



DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 217

[Docket No. 131120978-4146-01]

RIN 0648-BD80

Takes of Marine Mammals Incidental to Specified Activities; U.S. Navy Missile Launches from San Nicolas Island, California

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

ACTION: Proposed rule, request for comments and information.

SUMMARY: NMFS has received a request from the U.S. Navy (Navy), Naval Air Warfare Center Weapons Division (NAWCWD) for authorization to take marine mammals incidental to missile launches from San Nicolas Island (SNI) from June 2014 through June 2019. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue regulations and subsequent Letters of Authorization (LOAs) to the Navy to incidentally harass marine mammals.

DATES: Comments and information must be received no later than [insert date 45 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: You may submit comments, identified by 0648-BD80, by either of the following methods:

- Electronic submissions: submit all electronic public comments via the Federal eRulemaking Portal (<http://www.regulations.gov>)
- Hand delivery or mailing of paper, disk, or CD-ROM comments should be addressed to Jolie Harrison, Incidental Take Program Supervisor, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910.

Instructions: All comments received are part of the public record and will generally be posted to <http://www.regulations.gov> without change. All Personal Identifying Information (e.g., name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

NMFS will accept anonymous comments (enter N/A in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, WordPerfect, or Adobe PDF file formats only.

An electronic copy of the Navy's application may be obtained by writing to the address specified above, telephoning the contact listed below (see FOR FURTHER INFORMATION CONTACT), or visiting the internet at:

<http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications>. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

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

SUPPLEMENTARY INFORMATION:

## Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C 1361 et seq.) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring, and reporting of such takings are set forth. NMFS has defined “negligible impact” in 50 CFR 216.103 as “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.”

The National Defense Authorization Act of 2004 (NDAA) (Public Law 108-136) removed the “small numbers” and “specified geographical region” limitations indicated above and amended the definition of “harassment” as it applies to a “military readiness activity” to read as follows (Section 3(18)(B) of the MMPA): (i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild [Level A Harassment]; or (ii) Any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, to a point where such behavioral patterns are abandoned or significantly altered [Level B Harassment].

## Summary of Request

On July 24, 2013, NMFS received an application from the Navy for the taking of marine mammals incidental to missile launches from San Nicolas Island (SNI). NMFS determined that the application was adequate and complete on November 18, 2013.

The Navy proposes to continue a launch program for missiles and targets from several launch sites on SNI. The proposed activity would occur between June 2014 and June 2019 and may involve up to 40 launches per year. Take, by Level B Harassment only, of individuals of northern elephant seal (Mirounga angustirostris), Pacific harbor seal (Phoca vitulina), and California sea lion (Zalophus californianus) is anticipated to result from the specified activity.

The Navy is currently operating under an authorization to take marine mammals incidental to missile launches from SNI, which expires June 2, 2014 (74 FR 26587).

## Description of the Specified Activity

### Overview

The Navy plans to continue a launch program for missiles and targets from several launch sites on SNI. Missiles vary from tactical and developmental weapons to target missiles used to test defensive strategies and other weapons systems. Some launch events involve a single missile, while others involve the launch of multiple missiles either in quick succession or at intervals of a few hours. Up to 200 missiles may be launched over the 5-year period, but the number and type of launch varies depending on operational needs.

The purpose of these launches is to support testing and training activities associated with operations on the NAWCWD Point Mugu Sea Range. The Sea Range is used by the U.S. and allied military services to test and evaluate sea, land, and air weapon systems; to provide realistic training opportunities; and to maintain operational readiness of these forces. Some of the

launches are used for practicing defensive drills against the types of weapons simulated by these missiles and some launches are conducted for the related purpose of testing new types of targets.

#### Dates and Duration

Launches of this type have been occurring at SNI for many years and are expected to continue indefinitely into the future. The Navy has requested a 5-year Letter of Authorization for missile launches taking place between June 2014 and June 2019. The timing of these launches is variable and subject to testing and training requirements and meteorological and logistical limitations. To meet the Navy's operational testing and training requirements, launches may be required at any time of year and any time of day. Up to 200 missiles (40 missiles per year) may be launched over the 5-year period and the Navy is proposing that up to 10 launches per year may occur at night. Given the launch acceleration and flight speed of the missiles, most launch events are of extremely short duration. Strong launch sounds are typically detectable near the surrounding beaches for no more than a few seconds per launch (Holst et al., 2005a, 2008, 2011).

#### Specified Geographic Region

SNI is one of the eight Channel Islands in the Southern California Bight, located about 105 kilometers (km) southwest of Point Mugu. Missile launches would occur from the western part of SNI (see Figure 2 in the Navy's LOA application). The missiles fly generally westward through the Point Mugu Sea Range. The primary launch locations are the Alpha Launch Complex, which is located on the west-central part of SNI, and Building 807 Launch Complex, which is located at the western end of SNI. Other launch pads are located nearby.

#### Detailed Description of Activities

Missiles included in the Navy's request range from relatively small and quieter missiles like the Rolling Airframe Missile to larger and louder missiles like the Terrier Black-Brant. While other missiles may be launched in the future, the largest missile analyzed here is 23,000 kilograms (kg). The following is a description of the types of missiles that may be launched at SNI during the 5-year period.

Rolling Airframe Missile (RAM) – The Navy/Raytheon RAM is a supersonic, lightweight, quick-reaction missile. This relatively small missile uses the infrared seeker of the Stinger missile and the warhead, rocket motor, and fuse from the Sidewinder missile. It has a high-tech radio-to-infrared frequency guiding system. The RAM is a solid-propellant rocket 12.7 centimeters (cm) in diameter and 2.8 m long. Its launch weight is 73.5 kg, and operational versions have warheads that weigh 11.4 kg.

At SNI, RAMs are launched from the Building 807 Launch Complex, near the shoreline. Previous RAM launches have resulted in flat-weighted sound pressure levels up to 126 decibels (dB) near the launcher and 99 dB at a nearshore site located 1.6 km from the three-dimensional closest point of approach. Flat-weighted sound exposure level ranged from 84 to 97 dB reference 20 micropascals (20  $\mu$ Pa), and M-weighted sound exposure levels for pinnipeds in air ranged from 76 to 96 dB reference 20 micropascals squared per second (20  $\mu$ Pa<sup>2</sup>s). Peak pressure ranged from 104 to 117 dB re 20  $\mu$ Pa. The reference sound pressure (20  $\mu$ Pa) used here and throughout the document is standard for airborne sounds.

GQM-163A "Coyote" – The Coyote, designated GQM-163A, is an expendable SSST powered by a ducted-rocket ramjet. It has replaced the Vandal, which was used as the primary missile during launches from 2001 to 2005, and is similar in size and performance. The Coyote is capable of flying at low altitudes (4 m cruise altitude) and supersonic speeds (Mach 2.5) over a

flight range of 83 km. This missile is designed to provide a ground launched aerial target system to simulate a supersonic, sea-skimming Anti-Ship Cruise missile threat. The SSST assembly consists of two primary subsystems: Mk 70 solid propellant booster and the GQM-163A target missile. The solid-rocket booster is about 46 centimeters (cm) in diameter and is of the type used to launch the Navy's "Standard" surface-to-air missile. The GQM-163A target missile is 5.5 m long and 36 cm in diameter, exclusive of its air intakes. It consists of a solid fuel Ducted Rocket (DR) ramjet subsystem, Control and Fairing Subassemblies, and the Front End Subsystem, which includes an explosive destruct system to terminate flight if required.

The Coyote uses the Vandal launcher, currently installed at the Alpha Launch Complex on SNI. Previous Coyote launches produced flat-weighted sound pressure levels ranging from 126 to 134 dB re  $\mu\text{Pa}^2\text{s}$  at distances of 0.8 to 1.7 km from the closest point of approach of the vehicle, and 82 to 93 dB at distances of 2.4 to 3.2 km. Flat-weighted sound exposure levels ranged from 87 to 119 dB re  $20 \mu\text{Pa}^2\text{s}$ . M-weighted sound exposure levels ranged from 60 to 114 dB re  $20 \mu\text{Pa}^2\text{s}$ , and peak pressures ranged from 100 to 144 dB  $20 \mu\text{Pa}$ .

Multi-stage Sea Skimming Target (MSST) – The MSST is a subsonic cruise missile with a supersonic terminal stage that approaches its target at low-level at Mach 2.8. The MSST is expected to replace the Coyote as the primary target missile launched from SNI in the future. It consists of a subsonic winged "cruise bus," which releases a supersonic "sprint vehicle" for terminal approach. The sprint vehicle is based on the Coyote target missile.

The MSST is launched from the Alpha Launch Complex on SNI. Previous MSST launches had flat-weighted sound pressure levels of 78.7 to 96.6 dB re  $20 \mu\text{Pa}$  and M-weighted sound exposure levels of 62.3 to 83.3 re  $20 \mu\text{Pa}^2\text{s}$  at sites 1.3 to 2.7 km from the closest point of approach.

Terrier (Black Brant, Lynx, Orion) – The Terrier class missiles consist of the Terrier Mark 70 booster with a variety of second stage rockets (e.g., Terrier-Black Brant). The solid-rocket booster is about 46 cm in diameter, 394 cm long, and weighs 1,038 kg. The three most likely Terrier class missiles that would be launched include the Terrier-Black Brant, Terrier-Lynx, and Terrier-Orion. The Black Brant has a diameter of 44 cm, is 533 cm long, and weighs 1,265 kg. This missile reaches an altitude of 203 km and has a range of 264 km. Terrier burnout occurs after 6.2 seconds at an altitude of 3 km, and Black Brant burnout occurs after 44.5 seconds at an altitude of 37.7 km. The Lynx is 36 cm in diameter and 279 cm long. This missile reaches an altitude of 84 km and has a range of 99 km. Lynx burnout occurs after 58.5 seconds at 43.5 km. The Improved Orion motor is 36 cm in diameter and 280 cm long. On SNI, this class of missile target is typically launched vertically or near-vertically from the Building 807 Launch Complex. Since these missiles use the same Terrier MK 70 booster as the Coyote, launch sound levels are generally similar to those from the Coyote. Given the near-vertical launch elevation, sounds in the immediate vicinity may be prolonged, though the missile reaches high altitude very quickly after launch.

A Terrier-Orion produced a flat-weighted sound pressure level of 91 dB re 20  $\mu\text{Pa}$ , a flat-weighted sound exposure level of 96 dB 20  $\mu\text{Pa}^2\text{s}$ , and an M-weighted sound exposure level of 92 dB re 20  $\mu\text{Pa}^2\text{s}$  at a distance of 2.4 km from the closest point of approach. The peak pressure was 104 dB 20  $\mu\text{Pa}$ . During previous Terrier-Black Brant launches, the flat-weighted sound pressure level ranged from 102.7 to 115 dB, and M-weighted sound exposure level ranged from 106.5 to 118.4 dB at pinniped haul-out sites located at 0.6 to 1.3 km from the closest point of approach. Sounds near the launcher reached 134 dB flat-weighted sound pressure level and 132.3 dB 20  $\mu\text{Pa}^2\text{s}$  M-weighted sound exposure level. During previous Terrier-Lynx launches,

flat-weighted sound pressure level measured 85.9 to 114.4 dB re 20  $\mu$ Pa at sites located 0.6 to 5.1 km from the closest point of approach of the launched vehicle and M-weighted sound exposure levels ranged from 90.5 to 118 dB re 20  $\mu$ Pa.

RIM-161 Standard Missile 3 (SM-3) – The SM-3 is a ship-based missile system used to intercept short- to intermediate-range ballistic missiles as a part of Aegis Ballistic Missile Defense System. Although primarily designed as an anti-ballistic missile defensive weapon, the SM-3 has also been employed in an anti-satellite capacity against a satellite at the lower end of low Earth orbit. The SM-3 evolved from the proven SM-2 Block IV design. The SM-3 uses the same booster and dual thrust rocket motor as the Block IV missile for the first and second stages and the same steering control section and midcourse missile guidance for maneuvering in the atmosphere. To support the extended range of an exo-atmospheric intercept, additional missile thrust is provided in a new third stage for the SM-3 missile, containing a dual pulse rocket motor for the early exo-atmospheric phase of flight. Testing of SM-3 missiles may begin during this proposed authorization period and launch sounds are expected to be within the range of existing missiles.

Other Missile Launches – The Navy may also launch other missiles to simulate various types of threat missiles and aircraft, and to test other systems. For example, in 2002, a Tactical Tomahawk was launched from Building 807 Launch Complex. The Tomahawk produced a flat-weighted sound pressure level of 93 dB re 20  $\mu$ Pa, a flat-weighted sound exposure level of 107 dB re 20  $\mu$ Pa<sup>2</sup>s, and an M-weighted sound exposure level of 105 dB re 20  $\mu$ Pa<sup>2</sup>s at a distance of 539 m from the closest point of approach. The peak pressure was 111 dB 20  $\mu$ Pa. A Falcon was launched from the Alpha Launch Complex in 2006, producing a flat-weighted sound pressure level of 84 dB re 20  $\mu$ Pa, a flat-weighted sound exposure level of 88 dB 20  $\mu$ Pa<sup>2</sup>s, and an M-

weighted sound exposure level of 82 dB re 20  $\mu\text{Pa}^2\text{s}$  at a beach located north of the launch azimuth. Near the launcher, the flat-weighted sound pressure level was 128 dB re 20  $\mu\text{Pa}$ , the flat-weighted sound exposure level was 126 dB 20  $\mu\text{Pa}^2\text{s}$ , and the M-weighted sound exposure level was 125 dB re 20  $\mu\text{Pa}^2\text{s}$ .

Missiles of the BQM-34 or BQM-74 type could also be launched. These are small, unmanned aircraft that are launched using jet-assisted take-off rocket bottles and then continue offshore powered by small turbojet engines. The larger of these, the BQM-34, is 7 m long and has a mass of 1,134 kg plus the jet-assisted take-off rocket bottle. The smaller BQM-74 is up to 420 cm long and has a mass of 250 kg plus the solid propellant jet-assisted take-off rocket bottles. Burgess and Greene (1998) reported that A-weighted sound pressure levels ranged from 92 dBA re 20  $\mu\text{Pa}$  at a closest point of approach distance of 370 m, to 145 dB at 15 m for a launch in 1997. If launches of other missile types occur, they would be included within the total of 40 launches anticipated per year.

General Launch Operations – Aircraft and helicopter flights between the Point Mugu airfield on the mainland, the airfield on SNI, and the target sites in the Sea Range are a routine part of a planned launch operation. These flights generally do not pass at low level over the beaches where pinnipeds are expected to be hauled out. Therefore, these flights are not further considered in this document.

Movements of personnel are restricted near the launch sites at least several hours prior to a launch for safety reasons. No personnel are allowed on the western end of SNI during launches. Movements of personnel or missiles near the island's beaches are also restricted at other times of the year for purposes of environmental protection and preservation of cultural

resource sites. Launch monitoring equipment would be deployed and activated prior to the launches.

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

There are seven species of marine mammals with possible or confirmed occurrence in the area of the specified activity: northern elephant seals, harbor seals, California sea lion, northern fur seals (Callorhinus ursinus), Guadalupe fur seal (Arctocephalus townsendi), Steller sea lion (Eumetopias jubatus), and southern sea otter (Enhydra lutris nereis). The northern fur seal is considered depleted under the MMPA; the Guadalupe fur seal is listed as threatened under the Endangered Species Act (ESA) and depleted under the MMPA; and the eastern distinct population segment of Steller sea lion was delisted from the ESA in 2013. The northern fur seal, Guadalupe fur seal, and Steller sea lion are considered rare at SNI and takes of these species have not been observed under the Navy’s current MMPA authorization. Therefore, these three species will not be considered further. The southern sea otter is managed by the U.S. Fish and Wildlife Service and is also not considered further in this proposed rule notice. Table 1 includes species-specific information on the three species likely to occur in the area of the specified activity.

Table 1. Species information on the marine mammals likely to occur in the area of the specified activity.

Common Name	Scientific Name	Status	Occurrence	Seasonality	Range	Abundance
Northern elephant sea	<u>Mirounga angustirostris</u>	-	Common	Year-round	Mexico to Alaska	124,000
Harbor seal	<u>Phoca vitulina</u>	-	Common	Year-round	Baja California to Aleutian	30,196

					Islands	
California sea lion	<u>Zalophus californianus</u>	-	Common	Year-round	Mexico to Canada	296,750

Further information on the biology and local distribution of these species can be found in the Navy’s application (see ADDRESSES), and the NMFS Marine Mammal Stock Assessment Reports, which are available online at: <http://www.nmfs.noaa.gov/pr/species/>.

#### Potential Effects of the Specified Activity on Marine Mammals

This section includes a summary and discussion of the ways that the types of stressors associated with the specified activity (e.g., missile launch noise) have been observed to impact marine mammals. This discussion may also include reactions that we consider to rise to the level of a take and those that we do not consider to rise to the level of a take (for example, with acoustics, we may include a discussion of studies that showed animals not reacting at all to sound or exhibiting barely measurable avoidance). This section is intended as a background of potential effects and does not consider either the specific manner in which this activity will be carried out or the mitigation that will be implemented, and how either of those will shape the anticipated impacts from this specific activity. The “Estimated Take by Incidental Harassment” section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The “Negligible Impact Analysis” section will include the analysis of how this specific activity will impact marine mammals and will consider the content of this section, the “Estimated Take by Incidental Harassment” section, the “Proposed Mitigation” section, and the “Anticipated Effects on Marine Mammal Habitat” section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and from that on the affected marine mammal populations or stocks.

Potential effects of the specified activity on marine mammals involve both acoustic and non-acoustic effects. Acoustic effects are related to sound produced by the engines of all launch vehicles, and, in some cases, their booster rockets. Potential non-acoustic effects could result from the physical presence of personnel during placement of video and acoustical monitoring equipment. However, careful deployment of monitoring equipment is not expected to result in any disturbance to pinnipeds hauled out nearby. Any visual disturbance caused by passage of a vehicle overhead is likely to be minor and brief as the launch vehicles are relatively small and move at great speed.

### Acoustic Impacts

The effects of noise on marine mammals are highly variable, and can be categorized as follows (based on Richardson et al., 1995):

(1) The noise may be too weak to be heard at the location of the animal (i.e., lower than the prevailing ambient noise level, the hearing threshold of the animal at relevant frequencies, or both);

(2) The noise may be audible but not strong enough to elicit any overt behavioral response;

(3) The noise may elicit reactions of variable conspicuousness and variable relevance to the well-being of the marine mammal; these can range from temporary alert responses to active avoidance reactions, such as stampedes into the sea from terrestrial haul-out sites;

(4) Upon repeated exposure, a marine mammal may exhibit diminishing responsiveness (habituation), or disturbance effects may persist; the latter is most likely with sounds that are highly variable in characteristics, infrequent and unpredictable in occurrence (as are vehicle launches), and associated with situations that a marine mammal perceives as a threat;

(5) Any anthropogenic noise that is strong enough to be heard has the potential to reduce (mask) the ability of a marine mammal to hear natural sounds at similar frequencies, including calls from conspecifics, and underwater environmental sounds such as surf noise;

(6) If marine mammals remain in an area because it is important for feeding, breeding, or some other biologically important purpose even though there is chronic exposure to noise, it is possible that there could be noise-induced physiological stress; this might in turn have negative effects on the well-being or reproduction of the animals involved; and

(7) Very strong sounds have the potential to cause temporary or permanent reduction in hearing sensitivity. In terrestrial mammals, and presumably marine mammals, received sound levels must far exceed the animal's hearing threshold for there to be any temporary threshold shift (TTS) in its hearing ability. For transient sounds, the sound level necessary to cause TTS is inversely related to the duration of the sound. Received sound levels must be even higher for there to be risk of permanent hearing impairment.

When considering the influence of various kinds of sound on the marine environment, it is necessary to understand that different kinds of marine life are sensitive to different frequencies of sound. Based on available behavioral data, audiograms have been derived using auditory evoked potentials, anatomical modeling, and other data, Southall et al. (2007) designate “functional hearing groups” for marine mammals and estimate the lower and upper frequencies of functional hearing of the groups. The functional groups and the associated frequencies are indicated below (though animals are less sensitive to sounds at the outer edge of their functional range and most sensitive to sounds of frequencies within a smaller range somewhere in the middle of their functional hearing range):

- Low-frequency cetaceans (13 species of mysticetes): functional hearing is estimated to occur between approximately 7 Hz and 22 kHz (however, a study by Au et al. (2006) of humpback whale songs indicate that the range may extend to at least 24 kHz);
- Mid-frequency cetaceans (32 species of dolphins, six species of larger toothed whales, and 19 species of beaked and bottlenose whales): functional hearing is estimated to occur between approximately 150 Hz and 160 kHz;
- High-frequency cetaceans (eight species of true porpoises, six species of river dolphins, Kogia, the franciscana, and four species of cephalorhynchids): functional hearing is estimated to occur between approximately 200 Hz and 180 kHz; and
- Pinnipeds in water: functional hearing is estimated to occur between approximately 75 Hz and 75 kHz, with the greatest sensitivity between approximately 700 Hz and 20 kHz.

As mentioned previously in this document, three marine mammal species (pinnipeds only) are likely to occur in the proposed action area. A species functional hearing group is a consideration when we analyze the effects of exposure to sound on marine mammals.

#### Behavioral Reactions of Pinnipeds to Missile Launches

Acoustic impacts of the specified activity could result from sound produced by the engines of all launch vehicles, and, in some cases, their booster rockets. Noises with sudden onset or high amplitude relative to the ambient noise level may elicit a behavioral response from pinnipeds resting on shore. Some pinnipeds tolerate high sound levels without reacting strongly, whereas others may react strongly when sound levels are lower. Published papers and available technical reports describing behavioral responses of pinnipeds to the types of sound recorded

near haul-out sites on SNI indicate that there is much variability in the responses. Responses can range from momentary startle reactions to animals fleeing into the water or otherwise away from their resting sites in what has been termed a stampede. Studies of pinnipeds during missile launch events have demonstrated that different pinniped species, and even different individuals in the same haul-out group, can exhibit a range of responses from alert to stampede. It is this variation that makes setting reaction criteria difficult. An acoustic stimulus with sudden onset (such as a sonic boom) may be analogous to a looming visual stimulus (Hayes and Saif, 1967), which can be especially effective in eliciting flight or other responses (Berrens *et al.*, 1988). Missile launches are unlike many other forms of disturbance because of their sudden sound onsets, high peak levels in some cases, and short durations (Cummings, 1993).

Previous to the start of monitoring work at SNI under an Incidental Harassment Authorization issued in 2001, most existing data on reactions of hauled-out pinnipeds to sonic booms or launch noise involved far larger launch missiles than the Coyotes and other missiles that would be launched from SNI. In most cases, where the species of pinnipeds occurring in the Sea Range have been exposed to the sounds of large missile launches (such as the Titan IV from Vandenberg Air Force Base), animals did not flush into the sea unless the sound level to which they were exposed was relatively high. The reactions of harbor seals to even these large missile launches have been limited to short-term (5-30 minute) abandonment of haul-out sites.

Holst *et al.* (2005, 2008, 2010, and 2011) summarize the systematic monitoring results from SNI from mid-2001 through February 2011. Ugoretz and Green (2012) summarize results from 2011 through 2012. In particular, northern elephant seals seem very tolerant of acoustic disturbances (Stewart 1981; Holst *et al.*, 2008) and were removed from the list of target species for monitoring on SNI in 2010. In contrast, harbor seals are more easily disturbed. Based on

SNI launch monitoring results from 2001 to 2007, most pinnipeds – especially northern elephant seals – would be expected to exhibit no more than short-term alter or startle responses (Holst et al., 2005, 2008, 2011). Any localized displacement would be of short duration, although some harbor seals may leave their haul-out site until the following low tide. However, Holst and Lawson (2002) noted that numbers occupying haul-out sites on the next day were similar to pre-launch numbers.

The most common type of reaction to missile launches at SNI is expected to be a momentary “alert” response. When the animals hear or otherwise detect the launch, they are likely to become alert, and (at least momentarily) to interrupt prior activities in order to pay attention to the launch. Animals that are well to the side of the launch trajectory are likely to not show any additional reaction. Animals that are closer to the trajectory may show a momentary alert response, or they may react more strongly. Previous observations indicate that elephant seals, in particular, will rarely if ever show more than a momentary alert reaction (Stewart, 1981; Stewart et al., 1994; Holst et al., 2005, 2008) – even when exposed to noise levels or types that caused nearby harbor seals and California sea lions to flee.

Video recordings of pinnipeds around the periphery of western SNI during launches on SNI in 2001-2012 have shown that some pinnipeds react to a nearby launch by moving into the water or along the shoreline (Holst et al., 2005, 2008, 2010, 2011; Ugoretz and Greene, 2012). Pinniped behavioral responses to launch sounds were usually brief and of low magnitude, especially for northern elephant seals. California sea lions (especially the young animals) exhibited more reaction than elephant seals, and harbor seals were the most responsive of the three species.

Northern elephant seals exhibited little reaction to launch sounds (Holst et al., 2005, 2008, 2010, 2011). Most individuals merely raised their heads briefly upon hearing the launch sounds and then quickly returned to their previous activity pattern (usually sleeping). During some launches, a small proportion of northern elephant seals moved a short distance on the beach, away from their resting site, but settled within minutes. Because of this, elephant seals are no longer targeted for monitoring during launches, but are often in the field of view when monitoring other species.

As expected, responses of California sea lions to the launches varied by individual and age group (Holst et al., 2005, 2008, 2010, 2011). Some sea lions exhibited brief startle responses and increased vigilance for a short period after each launch. Other sea lions, particularly pups that were previously playing in groups along the margin of the haul-out beaches, appeared to react more vigorously. A greater proportion of hauled-out sea lions typically responded and/or entered the water when launch sounds were louder (Holst et al., 2005, 2008, 2010, 2011; Ugoretz and Greene, 2012). Adult sea lions already hauled out would mill about on the beach for a short period before settling, whereas those in the shallow water near the beach did not come ashore.

During the majority of launches at SNI, most harbor seals within the audible range of the launch left their haul-out sites on rocky ledges to enter the water and did not return during the duration of the video-recording period (which sometimes extended up to several hours after the launch) (Holst et al., 2005, 2008, 2010, 2011; Ugoretz and Greene, 2012). During monitoring the day after a launch, harbor seals were usually hauled out again at these sites (Holst and Lawson, 2002).

The type of missile being launched is also important in determining the nature and extent of pinniped reactions to launch sounds. Holst et al. (2008) showed that significantly more

California sea lions responded during Coyote launches than during other missile launches; AGS launches caused the fewest reactions. Elephant seals showed significantly less reaction during launches involving missiles other than Vandals. The BQM-34 and especially the BQM-74 subsonic drone missiles that may be launched from SNI are smaller and less noisy than Coyotes. Launches of BQM-34 drones from NAS Point Mugu have not normally resulted in harbor seals leaving their haul-out area at the mouth of Mugu Lagoon about 3.2 kilometers (km) to the side of the launch track (Lawson et al., 1998).

#### Stampede-related Injury or Mortality from Missile Launches

Bowles and Stewart (1980) reported that harbor seals on San Miguel Island reacted to low-altitude jet overflights with alert postures and often with rapid movement across the haul-out sites, especially when aircraft were visible. These harbor seals flushed into the water in response to some sonic booms and to a few of the overflights by light aircraft, jets above 244 meters (m) and helicopters below 305 m. Sometimes the harbor seals did not return to land until the next day, although they more commonly returned the same day. These authors postulated that such disturbance-induced stampedes or other mother-pup separations could be a source of increased mortality. However, observations during actual sonic booms and tests with a carbide cannon simulating sonic booms at San Miguel and SNI provide no evidence of such pinniped injury or mortality (Stewart, 1982) and no mortality has been observed during missile launches (Holst et al., 2005, 2008, 2010, 2011; Ugoretz and Greene, 2012).

It is possible, although unlikely, that launch-induced stampedes could have adverse impacts on individual pinnipeds on the west end of SNI. However, during missile launches in 2001-2012, there was no evidence of launch-related injuries or deaths (Holst et al., 2005, 2008, 2010, 2012; Ugoretz and Greene, 2012). On several occasions, harbor seals and California sea

lion adults moved over pups as the animals moved in response to the launches, but the pups did not appear to be injured. Given the large numbers of pinnipeds giving birth on SNI, it is expected that injuries and deaths will occur as a result of natural causes. For example, during the 1997-1998 El Niño event, pup mortality reached almost 90 percent for northern fur seals at nearby San Miguel Island, and some adults may have died as well (Melin et al., 2005). Pup mortality also increased during this period for California sea lions. Indirect evidence that launches have not caused mortality comes from the fact that populations of northern elephant seals and especially California sea lions on SNI are growing rapidly despite similar launches for many years. Harbor seal numbers have also increased and new harbor seal haul-out sites have been established at locations directly under and near the launch tracks of missiles.

#### Anticipated Effects on Marine Mammal Habitat

During the period of the proposed activity, three species of pinnipeds will use various beaches around SNI as places to rest, molt, and breed. These beaches consist of sand, rock ledges, and rocky cobble. Pinnipeds continue to use beaches around the western end of SNI, and are expanding their use of some beaches, despite ongoing launch activities for many years. Similarly, it appears that sounds from prior launches have not affected use of coastal areas at Vandenberg Air Force Base where similar missile launches occur.

Pinnipeds do not feed when hauled out on these beaches and the airborne launch sounds will not persist in the water near the island for more than a few seconds. Therefore, it is not expected that the launch activities will have any impact on the food or feeding success of these pinnipeds.

Boosters from missiles may be jettisoned shortly after launch and fall on the island, but are not expected to impact beaches. Fuel contained in these boosters is consumed rapidly and

completely, so there would be no risk of contamination even in the very unlikely event that a booster did land on a beach. Thus, the proposed activity is not expected to have any effects on marine mammal habitat.

#### Proposed Mitigation

In order to issue an incidental take authorization (ITA) under section 101(a)(5)(A) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (where relevant).

The NDAA of 2004 amended the MMPA as it relates to military-readiness activities and the ITA process such that “least practicable adverse impact” shall include consideration of personnel safety, practicality of implementation, and impact of the effectiveness of the “military readiness activity.” The activities described in the Navy’s application are considered military readiness activities.

As during launches conducted under previous regulations, where practicable, the Navy proposes the following mitigation measures, provided that doing so will not compromise operational safety, human safety, national security, or other requirements or mission goals:

- (1) Limit activities near the beaches in advance of launches;
- (2) Avoid launch activities during harbor seal pupping season (February through April);
- (3) Limit launch activities during other pinniped pupping seasons;
- (4) Not launch missiles from the Alpha Complex at low elevation (less than 305 m) on launch azimuths that pass close to pinniped haul-out sites when occupied;

(5) Avoid launching multiple missiles in quick succession over haul-out sites, especially when young pups are present; and

(6) Aircraft and helicopter flight paths during missile launch operations would maintain a minimum altitude of 305 m from pinniped haul-outs and rookeries, except in emergencies or for real-time security incidents (e.g., search-and-rescue, fire-fighting, adverse weather conditions), which may require approaching pinniped haul-outs and rookeries closer than 305 m.

#### Mitigation Conclusions

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

- The manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;
- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and
- The practicability of the measure for applicant implementation, including consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

Any mitigation measure(s) prescribed by NMFS should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed 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 received levels of noise, 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 received levels of noise, 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 received levels of noise, or other activities expected to result in the take of marine mammals (this goal may contribute to a, above, or to reducing the severity of harassment takes only).
5. Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/disturbance of habitat during a biologically important time.
6. For monitoring directly related to mitigation – an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammal species

or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, while also considering personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

#### Proposed Monitoring and 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.” The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. The Navy submitted a marine mammal monitoring plan as part of their application. It can be found in section 13 of their application. The plan may be modified or supplemented based on comments or new information received from the public during the public comment period.

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 mitigation 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 noise 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 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:

- a. Behavioral observations in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information).
  - b. Physiological measurements in the presence of stimuli compared to observations in the absence of stimuli (need to be able to accurately predict received level, distance from source, and other pertinent information).
  - c. Distribution and/or abundance comparisons in times or areas with concentrated stimuli versus times or areas without stimuli.
4. An increased knowledge of the affected species.
  5. An increase in our understanding of the effectiveness of certain mitigation and monitoring measures.

#### Proposed Monitoring Measures

The Navy proposes to conduct the following monitoring measures, which are further detailed in section 13 of their application:

- The Navy would continue a standard, ongoing, land-based monitoring program to assess effects on harbor seals, northern elephant seals, and California sea lions on SNI. This monitoring would occur at up to three sites at different distances from the launch site before, during, and after each launch, depending upon presence of pinnipeds during each launch. The monitoring would be via autonomous video or Forward Looking Infrared (FLIR) cameras. Pinniped behavior on the beach would be documented prior to the

planned launch operations, during the launch, and following the launch. Northern elephant seals would not be specifically targeted for monitoring, though may be present in the field of view when monitoring other species.

- During each launch, the Navy would obtain calibrated recordings of the sounds of the launches as received at different distances from the missile's flightline. The Navy anticipates that acoustic data would be acquired at each video monitoring location, to estimate sounds received by pinnipeds, and at the launch site to estimate maximum potential sound received. These recordings would provide for a thorough description of launch sounds as received at different locations on western SNI, and of the factors that affect received sound levels. By analysis of the paired data on behavioral observations and received sound levels, the Navy would further characterize the relationship between the two. If there is a clear correlation, the Navy would determine the "dose-response" relationship.

Visual Monitoring – The Navy proposes to conduct marine mammal and acoustic monitoring during launches from SNI, using simultaneous video recording of pinniped behavior and audio recording of launch sounds. The land-based monitoring would provide data required to characterize the extent and nature of the takes. In particular, the monitoring would provide the information needed to document the occurrence, nature, frequency, and duration of any changes in pinniped behavior that might result from missile launches.

Components of this documentation would include the following:

- Identify and document any change in behavior or movements that may occur at the time of the launch;

- Compare received levels of launch sound with pinniped responses, based on acoustic and behavioral data from up to three monitoring sites at different distances from the launch site and missile path during each launch and attempt to establish the dose-response relationship for launch sounds under different launch conditions;
- Ascertain periods or launch conditions when pinnipeds are most and least responsive to launch activities; and
- Document take by harassment and, although unlikely, any mortality or injury.

The launch monitoring program would include remote video recordings before, during, and after launches when pinnipeds are present in the area of potential impact, and visual assessment by trained observers before and after the launch. Remote cameras are essential during launches because safety rules prevent personnel from being present in most of the areas of interest. In addition, video techniques would allow simultaneous observations at up to three different locations, and would provide a permanent record that could be reviewed in detail. No specific effort would be made to monitor elephant seals, though they may be present in mixed groups when monitoring other species.

Acoustical Monitoring – The Navy would take acoustical recordings during each monitored launch. These recordings would be suitable for quantitative analysis of the levels and characteristics of the received launch sounds. The Navy would use up to four autonomous audio recorders to make acoustical measurements. During each launch, these would be located as close as practical to monitored pinniped haul-out sites and near the launch pad itself. The monitored haul-out sites would typically include one site as close as possible to the missile's planned flight

path and one or two locations farther from the flight path within the area of potential impact with pinnipeds present.

### Reporting Measures

The Navy would submit annual interim technical reports to NMFS no later than December 31 for the duration of the regulations. These reports would provide full documentation of methods, results, and interpretation pertaining to all monitoring tasks for launches during each calendar year. However, only preliminary information would be included for any launches during the 60-day period immediately preceding submission.

The Navy would submit a draft comprehensive technical report to NMFS 180 days prior to the expiration of the regulations, providing full documentation of the methods, results, and interpretation of all monitoring tasks for launches to date. A revised final comprehensive technical report, including all monitoring results during the entire period of the regulations would be due 90 days after the regulations expire.

The Navy would ensure that NMFS is notified immediately if an injured or dead marine mammal is judged to result from launch activities at any time.

### Monitoring Results from Previously Authorized Activities

Between 2001 and 2012, a maximum of 1,990 California sea lions, 395 harbor seals, and 130 northern elephant seals were estimated to have been potentially harassed in any single monitoring year incidental to missile launches at SNI (Holst et al., 2008, 2010, 2011; Ugoretz and Greene, 2012). These numbers may represent multiple exposures of single animals, as beaches were monitored repeatedly over the course of the year during numerous launches. However, some animals that displayed behavioral reactions may have been missed, as not all areas can be monitored during the launches. Pinnipeds that were potentially affected left the

haul-out site in response to the launch, left the water at a vigorous pace, or exhibited prolonged movement or behavioral changes relative to their behavior immediately prior to the launch.

#### Estimated Take by Incidental Harassment

The NDAA of 2004(Public Law 103-136) removed the “small numbers” and specified geographical region” limitations indicated above and amended the definition of “harassment” as it applies to a “military readiness activity” to read as follows (section 3(18)(B) of the MMPA):

(i) Any act that injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild [Level A Harassment]; or (ii) Any act that disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns, including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering, to a point where such behavioral patterns are abandoned or significantly altered [Level B Harassment].

Any takes of marine mammals are most likely to result from operational noise as launch missiles pass near haul-out sites, and/or associated visual cues. This section estimates maximum potential take and the likely annual take of marine mammal species during the proposed missile launch program at SNI.

The launch sounds could be received for several seconds and, to be conservative, are considered to be prolonged rather than transient sounds. Given the variety of responses documented previously for the sounds of man-made activities lasting several seconds, a sound exposure level of 100 dB re 20 microPascals<sup>2</sup> per second is considered appropriate as a disturbance criterion for pinnipeds hauled out at the west end of SNI, particularly for California sea lions and northern elephant seals. Some pinnipeds that haul-out on the western end of SNI are expected to be within the area where sound exposure levels exceed 100 dB. Far fewer

pinnipeds are expected to occur within this area and none of the recorded sound exposure levels appear to be high enough to induce TTS.

Based on the reaction criterion, the distance to which it is assumed to extend, and the estimated numbers of pinnipeds exposed to sound exposure levels at or above 100 dB, the Navy estimated the number of pinnipeds on the west end of SNI that might be taken. The Navy made an additional adjustment for harbor seals, as they are known to sometimes react strongly to sound exposure levels below 100 dB. The Navy considered the percentage of animals that actually responded to launch noise in previous monitoring years in order to estimate the number of animals potentially harassed. Recorded sound exposure levels in different areas of SNI were compared to ground-based census data of pinnipeds. These censuses were typically conducted seasonally when maximum numbers of pinnipeds were known to occur on land.

#### Northern Elephant Seal

To estimate the potential maximum numbers of northern elephant seals that might be exposed to sound levels at or above 100 dB in 2014, the highest pup counts within map areas K, L, and M (see Figure 16 of the Navy's application) in any year between 2000 and 2010 were used (yielding a total of 1,854), and a continuing growth rate of 7.3 percent since 2010 was applied. This results in a maximum potential pup count of 2,458 for those map areas in 2014. Based on data collected from 1988 to 2010, the total count of all age classes expected to be hauled out is approximately twice the number of pups hauled out. Therefore, the maximum number hauled out in areas of potential impact for 2014 was approximated by doubling the maximum potential calculated pup count. Thus, the maximum expected number of elephant seals that may be exposed to sound levels at or above 100 dB during 2014 is estimated to be 4,916.

In the absence of any contrary data, it is assumed that elephant seals exhibit high site fidelity when they return to shore, and that the 4,916 elephant seals calculated above represent the maximum total number that might be exposed to “strong” (at or above 100 dB) sounds during the year, assuming missiles are launched when all animals are hauled out and all beaches within the area receive strong sounds. If some seals haul out on different beaches at various times during the year, sometimes within and sometimes outside the area exposed to levels at or above 100 dB, then the number of times an individual elephant seal might be exposed to strong launch sounds would be reduced. However, the total number of individuals that would be exposed at least once over the course of the year would probably be increased. Movements from one beach to another may be more likely for juveniles than for older seals, given that this has been observed in other pinniped species (such as for harbor seal pups; Thompson *et al.* 1994).

Published studies and results from the 2001–2012 monitoring at SNI indicate that elephant seals are more tolerant of transient noise and other forms of disturbance than are California sea lions or harbor seals. If so, the actual impact zone is smaller than assumed here, and the number of elephant seals that might be taken by harassment would be substantially lower than the number of seals present within the area where sound levels are at or above 100 dB. For example, during the 2001-2012 launch program, the majority of northern elephant seals did not exhibit more than brief startle reactions in response to launches (Holst *et al.* 2005, 2008, 2010, 2011; Ugoretz and Greene, 2012). Most individuals merely raised their heads briefly upon hearing the launch sounds and then quickly returned to their previous activity pattern (usually sleeping). During some launches, a small proportion (typically much less than 10 percent) of northern elephant seals moved a short distance (<10 m) away from their resting site, but settled within minutes. Elephant seals rarely moved or reacted more than this.

Therefore, the Navy estimates that up to 10 percent of 4,916 elephant seals (or 492 seals) might be taken by Level B harassment during each year of planned launch operations.

#### Harbor Seals

To determine the potential numbers of harbor seals that might be taken by harassment, the Navy used the maximum total harbor seal count for SNI (858) and assumed that the population has remained relatively stable. Previous monitoring from 2001-2012 showed that most monitored harbor seals entered the water in response to launches. Previous monitoring also indicates that about 70 percent of harbor seals that haul out on SNI use the beaches within areas K, L, and M. The Navy conservatively estimates that 80 percent of harbor seals on SNI may be impacted by missile launches. Therefore, the Navy estimates that a maximum of 686 harbor seals might be taken by Level B harassment during a 1-year period.

#### California Sea Lion

To estimate the maximum potential number of sea lions that might be hauled out within areas exposed to sound levels at or above 100 dB, the Navy calculated the maximum number of sea lions occurring within map areas K, L, and M (Figure 16 of the Navy's application) in any year from 2001-2011. The Navy adjusted this maximum, 14,963 sea lions, for a population growth rate of 5.6 percent per year, which results in a maximum of 20,749 sea lions of all ages and sexes that might be hauled out within the areas exposed to sound levels at or above 100 dB in a single year. For most of the year, only females and pups are expected to be ashore, so the number of animals exposed to these sound levels from any one launch is likely less than the estimated total number.

Based on past monitoring, approximately 10 percent of the California sea lions exposed to launch sounds during each year of launch activity might exhibit behavioral disturbance.

Therefore, the Navy estimates that a maximum of 2,740 California sea lions on SNI might be taken by Level B harassment during a 1-year period.

Summary

NMFS proposes to authorize take according to the Navy’s estimates. The estimated take numbers are provided in Table 2 below for each marine mammal species. These take estimates do not take mitigation measures into consideration.

Table 2. Estimated and proposed take of marine mammals on an annual basis.

Common Species Name	Estimated Take by Level B Harassment	Abundance of Stock	Percentage of Stock Potentially Affected	Population Trend
Northern elephant seal	492	124,000	<1%	unknown
Harbor seal	686	30,196	2.3%	stable
California sea lion	2,740	296,750	<1%	increasing

Analysis and Preliminary Determinations

Negligible Impact

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

responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, and effects on habitat.

NMFS has preliminarily determined that target and missile launch activities and aircraft and helicopter operations from SNI, as described in this document and in the Navy's application, will result in no more than Level B harassment of northern elephant seals, harbor seals, and California sea lions. The effects of these military readiness activities will be limited to short-term, localized changes in behavior, including temporarily vacating haul-outs, and possible temporary threshold shift in the hearing of any pinnipeds that are in close proximity to a launch pad at the time of a launch. These effects are not likely to have a significant or long-term impact on feeding, breeding, or other important biological functions. No take by injury or mortality is anticipated, and the potential for permanent hearing impairment is unlikely. Harassment takes will be at the lowest level practicable due to incorporation of the proposed mitigation measures mentioned previously in this document. NMFS has proposed regulations for the specified activity 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.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the Navy's missile launches will have a negligible impact on the affected marine mammal species or stocks.

Impact on Availability of Affected Species for Taking for Subsistence Uses

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

#### Endangered Species Act (ESA)

No species listed under the ESA are expected to be affected by these activities. Therefore, NMFS has determined that a section 7 consultation under the ESA is not required.

#### National Environmental Policy Act (NEPA)

In May 2009, NMFS prepared an Environmental Assessment on the Navy's missile launches at SNI. NMFS is currently updating this analysis, pursuant to NEPA, to determine whether or not this proposed activity may have a significant effect on the human environment. This analysis will be completed prior to the issuance or denial of an authorization.

#### Request for Public Comments

NMFS requests comment on our analysis, the draft authorization, and any other aspect of the Notice of Proposed Rulemaking for the Navy's missile launch activities at SNI. Please include with your comments any supporting data or literature citations to help inform our final decision on the Navy's request for an MMPA authorization.

#### Classification

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

Pursuant to the Regulatory Flexibility Act (RFA), the Chief Counsel for Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact

on a substantial number of small entities. The RFA requires federal agencies to prepare an analysis of a rule's impact on small entities whenever the agency is required to publish a notice of proposed rulemaking. However, a federal agency may certify, pursuant to 5 U.S.C. 605 (b), that the action will not have a significant economic impact on a substantial number of small entities. The Navy is the sole entity that would be affected by this rulemaking, and the Navy is not a small governmental jurisdiction, small organization, or small business, as defined by the RFA. Any requirements imposed by an LOA issued pursuant to these regulations, and any monitoring or reporting requirements imposed by these regulations, would be applicable only to the Navy. NMFS does not expect the issuance of these regulations or the associated LOAs to result in any impacts to small entities pursuant to the RFA. Because this action, if adopted, would directly affect the Navy and not any small entities, NMFS concludes that the action would not result in a significant economic impact on a substantial number of small entities. Therefore, an Initial Regulatory Flexibility Analysis is not required and none has been prepared.

List of Subjects in 50 CFR Part 217

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

Dated: February 25, 2014

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Samuel D. Rauch III,  
Deputy Assistant Administrator for Regulatory Programs,  
National Marine Fisheries Service.

For reasons set forth in the preamble, 50 CFR part 217 is proposed to be amended as follows:

PART 217--REGULATIONS GOVERNING THE TAKE OF MARINE MAMMALS  
INCIDENTAL TO SPECIFIED ACTIVITIES

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

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

2. Subpart F is added to part 217 to read as follows:

Subpart F--Taking Of Marine Mammals Incidental to Target and Missile Launch Activities from  
San Nicolas Island, CA

Sec.

217.50 Specified activity and specified geographical region.

217.51 Effective dates.

217.52 Permissible methods of taking.

217.53 Prohibitions.

217.54 Mitigation.

217.55 Requirements for monitoring and reporting.

217.56 Applications for Letters of Authorization.

217.57 Letters of Authorization.

217.58 Renewal of Letters of Authorization.

217.59 Modifications to Letters of Authorization.

Subpart F--Taking Of Marine Mammals Incidental To Target and Missile Launch Activities  
from San Nicolas Island, CA

§ 217.50 Specified activity and specified geographical region.

(a) Regulations in this subpart apply only to the incidental taking of marine mammals  
specified in paragraph (b) of this section by the Naval Air Warfare Center Weapons Division,

U.S. Navy, and those persons it authorizes to engage in target missile launch activities and associated aircraft and helicopter operations at the Naval Air Warfare Center Weapons Division facilities on San Nicolas Island, California.

(b) The incidental take of marine mammals under the activity identified in paragraph (a) of this section is limited to the following species: northern elephant seals (Mirounga angustirostris), harbor seals (Phoca vitulina), and California sea lions (Zalophus californianus).

(c) This Authorization is valid only for activities associated with the launching of a total of 40 Coyote (or similar sized) vehicles from Alpha Launch Complex and smaller missiles and targets from Building 807 on San Nicolas Island, California.

§ 217.51 Effective dates.

(a) Regulations in this subpart become effective upon issuance of the final rule.

(b) [Reserved].

§ 217.52 Permissible methods of taking.

(a) Under Letters of Authorization issued pursuant to § 216.106 and 217.57 of this chapter, the Holder of the Letter of Authorization may incidentally, but not intentionally, take marine mammals by harassment, within the area described in § 217.50, provided the activity is in compliance with all terms, conditions, and requirements of the regulations and the appropriate Letter of Authorization.

(b) The activities identified in § 217.50 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 is authorized for the species listed in § 217.50(b) and is limited to Level B Harassment.

§ 217.53 Prohibitions.

Notwithstanding takings contemplated in § 217.50 and authorized by a Letter of Authorization issued under §§ 216.106 and 217.57 of this chapter, no person in connection with the activities described in § 217.50 may:

(a) Take any marine mammal not specified in § 217.50(b);

(b) Take any marine mammal specified in § 217.50(b) other than by incidental, unintentional harassment;

(c) Take a marine mammal specified in § 217.50(b) 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 this subpart or a Letter of Authorization issued under §§ 216.106 and 217.57 of this chapter.

§ 217.54 Mitigation.

(a) When conducting operations identified in § 217.50(c), the mitigation measures contained in the Letter of Authorization issued under §§ 216.106 and 217.57 must be implemented. These mitigation measures include, but are not limited to:

(1) The holder of the Letter of Authorization must prohibit personnel from entering pinniped haul-out sites below the missile's predicted flight path for 2 hours prior to planned missile launches.

(2) The holder of the Letter of Authorization must avoid, whenever possible, launch activities during harbor seal pupping season (February to April), unless constrained by factors including, but not limited to, human safety, national security, or for vehicle launch trajectory necessary to meet mission objectives.

(3) The holder of the Letter of Authorization must limit, whenever possible, launch activities during other pinniped pupping seasons, unless constrained by factors including, but not

limited to, human safety, national security, or for vehicle launch trajectory necessary to meet mission objectives.

(4) The holder of the Letter of Authorization must not launch vehicles from the Alpha Complex at low elevation (less than 1,000 feet (305 m)) on launch azimuths that pass close to pinniped haul-out sites when occupied.

(5) The holder of the Letter of Authorization must avoid, where practicable, launching multiple target missiles in quick succession over haul-out sites, especially when young pups are present.

(6) The holder of the Letter of Authorization must limit launch activities during nighttime hours, except when required by the test objectives.

(7) Aircraft and helicopter flight paths must maintain a minimum altitude of 1,000 feet (305 m) from pinniped haul-outs and rookeries, except in emergencies or for real-time security incidents (e.g., search-and-rescue, fire-fighting), which may require approaching pinniped haul-outs and rookeries closer than 1,000 feet (305 m).

(8) If post-launch surveys determine that an injurious or lethal take of a marine mammal has occurred or there is an indication that the distribution, size, or productivity of the potentially affected pinniped populations has been affected, the launch procedure and the monitoring methods must be reviewed, in cooperation with NMFS, and, if necessary, appropriate changes must be made through modification to a Letter of Authorization, prior to conducting the next launch of the same vehicle under that Letter of Authorization.

(9) Additional mitigation measures as contained in a Letter of Authorization.

(b) [Reserved]

§ 217.55 Requirements for monitoring and reporting.

(a) The Holder of the Letter of Authorization issued pursuant to §§ 216.106 and 217.57 of this chapter for activities described in § 217.50 are required to cooperate with NMFS, and any other federal, state, or local agency with authority to monitor the impacts of the activity on marine mammals. Unless specified otherwise in the Letter of Authorization, the Holder of the Letter of Authorization must notify the Administrator, Southwest Region, NMFS, by letter or telephone, at least 2 weeks prior to activities possibly involving the taking of marine mammals. If the authorized activity identified in § 217.50 is thought to have resulted in the mortality or injury of any marine mammals or in any take of marine mammals not identified in § 217.50(b), then the Holder of the Letter of Authorization must notify the Director, Office of Protected Resources, NMFS, or designee, by telephone (301-427-8401), and the Administrator, Southwest Region, NMFS, or designee, by telephone (562-980-3232), within 48 hours of the discovery of the injured or dead animal.

(b) The National Marine Fisheries Service must be informed immediately of any changes or deletions to any portions of the proposed monitoring plan submitted, in accordance with the Letter of Authorization.

(c) The holder of the Letter of Authorization must designate biologically trained, on-site individual(s), approved in advance by NMFS, to record the effects of the launch activities and the resulting noise on pinnipeds.

(d) The holder of the Letter of Authorization must implement the following monitoring measures:

(1) Visual Land-Based Monitoring.

(i) Prior to each missile launch, an observer(s) will place three autonomous digital video cameras overlooking chosen haul-out sites located varying distances from the missile launch site. Each video camera will be set to record a focal subgroup within the larger haul-out aggregation for a maximum of 4 hours or as permitted by the videotape capacity.

(ii) Systematic visual observations, by those individuals, described in paragraph (c) of this section, on pinniped presence and activity will be conducted and recorded in a field logbook a minimum of 2 hours prior to the estimated launch time and for no less than 1 hour immediately following the launch of Coyote and similar types of target missiles.

(iii) Systematic visual observations, by those individuals, described in paragraph (c) of this section, on pinniped presence and activity will be conducted and recorded in a field logbook a minimum of 2 hours prior to launch, during launch, and for no less than 1 hour after the launch of the BQM-34, BQM-74, Tomahawk, RAM target and similar types of missiles.

(iv) Documentation, both via autonomous video camera and human observer, will consist of:

- (A) Numbers and sexes of each age class in focal subgroups;
- (B) Description and timing of launch activities or other disruptive event(s);
- (C) Movements of pinnipeds, including number and proportion moving, direction and distance moved, and pace of movement;
- (D) Description of reactions;
- (E) Minimum distances between interacting and reacting pinnipeds;
- (F) Study location;
- (G) Local time;
- (H) Substratum type;

- (I) Substratum slope;
- (J) Weather condition;
- (K) Horizontal visibility; and
- (L) Tide state.

(2) Acoustic Monitoring.

(i) During all target missile launches, calibrated recordings of the levels and characteristics of the received launch sounds will be obtained from three different locations of varying distances from the target missile's flight path. To the extent practicable, these acoustic recording locations will correspond with the haul-out sites where video and human observer monitoring is done.

(ii) Acoustic recordings will be supplemented by the use of radar and telemetry systems to obtain the trajectory of target missiles in three dimensions.

(iii) Acoustic equipment used to record launch sounds will be suitable for collecting a wide range of parameters, including the magnitude, characteristics, and duration of each target missile.

(e) The holder of the Letter of Authorization must implement the following reporting requirements:

(1) For each target missile launch, the lead contractor or lead observer for the holder of the Letter of Authorization must provide a status report to NMFS, Southwest Regional Office, providing reporting items found under the Letter of Authorization, unless other arrangements for monitoring are agreed upon in writing.

(2) The Navy shall submit an annual report describing their activities and including the

following information:

- (i) Timing, number, and nature of launch operations;
- (ii) Summary of mitigation and monitoring implementation;
- (iii) Summary of pinniped behavioral observations; and
- (iv) Estimate of the amount and nature of all takes by harassment or by other means.

(3) The Navy shall submit a draft comprehensive technical report to the Office of Protected Resources and Southwest Regional Office, NMFS, 180 days prior to the expiration of the regulations in this subpart, providing full documentation of the methods, results, and interpretation of all monitoring tasks for launches to date plus preliminary information for missile launches during the first 6 months of the regulations.

(4) A revised final comprehensive technical report, including all monitoring results during the entire period of the Letter of Authorization will be due 90 days after the end of the period of effectiveness of the regulations in this subpart.

(5) Both the 60-day and final reports will be subject to review and comment by NMFS. Any recommendations made by NMFS must be addressed in the final comprehensive technical report prior to acceptance by NMFS.

(f) Activities related to the monitoring described in paragraphs (c) and (d) of this section, or in the Letter of Authorization issued under §§ 216.106 and 217.57 of this chapter, including the retention of marine mammals, may be conducted without the need for a separate scientific research permit.

(g) In coordination and compliance with appropriate Navy regulations, at its discretion, the NMFS may place an observer on San Nicolas Island for any activity involved in marine

mammal monitoring either prior to, during, or after a missile launch in order to monitor the impact on marine mammals.

§ 217.56 Applications for Letters of Authorization

To incidentally take marine mammals pursuant to the regulations in this subpart, the U.S. citizen (as defined by § 216.06 of this chapter) conducting the activity identified in § 217.50 (the U.S. Navy) must apply for and obtain either an initial LOA in accordance with § 217.57 or a renewal under § 217.58.

§ 217.57 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.

(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).

§ 217.58 Renewals and Modifications of Letters of Authorization.

(a) A Letter of Authorization issued under §§ 216.106 and 217.57 of this chapter for the activity identified in § 217.50 will be renewed or modified upon request of the applicant, provided that:

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

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

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

(c) An LOA issued under §§ 216.106 and 217.57 of this chapter for the activity identified in § 217.50 may be modified by NMFS under the following circumstances:

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

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

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

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

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

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

(2) Emergencies – If NMFS determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in § 217.50(b), a Letter of Authorization may be modified without prior notice or opportunity for public comment. Notice would be published in the Federal Register within 30 days of the action.

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