e.*, hours, dips, number of exercises) vary from those estimated in § 218.100(c), provided that the variation does not result in exceeding the amount of take indicated in § 218.102.

#### § 218.101 Effective dates.

Regulations are effective August 3, 2010 through August 3, 2015.

#### § 218.102 Permissible methods of taking.

(a) Under Letters of Authorization issued pursuant to §§ 216.106 and 218.107 of this chapter, the Holder of the Letter of Authorization (hereinafter "Navy") may incidentally, but not intentionally, take marine mammals within the area described in § 218.100(b), provided the activity is in compliance with all terms, conditions, and requirements of these regulations and the appropriate Letter of Authorization.

(b) The activities identified in § 218.100(c) must be conducted in a manner that minimizes, to the greatest extent practicable, any adverse impacts on marine mammals and their habitat.

(c) The incidental take of marine mammals under the activities identified in § 218.100(c) is limited to the species

listed in this paragraph (4), (5), and (6) of this section (c) by the indicated method of take and the indicated number of times (estimated based on the authorized amounts of sound source operation), but with the following allowances for annual variation in activities:

(1) In any given year, annual take, by harassment, of any species of marine mammal may not exceed the amount identified in paragraphs (b)(4) and (b)(5) of this section, for that species by more than 25% (a post-calculation/estimation of which must be provided in the annual LOA application);

(2) In any given year, annual take by harassment of all marine mammal species combined may not exceed the estimated total of all species combined, indicated in paragraphs (b)(4) and (b)(5) of this section, by more than 10%; and

(3) Over the course of the effective period of this subpart, total take, by harassment, of any species may not exceed the 5-year amounts indicated in paragraphs (b)(4) and (b)(5) of this section by more than 10%. A running calculation/estimation of takes of each species over the course of the years covered by the rule must be maintained.

(4) Level B Harassment:

(i) Mysticetes:

(A) Humpback whale (*Megaptera novaeangliae*)—4,025 (an average of 805 annually);

(B) Fin whale (*Balaenoptera physalus*)—910 (an average of 182 annually);

(C) Blue whale (*Balaenoptera musculus*)—650 (an average of 130 annually);

(D) Sei whale (*Balaenoptera borealis*)—1,625 (an average of 325 annually);

(E) Minke whale (*Balaenoptera acutorostrata*)—2,225 (an average of 445 annually);

(F) Bryde's whale (*Balaenoptera edeni*)—2,285 (an average of 457 annually); and

(G) Unidentified Baleopterid whales—360 (an average of 72 annually).

(ii) Odontocetes:

(A) Sperm whales (*Physeter macrocephalus*)—4,120 (an average of 824 annually);

(B) Killer whale (*Orcinus orca*)—1,150 (an average of 230 annually);

(C) Pygmy or dwarf sperm whales (*Kogia breviceps* or *Kogia sima*)—33,530 (an average of 6,706 annually);

(D) Blainville's beaked whales (*Mesoplodon densirostris*)—3,850 (an average of 770 annually);

(E) Cuvier's beaked whales (*Ziphius cavirostris*)—18,140 (an average of 3,628 annually);

(F) Ginkgo-toothed beaked whales (*Mesoplodon ginkgodens*)—2,150 (an average of 430 annually);

(G) Longman's beaked whale (*Indopacetus pacificus*)—1,030 (an average of 206 annually);

(H) Short-finned pilot whale (*Globicephala macrorhynchus*)—11,370 (an average of 2,274 annually);

(I) Melon-headed whale (*Peponocephala electra*)—14,315 (an average of 2,863 annually);

(J) Pygmy killer whale (*Feresa attenuata*)—800 (an average of 160 annually);

(K) False killer whale (*Pseudorca crassidens*)—6,445 (an average of 1,289 annually);

(L) Striped dolphin (*Stenella coeruleoalba*)—44,290 (an average of 8,858 annually);

(M) Short-beaked common dolphin (*Delphinus delphis*)—4,715 (an average of 943 annually);

(N) Risso's dolphin (*Grampus griseus*)—33,865 (an average of 6,773 annually);

(O) Bottlenose dolphin (*Tursiops truncatus*)—855 (an average of 171 annually);

(P) Fraser's dolphin (*Lagenodelphis hosei*)—23,075 (an average of 4,615 annually);

(Q) Pantropical spotted dolphin (*Stenella attenuata*)—162,495 (an average of 32,499 annually);

(R) Rough-toothed dolphin (*Steno bredanensis*)—1,205 (an average of 241 annually);

(S) Spinner dolphin (*Stenella longirostris*)—10,720 (an average of 2,144 annually); and

(T) Unidentified delphinid—7,690 (an average of 1,538 annually).

(5) Level A Harassment:

(i) Sperm whale—5 (an average of 1 annually);

(ii) Pantropical spotted dolphin—5 (an average of 1 annually);

(6) Level A Harassment and/or mortality of no more than 10 beaked whales (total), of any of the species listed in § 218.102(c)(4)(ii)(D) through (G) over the course of the 5-year regulations.

#### § 218.103 Prohibitions.

No person in connection with the activities described in § 218.100 may:

(a) Take any marine mammal not specified in § 218.102(c);

(b) Take any marine mammal specified in § 218.102(c) other than by incidental take as specified in §§ 218.102(c)(1) and (c)(2);

(c) Take a marine mammal specified in § 218.102(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 and 218.107 of this chapter.

#### § 218.104 Mitigation.

(a) When conducting training and utilizing the sound sources or explosives identified in § 218.100(c), the mitigation measures contained in a Letter of Authorization issued under §§ 216.106 and 218.107 of this chapter must be implemented. These mitigation measures include, but are not limited to:

(1) Personnel Training:

(i) All commanding officers (COs), executive officers (XOs), lookouts, Officers of the Deck (OODs), junior OODs (JOODs), maritime patrol aircraft aircrews, and Anti-submarine Warfare (ASW)/Mine Warfare (MIW) helicopter crews shall complete the NMFS-approved Marine Species Awareness Training (MSAT) by viewing the U.S. Navy MSAT digital versatile disk (DVD). All bridge lookouts shall complete both parts one and two of the MSAT; part two is optional for other personnel.

(ii) Navy lookouts shall undertake extensive training in order to qualify as a watchstander in accordance with the Lookout Training Handbook (Naval Education and Training Command [NAVEDTRA] 12968-D).

(iii) Lookout training shall include on-the-job instruction under the supervision of a qualified, experienced lookout. Following successful completion of this supervised training period, lookouts shall complete the Personal Qualification Standard Program, certifying that they have demonstrated the necessary skills (such as detection and reporting of partially submerged objects). Personnel being trained as lookouts can be counted among required lookouts as long as supervisors monitor their progress and performance.

(iv) Lookouts shall be trained in the most effective means to ensure quick and effective communication within the command structure in order to facilitate implementation of protective measures if marine species are spotted.

(v) All lookouts onboard platforms involved in ASW training events will review the NMFS-approved Marine Species Awareness Training material prior to use of MFAS.

(vi) All COs, XOs, and officers standing watch on the bridge will review the Marine Species Awareness Training material prior to a training event employing the use of MFAS/HFAS.

(2) General Operating Procedures (for all training types):

(i) Prior to major exercises, a Letter of Instruction, Mitigation Measures Message or Environmental Annex to the Operational Order shall be issued to further disseminate the personnel training requirement and general marine species protective measures.

(ii) COs shall make use of marine species detection cues and information to limit interaction with marine mammals to the maximum extent possible consistent with safety of the ship.

(iii) While underway, surface vessels shall have at least two lookouts with binoculars; surfaced submarines shall have at least one lookout with binoculars. Lookouts already posted for safety of navigation and man-overboard precautions may be used to fill this requirement. As part of their regular duties, lookouts will watch for and report to the OOD the presence of marine mammals.

(iv) On surface vessels equipped with a multi-function active sensor, pedestal mounted "Big Eye" (20x110) binoculars shall be properly installed and in good working order to assist in the detection of marine mammals in the vicinity of the vessel.

(v) Personnel on lookout shall employ visual search procedures employing a scanning methodology in accordance with the Lookout Training Handbook (NAVEDTRA 12968-D).

(vi) After sunset and prior to sunrise, lookouts shall employ Night Lookouts Techniques in accordance with the Lookout Training Handbook (NAVEDTRA 12968-D).

(vii) While in transit, naval vessels shall be alert at all times, use extreme caution, and proceed at a "safe speed", which means the speed at which the CO can maintain crew safety and effectiveness of current operational directives, so that the vessel can take action to avoid a collision with any marine mammal.

(viii) When marine mammals have been sighted in the area, Navy vessels shall increase vigilance and take all reasonable actions to avoid collisions and close interaction of naval assets and marine mammals. Such action may include changing speed and/or direction and are dictated by environmental and other conditions (e.g., safety, weather).

(ix) Navy aircraft participating in exercises at-sea shall conduct and maintain surveillance for marine mammals as long as it does not violate safety constraints or interfere with the accomplishment of primary operational duties.

(x) All marine mammal detections shall be immediately reported to assigned Aircraft Control Unit for

further dissemination to ships in the vicinity of the marine species as appropriate when it is reasonable to conclude that the course of the ship will likely result in a closing of the distance to the detected marine mammal.

(xi) Naval vessels will maneuver to keep at least 1,500 ft (500 yds) away from any observed whale in the vessel's path and avoid approaching whales head-on. These requirements do not apply if a vessel's safety is threatened, such as when change of course will create an imminent and serious threat to a person, vessel, or aircraft, and to the extent vessels are restricted in their ability to maneuver. Restricted maneuverability includes, but is not limited to, situations when vessels are engaged in dredging, submerged activities, launching and recovering aircraft or landing craft, minesweeping activities, replenishment while underway and towing activities that severely restrict a vessel's ability to deviate course. Vessels will take reasonable steps to alert other vessels in the vicinity of the whale. Given rapid swimming speeds and maneuverability of many dolphin species, naval vessels would maintain normal course and speed on sighting dolphins unless some condition indicated a need for the vessel to maneuver.

(3) Operating Procedures (for Anti-submarine Warfare (ASW) Operations):

(i) On the bridge of surface ships, there shall always be at least three people on watch whose duties include observing the water surface around the vessel.

(ii) All surface ships participating in ASW training events shall have, in addition to the three personnel on watch noted in (i), at least two additional personnel on watch as lookouts at all times during the exercise.

(iii) Personnel on lookout and officers on watch on the bridge will have at least one set of binoculars available for each person to aid in the detection of marine mammals.

(iv) Personnel on lookout shall be responsible for reporting all objects or anomalies sighted in the water (regardless of the distance from the vessel) to the Officer of the Deck, since any object or disturbance (e.g., trash, periscope, surface disturbance, discoloration) in the water may be indicative of a threat to the vessel and its crew or indicative of a marine mammal that may need to be avoided.

(v) All personnel engaged in passive acoustic sonar operation (including aircraft, surface ships, or submarines) shall monitor for marine mammal vocalizations and report the detection of any marine mammal to the appropriate

watch station for dissemination and appropriate action.

(vi) During MFAS operations, personnel shall utilize all available sensor and optical systems (such as night vision goggles) to aid in the detection of marine mammals.

(vii) Aircraft with deployed sonobuoys shall use only the passive capability of sonobuoys when marine mammals are detected within 200 yds (183 m) of the sonobuoy.

(viii) Helicopters shall observe/survey the vicinity of an ASW exercise for 10 minutes before the first deployment of active (dipping) sonar in the water.

(ix) Helicopters shall not dip their sonar within 200 yards of a marine mammal and shall cease pinging if a marine mammal closes within 200 yards after pinging has begun.

(x)(A) Safety Zones—When marine mammals are detected by any means (aircraft, shipboard lookout, or acoustically) the Navy shall ensure that sonar transmission levels are limited to at least 6 dB below normal operating levels if any detected marine mammals are within 1000 yards (914 m) of the sonar dome (the bow) (*i.e.*, limit to at most 229 dB for AN/SQS-53 and 219 dB for AN/SQS-56, etc.). Ships and submarines shall continue to limit maximum transmission levels by this 6-dB factor until the animal has been seen to leave the 1000-yd safety zone, has not been detected for 30 minutes, or the vessel has transited more than 2,000 yds (1829 m) beyond the location of the last detection.

(B) When marine mammals are detected by any means (aircraft, shipboard lookout, or acoustically) the Navy shall ensure that sonar transmission levels are limited to at least 10 dB below normal operating levels if any detected marine mammals are within 500 yards (457 m) of the sonar dome (the bow). Ships and submarines shall continue to limit maximum ping levels by this 10-dB factor until the animal has been seen to leave the 500-yd safety zone, has not been detected for 30 minutes, or the vessel has transited more than 2,000 yds (1829 m) beyond the location of the last detection.

(C) When marine mammals are detected by any means (aircraft, shipboard lookout, or acoustically) the Navy shall ensure that sonar transmission ceases if any detected marine mammals are within 200 yards (183 m) of the sonar dome (the bow). Sonar shall not resume until the animal has been seen to leave the 200-yd safety zone, has not been detected for 30 minutes, or the vessel has transited

more than 2,000 yds (457 m) beyond the location of the last detection.

(D) Special conditions applicable for dolphins and porpoises only: If, after conducting an initial maneuver to avoid close quarters with dolphins or porpoises, the OOD concludes that dolphins or porpoises are deliberately closing to ride the vessel's bow wave, no further mitigation actions are necessary while the dolphins or porpoises continue to exhibit bow wave riding behavior.

(xi) Prior to start up or restart of active sonar, operators will check that the 1000-m Safety Zone radius around the sound source is clear of marine mammals.

(xii) Active sonar levels (generally)—Navy shall operate active sonar at the lowest practicable level, not to exceed 235 dB, except as required to meet tactical training objectives.

(xiii) Submarine sonar operators will review detection indicators of close-aboard marine mammals prior to the commencement of ASW training events involving MFAS.

(E) If the need for power-down should arise (as detailed in 218.114(a)(3)(x)) when the Navy is operating a hull-mounted or sub-mounted source above 235 dB (infrequent), the Navy shall follow the requirements as though they were operating at 235 dB—the normal operating level (*i.e.*, the first power-down will be to 229 dB, regardless of at what level above 235 dB active sonar was being operated).

(4) Operating Procedures for Underwater Detonations (up to 10-lb charges):

(i) Exclusion Zones—All demolitions and ship mine countermeasures training exercises involving the use of explosive charges must include exclusion zones for marine mammals to prevent physical and/or acoustic effects to those species. These exclusion zones shall extend in a 700-yard arc radius around the detonation site. Should a marine mammal be present within the surveillance area, the explosive event shall not be started until the animal leaves the area.

(ii) Pre-Exercise Surveys—For Demolition and Ship Mine Countermeasures Operations, pre-exercise surveys shall be conducted for 30 minutes prior to the commencement of the scheduled explosive event. The survey may be conducted from the surface, by divers, and/or from the air, and personnel shall be alert to the presence of any marine mammal. Should such an animal be present within the survey area, the explosive event shall not be started until the animal voluntarily leaves the area. The



Navy will ensure the area is clear of marine mammals for a full 30 minutes prior to initiating the explosive event. Personnel will record any marine mammal observations during the exercise as well as measures taken if species are detected within the exclusion zone.

(iii) Post-Exercise Surveys—Surveys within the same exclusion zone radius shall also be conducted within 30 minutes after the completion of the explosive event.

(iv) Reporting—If there is evidence that a marine mammal may have been stranded, injured or killed by the action, Navy training activities shall be immediately suspended and the situation immediately reported by the participating unit to the Officer in Charge of the Exercise (OCE), who will follow Navy procedures for reporting the incident to Commander, Pacific Fleet, Commander, Navy Region Marianas, Environmental Director, and the chain-of-command. The situation shall also be reported to NMFS (see Stranding Plan for details).

(5) Sinking Exercise:

(i) All weapons firing shall be conducted during the period 1 hour after official sunrise to 30 minutes before official sunset.

(ii) An exclusion zone with a radius of 1.0 nm (1.9 km) will be established around each target. An additional buffer of 0.5 nm (0.9 km) will be added to account for errors, target drift, and animal movements. Additionally, a safety zone, which will extend beyond the buffer zone by an additional 0.5 nm (0.9 km), shall be surveyed. Together, the zone extends out 2 nm (3.7 km) from the target.

(iii) A series of surveillance overflights shall be conducted within the 2-nm zone around the target, prior to and during the exercise, when feasible. Survey protocol shall be as follows:

(A) Overflights within the 2-nm zone around the target shall be conducted in a manner that optimizes the surface area of the water observed. This may be accomplished through the use of the Navy's Search and Rescue Tactical Aid, which provides the best search altitude, ground speed, and track spacing for the discovery of small, possibly dark objects in the water based on the environmental conditions of the day. These environmental conditions include the angle of sun inclination, amount of daylight, cloud cover, visibility, and sea state.

(B) All visual surveillance activities shall be conducted by Navy personnel trained in visual surveillance. At least one member of the mitigation team will

have completed the Navy's marine mammal training program for lookouts.

(C) In addition to the overflights, the 2-nm zone around the target shall be monitored by passive acoustic means, when assets are available. This passive acoustic monitoring would be maintained throughout the exercise. Additionally, passive sonar onboard submarines may be utilized to detect any vocalizing marine mammals in the area. The OCE will be informed of any aural detection of marine mammals and will include this information in the determination of when it is safe to commence the exercise.

(D) On each day of the exercise, aerial surveillance of the 2-nm zone around the target shall commence 2 hours prior to the first firing.

(E) The results of all visual, aerial, and acoustic searches shall be reported immediately to the OCE. No weapons launches or firing may commence until the OCE declares this 2-nm zone around the target is free of marine mammals.

(F) If a marine mammal is observed within the 2-nm zone around the target, firing will be delayed until the animal is re-sighted outside the 2-nm zone around the target, or 30 minutes have elapsed. After 30 minutes, if the animal has not been re-sighted it can be assumed to have left the 2-nm zone around the target. The OCE will determine if the marine mammal is in danger of being adversely affected by commencement of the exercise.

(G) During breaks in the exercise of 30 minutes or more, the 2-nm zone around the target shall again be surveyed for any marine mammal. If marine mammals are sighted within the 2-nm zone around the target, the OCE shall be notified, and the procedures described in this section shall be followed.

(H) Upon sinking of the vessel, a final surveillance of the 2-nm zone around the target shall be monitored for 2 hours, or until sunset, to verify that no marine mammals were harmed.

(iv) Aerial surveillance shall be conducted using helicopters or other aircraft based on necessity and availability. The Navy has several types of aircraft capable of performing this task; however, not all types are available for every exercise. For each exercise, the available asset best suited for identifying objects on and near the surface of the ocean shall be used. These aircraft shall be capable of flying at the slow safe speeds necessary to enable viewing of marine vertebrates with unobstructed, or minimally obstructed, downward and outward visibility. The exclusion and safety zone surveys may be cancelled in the event that a mechanical problem, emergency search

and rescue, or other similar and unexpected event preempts the use of one of the aircraft onsite for the exercise.

(v) Every attempt shall be made to conduct the exercise in sea states that are ideal for marine mammal sighting, Beaufort Sea State 3 or less. In the event of a 4 or above, survey efforts shall be increased within the 2-nm zone around the target. This shall be accomplished through the use of an additional aircraft, if available, and conducting tight search patterns.

(vi) The exercise shall not be conducted unless the 2-nm zone around the target could be adequately monitored visually. Should low cloud cover or surface visibility prevent adequate visual monitoring as described previously, the exercise would be delayed until conditions improved, and all of the above monitoring criteria could be met.

(vii) In the event that any marine mammals are observed to be harmed in the area, a detailed description of the animal shall be taken, the location noted, and if possible, photos taken of the marine mammal. This information shall be provided to NMFS via the Navy's regional environmental coordinator for purposes of identification (see the Stranding Plan for detail).

(viii) An after action report detailing the exercise's time line, the time the surveys commenced and terminated, amount, and types of all ordnance expended, and the results of survey efforts for each event shall be submitted to NMFS.

(6) Surface-to-Surface Gunnery (up to 5-inch Explosive Rounds):

(i) For exercises using targets towed by a vessel, target-towing vessels shall maintain a trained lookout for marine mammals when feasible. If a marine mammal is sighted in the vicinity, the tow vessel will immediately notify the firing vessel, which will suspend the exercise until the area is clear.

(ii) A 600 yard (585 m) radius buffer zone will be established around the intended target.

(iii) From the intended firing position, trained lookouts will survey the buffer zone for marine mammals prior to commencement and during the exercise as long as practicable. Due to the distance between the firing position and the buffer zone, lookouts are only expected to visually detect breaching whales, whale blows, and large pods of dolphins and porpoises.

(iv) The exercise will be conducted only when the buffer zone is visible and marine mammals are not detected within it.

(7) Surface-to-Surface Gunnery (non-explosive rounds):

(i) A 200-yd (183 m) radius buffer zone shall be established around the intended target.

(ii) From the intended firing position, trained lookouts shall survey the buffer zone for marine mammals prior to commencement and during the exercise as long as practicable.

(iii) If available, target towing vessels shall maintain a lookout (unmanned towing vessels will not have a lookout available). If a marine mammal is sighted in the vicinity of the exercise, the tow vessel shall immediately notify the firing vessel in order to secure gunnery firing until the area is clear.

(iv) The exercise shall be conducted only when the buffer zone is visible and marine mammals are not detected within the target area and the buffer zone.

(8) Surface-to-Air Gunnery (Explosive and Non-explosive Rounds):

(i) Vessels will orient the geometry of gunnery exercises in order to prevent debris from falling in the area of sighted marine mammals.

(ii) Vessels will attempt to recover any parachute deploying aerial targets to the extent practicable (and their parachutes if feasible) to reduce the potential for entanglement of marine mammals.

(iii) Target towing aircraft shall maintain a lookout if feasible. If a marine mammal is sighted in the vicinity of the exercise, the tow aircraft will immediately notify the firing vessel in order to secure gunnery firing until the area is clear.

(9) Air-to-Surface Gunnery (Explosive and Non-explosive Rounds):

(i) A 200 yard (183 m) radius buffer zone will be established around the intended target.

(ii) If surface vessels are involved, lookout(s) will visually survey the buffer zone for marine mammals to and during the exercise.

(iii) Aerial surveillance of the buffer zone for marine mammals will be conducted prior to commencement of the exercise. Aerial surveillance altitude of 500 feet to 1,500 feet (152–456 m) is optimum. Aircraft crew/pilot will maintain visual watch during exercises. Release of ordnance through cloud cover is prohibited; aircraft must be able to actually see ordnance impact areas.

(iv) The exercise will be conducted only if marine mammals are not visible within the buffer zone.

(10) Small Arms Training (Grenades, Explosive and Non-explosive Rounds)—Lookouts will visually survey for marine mammals. Weapons will not be fired in the direction of known or observed marine mammals.

(11) Air-to-Surface At-sea Bombing Exercises (explosive bombs and rockets):

(i) If surface vessels are involved, trained lookouts shall survey for marine mammals. Ordnance shall not be targeted to impact within 1,000 yds (914 m) of known or observed marine mammals.

(ii) A 1,000 yd (914 m) radius buffer zone shall be established around the intended target.

(iii) Aircraft shall visually survey the target and buffer zone for marine mammals prior to and during the exercise. The survey of the impact area shall be made by flying at 1,500 ft (457 m) or lower, if safe to do so, and at the slowest safe speed. When safety or other considerations require the release of weapons without the releasing pilot having visual sight of the target area, a second aircraft, the “wingman,” will clear the target area and perform the clearance and observation functions required before the dropping plane may release its weapons. Both planes must have direct communication to assure immediate notification to the dropping plane that the target area may have been fouled by encroaching animals or people. The clearing aircraft will assure it has visual site of the target area at a maximum height of 1500 ft. The clearing plane will remain within visual sight of the target until required to clear the area for safety reasons. Survey aircraft shall employ most effective search tactics and capabilities.

(iv) The exercise will be conducted only if marine mammals are not visible within the buffer zone.

(12) Air-to-Surface At-Sea Bombing Exercises (Non-explosive Bombs and Rockets):

(i) If surface vessels are involved, trained lookouts will survey for marine mammals. Ordnance shall not be targeted to impact within 1,000 yards (914 m) of known or observed marine mammals.

(ii) A 1,000 yard (914 m) radius buffer zone will be established around the intended target.

(iii) Aircraft will visually survey the target and buffer zone for marine mammals prior to and during the exercise. The survey of the impact area will be made by flying at 1,500 feet (456 m) or lower, if safe to do so, and at the slowest safe speed. When safety or other considerations require the release of weapons without the releasing pilot having visual sight of the target area, a second aircraft, the “wingman,” will clear the target area and perform the clearance and observation functions required before the dropping plane may release its weapons. Both planes must

have direct communication to assure immediate notification to the dropping plane that the target area may have been fouled by encroaching animals or people. The clearing aircraft will assure it has visual site of the target area at a maximum height of 1500 ft. The clearing plane will remain within visual sight of the target until required to clear the area for safety reasons. Survey aircraft shall employ most effective search tactics and capabilities.

(iv) The exercise will be conducted only if marine mammals and are not visible within the buffer zone.

(13) Air-to-Surface Missile Exercises (explosive and non-explosive):

(i) Aircraft will visually survey the target area for marine mammals. Visual inspection of the target area will be made by flying at 1,500 (457 m) feet or lower, if safe to do so, and at slowest safe speed. Firing or range clearance aircraft must be able to actually see ordnance impact areas.

(ii) Explosive ordnance shall not be targeted to impact within 1,800 yds (1646 m) of sighted marine mammals.

(14) Aircraft Training Activities Involving Non-Explosive Devices:

An exclusion zone of 200 yds around the target location, therefore, shall be clear of marine mammals. Pre- and post-surveillance and reporting requirements outlined for underwater detonations shall be implemented during Mining Training Activities.

(15) Extended Echo Ranging/Improved Extended Echo Ranging and Advanced Extended Echo-ranging (EER/IEER/AEER)—The following mitigation measures shall be used with the employment of IEER/AEER sonobuoys:

(i) Crews shall conduct visual reconnaissance of the drop area prior to laying their intended sonobuoy pattern. This search shall be conducted at an altitude below 500 yd (457 m) at a slow speed, if operationally feasible and weather conditions permit. In dual aircraft operations, crews are allowed to conduct coordinated area clearances.

(ii) For IEER (AN/SSQ–110A), crews shall conduct a minimum of 30 minutes of visual and aural monitoring of the search area prior to commanding the first post detonation. This 30-minute observation period may include pattern deployment time.

(iii) For any part of the intended sonobuoy pattern where a post (source/receiver sonobuoy pair) will be deployed within 1,000 yd (914 m) of observed marine mammal activity, the Navy shall deploy the receiver ONLY (i.e., not the source) and monitor while conducting a visual search. When marine mammals are no longer detected within 1,000 yd (914 m) of the intended

post position, the source sonobuoy (AN/SSQ-110A/SSQ-125) will be co-located with the receiver.

(iv) When operationally feasible, Navy crews shall conduct continuous visual and aural monitoring of marine mammal activity. This shall include monitoring of own-aircraft sensors from the time of the first sensor placement until the aircraft have left the area and are out of RF range of these sensors.

(v) *Aural Detection.* If the presence of marine mammals is detected aurally, then that shall cue the Navy aircrew to increase the diligence of their visual surveillance. Subsequently, if no marine mammals are visually detected, then the crew may continue multi-static active search.

(vi) *Visual Detection.* If marine mammals are visually detected within 1,000 yd (914 m) of the explosive source sonobuoy (AN/SSQ-110A/SSQ-125) intended for use, then that payload shall not be activated. Aircrews may utilize this post once the marine mammals have not been re-sighted for 30 minutes, or are observed to have moved outside the 1,000 yd (914 m) safety buffer. Aircrews may shift their multi-static active search to another post, where marine mammals are outside the 1,000 yd (914 m) safety buffer.

(vii) For IEER (AN/SSQ-110A), aircrews shall make every attempt to manually detonate the unexploded charges at each post in the pattern prior to departing the operations area by using the "Payload 1 Release" command followed by the "Payload 2 Release" command. Aircrews shall refrain from using the "Scuttle" command when two payloads remain at a given post. Aircrews shall ensure that a 1,000 yd (914 m) safety buffer, visually clear of marine mammals, is maintained around each post as is done during active search operations.

(viii) Aircrews shall only leave posts with unexploded charges in the event of a sonobuoy malfunction, an aircraft system malfunction, or when an aircraft must immediately depart the area due to issues such as fuel constraints, inclement weather, and in-flight emergencies. In these cases, the sonobuoy will self-scuttle using the secondary or tertiary method.

(ix) The Navy shall ensure all payloads are accounted for. Explosive source sonobuoys (AN/SSQ-110A) that cannot be scuttled shall be reported as unexploded ordnance via voice communications while airborne, then upon landing via naval message.

(x) Marine mammal monitoring shall continue until out of own-aircraft sensor range.

(16) The Navy shall implement the "Stranding Response Plan for Major Navy Training Exercises in the MIRC" (available at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>), which is incorporated herein by reference, including the following measures:

(i) *Shutdown Procedures.* When an Uncommon Stranding Event (USE—defined in § 216.271) occurs during a Major Training Exercise (MTE) (as defined in the Stranding Plan, meaning including Multi-strike group exercises, Joint Expeditionary exercises, and Marine Air Ground Task Force exercises in the MIRC), the Navy shall implement the procedures described in this section.

(A) The Navy shall implement a Shutdown (as defined in the Stranding Response Plan for MIRC) when advised by a NMFS Office of Protected Resources Headquarters Senior Official designated in the MIRC Stranding Communication Protocol that a USE (as defined in the Stranding Response Plan for MIRC) involving live animals has been identified and that at least one live animal is located in the water. NMFS and Navy shall communicate, as needed, regarding the identification of the USE and the potential need to implement shutdown procedures.

(B) Any shutdown in a given area shall remain in effect in that area until NMFS advises the Navy that the subject(s) of the USE at that area die or are euthanized, or that all live animals involved in the USE at that area have left the area (either of their own volition or herded).

(C) If the Navy finds an injured or dead marine mammal floating at sea during an MTE, the Navy shall notify NMFS immediately or as soon as operational security considerations allow. The Navy shall provide NMFS with species or description of the animal(s), the condition of the animal(s) including carcass condition if the animal(s) is/are dead, location, time of first discovery, observed behaviors (if alive), and photo or video of the animals (if available). Based on the information provided, NMFS shall determine if, and advise the Navy whether, a modified shutdown is appropriate on a case-by-case basis.

(D) In the event, following a USE, that: (a) Qualified individuals are attempting to herd animals back out to the open ocean and animals are not willing to leave, or (b) animals are seen repeatedly heading for the open ocean but turning back to shore, NMFS and the Navy shall coordinate (including an investigation of other potential anthropogenic stressors in the area) to determine if the proximity of MFAS/

HFAS activities or explosive detonations, though farther than 14 nm from the distressed animal(s), is likely decreasing the likelihood that the animals return to the open water. If so, NMFS and the Navy shall further coordinate to determine what measures are necessary to further minimize that likelihood and implement those measures as appropriate.

(ii) Within 72 hours of NMFS notifying the Navy of the presence of a USE, the Navy shall provide available information to NMFS (per the MIRC Communication Protocol) regarding the location, number and types of acoustic/explosive sources, direction and speed of units using MFAS/HFAS, and marine mammal sightings information associated with training activities occurring within 80 nm (148 km) and 72 hours prior to the USE event. Information not initially available regarding the 80 nm (148 km), 72 hours, period prior to the event shall be provided as soon as it becomes available. The Navy shall provide NMFS investigative teams with additional relevant unclassified information as requested, if available.

(b) [Reserved]

#### **§ 218.105 Requirements for monitoring and reporting.**

(a) *General Notification of Injured or Dead Marine Mammals.* Navy personnel shall ensure that NMFS is notified immediately ((see Communication Plan) or as soon as clearance procedures allow) if an injured, stranded, or dead marine mammal is found during or shortly after, and in the vicinity of, any Navy training exercise utilizing MFAS, HFAS, or underwater explosive detonations. The Navy will provide NMFS with the name of 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 of the animal(s) (if available). In the event that an injured, stranded, or dead marine mammal is found by the Navy that is not in the vicinity of, or during or shortly after, MFAS, HFAS, or underwater explosive detonations, the Navy will report the same information as listed above as soon as operationally feasible and clearance procedures allow.

(b) *General Notification of Ship Strike.* In the event of a ship strike by any Navy vessel, at any time or place, the Navy shall do the following:

(1) 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 whether its status is unknown.

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

(3) Report to NMFS the vessel length, speed, and heading as soon as feasible.

(4) Provide NMFS a photo or video of the animal(s), if equipment is available.

(c) The Navy must conduct all monitoring and/or research required under the Letter of Authorization, including abiding by the annual MIRC Monitoring Plan. (<http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>)

(d) *Report on Monitoring required in paragraph (c) of this section.* The Navy shall submit a report annually describing the implementation and results of the monitoring required in paragraph (c) of this section. Required submission date will be identified each year in the LOA. Navy will standardize data collection methods across ranges to allow for comparison in different geographic locations.

(e) *Sonar Exercise Notification.* The Navy shall submit to the NMFS Office of Protected Resources (specific contact information to be provided in LOA) either an electronic (preferably) or verbal report within fifteen calendar days after the completion of any Major Training Exercise for Reporting (MTER) indicating:

- (1) Location of the exercise;
- (2) Beginning and end dates of the exercise; and
- (3) Type of exercise.

(f) *Annual MIRC Report.* The Navy will submit an Annual Exercise MIRC Report every year. This report shall contain the subsections and information indicated below.

(1) *MFAS/HFAS Major Training Exercises*—This section shall contain the following information for the following Coordinated and Strike Group exercises, which for simplicity will be referred to as MTERs: Joint Multi-strike Group Exercises; Joint Expeditionary Exercises; and Marine Air Ground Task Force MIRC:

(i) *Exercise Information* (for each MTER):

- (A) Exercise designator;
- (B) Date that exercise began and ended;
- (C) Location;
- (D) Number and types of active sources used in the exercise;
- (E) Number and types of passive acoustic sources used in exercise;
- (F) Number and types of vessels, aircraft, etc., participating in exercise;

(G) Total hours of observation by watchstanders;

(H) Total hours of all active sonar source operation;

(I) Total hours of each active sonar source (along with explanation of how hours are calculated for sources typically quantified in alternate way (buoys, torpedoes, etc.)); and

(J) Wave height (high, low, and average during exercise).

(ii) *Individual marine mammal sighting info* (for each sighting in each MTER):

- (A) Location of sighting;
- (B) Species (if not possible—indication of whale/dolphin/pinniped);
- (C) Number of individuals;
- (D) Calves observed (y/n);
- (E) Initial Detection Sensor;
- (F) Indication of specific type of platform observation made from (including, for example, what type of surface vessel, i.e., FFG, DDG, or CG);

(G) Length of time observers maintained visual contact with marine mammal(s);

(H) Wave height (in feet);

(I) Visibility;

(J) Sonar source in use (y/n);

(K) Indication of whether animal is <200 yd, 200–500 yd, 500–1,000 yd, 1,000–2,000 yd, or >2,000 yd from sonar source in paragraph (f)(1)(i)(J) of this section;

(L) *Mitigation Implementation.*

Whether operation of sonar sensor was delayed, or sonar was powered or shut down, and how long the delay was;

(M) If source in use in paragraph (f)(1)(i)(J) is hullmounted, true bearing of animal from ship, true direction of ship's travel, and estimation of animal's motion relative to ship (opening, closing, parallel); and

(N) *Observed behavior.* Watchstanders shall describe, in plain language and without trying to categorize in any way, the observed behavior of the animals (such as animal closing to bow ride, paralleling course/speed, floating on surface and not swimming, etc.).

(iii) An evaluation (based on data gathered during all of the MTERs) of the effectiveness of mitigation measures designed to avoid exposing marine mammals to MFAS. This evaluation shall identify the specific observations that support any conclusions the Navy reaches about the effectiveness of the mitigation.

(2) *ASW Summary.* This section shall include the following information as summarized from non-major training exercises (unit-level exercises, such as TRACKEXs):

(i) *Total Hours.* Total annual hours of each type of sonar source (along with explanation of how hours are calculated

for sources typically quantified in alternate way (buoys, torpedoes, etc.));

(ii) *Cumulative Impacts.* To the extent practicable, the Navy, in coordination with NMFS, shall develop and implement a method of annually reporting non-major training (i.e., ULT) utilizing hull-mounted sonar. The report shall present an annual (and seasonal, where practicable) depiction of non-major training exercises geographically across MIRC. The Navy shall include (in the MIRC annual report) a brief annual progress update on the status of the development of an effective and unclassified method to report this information until an agreed-upon (with NMFS) method has been developed and implemented.

(3) *Sinking Exercises (SINKEXs).* This section shall include the following information for each SINKEX completed that year:

(i) *Exercise info:*

(A) Location;

(B) Date and time exercise began and ended;

(C) Total hours of observation by watchstanders before, during, and after exercise;

(D) Total number and types of rounds expended/explosives detonated;

(E) Number and types of passive acoustic sources used in exercise;

(F) Total hours of passive acoustic search time;

(G) Number and types of vessels, aircraft, etc., participating in exercise;

(H) Wave height in feet (high, low and average during exercise); and

(I) Narrative description of sensors and platforms utilized for marine mammal detection and timeline illustrating how marine mammal detection was conducted.

(ii) *Individual marine mammal observation during SINKEX* (by Navy lookouts) information:

(A) Location of sighting;

(B) Species (if not possible—

indication of whale/dolphin/pinniped);

(C) Number of individuals;

(D) Calves observed (y/n);

(E) Initial detection sensor;

(F) Length of time observers maintained visual contact with marine mammal;

(G) Wave height;

(H) Visibility;

(I) Whether sighting was before, during, or after detonations/exercise, and how many minutes before or after;

(J) Distance of marine mammal from actual detonations (or target spot if not yet detonated)—use four categories to define distance:

(1) The modeled injury threshold radius for the largest explosive used in that exercise type in that OPAREA (TBD m for SINKEX in MIRC);

(2) The required exclusion zone (1 nm for SINKEK in MIRC);

(3) The required observation distance (if different than the exclusion zone (2 nm for SINKEK in MIRC); and

(4) Greater than the required observed distance. For example, in this case, the observer shall indicate if < TBD m, from 426 m–1 nm, from 1 nm–2 nm, and >2 nm.

(K) Observed behavior—Watchstanders will describe, in plain language and without trying to categorize in any way, the observed behavior of the animals (such as animal closing to bow ride, paralleling course/speed, floating on surface and not swimming etc.), including speed and direction.

(L) Resulting mitigation implementation—Indicate whether explosive detonations were delayed, ceased, modified, or not modified due to marine mammal presence and for how long.

(M) If observation occurs while explosives are detonating in the water, indicate munitions type in use at time of marine mammal detection.

(4) Improved Extended Echo-Ranging System (IEER)/Advanced Extended Echo-Ranging (AEER) Summary:

(i) Total number of IEER and AEER events conducted in MIRC;

(ii) Total expended/detonated rounds (buoys); and

(iii) Total number of self-scuttled IEER rounds.

(5) *Explosives Summary*. The Navy is in the process of improving the methods used to track explosive use to provide increased granularity. To the extent practicable, the Navy shall provide the information described below for all of their explosive exercises. Until the Navy is able to report in full the information below, they will provide an annual update on the Navy's explosive tracking methods, including improvements from the previous year.

(i) Total annual number of each type of explosive exercise (of those identified as part of the "activity" in this Subpart) conducted in MIRC; and

(ii) Total annual expended/detonated rounds (missiles, bombs, etc.) for each explosive type.

(g) *MIRC 5-year Comprehensive Report*. The Navy shall submit to NMFS a draft report that analyzes and summarizes all of the multi-year marine mammal information gathered during ASW and explosive exercises for which annual reports are required (Annual MIRC Exercise Reports and MIRC Monitoring Plan Reports). This report will be submitted at the end of the fourth year of the rule (November 2014),

covering activities that have occurred through July 15, 2014.

(h) *Comprehensive National ASW Report*. By June, 2014, the Navy shall submit a draft National Report that analyzes, compares, and summarizes the active sonar data gathered (through January 1, 2014) from the watchstanders and pursuant to the implementation of the Monitoring Plans for the Northwest Training Range Complex, the Southern California Range Complex, the Atlantic Fleet Active Sonar Training, the Hawaii Range Complex, the Mariana Islands Range Complex, and the Gulf of Alaska.

(i) The Navy shall comply with the 2009 Integrated Comprehensive Monitoring Program (ICMP) Plan and continue to improve the program in consultation with NMFS. Changes and improvements to the program made during 2010 (as prescribed in the 2009 ICMP and deemed appropriate by the Navy and NMFS) will be described in an updated 2010 ICMP and submitted to NMFS by October 31, 2010, for review. An updated 2010 ICMP will be finalized by December 31, 2010.

#### **§ 218.106 Applications for Letters of Authorization.**

To incidentally take marine mammals pursuant to these regulations, the U.S. Citizen (as defined by § 216.103) conducting the activity identified in § 218.100(c) (*i.e.*, the Navy) must apply for and obtain either an initial Letter of Authorization in accordance with § 218.107 or a renewal under § 218.108.

#### **§ 218.107 Letters of Authorization.**

(a) A Letter of Authorization, unless suspended or revoked, will be valid for a period of time not to exceed the period of validity of this subpart, but must be renewed annually subject to annual renewal conditions in § 218.108.

(b) Each Letter of Authorization shall set forth:

(1) Permissible methods of incidental taking;

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

(3) Requirements for mitigation, monitoring and reporting.

(c) Issuance and renewal of the Letter of Authorization shall be based on a determination that the total number of marine mammals taken by the activity as a whole will have no more than a negligible impact on the affected species or stock of marine mammal(s).

#### **§ 218.108 Renewal of Letters of Authorization and adaptive management.**

(a) A Letter of Authorization issued under § 216.106 and § 218.107 of this

chapter for the activity identified in § 218.100(c) will be renewed annually upon:

(1) Notification to NMFS that the activity described in the application submitted under § 218.206 will be undertaken and that there will not be a substantial modification to the described work, mitigation or monitoring undertaken during the upcoming 12 months;

(2) Receipt of the monitoring reports and notifications within the timeframes indicated in the previous LOA; and

(3) A determination by NMFS that the mitigation, monitoring and reporting measures required under § 218.104 and the Letter of Authorization issued under §§ 216.106 and 218.107 of this chapter, were undertaken and will be undertaken during the upcoming annual period of validity of a renewed Letter of Authorization.

(b) If a request for a renewal of a Letter of Authorization issued under §§ 216.106 and 218.208 indicates that a substantial modification, as determined by NMFS, to the described work, mitigation or monitoring undertaken during the upcoming season will occur, NMFS will provide the public a period of 30 days for review and comment on the request.

(c) A notice of issuance or denial of a renewal of a Letter of Authorization will be published in the **Federal Register**.

(d) *Adaptive Management*. NMFS may modify or augment the existing mitigation or monitoring measures (after consulting with the Navy 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. Below 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 Navy's monitoring from the previous year (either from the MIRC Study Area or other locations).

(2) Findings of the Monitoring Workshop that the Navy will convene in 2011.

(3) Compiled results of Navy funded research and development (R&D) studies (presented pursuant to the Integrated Comprehensive Monitoring Plan).

(4) Results from specific stranding investigations (either from the MIRC Study Area or other locations, and involving coincident MFAS/HFAS or explosives training or not involving coincident use).

(5) Results from the Long Term Prospective Study described in the preamble to these regulations.

(6) Results from general marine mammal and sound research.

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

**§ 218.109 Modifications to Letters of Authorization.**

(a) Except as provided in paragraph (b) of this section, no substantive

modification (including withdrawal or suspension) to the Letter of Authorization by NMFS, issued pursuant to §§ 216.106 and 218.107 of this chapter and subject to the provisions of this subpart, shall be made until after notification and an opportunity for public comment has been provided. For purposes of this paragraph, a renewal of a Letter of Authorization under § 218.108 without modification (except for the period of validity) is not considered a substantive modification.

(b) If the Assistant Administrator determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in § 218.100(b), a Letter of Authorization issued pursuant to §§ 216.106 and 218.107 of this chapter may be substantively modified without prior notification and an opportunity for public comment. Notification will be published in the **Federal Register** within 30 days subsequent to the action.

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