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Joseph S. Carra,

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 218

RIN 0648–AX11

Taking and Importing Marine Mammals; U.S. Navy's Research, Development, Test, and Evaluation Activities Within the Naval Sea Systems Command Naval Undersea Warfare Center Keyport 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), is issuing regulations to govern the unintentional taking of marine mammals incidental to activities conducted at the Naval Sea Systems Command (NAVSEA) Naval Undersea Warfare Center (NUWC) Keyport Range Complex for the period of April 2011 through April 2016. 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 and their habitat, as well as requirements pertaining to the monitoring and reporting of such taking.

DATES: Effective April 11, 2011 through April 11, 2016.

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**). Additionally, the Navy's LOA application may be obtained by visiting the Internet at: *http://www-keyport.kpt.nuwc.navy.mil/EIS_Home.htm.*

FOR FURTHER INFORMATION CONTACT: Shane Guan, Office of Protected Resources, NMFS, (301) 713–2289, ext. 137.

SUPPLEMENTARY INFORMATION: Extensive Supplementary Information was provided in the proposed rule for this activity, which was published in the **Federal Register** on Tuesday, July 7, 2009 (74 FR 32264). 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 contains a section that 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 NDAA (Pub. L. 108–136) removed 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): 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 any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered [Level B Harassment].

Summary of Request

On May 15, 2008, NMFS received an application from the Navy requesting authorization for the take of 5 species of marine mammals incidental to the RDT&E activities within the NAVSEA NUWC Keyport Range Complex Extension over the course of 5 years. These RDT&E activities are classified as military readiness activities. On April 29, 2009, NMFS received additional information and clarification on the Navy's proposed NAVSEA NUWC Keyport Range Complex Extension RDT&E activities. The Navy states that these RDT&E activities may cause various impacts to marine mammal species in the proposed action area. The Navy requests an authorization to take individuals of these marine mammals by Level B Harassment. Please refer to Tables 6–23, 6–24, 6–25, and 6–26 of the Navy's Letter of Authorization (LOA) application for detailed information of the potential marine mammal exposures from the RDT&E activities in the Keyport Range Complex Extension per year. However, due to the proposed mitigation and monitoring measures and standard range operating procedures in place, NMFS estimates that the take of marine mammals is likely to be lower than the amount requested. NMFS does not expect any marine mammals to be killed or injured as a result of the Navy's proposed activities, and NMFS is not proposing to authorize any injury or mortality incidental to the Navy's proposed RDT&E activities within the Keyport Range Complex Extension.

Background of Navy 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 32264; July 7, 2009; pages 32264–32265).

Description of the 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 levels of the RDT&E activities and the proposed range extension. These RDT&E activities consist of testing that involves active acoustic devices such as general range tracking, unmanned undersea vehicle (UUV) tracking systems, torpedo sonars, range targets and special tests, special sonars, sonobuoys and helicopter dipping sonar, side scan sonar, and other acoustic sources (acoustic modem, target simulators, navigation aids, sub-bottom profilers, and vessel engines, *etc.*); and testing that involves non-acoustic activities such as magnetic, oceanographic sensor, laser imaging detection and ranging, and inert mine hunting and inert mine clearing exercises. Since NMFS does not believe that those range activities involving non-acoustic testing will have adverse impacts to marine mammals, they were not analyzed further and will not be covered under this rule.

The proposed regulations were drafted in such a way that the Navy's specified actions were strictly defined by the amounts of each type of sound source utilized (*e.g.,* hours of source use) over the course of the 5-year regulations. Following the issuance of the proposed rule, the Navy realized that their evolving RDT&E programs necessitate greater flexibility in both the *types* and *amounts* of sound sources that they use.

The Navy regularly modifies or develops new technology, often in the way of sound sources that are similar to, but not exactly the same as, other sources. In this final rule, we increase flexibility by inserting language into § 218.170(c) that will allow for authorization of take incidental to the previously identified specified activities and sources or to "similar activities and sources," provided that the implementation of these changes in annual LOAs does not result in exceeding the incidental take analyzed and identified in the final rules.

Regarding amounts of sound source use, the proposed regulations only allowed for the authorization of take incidental to a 5-yr maximum amount of use for each specific sound source, even though in most cases our effects analyses do not differentiate the impacts from the majority of the different types of sources. Specifically, although some sonar sources are louder or put more acoustic energy into the water in a given amount of time, which results in more marine mammal takes, we do not differentiate between the individual takes that result from one source versus another. In this final rule, we increase flexibility by including language in § 218.170(c)(2) that allows for inter-annual variability in the amount of source use identified in each annual LOA (*i.e.,* one year the Navy could use a lot of one source, and little of another, and the next year those amounts could be reversed), provided it does not result in exceeding the incidental take analyzed and identified in the final rules. These technical regulatory modifications do not change the analyses conducted in the proposed rule.

No other changes have been made in this section from the proposed rule (74 FR 32264; July 7, 2009; pages 32265–32268). Tables 1 through 4 summarize the projected days of use by range site, primary acoustic sources commonly used within the NAVSEA NUWC Keyport Range Complex and their operating hours, and the proposed annual range activities and operations, respectively.

TABLE 1—PROJECTED ANNUAL DAYS OF USE BY RANGE SITE

	Keyport range site	DBRC site	QUTR site—offshore	QUTR site—surf zone
Current	55	200	14	0
Proposed	60	200	16	30

TABLE 2—PRIMARY ACOUSTIC SOURCES COMMONLY USED WITHIN THE NAVSEA NUWC KEYPORT RANGE COMPLEX AND THEIR ANNUAL OPERATING HOURS

Source	Frequency (kHz)	Max. source level (dB re 1 μPa @ 1 m)	Keyport site operating hours/yr	DBRC site operating hours/yr	QUTR site operating hours/yr	All sites total operating hours/yr
Sonar						
General range tracking	10–100	195 (at Keyport Site); 203 (at DBRC & QUTR Sites).	108.90	95.00	300.60	504.50
UUV Payloads	10–100	195	42.00	100.00	24.00	166.00
Torpedoes	10–100	233	1.00	17.50	2.50	21.00
Range targets and special tests.	5–100	195 (at Keyport Site);. 238 (at DBRC & QUTR Sites).	1.33	6.67	1.00	9.00
Special sonars (non-Navy, shore/pier static testing, diver activities) & Fleet Aircraft (active sonobuoys & dipping sonars).	2–2,500	225–235	105.00	120.00	96.00	321.00
Side-scan	100–700	235	42.00	100.00	24.00	166.00

TABLE 2—PRIMARY ACOUSTIC SOURCES COMMONLY USED WITHIN THE NAVSEA NUWC KEYPORT RANGE COMPLEX AND THEIR ANNUAL OPERATING HOURS—Continued

Source	Frequency (kHz)	Max. source level (dB re 1 μPa @ 1 m)	Keyport site operating hours/yr	DBRC site operating hours/yr	QUTR site operating hours/yr	All sites total operating hours/yr
Other Acoustic Sources						
Acoustic modems	10–300	210	41.00	100.00	24.00	166.00
Sub-bottom profiler	2–7	210	80.00	80.00	32.00	192.00
	35–45	220				
Target simulator (surface vessels, submarines, torpedoes, and UUV engine noise).	0.05—10	170	1.33	20.00	2.99	24.33

TABLE 3—PROPOSED ANNUAL RANGE ACTIVITIES AND OPERATIONS

Range activity	*Platform/system used*	*Proposed number of activities/year**		
		Keyport range site	*DBRC site*	*QUTR site*
Test Vehicle Propulsion	Thermal propulsion systems	5	130	30
	Electric/Chemical propulsion systems	55	140	30
Other Testing Systems and Activities.	Submarine testing	0	45	15
	Inert mine detection, classification and localization	5	20	10
	Non-Navy testing	5	5	5
	Acoustic & non-acoustic sensors (magnetic array, oxygen)	20	10	5
	Countermeasure test	5	50	5
	Impact testing	0	10	5
	Static in-water testing	10	10	6
	UUV test	45	120	40
	Unmanned Aerial System (UAS) test	0	2	2
Fleet Activities** (excluding RDT&E).	Surface Ship activities	1	10	10
	Aircraft activities	0	10	10
	Submarine activities	0	30	30
	Diver activities	45	5	15
Deployment Systems (RDT&E)	Range support vessels:			
	Surface launch craft	35	180	30
	Special purpose barges	25	75	0
	Fleet vessels***	15	20	20
	Aircraft (rotary and fixed wing)	0	10	20
	Shore and pier	45	30	30

* There may be several activities in 1 day. These numbers provide an estimate of types of range activities over the year.
** Fleet activities in the NAVSEA NUWC Keyport Range Complex do not include the use of surface ship and submarine hull-mounted active sonars.
*** As previously noted, Fleet vessels can include very small craft such as SEAL Delivery Vehicles.

Description of Marine Mammals in the Area of the Specified Activities

The information on marine mammals and their distribution and density are based on data gathered from NMFS, United States Fish and Wildlife Service (USFWS) and recent references, literature searches of search engines, peer review journals, and other technical reports, to provide a regional context for each species. The data were compiled from available sighting records, literature, satellite tracking, and stranding and by-catch data.

A total of 24 cetacean species and subspecies and 4 pinniped species are known to occur in Washington State waters; however, several are seen only rarely. Seven of these marine mammal species are listed as Federally-endangered under the Endangered Species Act (ESA) occur or have the potential to occur in the proposed action area: Blue whale (*Balaenoptera musculus*), fin whale (*B. physalus*), Sei whale (*B. borealis*), humpback whale (*Megaptera novaengliae*), north Pacific right whale (*Eubalaena japonica*), sperm whale (*Physeter macrocephalus*), and the southern resident population of killer whales (*Orcinus orca*). The species, Steller sea lion (*Eumetopias jubatus*), is listed as threatened under the ESA. 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 32264; July 7, 2009; pages 32268–32273). Lists of marine mammal species known to occur or potentially occur within the Keyport, DBRC, and QUTR sites are shown in Tables 4, 5, and 6, respectively.

TABLE 4—MARINE MAMMAL KNOWN TO OCCUR OR POTENTIALLY OCCUR WITHIN THE KEYPORT ACTION AREA

Species	ESA/MMPA status	Occurrence in keyport action area	Density estimate (km³)	
			Warm Season	Cold Season
Cetacean				
Mysticetes				
Minke whale	-/-	Very rare, year round	[a] 0	[a] 0
Humpback whale	E/D	Very rare, warm season; has never been recorded in action area.	[a] 0	[a] 0
Gray whale	-/-	Very rare, migrant and summer/fall resident population in primarily northern Puget Sound.	[a] 0	[a] 0
Odontocetes				
Killer whale:.				
Transient	-/-	Very rare, year round; has never been recorded in action area.	[a] 0	[a] 0
S. Resident	E, CH/D	Very rare, summer/fall season; has never been recorded in action area..	[a] 0	[a] 0
Dall's porpoise	-/-	Rare, year round.	[a] 0	[a] 0
Pinnipeds				
Harbor seal	-/-	Common year-round resident	0.55	0.55
California sea lion	-/-	Rare, cold season	[a] 0	[a] 0
Steller sea lion	T/D	Rare, cold season; has never been recorded in action area.	[a] 0	[a] 0

Notes: D = Depleted, E = Endangered, CH = Critical Habitat, T = Threatened.
Warm season = May–October, Cold season = November–April.
abundant = the species is expected to be encountered during a single visit to the area and the number of individuals encountered during an average visit may be as many as hundreds or more; *common* = the species is expected to be encountered once or more during 2–3 visits to the area and the number of individuals encountered during an average visit is unlikely to be more than a few 10s; *uncommon* = the species is expected to be encountered at most a few times a year; *rare* = the species is not expected to be encountered more than once in several years; *very rare* = not expected to be encountered more than once in 10 years.
[a] Density estimates for these species were calculated for Puget Sound as a whole, but these species have never been recorded or observed in the action area. Thus the densities for the action area are shown as "0" to reflect this.

TABLE 5—MARINE MAMMAL KNOWN TO OCCUR OR POTENTIALLY OCCUR WITHIN THE DBRC ACTION AREA

Species	ESA/MMPA status	Occurrence in keyport action area	Density estimate (km³)	
			Warm Season	Cold Season
Cetacean				
Mysticetes				
Minke whale	-/-	Very rare, year round; has never been recorded in action area.	[a] 0	[a] 0
Humpback whale	E/D	Very rare, warm season; has never been recorded in action area.	[a] 0	[a] 0
Gray whale	-/-	Very rare, spring/fall migrant and summer/fall resident population in primarily northern Puget Sound.	[a] 0	[a] 0
Odontocetes				
Killer whale				
Transient	-/-	Uncommon, spring/summer	Jan–Jun: 0.038	Jul–Dec: 0
S. Resident	E/D	Very rare, no recorded occurrence in Hood Canal.	[a] 0	[a] 0
Dall's porpoise	-/-	Very rare, year round	0	0
Pinnipeds				
Harbor seal	-/-	Common year-round resident	1.31	1.31
California sea lion	-/-	Common resident and seasonal migrant	[a] 0	0.052
Steller sea lion	T/D	Very rare, cold season; has never been recorded in action area.	[a] 0	[a] 0

Notes: D = Depleted, E = Endangered, CH = Critical Habitat, T = Threatened.
Warm season = May–October, Cold season = November–April.

abundant = the species is expected to be encountered during a single visit to the area and the number of individuals encountered during an average visit may be as many as hundreds or more; *common* = the species is expected to be encountered once or more during 2–3 visits to the area and the number of individuals encountered during an average visit is unlikely to be more than a few 10s; *uncommon* = the species is expected to be encountered at most a few times a year; *rare* = the species is not expected to be encountered more than once in several years; *very rare* = not expected to be encountered more than once in 10 years.

[a] These species have never been recorded or observed in the action area. Thus the densities for the action area are shown as "0" to reflect this.

TABLE 6—MARINE MAMMAL KNOWN TO OCCUR OR POTENTIALLY OCCUR WITHIN THE QUTR ACTION AREA

Species	ESA/MMPA status	Occurrence in keyport action area	Density estimate (km^3)	
			Warm season	Cold season
Cetacean				
Mysticetes				
Blue whale	E/D	Rare, warm season	0.0003	0
Fin whale	E/D	Rare, year-round	0.0012	0.0012
Gray whale:				
Resident	-/-	Uncommon, year-round	0.003	0.003
Migratory	-/-	Abundant briefly during cold season migration.	0	NA
Humpback whale	E/D	Uncommon, warm season	0.0237	0
Minke whale	-/-	Rare, year-round	0.0004	0.0004
North Pacific right whale	E/D	Very rare, warm season	[a] 0	[a] 0
Sei whale	E/D	Very rare, year-round	0.0002	0.0002
Odontocetes				
Baird's beaked whale	-/-	Uncommon, year-round	0.0027	0.0027
Hubb's & Stejneger's beaked whale	-/-	Uncommon, year-round	0.0027	0.0027
Dall's porpoise	-/-	Abundant, year-round	0.1718	0.1718
Harbor porpoise	-/-	Abundant, year-round	2.86	2.86
Northern right whale dolphin	-/-	Common, year-round	0.0419	0.0419
Pacific white-sided dolphin	-/-	Abundant, warm season	0.1929	0
Risso's dolphin	-/-	Uncommon, year-round	0.002	0.002
Short-beaked common dolphin	-/-	Uncommon, warm season	0.0012	0
Striped dolphin	-/-	Very rare, year-round	0.0002	0
Dwarf & pygmy sperm whales	-/-	Uncommon, warm season	0.0015	0
Sperm whale	E/D	Uncommon, warm season	0.0011	0.0011
Killer whale:				
N. Resident	-/-	Rare, year-round	0.0028	0.0028
S. Resident	E/D	Rare, year-round		
Offshore	-/-	Uncommon, year-round		
Transient	-/-	Uncommon, cold season		
Pinnipeds				
Phocids				
Harbor seal	-/-	Abundant, year-round	0.44	0.44
Northern elephant seal	-/-	Uncommon, year-round	Dec–Feb: 0.019 Mar–Apr: 0.026 May–Jul: 0.038 Aug–Nov: 0.047	
Otariids				
California sea lion	-/-	Common, year-round except May–July	Aug–Apr: 0.283 May–Jul: 0	
Northern fur seal	-/D	Common, year-round	0.091	0.117
Steller sea lion	T/D	Uncommon, year-round	0.0096	0.0096
Mustelids				
Sea otter	-/-	Does not presently occur within the action area.	[a] 0	[a] 0

Notes: D = Depleted, E = Endangered, CH = Critical Habitat, T = Threatened.
Warm season = May–October, Cold season = November–April.

abundant = the species is expected to be encountered during a single visit to the area and the number of individuals encountered during an average visit may be as many as hundreds or more; *common* = the species is expected to be encountered once or more during 2–3 visits to the area and the number of individuals encountered during an average visit is unlikely to be more than a few 10s; *uncommon* = the species is expected to be encountered at most a few times a year; *rare* = the species is not expected to be encountered more than once in several years; *very rare* = not expected to be encountered more than once in 10 years.

[(a)] These species have never been recorded or observed in the action area. Thus the densities for the action area are shown as "0" to reflect this.

A Brief Background on Sound

An understanding of the basic properties of underwater sound is necessary to comprehend many of the concepts and analyses presented in this document. A detailed description of this topic was provided in the proposed rule (74 FR 32264; July 7, 2009; pages 32273–32274) and is not repeated herein.

Potential Impacts to Marine Mammal Species

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; and (4) to prescribe requirements pertaining to monitoring and reporting.

In the Potential Impacts to Marine Mammal Species section of the proposed rule, NMFS included a qualitative discussion of the different ways that sonar operations may potentially affect marine mammals. *See* 74 FR 32264; July 7, 2009; pages 32274–42281. Marine mammals may experience direct physiological effects (such as threshold shift), acoustic masking, impaired communications, stress responses, and behavioral disturbance. The information contained in Potential Impacts to Marine Mammal Species from sonar operations section from the proposed rule has not changed.

Additional analyses on potential impacts to marine mammals from vessel movement within the NAVSEA NUWC Keyport Range Complex Study Area are added below.

Vessel Movement

There are limited data concerning marine mammal behavioral responses to vessel traffic and vessel noise, and a lack of consensus among scientists with respect to what these responses mean or whether they result in short-term or long-term adverse effects. In those cases where there is a busy shipping lane or where there is large amount of vessel traffic, marine mammals may experience acoustic masking (Hildebrand, 2005) if they are present in the area (*e.g.,* killer whales in Puget Sound; Foote *et al.,* 2004; Holt *et al.,* 2008). In cases where vessels actively approach marine mammals (*e.g.,* whale watching or dolphin watching boats), scientists have documented that animals exhibit altered behavior such as increased swimming speed, erratic movement, and active avoidance behavior (Bursk, 1983; Acevedo, 1991; Baker and MacGibbon, 1991; Trites and Bain, 2000; Williams *et al.,* 2002; Constantine *et al.,* 2003), reduced blow interval (Ritcher *et al.,* 2003), disruption of normal social behaviors (Lusseau, 2003; 2006), and the shift of behavioral activities which may increase energetic costs (Constantine *et al.,* 2003; 2004)). A detailed review of marine mammal reactions to ships and boats is available in Richardson *et al.* (1995). For each of the marine mammal's taxonomy groups, Richardson *et al.* (1995) provided the following assessment regarding marine mammal reactions to vessel traffic:

Toothed whales: "In summary, toothed whales sometimes show no avoidance reaction to vessels, or even approach them. However, avoidance can occur, especially in response to vessels of types used to chase or hunt the animals. This may cause temporary displacement, but we know of no clear evidence that toothed whales have abandoned significant parts of their range because of vessel traffic."

Baleen whales: "When baleen whales receive low-level sounds from distant or stationary vessels, the sounds often seem to be ignored. Some whales approach the sources of these sounds. When vessels approach whales slowly and nonaggressively, whales often exhibit slow and inconspicuous avoidance maneuvers. In response to strong or rapidly changing vessel noise, baleen whales often interrupt their normal behavior and swim rapidly away. Avoidance is especially strong when a boat heads directly toward the whale."

Pinnipeds: "In general, evidence about reactions of seals to vessels is meager. The limited data, plus the responses of seals to other noisy human activities, suggest that seals often show considerable tolerance of vessels. It is not known whether these animals are truly unaffected or are subject to stress. This uncertainty applies to many human activities and all marine mammals." In addressing walruses, Richardson *et al.* (1995) states, "walrus reactions to ships include waking up, head-raises, and entering the water. Females with young seem more wary than adult males. Walruses in open water are less responsive than those on ice pans, usually showing little reaction unless the ship is about to run over them."

It is important to recognize that behavioral responses to stimuli are complex and influenced to varying degrees by a number of factors such as species, behavioral contexts, geographical regions, source characteristics (moving or stationary, speed, direction, *etc.*), prior experience of the animal, and physical status of the animal. For example, studies have shown that beluga whales reacted differently when exposed to vessel noise and traffic. In some cases, naïve beluga whales exhibited rapid swimming from ice-breaking vessels up to 80 km away, and showed changes in surfacing, breathing, diving, and group composition in the Canadian high Arctic where vessel traffic is rare (Finley *et al.,* 1990). In other cases, beluga whales were more tolerant of vessels, but differentially responsive by reducing their calling rates, to certain vessels and operating characteristics (especially older animals) in the St. Lawrence River where vessel traffic is common (Blane and Jaakson, 1994). In Bristol Bay, Alaska, beluga whales continued to feed when surrounded by fishing vessels and resisted dispersal even when purposefully harassed (Fish and Vania, 1971).

In reviewing more than 25 years of whale observation data, Watkins (1986) concluded that whale reactions to vessel traffic were "modified by their previous experience and current activity: Habituation often occurred rapidly,

attention to other stimuli or preoccupation with other activities sometimes overcame their interest or wariness of stimuli." Watkins noticed that over the years of exposure to ships in the Cape Cod area, minke whales (*Balaenoptera acutorostrata*) changed from frequent positive (such as approaching vessels) interest to generally uninterested reactions; finback whales (*B. physalus*) changed from mostly negative (such as avoidance) to uninterested reactions; right whales (*Eubalaena glacialis*) apparently continued the same variety of responses (negative, uninterested, and positive responses) with little change; and humpbacks (*Megaptera novaeangliae*) dramatically changed from mixed responses that were often negative to often strongly positive reactions. Watkins (1986) summarized that "whales near shore, even in regions with low vessel traffic, generally have become less wary of boats and their noises, and they have appeared to be less easily disturbed than previously. In particular locations with intense shipping and repeated approaches by boats (such as the whale-watching areas of Stellwagen Bank), more and more whales had P [positive] reactions to familiar vessels, and they also occasionally approached other boats and yachts in the same ways."

In the case of the NAVSEA NUWC Keyport Range Complex Study Area, naval vessel traffic is expected to be much lower than in areas where there are large shipping lanes and large numbers of fishing vessels and/or recreational vessels. Nevertheless, the proposed action area is well traveled by a variety of commercial and recreational vessels, so marine mammals in the area are expected to be habituated to vessel noise.

As described in the proposed rule, typical vessel movement occurring at the surface includes the deployment or towing of mine counter-measure equipment, retrieval of equipment, and clearing and monitoring for non-participating vessels. As shown in Table 1, the projected annual days of range use amount to a total of 306 days for all range sites (60 days for Keyport Range Site, 200 days for DBRC Site, 16 days for offshore QUTR Site, and 30 days for surf zone QUTR Site).

Moreover, naval vessels transiting the study area or engaging in RDT&E activities will not actively or intentionally approach a marine mammal or change speed drastically. In addition, range craft would not be permitted to approach within 100 yards (91 m) of marine mammals, to the extent practicable considering human and vessel safety priorities. This includes marine mammals "hauled-out" on islands, rocks, and other areas such as buoys.

Mitigation

In order to issue an incidental take authorization (ITA) under Section 101(a)(5)(A) of the MMPA, NMFS must prescribe regulations setting 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 amended the MMPA as it relates to military readiness activities and the incidental take authorization process such that "least practicable adverse impact" shall include consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the "military readiness activity." The NUWC Keyport Range Complex's RDT&E activities are considered military readiness activities.

NMFS reviewed the Navy's proposed NUWC Keyport Range Complex's RDT&E activities and the proposed NUWC Keyport Range Complex's mitigation measures presented in the Navy's application to determine whether the activities and mitigation measures were capable of achieving the least practicable adverse effect on marine mammals.

Any mitigation measure prescribed by NMFS should be known to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

(1) Avoidance or minimization of injury or death of marine mammals wherever possible (goals (2), (3), and (4) may contribute to this goal).

(2) A reduction in the numbers of marine mammals (total number or number at biologically important time or location) exposed to underwater detonations or other activities expected to result in the take of marine mammals (this goal may contribute to (1), above, or to reducing harassment takes only).

(3) A reduction in the number of times (total number or number at biologically important time or location) individuals would be exposed to underwater detonations or other activities expected to result in the take of marine mammals (this goal may contribute to (1), above, or to reducing harassment takes only).

(4) A reduction in the intensity of exposures (either total number or number at biologically important time or location) to underwater detonations or other activities expected to result in the take of marine mammals (this goal may contribute to (1), above, or to reducing the severity of harassment takes only).

(5) A reduction in adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/disturbance of habitat during a biologically important time.

(6) For monitoring directly related to mitigation—an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation (shut-down zone, *etc.*).

NMFS reviewed the Navy's proposed 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."

The Navy's proposed mitigation measures were described in detail in the proposed rule (74 FR 32264, pages 32293–32294). The Navy's measures address personnel training, marine observer responsibilities, operating procedures for RDT&E activities using sonar, and mitigation related to vessel traffic. The following additional requirements were added based on comments from the Marine Mammal Commission, Natural Resources Defense Council, and NMFS scientists:

(i) If there is clear evidence that a marine mammal is injured or killed as a result of the proposed Navy RDT&E activities, the Naval activities shall be immediately suspended and the situation immediately reported by personnel involved in the activity to the Range Officer, who will follow Navy procedures for reporting the incident to NMFS through the Navy's chain-of-command.

(j) For nighttime RDT&E activities of active acoustic transmissions in the Keyport Range proposed extension area, the Navy shall conduct passive acoustic monitoring within the Agate Pass and south of University Point in southern Port Orchard Reach. If Southern Resident killer whales are detected in the vicinity of the Keyport Range Site, the Range Office shall be notified immediately and the active acoustic sources must be shutdown if killer whales are confirmed to approach at 1,000 yards from the source.

In addition, in response to information provided by the Navy, the

requirement for general passive acoustic monitoring was modified to reflect the feasibility and practicability of PAM when used as a mitigation measure for the proposed RDT&E activities. The Navy indicated, and NMFS agreed, that the blanket requirement for PAM contained in the proposed rule will not be practicable due to limitation of assets at the Keyport Range Complex. Further, NMFS believes that the revised PAM would not change the results of the analysis on the effects of the proposed Keyport RDT&E activities on marine mammals. Therefore, the proposed mitigation measure concerning PAM has been modified as follows:

(g) Passive acoustic monitoring for cetaceans will be implemented throughout the NUWC Keyport Range Complex during RDT&E testing activities involving active sonar transmissions and when passive acoustic monitoring capabilities are being operated during the testing activity.

No other changes have been made to the mitigation measures described in the proposed rule.

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.

Monitoring measures prescribed by NMFS should accomplish one or more of the following general goals:

(1) An increase in the probability of detecting marine mammals, both within the safety zone (thus allowing for more effective implementation of the mitigation) and in general to generate more data to contribute to the analyses mentioned below.

(2) An increase in our understanding of how many marine mammals are likely to be exposed to levels of HFAS/MFAS (or explosives or other stimuli) that we associate with specific adverse effects, such as behavioral harassment, TTS, or PTS.

(3) An increase in our understanding of how marine mammals respond to HFAS/MFAS (at specific received levels), explosives, or other stimuli expected to result in take and how anticipated adverse effects on individuals (in different ways and to varying degrees) may impact the population, species, or stock (specifically through effects on annual rates of recruitment or survival) through any of the following methods:

- Behavioral observations in the presence of HFAS/MFAS compared to observations in the absence of sonar (need to be able to accurately predict received level and report bathymetric conditions, distance from source, and other pertinent information).
- Physiological measurements in the presence of HFAS/MFAS compared to observations in the absence of sonar (need to be able to accurately predict received level and report bathymetric conditions, distance from source, and other pertinent information), and/or
- Pre-planned and thorough investigation of stranding events that occur coincident to naval activities.
- Distribution and/or abundance comparisons in times or areas with concentrated HFAS/MFAS versus times or areas without HFAS/MFAS.

(4) An increased knowledge of the affected species.

(5) An increase in our understanding of the effectiveness of certain mitigation and monitoring measures.

A detailed description of monitoring measures is provided in the proposed rule (74 FR 32264, pages 32294–32297). The monitoring procedures require the Navy to conduct visual surveys (including shore-based and vessel surveys), passive acoustic monitoring, and marine mammal observers on Navy vessels.

Monitoring Workshop

During the public comment period on past proposed rules for Navy actions (such as the Hawaii Range Complex (HRC), and Southern California Range Complex (SOCAL) proposed rules), NMFS received a recommendation that a workshop or panel be convened to solicit input on the monitoring plan from researchers, experts, and other interested parties. The NAVSEA NUWC Keyport Range Complex RDT&E proposed rule included an adaptive management component and both NMFS and the Navy believe that a workshop would provide a means for Navy and NMFS to consider input from participants in determining whether (and if so, how) to modify monitoring techniques to more effectively accomplish the goals of monitoring set forth earlier in the document. NMFS and the Navy believe that this workshop is valuable in relation to all of the Range Complexes and major training exercise rules and LOAs that NMFS is working on with the Navy at this time, and consequently this single Monitoring Workshop will be included as a component of all of the rules and LOAs that NMFS will be processing for the Navy in the next year or so.

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 the previous two years of monitoring pursuant to the NAVSEA NUWC Keyport Range Complex RDT&E rule as well as monitoring results from other Navy rules and LOAs (*e.g.,* AFAST, SOCAL, HRC, and other rules). The Monitoring Workshop participants would 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 would 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.

Integrated Comprehensive Monitoring Program

In addition to the site-specific Monitoring Plan for the NAVSEA NUWC Keyport Range Complex Study Area, the Navy will complete the Integrated Comprehensive Monitoring Program (ICMP) Plan by the end of 2009. The ICMP is currently in development by the Navy, with the Chief of Naval Operations Environmental Readiness Division (CNO–N45) having the lead. The program does not duplicate the monitoring plans for individual areas (*e.g.,* AFAST, HRC, SOCAL); instead it is intended to provide the overarching coordination that will support compilation of data from both range-specific monitoring plans as well as Navy funded research and development (R&D) studies. The ICMP will coordinate the monitoring program's progress towards meeting its goals and developing a data management plan. A program review board is also being considered to provide additional guidance. The ICMP will be evaluated annually to provide a matrix for progress and goals for the following year, and will make recommendations on adaptive management for refinement and analysis of the monitoring methods.

The primary objectives of the ICMP are to:

- Monitor and assess the effects of Navy activities on protected species;
- Ensure that data collected at multiple locations is collected in a manner that allows comparison between and among different geographic locations;
- Assess the efficacy and practicality of the monitoring and mitigation techniques;
- Add to the overall knowledge-base of marine species and the effects of Navy activities on marine species.

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/marine observer data, as well as new information from other Navy programs (*e.g.,* R&D), and other appropriate newly published information.

In combination with the 2011 Monitoring Workshop and the adaptive management component of the NAVSEA NUWC Keyport Range Complex RDT&E rule and the other planned Navy rules (*e.g.,* Virginia Capes Range Complex, Jacksonville Range Complex, Cherry Point Range Complex, *etc.*), the ICMP could potentially provide a framework for restructuring the monitoring plans and allocating monitoring effort based on the value of particular specific monitoring proposals (in terms of the degree to which results would likely contribute to stated monitoring goals, as well as the likely technical success of the monitoring based on a review of past monitoring results) that have been developed through the ICMP framework, instead of allocating based on maintaining an equal (or commensurate to effects) distribution of monitoring effort across range complexes. For example, if careful prioritization and planning through the ICMP (which would include a review of both past monitoring results and current scientific developments) were to show that a large, intense monitoring effort in Hawaii would likely provide extensive, robust and much-needed data that could be used to understand the effects of sonar throughout different geographical areas, it may be appropriate to have other range complexes dedicate money, resources, or staff to the specific monitoring proposal identified as "high priority" by the Navy and NMFS, in lieu of focusing on smaller, lower priority projects divided throughout their home range complexes.

The ICMP will identify:

- A means by which NMFS and the Navy would jointly consider prior years' monitoring results and advancing science to determine if modifications are needed in mitigation or monitoring measures to better effect the goals laid out in the Mitigation and Monitoring sections of the NAVSEA NUWC Keyport Range Complex RDT&E rule.
- Guidelines for prioritizing monitoring projects.

If, as a result of the workshop and similar to the example described in the paragraph above, the Navy and NMFS decide it is appropriate to restructure the monitoring plans for multiple ranges such that they are no longer evenly allocated (by rule), but rather focused on priority monitoring projects that are not necessarily tied to the geographic area addressed in the rule, the ICMP will be modified to include a very clear and unclassified record-keeping system that will allow NMFS and the public to see how each range complex/project is contributing to all of the ongoing monitoring programs (resources, effort, money, *etc.*).

Adaptive Management

The final regulations governing the take of marine mammals incidental to Navy's NAVSEA NUWC Keyport Range Complex RDT&E activities contain an adaptive management component. The use of adaptive management will give NMFS the ability 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 suggests that such modifications are appropriate (or are not appropriate) for subsequent annual LOAs.

The following are some of the possible sources of applicable data:

- Results from the Navy's monitoring from the previous year (either from NAVSEA NUWC Keyport Range Complex Study Area 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 NAVSEA NUWC Keyport Range Complex Study Area or other locations)
- Results from general marine mammal and sound research (funded by the Navy or otherwise)
- Any information which reveals that marine mammals may have been taken in a manner, extent or number not authorized by these regulations or subsequent Letters of Authorization

Mitigation measures could be modified or added (or deleted) if new data suggest that such modifications 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 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, 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 to ensure compliance with the terms and conditions of a LOA, and to provide NMFS and the Navy with data of the highest quality based on the required monitoring. As NMFS noted in its proposed rule, additional detail has been added to the reporting requirements since they were outlined in the proposed rule. The updated reporting requirements are all included below. A subset of the information provided in the monitoring reports may be classified and not releasable to the public.

General Notification of Injured or Dead Marine Mammals

Navy personnel will ensure that NMFS (regional stranding coordinator) is notified immediately (or as soon as operational security allows) if an injured or dead marine mammal is found during or shortly after, and in the vicinity of, any Navy RDT&E activities. The Navy will provide NMFS with species or description of the animal(s), the condition of the animal(s) (including

carcass condition if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

Annual Report

The NAVSEA NUWC Keyport Range Complex shall submit a report annually on October 1 describing the RDT&E activities conducted and implementation and results of the NAVSEA NUWC Keyport Range Complex Monitoring Plan (through June 1 of the same year) and RDT&E activities. The report will, at a minimum, include the following information:

(1) RDT&E Information:

- Date and time test began and ended
- Location
- Number and types of active sources used in the test
- Number and types of vessels, aircraft, *etc.,* participated in the test
- Total hours of observation effort (including observation time when sonar was not operating)
- Total hours of all active sonar source operation
- Total hours of each active sonar source
- Wave height (high, low, and average during the test)

(2) Individual Marine Mammal Sighting Info

- Location of sighting
- Species
- Number of individuals
- Calves observed (y/n)
- Initial detection sensor
- Indication of specific type of platform observation made from
- Length of time observers maintained visual contact with marine mammal(s)
- Wave height (in feet)
- Visibility
- Sonar source in use (y/n)
- 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 above
- Mitigation implementation—Whether operation of sonar sensor was delayed, or sonar was powered or shut down, and how long the delay was
- Observed behavior—Marine observers shall report, 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.*)
- An evaluation of the effectiveness of mitigation measures designed to avoid exposing marine mammals to mid-frequency sonar. This evaluation shall identify the specific observations that support any conclusions the Navy reaches about the effectiveness of the mitigation.

NAVSEA NUWC Keyport Range Complex 5-yr Comprehensive Report

The Navy will submit to NMFS a draft report that analyzes and summarizes all of the multi-year marine mammal information gathered during HFAS/MFAS activities for which annual reports are required as described above. This report will be submitted at the end of the fourth year of the rule (December 2014), covering activities that have occurred through July 1, 2014. The Navy will respond to NMFS comments on the draft comprehensive report if submitted within 3 months of receipt. The report will be considered final after the Navy has addressed NMFS' comments, or three months after the submittal of the draft if NMFS does not comment by then.

Comments and Responses

On July 7, 2009, NMFS published a proposed rule (74 FR 32264) in response to the Navy's request to take marine mammals incidental to conducting RDT&E activities in the NAVSEA NUWC Keyport Range Complex Study Area and requested comments, information and suggestions concerning the request. During the 30-day public comment period, NMFS received comments from the Marine Mammal Commission (Commission), the Natural Resources Defense Council (NRDC), Friends of the Earth, and two private citizens. The comments are addressed below.

MMPA Concerns

Comment 1: Citing that most North American marine mammal biologists are in the field and that the general public is engaged in recreational activities during the period when the proposed rule was published for public comments, the Friends of the Earth requests NMFS to extend the comment period for a minimum of 30 days for the proposed rule.

Response: There is no prescribed minimum timeframe for public comment on proposed rules in the Administrative Procedure Act (APA) or section 101(a)(5)(A) of MMPA. NMFS routinely strives to ensure that the public is afforded at least a 30-day public comment period on all MMPA rules and believes that such a duration is reasonable for this particular rule making.

Whenever NMFS develops proposed regulations under the MMPA, the agency is required to first publish a notice of receipt of a request for the implementation of regulations and LOAs governing the incidental taking. This process typically affords the public up to 30 days to comment on a requester's application and provide NMFS with information and suggestions that will be considered in developing MMPA regulations. *See* 50 CFR 216.104. On July 3, 2008, NMFS published its "Notice; receipt of application for a Letter of Authorization (LOA); request for comments and information" for the Navy's NAVSEA NUWC Keyport Range Complex and solicited input for 30 days (*See* 73 FR 38183).

The public was also afforded 30 days to comment on the Keyport Range Complex proposed rule. For the proposed MMPA rulemaking for the Navy training and RDT&E activities, thirty days was appropriate in this instance because of: (1) The tight deadline of the scheduled RDT&E or training activities identified in the Navy's schedule; and (2) the fact that NMFS anticipated only low impacts to marine mammals with the implementation of mitigation and monitoring measures. Therefore, NMFS does not believe an additional 30-day comment period is warranted.

Comment 2: The Commission recommends that NMFS: (1) Work with the Navy to ensure that the final rule and any LOA issued under that rule provide authorization for the taking of all marine mammal species that could occur in the study area (including those listed under the Endangered Species Act) and that may be exposed to Level A or Level B harassment as a result of the proposed activities; and (2) either reconsider its decision to exclude endangered and threatened species from the authorization or provide a well-reasoned, science-based explanation for its apparent belief that the proposed mitigation measures will be much more effective for listed species than for unlisted species.

Response: First, NMFS worked with the Navy to ensure that the rule provides authorization for animals that are likely to be taken in the area, but NMFS does not agree with the Commission's recommendation that NMFS' final rule and LOAs should authorize takes of all marine mammal species that are known to occur in the Keyport Range Complex Study Area, regardless of how infrequently they occur. Second, to clarify, NMFS does not believe that the proposed mitigation measures will be much more effective for listed species than for unlisted species, rather, all of the listed species fell into a larger group of marine mammals that occur rarely and infrequently in Keyport and are unlikely to be exposed to the Navy sound sources

at all and, therefore, unlikely to be taken.

As described in the proposed rule (74 FR 32264; July 7, 2009), the annual estimated number of exposures from acoustic sources are given for each species, based on the abundance, distribution, and density of these species. NMFS is not authorizing the take of every marine mammal species that could potentially occur in the Keyport Range Complex Study Area, since many of these species (all ESA-listed species and some non-listed) occur rarely (*e.g.,* blue whale, fin whale, sei whale, North Pacific right whale, minke whale, killer whale, and striped dolphin) or occur infrequently (*e.g.,* humpback whale, Baird's beaked whale, Hubb's beaked whale, Stejneger's beaked whale, Risso's dolphin, short-beaked common dolphin, sperm whale, dwarf sperm whale, pygmy sperm whale, northern elephant seal, and Steller sea lion). In fact, none of the ESA-listed species are commonly found in the Keyport Range Complex Study Area, and NMFS' Biological Opinion for Keyport and NWTRC also indicates that these species will not be taken by the Keyport activities.

The estimates of 11,283 takes of harbor porpoises, 44 takes of northern fur seal, 114 takes of California sea lions, and 5,569 takes of harbor seals by Level B harassment as a result of the proposed Keyport Range Complex RDT&E activities are based on scientific modeling for acoustic sources using the risk function methodology, coupled with the analysis of the abundance, distribution, and density of marine mammal species in the action area.

Comment 3: The Commission requests NMFS describe the "specified events" that would involve or require special surveys at the Dabob Bay Range site (74 FR 32264; July 7, 2009; page 32295).

Response: According to the Navy, a "specified event" is a test or run plan well suited for monitoring because certain operational and environmental parameters are in place (*e.g.,* high level of activity, bottom mounted hydrophone in place, controlled environment, *etc.; see* 74 FR 32264; July 7, 2009; page 32295). As an RDT&E facility, it is important to maintain an open perspective of what kind of mid and high frequency events may be best for a special survey. Examples of the types of scenarios that would be considered for monitoring scenarios are those utilizing the high frequency systems that were modeled such as sources S6, S7, or S8 described in the proposed rule (74 FR 32264; July 7, 2009; page 32288). These may include a test unit and a launch and recovery craft and associated tracking sonar. For monitoring an activity with a mid frequency source, a range target operating at the lower end of its frequency range (5–100 kHz) at source level of 238 microPa @ 1 m or a countermeasure under test with an output frequency between 1 and 10 kHz may be the appropriate type of test to use for monitoring.

Mitigation

Comment 4: The Commission requests NMFS require the Navy to suspend an activity if a marine mammal is killed or seriously injured and the death or injury could be associated with the Navy's activities, and resumption of the activity should be contingent upon a review by NMFS of the circumstances of the death or injury and the Navy's plans for avoiding additional mortalities. If, upon review, those plans are deemed inadequate, then the Navy should be required to halt its operations until it has obtained the necessary authorization.

Response: Without detailed examination by an expert, it is usually not feasible to determine the cause of injury or mortality in the field. Therefore, NMFS has required in its final rule that if there is clear evidence that a marine mammal is injured or killed as a result of the proposed Navy RDT&E activities, the Naval activities shall be immediately suspended and the situation immediately reported by personnel involved in the activity to the Range Officer, who will follow Navy procedures for reporting the incident to NMFS through the Navy's chain-of-command.

For any other sighting of injured or dead marine mammals in the vicinity of any Navy RDT&E activities utilizing underwater active acoustic sources for which the cause of injury or mortality cannot be immediately determined, the Navy personnel will ensure that NMFS (regional stranding coordinator) is notified immediately (or as soon as operational security allows). The Navy will provide NMFS with species or description of the animal(s), the condition of the animal(s) (including carcass condition if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

If NMFS determines that further investigation is appropriate, once investigations are completed and determinations made, NMFS would use the resulting information, if appropriate, to help reduce the likelihood that a similar event would happen in the future and to move forward with necessary steps to ensure environmental compliance for the Navy under the MMPA.

Comment 5: Stating that waters out to at least the 100-meter isobath represent vital habitat for a discrete population of harbor porpoises, the Oregon/Washington Coast stock, that the species has acute sensitivity to acoustic sources, and that the offshore population of approximately 37,745 would be exposed over 11,000 times, representing nearly 99 percent of all take authorized for QUTR under the proposed rule, the NRDC recommends establishing a protection area within waters landward of the 100-meter isobath. In addition, the NRDC recommends a buffer zone reflecting the sensitivity of the species should be applied beyond the 100-meter isobath, optimally ensuring that exposure levels within the 100-meter isobath do not exceed 120 dB. The NRDC recommends that NMFS ask the Navy to prepare a nominal propagation analysis for the coast to determine what stand-off distances are necessary to reduce exposure levels below this threshold.

Response: In order to determine the appropriate mitigation measures for a particular activity, NMFS must balance the benefit of the measure to the species, the likely effectiveness of a given measure, and the practicability of the measure for applicant implementation.

First, the estimated incidental takes of harbor porpoises are expected to be non-injurious, short-term Level B harassment. It is reasonable to expect high numbers of takes due to multiple takes of one individual in a year (not every estimated take represents a different individual). Given the nature of the activity, it is more likely that a percentage of the population (as opposed to the entire population) would be taken with each event, and that over time multiple repetitions of exposure to these short-term exercises would occur.

Regarding NRDC's recommendation, a buffer zone applied beyond the 100-meter isobaths is not practicable for this activity and would seriously affect the Navy's proposed RDT&E activities. While it is true that most Oregon/Washington Coast stock harbor porpoises occur in waters shallower than 100-m, excluding these regions would not be practicable, as it would mean that large regions of the Keyport Range Complex Study Area would be off limits for the proposed RDT&E activities. For example, the 100-m isobaths in the W237A Area of the QUTR Range Site extend off shore for more than 7 miles. With such large areas and all of the area of that specific depth range off limits to the proposed RDT&E activities, the Navy would not be able to

fulfill its mission activities. It is also not practicable to recommend a "do not exceed 120 dB" level within the 100-m isobath, as some of the active sources have received levels reaching 120 dB at ranges over 66 km (Table 7).

The majority of the harbor seals take numbers include exposures close to this 120-dB threshold level (rather than at a higher exposure level), due to the large Level B harassment isopleths. The effects of exposures to this lower level are expected to be comparatively less severe. Also, none of these exposures are expected to affect the stock through effects on annual rates of survival and reproduction.

TABLE 7—SOURCE LEVELS AND DISTANCES AT 120 dB RECEIVED LEVEL FROM EIGHT ACTIVE SOURCES

Source comparison		Range to 120 dB (km)
	Source level	
S1	207	2.12
S2	205	6.32
S3	186	1.76
S4	220	0.93
S5	233	66.03
S6	233	13.82
S7	230	9.12
S8	233	7.41

As stated in this document, exposures to marine mammals are expected to be limited to Level B harassment, and the seemingly large takes of harbor porpoise do not represent the individual animals that would be taken, instead, some individuals may be taken multiple times. Among these multiple takes, only 1 animal is expected to be exposed once to received levels that could cause minor TTS. Further, the NRDC's proposed mitigation of limiting the RDT&E activities to water deeper than 100-m isobaths would compromise the Navy's ability to accomplish their mission with limited added benefit to the species. Mitigation and monitoring measures, such as establishing and monitoring exclusion zones and shutdown measures, are expected to achieve the least practicable adverse impacts to marine mammals in the vicinity of the proposed project area.

Separately, 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 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 in the Keyport rule would allow for the application of these protected areas, as appropriate.

Comment 6: The NRDC requests NMFS provide additional protection from the use of mid- and high-frequency acoustic sources within the Olympic Coast National Marine Sanctuary (NMS). Specifically, for those activities that do not require QUTR's instrumentation, NMFS should include measures to prohibit such activities from taking place in sanctuary waters. If this proves impracticable, the NRDC urges NMFS to substantially limit the number of RDT&E activities taking place by requiring prior approval from Pacific Fleet Command or other means to minimize sonar use in the area.

Response: NMFS has been working with the Navy throughout the rulemaking process to develop a series of strict mitigation and monitoring measures regarding the use of active acoustic sources in the Keyport Range Complex, which overlaps with the Olympic Coast NMS. These measures include the use of trained Navy marine observers who will conduct marine mammal monitoring to avoid collisions with marine mammals and the use of exclusion zones that avoid exposing marine mammals to levels of sound likely to result in temporary hearing loss, injury or death of marine mammals. However, prohibition of RDT&E activities and/or substantially limiting the number of RDT&E activities within the Olympic Coast NMS would compromise the Navy's mission and is impracticable for the proposed activities. The area and the number of the RDT&E events that were proposed to be carried out were carefully planned to have the least practicable adverse impacts to marine mammals while still meeting the Navy's RDT&E mission activity. In addition, the level and number of RDT&E events authorized are the maximum activities allowed within the five-year rule period; the actual number of events could be fewer than proposed.

Comment 7: The NRDC recommends that NMFS establish a seasonal protection area in certain canyons and banks on QUTR that represent important foraging habitat particularly for humpback whales. Citing Calambokidis *et al.* (2004), the NRDC states that humpback whales occur mostly in the northern part of the area, in a region informally known as the "Prairie." The NRDC further states that sonar impacts on beaked whales are also a concern in QUTR because these species have a general preference for waters of the lower continental slope. The NRDC requests NMFS to advocate avoidance, or a reduction of RDT&E activities, within areas between 500 and 2,000 meters depth with unusual bottom topography (such as canyons).

Response: There are no canyons or banks in the currently instrumented test range within the QUTR range site and its associated depth is limited to 91 meters. The proposed extension of the QUTR range site would expand the range boundaries to the full extent of range area W–237A, which does include canyons and banks and the varied topography. W–237A was determined to be a vital asset by the Navy to perform its RDT&E mission, and the proposed extension of the existing QUTR range site into the entire W–237A area is critical to fulfill the Navy's RDT&E mission activity. In addition, seasonal variability of oceanic conditions was also considered an important component of the Navy's RDT&E mission, and activities must be able to occur year round. Therefore, a restriction on seasonal use of the canyon and banks and making the areas between 500 and 2,000 meters off-limits to the proposed Keyport RDT&E operations would severely limit the Navy's mission activities, and will not be a practicable measure.

Although NMFS recognizes that the extended QUTR range site would include known feeding habitat for certain species of marine mammals including humpback whales, and the undersea canyon and banks of the type that are known to be used by beaked whales for feeding, the proposed RDT&E activities to be conducted within the extended QUTR range site would only take 16 days per year at its offshore area, with total operation time for all active acoustic sources adding up to approximately 507 hours, and the range tests would be comprised of low intensity mid- and high-frequency active acoustic sources (see Description of Specific Activities section above). In addition, humpback whales and beaked whales are rare within the proposed Keyport Range Complex. Scientific modeling on take calculations shows that the take of these species, even by Level B behavioral harassment, is very unlikely.

Lastly, as mentioned above, NMFS has been working with the Navy throughout the rulemaking process to develop a series of mitigation and monitoring measures so that adverse impact to marine mammals and their

habitat will be the least that is practicable. These measures include the use of trained Navy marine observers who will conduct marine mammal monitoring to avoid collisions with marine mammals and the use of exclusion zones that avoid exposing marine mammals to levels of sound likely to result in injury or death of marine mammals. The determination of appropriate mitigation measures includes consideration of benefit of the proposed measure to marine mammals, the likely effectiveness of the measure, and the practicability of the measure for applicant implementation. NMFS believes that the measures required of the Navy will result in the least practicable adverse impact.

Comment 8: The NRDC requests NMFS bar the use of mid- and high-frequency acoustic sources in those portions of the Keyport Range that extend into designated critical habitat for Southern Resident killer whales because these waters in Puget Sound are one of the most important habitats for the Southern Resident community of killer whales (and their near-exclusive habitat in summer/autumn months).

Response: The occurrence of Southern Resident killer whales (SRKW) in waters in the vicinity of the Keyport Range Site is rare (NMFS, 2006). The Navy conducted a density estimate of killer whales in inland waters of the Keyport Range Complex and concluded that density is zero for the Keyport Range Site (Navy, 2008). No take of SRKWs is expected or authorized. Therefore, NMFS does not agree with NRDC's recommendation.

The Keyport Range Complex has been at this site since 1914, and the existing Keyport Range Site was excluded from NMFS' 2006 critical habitat designation after a balancing of conservation benefits against national security considerations. The proposed Keyport Range Site extension would expand the existing range into the Southern Resident killer whale critical habitat. The extension would increase the area of the Keyport Range Site from 1.5 nm^2 to 1.7 nm^2 (5.1 km^2 to 5.9 km^2). The area in critical habitat is therefore approximately 0.2 nm^2 (0.8 km^2).

The Navy is required to shut down any active acoustic sources when any whale or dolphin is detected within 1,000 yards of the source. Modeling of three of the most powerful sources at the Keyport Range Site indicates that the received level at 1,000 yards drops down to 145 dB re 1 microPa, which is the level at which the risk function indicates a very small percentage of exposed animals would be harassed. Therefore, NMFS does not believe that the proposed RDT&E activities in the vicinity of SRKW critical habitat would result in the take this species if the shut-down mitigation measure is implemented.

Killer whales are mid-sized cetacean species with distinctive large dorsal fins and can be detected from a large distance, which allows mitigation and monitoring measures to be effectively carried out. However, to account for nighttime activities, NMFS has included an additional measure that will provide further assurance that no SRKW would be taken in the vicinity of the Keyport Range site. This additional measure requires the Navy to place a passive acoustic monitoring system at the northern and southern approaches to Port Orchard Reach and to conduct passive acoustic monitoring within the Agate Pass and south of University Point in southern Port Orchard Reach for nighttime RDT&E activities conducted in the Keyport Range Site Extension. If Southern Resident killer whales are detected in the vicinity of the Keyport Range Site, the Range Office shall be notified immediately and, in accordance with the required mitigation for all cetaceans, the active acoustic sources must be shutdown if killer whales are confirmed to approach at 1,000 yards from the source. NMFS considers passive acoustic monitoring for SRKW to be an effective way to supplement detection of this population in low light conditions, given that they are known to be more vocal compared to transient killer whales (Deecke *et al.,* 2005).

Comment 9: Citing that the exclusion zone for cetaceans is 1,000 yards and the exclusion zone for pinnipeds is 100 yards, the NRDC states that NMFS fails to explain why pinnipeds should be afforded less protection than cetaceans, especially as it notes that harbor seals will experience TTS onset at 183 dB, while cetaceans generally will experience TTS onset at 195 dB. The NRDC requests NMFS require a 1,000 yard exclusion zone for all marine mammals.

Response: Pinnipeds are abundant in the Keyport and Dabob current and proposed extensions. Given the limited operating area, close shore proximity and abundance of animals residing at the ranges, a greater standoff for pinnipeds would result in a large majority of activities interrupted, postponed or cancelled. As a result, the Keyport Range Complex would not meet its mission requirements, making such a measure impracticable. On the other hand, cetaceans are not as numerous as pinnipeds, and they are more easily detected at larger distances, allowing for the practicable implementation of a larger standoff distance.

The range to 183 dB re 1 microPa^2 (onset of TTS for harbor seal) for the mid frequency active acoustic source S5, which has a source level at 233 dB re 1 microPa @ 1 m (the highest of all active acoustic sources being used at Keyport Range Complex) is approximately 464 m. The total operation time for range target, which is under the S5 source type designation, is 9 hours per year for the entire Keyport Range Complex. All other active acoustic sources have lower source levels and thus the ranges to 183 dB 1 microPa^2 are expected to be much shorter. Although it is estimated that more than 2,000 harbor seals would incur Level B harassment which could cause TTS, the TTS is expected to be short-term in duration and of a low level (due to the modeled received levels, see Keyport Range Complex FEIS/OEIS, Navy, 2009). Even if TTS occurs in harbor seals, it is expected in the much higher frequency in their communication range. Additionally, no takes by Level A harassment are anticipated, based on the modeling results.

Sonar operations within the Keyport Range Complex have been ongoing for over 50 years and evidence shows that the pinniped populations remain abundant.

Monitoring

Comment 10: The NRDC request that NMFS require long-term monitoring of local populations on all ranges to see if any populations reflect habitat displacement or exhibit other negative impacts.

Response: NMFS agrees with the NRDC's suggestion. The Keyport Range Complex maintains a database of marine mammal sighting since 2003. NMFS is working and will continue to work with the Navy to develop and implement monitoring plans to help better understand the impacts of all Naval RDT&E and training activities that have the potential to adversely affect marine mammal species and their habitat. For the proposed Keyport Range Complex RDT&E activities, various monitoring measures will be implemented and are described in the Monitoring section of this document.

Comment 11: The Commission requests that NMFS require the Navy to develop and implement a detailed plan to verify the performance of the visual monitoring, passive acoustic monitoring, and other monitoring and mitigation measures being proposed to enable the Navy, NMFS, and other

interested parties to evaluate their effectiveness.

Response: NMFS has worked with the Navy throughout the rulemaking process to develop a series of mitigation, monitoring, and reporting protocols that will effect the least practicable adverse impact and increase our understanding of the impact of these activities on marine mammals. These monitoring and reporting measures include, but are not limited to: (1) The use of trained Navy marine observers who will conduct marine mammal monitoring to avoid collisions with marine mammals; (2) the use of exclusion zones that avoid exposing marine mammals to levels of sound likely to result in injury or death of marine mammals; (3) the use of MMOs/Navy marine observers to conduct vessel and shore-based surveys; and (4) annual monitoring reports and comprehensive reports to provide insights regarding impacts to marine mammals.

NMFS will evaluate the effectiveness of these measures through review and analyses of the Navy's annual monitoring reports, the annual adaptive management meetings required by the final 5-year rule, as well as a required Monitoring workshop that will be convened in 2011 to solicit detailed input from experts regarding the effectiveness of the Navy's monitoring. NMFS will, through this established adaptive management process, work with the Navy to determine whether additional mitigation and monitoring measures are necessary. In addition, with the ICMP, which is a comprehensive monitoring planning and prioritization tool, and the planned Monitoring Workshop in 2011, NMFS will work with the Navy and other interested parties to further improve its monitoring and mitigation plans for its future activities.

Miscellaneous Issues

Comment 12: Two individuals expressed general opposition to Navy testing and bombing activities and NMFS' issuance of an MMPA authorization because of the danger of killing marine life.

Response: NMFS appreciates the commenters' concern for the marine mammals that live in the area of the proposed activities. However, the proposed Keyport Range Complex activities do not include bombing or any explosive detonations. The proposed activities, as described in detail in the Proposed Rule (74 FR 32264; July 7, 2009), include the use of active acoustic sources to conduct the Navy's RDT&E activities. In addition, the MMPA allows individuals to take marine mammals incidental to specified activities if NMFS can make the necessary findings required by law (*i.e.,* negligible impact, unmitigable adverse impact on subsistence users, *etc.*). As explained throughout this rulemaking, NMFS has made the necessary findings under 16 U.S.C. 1371(a)(5)(A) to support issuance of the final rule.

Estimated Take of Marine Mammals

As mentioned previously, with respect to the MMPA, NMFS' effects assessments serve 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 in the NAVSEA NUWC Keyport Range Complex Study Area; thus, there would be no effect to any subsistence user); and (4) to prescribe requirements pertaining to monitoring and reporting.

In the Estimated Take of Marine Mammals section of the proposed rule, NMFS related the potential effects to marine mammals from sonar operations to the MMPA regulatory definitions of Level A and Level B Harassment and assessed the effects to marine mammals that could result from the specific activities that the Navy intends to conduct. The subsections of this analysis are discussed in the proposed rule (74 FR 32264; July 7, 2009; pages 32281–32290).

In the Estimated Exposures of Marine Mammals section of the proposed rule, NMFS described in detail how the take estimates were calculated through modeling (74 FR 32264; July 7, 2009; pages 32290–32292). A summary of potential exposures from active acoustic sources (per year) for marine mammals in the NAVSEA NUWC Keyport Range Complex Study Area is listed in Table 8. No change has been made to the final rule.

TABLE 8—COMBINED ESTIMATED ANNUAL MMPA LEVEL B EXPOSURES (TTS AND BEHAVIOR) FOR PROPOSED ANNUAL RDT&E ACTIVITIES OPERATIONS AT ALL SITES AFTER IMPLEMENTATION OF PROPOSED MITIGATION MEASURES

	TTS (level B) exposures	Risk function sub-TTS behavioral exposures
Endangered & Threatened Species		
Blue whale	0	0
Fin whale	0	0
Humpback whale	0	0
Sei whale	0	0
Sperm whale	0	0
Killer whale	0	0
Steller sea lion	0	0
Non-ESA Listed Species		
Minke whale	0	0
Gray whale	0	0
Dwarf and pygmy sperm whale	0	0
Baird's beaked whale	0	0
Mesoplodons	0	0

TABLE 8—COMBINED ESTIMATED ANNUAL MMPA LEVEL B EXPOSURES (TTS AND BEHAVIOR) FOR PROPOSED ANNUAL RDT&E ACTIVITIES OPERATIONS AT ALL SITES AFTER IMPLEMENTATION OF PROPOSED MITIGATION MEASURES—Continued

	TTS (level B) exposures	Risk function sub-TTS behavioral exposures
Risso's dolphin	0	0
Pacific white-sided dolphin	0	0
Short-beaked common dolphin	0	0
Striped dolphin	0	0
Northern right whale dolphin	0	0
Dall's porpoise	0	0
Harbor porpoise *	1	11,282
Northern fur seal	0	44
California sea lion	0	114
Northern elephant seal	0	14
Harbor seal	2,062	3,507

* For harbor porpoises, the model results represent the step function criteria where 100% of the population exposed to 120 dB SPL are listed. This is not a risk function calculation.

Effects on Marine Mammal Habitat

NMFS' NAVSEA NUWC Keyport Range Complex proposed rule included a section that addressed the effects of the Navy's activities on Marine Mammal habitat (74 FR 32264; July 7, 2009; pages 32292–32293). NMFS 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.

Analysis and Negligible Impact Determination

NMFS' NAVSEA NUWC Keyport Range Complex proposed rule included a section that addressed the analysis and negligible impact determination of the Navy's activities on the affected species or stocks (74 FR 32264; July 7, 2009; pages 32298–32300).

The Navy's specified activities have been described based on best estimates of the planned RDT&E activities the Navy would conduct within the proposed NAVSEA NUWC Keyport Range Complex Extension. The acoustic sources proposed to be used in the NAVSEA NUWC Keyport Range Complex Extension are low intensity and total proposed sonar operation hours are under 1,570 hours. Taking the above into account, along with the fact that NMFS anticipates no mortalities and injuries to result from the action, the fact that there are no specific areas of reproductive importance for marine mammals recognized within the Keyport Range Complex Extension study area, the sections discussed below, and dependent upon the implementation of the proposed mitigation measures, NMFS has determined that Navy RDT&E activities utilizing underwater acoustic sources will have a negligible impact on the affected marine mammal species and stocks present in the proposed action area.

Behavioral Harassment

As discussed in the Potential Effects of Exposure of Marine Mammals to HFAS/MFAS and illustrated in the conceptual framework, marine mammals can respond to HFAS/MFAS in many different ways, a subset of which qualifies as harassment. One thing that the take estimates do not take into account is the fact that most marine mammals will likely avoid strong sound sources to some extent. Although an animal that avoids the sound source will likely still be taken in some instances (such as if the avoidance results in a missed opportunity to feed, interruption of reproductive behaviors, *etc.*) in other cases avoidance may result in fewer instances of take than were estimated or in the takes resulting from exposure to a lower received level than was estimated, which could result in a less severe response. The Keyport Range Complex application involves mid-frequency and high frequency active sonar operations shown in Table 2, and none of the tests would involve powerful tactical sonar such as the 53C series MFAS. Therefore, any disturbance to marine mammals resulting from MFAS and HFAS in the proposed Keyport Range Complex RDT&E activities is expected to be significantly less in terms of severity when compared to major sonar exercises (*e.g.,* AFAST, HRC, SOCAL). In addition, high frequency signals tend to have more attenuation in the water column and are more prone to lose their energy during propagation. Therefore, their zones of influence are much smaller, thereby making it easier to detect marine mammals and prevent adverse effects from occurring.

There is limited information available concerning marine mammal reactions to MFAS/HFAS. The Navy has only been conducting monitoring activities since 2006. From the four major training exercises (MTEs) of HFAS/MFAS in the SOCAL Study Area for which NMFS has received training and monitoring reports, no instances of obvious behavioral disturbance were observed by the Navy watchstanders. The proposed activities in the Keyport Range Complex are RDT&E activities, which are much smaller in scale when compared with major training events in SOCAL. One cannot conclude from these results that marine mammals were not harassed from HFAS/MFAS, as a portion of animals within the area of concern may not have been seen (especially those more cryptic, deep-diving species, such as beaked whales or *Kogia* sp.) and some of the non-biologist watchstanders might not have had the expertise to characterize behaviors. However, the data demonstrate that the animals that were observed did not respond in any of the obviously more severe ways, such as panic, aggression, or anti-predator response.

In addition to the monitoring that will be required pursuant to these regulations and subsequent LOAs, which is specifically designed to help us better understand how marine mammals respond to sound, the Navy and NMFS have developed, funded, and begun conducting a controlled exposure experiment with beaked whales in the Bahamas.

Diel Cycle

As noted previously, many animals perform vital functions, such as feeding,

resting, traveling, and socializing on a diel cycle (24-hr cycle). Substantive behavioral reactions to noise exposure (such as disruption of critical life functions, displacement, or avoidance of important habitat) are more likely to be significant if they last more than one diel cycle or recur on subsequent days (Southall *et al.,* 2007). Consequently, a behavioral response lasting less than one day and not recurring on subsequent days is not considered particularly severe unless it could directly affect reproduction or survival (Southall *et al.,* 2007).

In the previous section, we discussed the fact that potential behavioral responses to HFAS/MFAS that fall into the category of harassment could range in severity. By definition, the takes by Level B behavioral harassment involve the disturbance of a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns (such as migration, surfacing, nursing, breeding, feeding, or sheltering) to a point where such behavioral patterns are abandoned or significantly altered. These reactions would, however, be more of a concern if they were expected to last over 24 hours or be repeated in subsequent days. Different sonar testing may not occur simultaneously. Some of the marine mammals in the Keyport Range Complex Study Area are residents and others would not likely remain in the same area for successive days, it is unlikely that animals would be exposed to HFAS/MFAS at levels or for a duration likely to result in a substantive response that would then be carried on for more than one day or on successive days.

TTS

NMFS and the Navy have estimated that individuals of some species of marine mammals may sustain some level of TTS from HFAS/MFAS operations. As mentioned previously, TTS can last from a few minutes to days, be of varying degree, and occur across various frequency bandwidths. The TTS sustained by an animal is primarily classified by three characteristics:

• Frequency—Available data (of mid-frequency hearing specialists exposed to mid to high frequency sounds—Southall *et al.,* 2007) suggest that most TTS occurs in the frequency range of the source up to one octave higher than the source (with the maximum TTS at ½; octave above).

• Degree of the shift (*i.e.,* how many dB is the sensitivity of the hearing reduced by)—generally, both the degree of TTS and the duration of TTS will be greater if the marine mammal is exposed to a higher level of energy (which would occur when the peak dB level is higher or the duration is longer). The threshold for the onset of TTS > 6 dB) for Navy sonars is 195 dB (SEL), which might be received at distances of up to 275–500 m from the most powerful MFAS source, the AN/SQS–53 (the maximum ranges to TTS from other sources would be less). An animal would have to approach closer to the source or remain in the vicinity of the sound source appreciably longer to increase the received SEL, which would be difficult considering the marine observers and the nominal speed of a sonar vessel (10–12 knots). Of all TTS studies, some using exposures of almost an hour in duration or up to 217 dB SEL, most of the TTS induced was 15 dB or less, though Finneran *et al.* (2007) induced 43 dB of TTS with a 64-sec exposure to a 20 kHz source (MFAS emits a 1-s ping 2 times/minute).

• Duration of TTS (Recovery time)—see above. Of all TTS laboratory studies, some using exposures of almost an hour in duration or up to 217 dB SEL, almost all recovered within 1 day (or less, often in minutes), though in one study (Finneran *et al.,* 2007), recovery took 4 days.

Based on the range of degree and duration of TTS reportedly induced by exposures to non-pulse sounds of energy higher than that to which free-swimming marine mammals in the field are likely to be exposed during HFAS/MFAS testing activities, it is unlikely that marine mammals would sustain a TTS from MFAS that alters their sensitivity by more than 20 dB for more than a few days (and the majority would be far less severe). Also, for the same reasons discussed in the Diel Cycle section, and because of the short distance within which animals would need to approach the sound source, it is unlikely that animals would be exposed to the levels necessary to induce TTS in subsequent time periods such that their recovery were impeded. Additionally, though the frequency range of TTS that marine mammals might sustain would overlap with some of the frequency ranges of their vocalization types, the frequency range of TTS from MFAS (the source from which TTS would more likely be sustained because the higher source level and slower attenuation make it more likely that an animal would be exposed to a higher level) would not usually span the entire frequency range of one vocalization type, much less span all types of vocalizations.

Acoustic Masking or Communication Impairment

As discussed above, it is also possible that anthropogenic sound could result in masking of marine mammal communication and navigation signals. However, masking only occurs during the time of the signal (and potential secondary arrivals of indirect rays), versus TTS, which occurs continuously for its duration. Masking effects from HFAS/MFAS are expected to be minimal. If masking or communication impairment were to occur briefly, it would be in the frequency range of MFAS, which overlaps with some marine mammal vocalizations; however, it would likely not mask the entirety of any particular vocalization or communication series because the pulse length, frequency, and duty cycle of the HFAS/MFAS signal does not perfectly mimic the characteristics of any marine mammal's vocalizations.

PTS, Injury, or Mortality

The Navy's model estimated that no marine mammal would be taken by Level A harassment (injury, PTS included) or mortality due to the low intensity of the active sound sources being used.

Based on the aforementioned assessment, NMFS determines that there would be the following number of takes: 11,283 harbor porpoises, 44 northern fur seals, 114 California sea lions, 14 northern elephant seals, and 5,569 harbor seals (5,468 Washington Inland Waters stock and 101 Oregon/Washington Coastal stock) by Level B harassment (TTS and sub-TTS) as a result of the proposed Keyport Range Complex RDT&E sonar testing activities. These numbers very likely do not represent the number of individuals that would be taken, since it's most likely that many individual marine mammals would be taken multiple times. However, if each take represents a different animal, these take numbers represent approximately 29.89%, 0.01%, 0.05%, 0.01%, 37.42%, and 0.41% of the Oregon/Washington Coastal stock harbor porpoises, Eastern Pacific stock northern fur seals, U.S. stock California sea lions, California breeding stock northern elephant seals, Washington Inland Waters stock harbor seals, and Oregon/Washington Coastal stock harbor seals, respectively, in the vicinity of the proposed Keyport Range Complex Study Area (calculation based on NMFS 2007 U.S. Pacific Marine Mammal Stock Assessments and 2007 U.S. Alaska Marine Mammal Stock Assessments).

No Level A take (injury, PTS included) or mortality would occur as the result of the proposed RDT&E and range extension activities for the Keyport Range Complex.

Based on these analyses, NMFS has determined that the total taking over the 5-year period of the regulations and subsequent LOAs from the Navy's NAVSEA NUWCX Keyport Range Complex RDT&E and range extension activities will have a negligible impact on the marine mammal species and stocks present in the Keyport Range Complex Study Area. No changes have been made to the discussion contained in this section of the proposed rule.

Subsistence Harvest of Marine Mammals

NMFS has determined that the total taking of marine mammal species or stocks from the Navy's mission activities in the Keyport Range Complex study area would not have an unmitigable adverse impact on the availability of the affected species or stocks for subsistence uses, since there are no such uses in the specified area.

ESA

There are eight marine mammal species/stocks, one sea turtle species, and four fish species over which NMFS has jurisdiction that are listed as endangered or threatened under the ESA that could occur in the NAVSEA NUWC Keyport Range Complex study area: Blue whale, fin whale, sei whale, humpback whale, North Pacific right whale, sperm whale, Southern Resident killer whale, Steller sea lions, leatherback sea turtle, Puget Sound Chinook salmon, Hood Canal summer-run chum salmon, Puget Sound Steelhead trout, and Coastal-Puget Sound bull trout.

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. NMFS' Biological Opinion concludes that the proposed RDT&E activities are not likely to jeopardize the continued existence of the threatened and endangered species listed under the ESA under NMFS jurisdiction.

NEPA

NMFS participated as a cooperating agency on the Navy's Final Environmental Impact Statement (FEIS) for the NAVSEA NUWC Keyport Range Complex, published on May 12, 2010. NMFS has adopted the Navy's EIS/OEIS in connection with this MMPA rulemaking and has prepared a record of decision.

Determination

Based on the analysis contained herein 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 the NAVSEA NUWC Keyport Range Complex's RDT&E activities utilizing active acoustic sources (including MFAS/HFAS) over the 5 year period will have a negligible impact on the affected species or stocks and will not result in an unmitigable adverse impact on the availability of marine mammal species or stocks for taking for subsistence uses. NMFS has issued 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.

Classification

This action does not contain a collection of information requirement for purposes of the Paperwork Reduction Act.

This proposed rule has been determined by the Office of Management and Budget to be not significant for purposes of Executive Order 12866.

Pursuant to the Regulatory Flexibility Act, the Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration at the proposed rule stage that this rule, if adopted, would not have a significant economic impact on a substantial number of small entities, and published such certification in the **Federal Register** notice of proposed rulemaking. No changes have been made that affect that certification. Accordingly, no final regulatory flexibility analysis is required, and none has been prepared.

The Assistant Administrator for Fisheries has determined that there is good cause under the Administrative Procedure Act (5 U.S.C. 553(d)(3)) to waive the 30-day delay in effective date of the measures contained in the final rule. The Navy has a compelling national policy reason to continue military readiness activities without interruption in the Keyport Range Complex. As discussed below, suspension/interruption of the Navy's ability to conduct RDT&E activities disrupts adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat essential to our national security.

In order to meet its national security objectives, the Navy must continually maintain its ability to operate in a challenging at-sea environment, conduct military operations, control strategic maritime transit routes and international straits, and protect sea lines of communications that support international commerce. To meet these objectives, the Navy must identify, develop, and procure defense systems by continually integrating test and evaluation support throughout the defense acquisition process and providing essential information to decision-makers. Such testing and evaluation is critical in determining that a defense system performs as expected and whether these systems are operationally effective, suitable, survivable, and safe for their intended use.

In order to effectively fulfill its national security mission, the Navy has a need to conduct RDT&E activities covered by this final rule as soon as possible. The defense acquisition process is structured to be responsive and acquire quality products that satisfy user needs with measurable improvements on mission capability and operational support in a timely manner. Test and evaluation confirms performance of platforms and systems against documented capability needs and adversary capabilities. Delays in acquisition test and evaluation affect the Navy's need to meet its statutory mission to deploy worldwide naval forces equipped to meet existing and emergent threats. The Navy has and will be unable to plan to conduct activities covered by this final rule in the immediate future due to the uncertainties in the planning process and the fiscal and other consequences of planning for, preparing for, and then cancelling a major testing event. A 30-day delay furthers the amount of time the Navy is unable to plan for and execute an activity covered by this rule. Further, should an immediate national security requirement to use the range complex arise, the 30 day delay would prevent the Navy from meeting its mission. This would have adverse national security consequences.

Waiver of the 30-day delay of the effective date of the final rule will allow the Navy to continue to integrate RDT&E activities into the defense acquisition process to meet test and evaluation requirements, and to put capability into the hands of U.S. Sailors and Marines quickly.

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: April 4, 2011.

Samuel D. Rauch III,

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

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

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

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

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

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

Subpart R—Taking Marine Mammals Incidental to U.S. Navy Research, Development, Test, and Evaluation Activities in the Naval Sea System Command (NAVSEA) Naval Undersea Warfare Center Keyport Range Complex and the Associated Proposed Extensions Study Area

Sec.
218.170 Specified activity and specified geographical area and effective dates.
218.171 Permissible methods of taking.
218.172 Prohibitions.
218.173 Mitigation.
218.174 Requirements for monitoring and reporting.
218.175 Applications for Letters of Authorization.
218.176 Letters of Authorization.
218.177 Renewal of Letters of Authorization and adaptive management.
218.178 Modifications to Letters of Authorization.

Subpart R—Taking Marine Mammals Incidental to U.S. Navy Research, Development, Test, and Evaluation Activities in the Naval Sea System Command (NAVSEA) Naval Undersea Warfare Center (NUWC) Keyport Range Complex and the Associated Proposed Extensions Study Area

§ 218.170 Specified activity and specified geographical area and effective dates.

(a) Regulations in this subpart apply only to the U.S. Navy for the taking of marine mammals that occur 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) These regulations apply only to the taking of marine mammals by the Navy that occurs within the Keyport Range Complex Action Area, which includes the extended Keyport Range Site, the extended Dabob Bay Range Complex (DBRC) Site, and the extended Quinault Underwater Tracking Range (QUTR) Site, as presented in the Navy's LOA application. The NAVSEA NUWC Keyport Range Complex is divided into open ocean/offshore areas and in-shore areas:

(1) Open Ocean Area—air, surface, and subsurface areas of the NAVSEA NUWC Keyport Range Complex Extension that lie outside of 12 nautical miles (nm) from land.

(2) Offshore Area—air, surface, and subsurface ocean areas within 12 nm of the Pacific Coast.

(3) In-shore—air, surface, and subsurface areas within the Puget Sound, Port Orchard Reach, Hood Canal, and Dabob Bay.

(c) These regulations apply only to the taking of marine mammals by the Navy if it occurs incidental to the following activities, or similar activities and sources (estimated amounts of use below):

(1) Range Activities Using Active Acoustic Devices:

(i) General range tracking: Narrow frequency output between 10 to 100 kHz with source levels (SL) between 195–203 dB re 1 microPa @ 1 m—up to 504.5 hours per year.

(ii) UUV Payloads: Operating frequency of 10 to 100 kHz with SLs less than 195 dB re 1 microPa @ 1 m at all range sites—up to 166 hours per year.

(iii) Torpedo Sonars: Operating frequency from 10 to 100 kHz with SL under 233 dB re 1 microPa @ 1 m—up to 21 hours per year.

(iv) Range Targets and Special Test Systems: 5 to 100 kHz frequency range with a SL less than 195 dB re 1 microPa @ 1 m at the Keyport Range Site and SL less than 238 dB re microPa @ 1 m at the DBRC and QUTR sites—up to 9 hours per year.

(v) Special Sonars (non-Navy, shore/pire static testing, diver activities) and Fleet Aircraft (active sonobuoys and dipping sonars): Frequencies vary from 100 to 2,500 kHz with SL less than 235 dB re 1 microPa @ 1 m—up to 321 hours per year.

(vi) Side Scan Sonar: Multiple frequencies typically at 100 to 700 kHz with SLs less than 235 dB re 1 microPa @ 1 m—up to 166 hours per year.

(vii) Other Acoustic Sources:

(A) Acoustic Modems: Emit pulses at frequencies from 10 to 300 kHz with SLs less than 210 dB re 1 microPa @ 1 m—up to 166 hours per year.

(B) Sub-bottom Profilers: Operate at 2 to 7 kHz at SLs less than 210 dB re 1 microPa @ 1 m, and 35 to 45 kHz at SLs less than 220 dB re 1 microPa @ 1 m—up to 192 hours per year.

(C) Target simulator (surface vessels, submarines, torpedoes, and UUV engine noise): Acoustic energy from engines usually from 50 Hz to 10 kHz at SLs less than 170 dB re 1 microPa @ 1 m—up to 24.5 hours per year.

(2) Increased Tempo and Activities due to Range Extension: Estimates of annual range activities and operations are listed in the following table, but may vary provided that the variation does not result in exceeding the amount of take indicated in § 218.171(c):

Range activity	Platform/system used	Proposed number of activities/year [1]		
		Keyport range site	DBRC site	QUTR site
Test Vehicle Propulsion	Thermal propulsion systems	5	130	30
	Electric/Chemical propulsion systems	55	140	30
Other Testing Systems and Activities.	Submarine testing	0	45	15
	Inert mine detection, classification and localization	5	20	10
	Non-Navy testing	5	5	5
	Acoustic & non-acoustic sensors (magnetic array, oxygen).	20	10	5
	Countermeasure test	5	50	5
	Impact testing	0	10	5
	Static in-water testing	10	10	6
	UUV test	45	120	40
	Unmanned Aerial System (UAS) test	0	2	2

Range activity	Platform/system used	Proposed number of activities/year [1]		
		Keyport range site	DBRC site	QUTR site
Fleet Activities [2] (excluding RDT&E)	Surface Ship activities	1	10	10
	Aircraft activities	0	10	10
	Submarine activities	0	30	30
	Diver activities	45	5	15
Deployment Systems (RDT&E)	Range support vessels:			
	Surface launch craft	35	180	30
	Special purpose barges	25	75	0
	Fleet vessels [3]	15	20	20
	Aircraft (rotary and fixed wing)	0	10	20
	Shore and pier	45	30	30

[1] There may be several activities in 1 day. These numbers provide an estimate of types of range activities over the year.
[2] Fleet activities in the NAVSEA NUWC Keyport Range Complex do not include the use of surface ship and submarine hull-mounted active sonars.
[3] As previously noted, Fleet vessels can include very small craft such as SEAL Delivery Vehicles.

(d) Regulations in this subpart are effective April 11, 2011 through April 11, 2016.

§ 218.171 Permissible methods of taking.

(a) Under Letters of Authorization issued pursuant to §§ 216.106 and 218.176 of this chapter, the Holder of the Letter of Authorization may incidentally, but not intentionally, take marine mammals within the area described in § 218.170(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 § 218.170(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 § 218.170(c) is limited to the following species, by Level B harassment only and the indicated number of times:

(1) Harbor porpoise (*Phocoena phocoena*)—56,415 (an average of 11,283 annually);

(2) Northern fur seal (*Callorhinus ursinus*)—220 (an average of 44 annually);

(3) California sea lion (*Zalophus californianus*)—570 (an average of 114 annually);

(4) Northern elephant seal (*Mirounga angustirostris*)—70 (an average of 14 annually);

(5) Harbor seal (*Phoca vitulina richardsi)* (Washington Inland Waters stock)—27,340 (an average of 5,468 annually); and

(6) Harbor seal (*P. v. richardsi*) (Oregon/Washington Coastal stock)—505 (an average of 101 annually).

§ 218.172 Prohibitions.

Notwithstanding takings contemplated in § 218.171 and authorized by a Letter of Authorization issued under § 216.106 of this chapter and § 218.176, no person in connection with the activities described in § 218.170 may:

(a) Take any marine mammal not specified in § 218.171(c);

(b) Take any marine mammal specified in § 218.171(c) other than by incidental take as specified in § 218.171 (c);

(c) Take a marine mammal specified in § 218.171(c) if such taking results in more than a negligible impact on the species or stocks of such marine mammal; or

(d) Violate, or fail to comply with, the terms, conditions, and requirements of these regulations or a Letter of Authorization issued under § 216.106 of this chapter and § 218.176.

§ 218.173 Mitigation.

When conducting RDT&E activities identified in § 218.170(c), the mitigation measures contained in this subpart and subsequent Letters of Authorization issued under § 216.106 of this chapter and § 218.176 must be implemented. These mitigation measures include, but are not limited to:

(a) Marine mammal observers training:

(1) All range personnel shall be trained in marine mammal recognition.

(2) Marine mammal observer training shall be conducted by qualified organizations approved by NMFS.

(b) Lookouts onboard vessels:

(1) Vessels on a range shall use lookouts during all hours of range activities.

(2) Lookout duties include looking for marine mammals.

(3) All sightings of marine mammals shall be reported to the Range Officer in charge of overseeing the activity.

(c) Visual surveillance shall be conducted just prior to all in-water exercises.

(1) Surveillance shall include, as a minimum, monitoring from all participating surface craft and, where available, adjacent shore sites.

(2) When cetaceans have been sighted in the vicinity of the operation, all range participants increase vigilance and take reasonable and practicable actions to avoid collisions and activities that may result in close interaction of naval assets and marine mammals.

(3) Actions may include changing speed and/or direction, subject to environmental and other conditions (*e.g.,* safety, weather).

(d) An "exclusion zone" shall be established and surveillance will be conducted to ensure that there are no marine mammals within this exclusion zone prior to the commencement of each in-water exercise.

(1) For cetaceans, the exclusion zone shall extend out 1,000 yards (914.4 m) from the intended track of the test unit.

(2) For pinnipeds, the exclusion zone shall extend out 100 yards (91 m) from the intended track of the test unit.

(e) Range craft shall not approach within 100 yards (91 m) of marine mammals, to the extent practicable considering human and vessel safety priorities. This includes marine mammals "hauled-out" on islands, rocks, and other areas such as buoys.

(f) In the event of a collision between a Navy vessel and a marine mammal, NUWC Keyport activities shall notify immediately the Navy chain of Command, which shall notify NMFS immediately.

(g) Passive acoustic monitoring for cetaceans will be implemented throughout the NUWC Keyport Range Complex during RDT&E testing activities involving active sonar transmissions when passive acoustic monitoring capabilities are being operated during the testing activity.

(h) Procedures for reporting marine mammal sightings on the NAVSEA

NUWC Keyport Range Complex shall be promulgated, and sightings shall be entered into the Range Operating System and forwarded to NOAA/NMML Platforms of Opportunity Program.

(i) If there is clear evidence that a marine mammal is injured or killed as a result of the proposed Navy RDT&E activities, the Naval activities shall be immediately suspended and the situation immediately reported by personnel involved in the activity to the Ranger Officer, who will follow Navy procedures for reporting the incident to NMFS through the Navy's chain-of-command.

(j) For nighttime RDT&E activities of active acoustic transmissions in the Keyport Range proposed extension area, the Navy shall conduct passive acoustic monitoring within the Agate Pass and south of University Point in southern Port Orchard Reach. If Southern Resident killer whales are detected in the vicinity of the Keyport Range Site, the Range Office shall be notified immediately and the active acoustic sources must be shutdown if killer whales are confirmed to approach at 1,000 yards from the source.

§ 218.174 Requirements for monitoring and reporting.

(a) The Holder of the Letter of Authorization issued pursuant to § 216.106 of this chapter and § 218.176 for activities described in § 218.170(c) is required to cooperate with the NMFS when monitoring the impacts of the activity on marine mammals.

(b) The Holder of the Authorization must notify NMFS immediately (or as soon as clearance procedures allow) if the specified activity identified in § 218.170(c) is thought to have resulted in the mortality or injury of any marine mammals, or in any take of marine mammals not identified or authorized in § 218.171(c).

(c) The Navy must conduct all monitoring and required reporting under the Letter of Authorization, including abiding by the NAVSEA NUWC Keyport Range Complex Monitoring Plan, which is incorporated herein by reference, and which requires the Navy to implement, at a minimum, the monitoring activities summarized below:

(1) Visual Surveys:

(i) The Holder of this Authorization shall conduct a minimum of 2 special visual surveys per year to monitor HFAS and MFAS respectively at the DBRC Range site.

(ii) For specified events, shore-based and vessel surveys shall be used 1 day prior to and 1–2 days post activity.

(A) Shore-based Surveys:

(*1*) Shore-based monitors shall observe test events that are planned in advance to occur adjacent to near shore areas where there are elevated topography or coastal structures, and shall use binoculars or theodolite to augment other visual survey methods.

(*2*) Shore-based surveys of the test area and nearby beaches shall be conducted for stranded marine animals following nearshore events. If any distressed, injured or stranded animals are observed, an assessment of the animal's condition (alive, injured, dead, or degree of decomposition) shall be reported immediately to the Navy and the information shall be transmitted immediately to NMFS through the appropriate chain of command.

(B) Vessel-based Surveys:

(*1*) Vessel-based surveys shall be designed to maximize detections of marine mammals near mission activity event.

(*2*) Post-analysis shall focus on how the location, speed and vector of the range craft and the location and direction of the sonar source (*e.g.* Navy surface vessel) relates to the animal.

(*3*) Any other vessels or aircraft observed in the area shall also be documented.

(iii) Surveys shall include the range site with special emphasis given to the particular path of the test run. When conducting a particular survey, the survey team shall collect the following information.

(A) Species identification and group size;

(B) Location and relative distance from the acoustic source(s);

(C) The behavior of marine mammals including standard environmental and oceanographic parameters;

(D) Date, time and visual conditions associated with each observation;

(E) Direction of travel relative to the active acoustic source; and

(F) Duration of the observation.

(iv) Animal sightings and relative distance from a particular active acoustic source shall be used post-survey to determine potential received energy (dB re 1 micro Pa-sec). This data shall be used, post-survey, to estimate the number of marine mammals exposed to different received levels (energy based on distance to the source, bathymetry, oceanographic conditions and the type and power of the acoustic source) and their corresponding behavior.

(2) Passive Acoustic Monitoring (PAM):

(i) The Navy shall deploy a hydrophone array in the Keyport Range Complex Study Area for PAM.

(ii) The array shall be utilized during the two special monitoring surveys in DBRC as described in § 218.174(c)(1)(i).

(iii) The array shall have the capability of detecting low frequency vocalizations (<1,000 Hz) for baleen whales and relatively high frequency (up to 30 kHz) for odontocetes.

(iv) Acoustic data collected from the PAM shall be used to detect acoustically active marine mammals as appropriate.

(3) Marine Mammal Observers on range craft or Navy vessels:

(i) Navy Marine mammal observers (NMMOs) may be placed on a range craft or Navy platform during the event being monitored.

(ii) The NMMO must possess expertise in species identification of regional marine mammal species and experience collecting behavioral data.

(iii) NMMOs may be placed alongside existing lookouts during the two specified monitoring events as described in § 218.174(c)(1)(i).

(iv) NMMOs shall inform the lookouts of any marine mammal sighting so that appropriate action may be taken by the chain of command. NMMOs shall schedule their daily observations to duplicate the lookouts' schedule.

(v) NMMOs shall observe from the same height above water as the lookouts, and they shall collect the same data collected by lookouts listed in § 218.174(c)(1)(iii).

(d) The Navy shall complete an Integrated Comprehensive Monitoring Program (ICMP) Plan in 2009. This planning and adaptive management tool shall include:

(1) A method for prioritizing monitoring projects that clearly describes the characteristics of a proposal that factor into its priority.

(2) A method for annually reviewing, with NMFS, monitoring results, Navy R&D, and current science to use for potential modification of mitigation or monitoring methods.

(3) A detailed description of the Monitoring Workshop to be convened in 2011 and how and when Navy/NMFS will subsequently utilize the findings of the Monitoring Workshop to potentially modify subsequent monitoring and mitigation.

(4) An adaptive management plan.

(5) A method for standardizing data collection for NAVSEA NUWC Keyport Range Complex Extension and across range complexes.

(e) Notification of Injured or Dead Marine Mammals—Navy personnel shall ensure that NMFS (regional stranding coordinator) is notified immediately (or as soon as clearance procedures allow) if an injured or dead marine mammal is found during or

shortly after, and in the vicinity of, any Navy activities utilizing sonar. 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 is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available).

(f) Annual Keyport Range Complex Monitoring Plan Report—The Navy shall submit a report annually by December 1 describing the implementation and results (through September 1 of the same year) of the Keyport Range Complex Monitoring Plan. Data collection methods will be standardized across range complexes to allow for comparison in different geographic locations. Although additional information will also be gathered, the NMMOs collecting marine mammal data pursuant to the Keyport Range Complex Monitoring Plan shall, at a minimum, provide the same marine mammal observation data required in § 218.174(c). The Keyport Range Complex Monitoring Plan Report may be provided to NMFS within a larger report that includes the required Monitoring Plan Reports from Keyport Range Complex and multiple range complexes.

(g) Keyport Range Complex 5-yr Comprehensive Report—The Navy shall submit to NMFS a draft comprehensive report that analyzes and summarizes *all* of the multi-year marine mammal information gathered during tests involving active acoustic sources for which individual reports are required in § 218.174 (d)–(f). This report will be submitted at the end of the fourth year of the rule (June 2013), covering activities that have occurred through September 1, 2013.

(h) The Navy shall respond to NMFS comments and requests for additional information or clarification on the Keyport Range Complex Extension Comprehensive Report, the Annual Keyport Range Complex Monitoring Plan Report (or the multi-Range Complex Annual Monitoring Report, it that is how the Navy chooses to submit the information) if submitted within 3 months of receipt. The report will be considered final after the Navy has addressed NMFS' comments, or three months after the submittal of the draft if NMFS does not comment by then.

(i) In 2011, the Navy shall convene a Monitoring Workshop in which the Monitoring Workshop participants will be asked to review the Navy's Monitoring Plans and monitoring results and make individual recommendations (to the Navy and NMFS) of ways of improving the Monitoring Plans. The recommendations shall be reviewed by the Navy, in consultation with NMFS, and modifications to the Monitoring Plan shall be made, as appropriate.

§ 218.175 Applications for Letters of Authorization.

To incidentally take marine mammals pursuant to these regulations for the activities identified in § 218.170(c), the U.S. Navy must apply for and obtain either an initial Letter of Authorization in accordance with § 218.176 or a renewal under § 218.177.

§ 218.176 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 § 218.177.

(b) Each Letter of Authorization will 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 will 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).

§ 218.177 Renewal of Letters of Authorization and adaptive management.

(a) A Letter of Authorization issued under § 216.106 and § 218.176 for the activity identified in § 218.170(c) will be renewed annually upon:

(1) Notification to NMFS that the activity described in the application submitted under § 218.175 shall 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) Timely receipt of the monitoring reports required under § 218.174(b); and

(3) A determination by the NMFS that the mitigation, monitoring and reporting measures required under § 218.173 and the Letter of Authorization issued under §§ 216.106 and 218.176, 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 218.177 indicates that a substantial modification to the described work, mitigation or monitoring undertaken during the upcoming season will occur, the NMFS will provide the public a period of 30 days for review and comment on the request. Public comment on renewals of Letters of Authorization are restricted to:

(1) New cited information and data indicating that the determinations made in this document are in need of reconsideration, and

(2) Proposed changes to the mitigation and monitoring requirements contained in these regulations or in the current Letter of Authorization.

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

(d) NMFS, in response to new information and in consultation with the Navy, may modify the mitigation or monitoring measures in subsequent LOAs 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 Keyport Range Complex Study Area or other locations).

(2) Findings of the Monitoring Workshop that the Navy will convene in 2011 (§ 218.174(i)).

(3) Compiled results of Navy funded research and development (R&D) studies (presented pursuant to the ICMP (§ 218.174(d)).

(4) Results from specific stranding investigations (either from the Keyport Range Complex Study Area or other locations).

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

(6) Results from general marine mammal and sound research (funded by the Navy (described below) or otherwise).

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

§ 218.178 Modifications to Letters of Authorization.

(a) Except as provided in paragraph (b) of this section and § 218.177(d), no substantive modification (including withdrawal or suspension) to the Letter of Authorization by NMFS, issued

pursuant to § 216.106 of this chapter and § 218.176 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 § 218.177, 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 § 218.171(b), a Letter of Authorization issued pursuant to § 216.106 of this chapter and § 218.176 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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