This document is scheduled to be published in the Federal Register on 03/30/2012 and available online at **http://federalregister.gov/a/2012-07593**, and on **FDsys.gov**

BILLING CODE 3510-22-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN: 0648-XZ14

Takes of Marine Mammals Incidental to Specified Activities; Navy Training Conducted at the Silver Strand Training Complex, San Diego Bay

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

ACTION: Notice; additional information for the proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received an application from the U.S. Navy (Navy) for an Incidental Harassment Authorization (IHA) to take marine mammals, by harassment, incidental to conducting training exercises at the Silver Strand Training Complex (SSTC) in the vicinity of San Diego Bay, California. Subsequently, additional information on marine mammals and proposed improvement on marine mammal monitoring and mitigation measures was received from the Navy. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to the Navy to incidentally harass, by Level B Harassment only, eight species of marine mammals during the specified activity.

DATES: Comments and information must be received no later than [insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: Comments on the application should be addressed to Tammy C. Adams, Acting Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3225. The

mailbox address for providing email comments is itp.guan@noaa.gov. NMFS is not responsible for e-mail comments sent to addresses other than the one provided here. Comments sent via e-mail, including all attachments, must not exceed a 10-megabyte file size.

Instructions: All comments received are a part of the public record and will generally be posted to http://www.nmfs.noaa.gov/pr/permits/incidental.htm without change. All Personal Identifying Information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

A copy of the application containing a list of the references used in this document 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. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Shane Guan, Office of Protected Resources, NMFS, (301) 427-8418.

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 (Secretary) to allow, upon request, the incidental, but not intentional taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) 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 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 taking are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as: "…an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

The National Defense Authorization Act of 2004 (NDAA) (Public Law 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):

(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].

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed

authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny the authorization.

Summary of Request

NMFS received an application on March 3, 2010, and subsequently, a revised application on September 13, 2010, from the Navy for the taking, by harassment, of marine mammals incidental to conducting training exercises at the Navy's Silver Strand Training Complex (SSTC) in the vicinity of San Diego Bay, California. On October 19, 2010, NMFS published a Federal Register notice (75 FR 64276) requesting comments from the public concerning the Navy's proposed training activities along with NMFS' proposed IHA. However, on March 4, 2011, three long-beaked common dolphins were found dead following the Navy's mine neutralization training exercise involving time-delayed firing devices (TDFDs) at SSTC, and were suspected to be killed by the detonation. In short, a TDFD device begins a countdown to a detonation event that cannot be stopped, for example, with a 10-min TDFD, once the detonation has been initiated, 10 minutes pass before the detonation occurs and the event cannot be cancelled during that 10 minutes. Subsequently, NMFS suspended the IHA process for SSTC and worked with the Navy to come up with more robust monitoring and mitigation measures to prevent such incidents. On July 22, 2011, the Navy submitted an addendum to its IHA application which includes additional information and additional mitigation and monitoring measures for its proposed mine neutralization training exercises using TDFDs at SSTC to ensure that the potential for injury or mortality is minimized.

Description of the Specific Activity

A detailed description of the Navy's proposed training activities at the SSTC is provided in the Federal Register notice for the proposed IHA (75 FR 64276; October 19, 2010),

Specifically, major training activities at SSTC include underwater detonation and elevated causeway system (ELCAS) training. There are no changes on the description of the ELCAS training from the original proposed IHA (75 FR 64276; October 19, 2010), therefore, it is not repeated here.

However, the Federal Register notice for the proposed IHA did not include a description of TDFDs, which are used to detonate the explosives in the majority of the proposed underwater detonation training related to mine neutralization instead of directly detonating the explosives using positive control (which was described)). A TDFD device begins a countdown to a detonation event with a time-delaying device. For example, with a 10-min TDFD, the actual detonation will be started 10 minutes after the device is set. In addition, there is no mechanism to stop (abort) the pre-set explosion once the device has been set. The following is a detailed description regarding the justification and procedures for underwater detonation using TDFDs.

The Need for Underwater Detonation using TDFDs

The Navy uses both timed-delayed and positive control to initiate a particular underwater detonation depending on the training event in question and in particular, the training objectives applicable to that underwater detonation. TDFDs are the simplest, safest, most operationally sound method of initiating a demolition charge on a floating mine or mine at depth. TDFDs are used because of their light weight ease of employment and low magnetic signature in cases of mines sensitive to magnetic fields. In addition, TDFD are HERO safe ("hazards of electromagnetic radiation to ordnance" safe), meaning there is reduced risk of accidental detonations from nearby radios or other electromagnetic radiation producing devices. The use of

TDFD eliminates the need to re-deploy swimmers from a helicopter or boat to recover equipment used with positive control firing devices such as the RFD. The TDFD also allows sufficient time for EOD personnel to swim outside of the detonation plume radius and human safety buffer zone after the timer is set.

Although other detonation initiation devices, such as an RFD (a type of positive control device) can be used to initiate an underwater detonation, it is not normally preferred as the primary firing device due to HERO (see above) concerns with electric detonators, Operational Risk Management (i.e., safety) considerations, and established Navy tactical procedures. Current Navy RFD uses a radio signal to remotely detonate a charge. By using electronic positive control devices such as the RFD as the only alternative to a TDFD, additional electronic signals, and metal from the receiver and wiring is unnecessarily introduced into an influence ordnance operating environment. It is not consistent with sound safety principles or good demolition practice to combine different firing circuits to a demolition charge. For instance, in a live mine field, Navy dive platoons expect there to be additional risks, such as unknown mines with different types of influence firing circuits (i.e., detonated by contact, magnetic field, or certain sounds) in close proximity to a mine they are trying to destroy. The use of a TDFD reduces these risks by limiting the possibility of unintentionally triggering detonation from unknown mine types. Underwater demolition needs to be kept as simple and streamlined as possible, especially when divers and influence ordnance are considered. In an open ocean environment,

universal use of RFDs would greatly increase the risk of misfire due to component failure, and put unnecessary stress on all needed connections and devices (adding 600 – 1,000 feet of firing wire; building\deploying an improvised, bulky, floating system for the RFD receiver; adding another 180 feet of detonating cord plus 10 feet of additional material).

While positive control devices do allow for instantaneous detonation of a charge and are used for some SSTC training events, exclusive use of RFD would introduce operationally unsound tactics, thereby increasing future risks to Navy dive teams. Therefore, it is essential that EOD and NSW platoons qualify annually with necessary time-delay certification, maintain proficiency, and train to face real-world scenarios requiring use of TDFDs.

General Underwater Detonation Procedures

Prior to getting underway, all Explosive Ordnance Disposal (EOD) and Naval Special Warfare (NSW) units conduct a detailed safety and procedure briefing to familiarize everyone with the goals, objectives, and safety requirements (including mitigation zones) applicable to the particular training event.

Underwater detonations only occur during daylight.

Underwater detonations are only conducted in sea-states equal to or less than Beaufort 3 (presence of large wavelets, crests beginning to break, presence of glassy foam, and/or perhaps scattered whitecaps).

Applicable mitigation zones are established and visual survey commences for 30 minutes before detonation. Divers enter the water to conduct the training objective which could include searching for a training object such as a simulated mine or mine-like shape.

For the detonation part of the training, the explosive charge and associate charge initiating device are taken to the detonation point. The explosives Navy EOD and NSW use are

military forms of C-4 explosives. In order to detonate C-4 explosives, a fusing and initiating device is required. The two main types of Navy charge initiating devices are discussed in a subsequent section.

Following a particular underwater detonation, additional personnel in the support boats (or helicopter) keep watch within the mitigation zone for 30 minutes.

Other changes the Navy proposed since the previous proposed IHA was issued include the addition of a new point sub-area Training Area-Kilo (TA-K), which is designated 500 yards west of the SSTC-SOUTH boat lanes with a 500 m radius (Table 1-1, Figure 1-1, of the Navy's Addendum). The TA-K area would be used to conduct small charge weight (< 20 lbs) underwater detonations.

Additional information concerning underwater detonations is also provided in the Navy's Addendum, and is included below:

Description of Marine Mammals in the Area of the Specified Activity

Common marine mammal species occurring regularly in the vicinity of the SSTC training area include the California sea lion (Zalophus californianus), Pacific harbor seal (Phoca vitulina richardsii), California coastal stock of bottlenose dolphin (Tursiops truncatus), and more infrequently gray whale (Eschrichtius robustus). Detailed descriptions of these species are provided in the Federal Register notice for the proposed IHA (75 FR 64276; October 19, 2010) and are not repeated here.

In addition to these four common species, the additional four dolphin species listed below have been sighted in the vicinity of the SSTC training area, but much less frequently. None are listed as threatened or endangered under the Endangered Species Act (ESA). Further

information on these species can also be found in the NMFS Stock Assessment Reports (SAR). The Pacific 2010 SAR is available at: http://www.nmfs.noaa.gov/pr/pdfs/sars/po2010.pdf.

Long-Beaked Common Dolphin (Delphinus capensis), California Stock

Long-beaked common dolphins (Delphis capensis) are found year-round in the waters off California (Carretta et al. 2000; Bearzi 2005; DoN 2009, 2010). The distribution and abundance of long-beaked common dolphins appears to be variable based on inter-annual and seasonal time scales (Dohl et al. 1986; Heyning and Perrin 1994; Barlow 1995; Forney et al. 1995; Forney and Barlow 2007). As oceanographic conditions change, long-beaked common dolphins may move between Mexican and US waters, and therefore a multi-year average abundance estimate is the most appropriate for management within the U.S. waters (Carretta et al. 2010). California waters represent the northern limit for this stock and animal's likely movement between US and Mexican waters. No information on trends in abundance is available for this stock because of high inter-annual variability in line-transect abundance estimates (Carretta et al. 2010). Heyning and Perrin (1994) detected changes in the proportion of short-beaked to long-beaked common dolphins stranding along the California coast, with the short-beaked common dolphin stranding more frequently prior to the 1982-83 El Niño (which increased water temperatures off California), and the long-beaked common dolphin more frequently observed for several years afterwards. Thus, it appears that both relative and absolute abundance of these species off California may change with varying oceanographic conditions (Carretta et al. 2010). Common dolphin distributions may be related to bathymetry (Hui 1979). Long-beaked common dolphins are usually found within 50 nautical miles (nm) (92.5 km) of shore with significantly more occurrence near canyons, escarpments, and slopes (Heyning and Perrin 1994; Barlow et al. 1997; Bearzi 2005, 2006). Group size ranges from less than a dozen to several thousand individuals

(Barlow and Forney 2007; Barlow et al. 2010). Sparse information is available on the life history of long-beaked common dolphins, however, some information is provided for short-beaked common dolphins which may also apply to long-beaked dolphins. North Pacific short-beaked common dolphin females and males reach sexual maturity at roughly 8 and 10 years, respectively (Ferrero and Walker 1995). Peak calving season for common dolphins in the eastern North Pacific may be spring and early summer (Forney 1994). Barlow (2010) reported average group size for long-beaked common dolphins within a Southern California-specific stratum as 195 individuals from a 2008 survey along the US West Coast. The geometric mean abundance estimate in NMFS' annual stock assessment for the entire California stock of long-beaked common dolphins, based on two ship surveys conducted in 2005 and 2008, is 27,046 (CV=0.59) (Forney 2007; Barlow 2010; Carretta et al. 2010). Using a more stratified approach, Barlow et al. (2010) estimated abundance within a Southern California-specific strata of 16,480 (CV=0.41) long-beaked common dolphins based on analysis of pooled sighting data from 1991-2008.

Pacific White-sided Dolphin (Lagenorhynchus obliquidens), California/Oregon/ Washington Stock

While Pacific white-sided dolphins could potentially occur year-round in Southern California, surveys suggest a seasonal north-south movement in the eastern North Pacific, with animals found primarily off California during the colder water months and shifting northward into Oregon and Washington as water temperatures increase during late spring and summer (Green et al. 1992, 1993; Forney 1994; Forney and Barlow 2007; Barlow 2010). Salvadeo et al. (2010) propose that increased global warming may increase a northward shift in Pacific white-sided dolphins. The Pacific white-sided dolphin is most common in waters over the continental

shelf and slope, however, sighting records and captures in pelagic driftnets indicate that this species also occurs in oceanic waters well beyond the shelf and slope (Leatherwood et al. 1984; DoN 2009, 2010). Soldevilla et al. (2010a) reported the possibility of two distinct eco-types of Pacific white-sided dolphins occurring in Southern California based on passive acoustic detection of two distinct echolocation click patterns. No population trends have been observed in California or adjacent waters. Barlow (2010) reported average group size for Pacific white-sided dolphins within a Southern California-specific stratum as 17 from a 2008 survey along the US West Coast. The size of the entire California/Oregon/Washington Stock is estimated to be 26,930 (CV=0.28) individuals (Forney 2007, Barlow, 2010). Using a more stratified approach, Barlow et al. (2010) estimated abundance within a Southern California-specific strata of 1,914 (CV=0.39) Pacific white-sided dolphins based on analysis of pooled sighting data from 1991-2008.

Risso's Dolphin (Grampus griseus), California/Oregon/ Washington Stock

Off the US West coast, Risso's dolphins are commonly seen on the shelf offSouthern California and in slope and offshore waters of California, Oregon and Washington (Soldevilla et al. 2010b; Carretta et al. 2010). Animals found off California during the colder water months are thought to shift northward into Oregon and Washington as water temperatures increase in late spring and summer (Green et al. 1992). The southern end of this population's range is not well documented, but previous surveys have shown a conspicuous 500 nm distributional gap between these animals and Risso's dolphins sighted south of Baja California and in the Gulf of California (Mangels and Gerrodette 1994). Thus this population appears distinct from animals found in the eastern tropical Pacific and the Gulf of California (Carretta et al. 2010). As oceanographic conditions vary, Risso's dolphins may spend time outside the US Exclusive Economic Zone.

Barlow (2010) reported average group size for Risso's dolphins within a Southern California-specific stratum as 23 from a 2008 survey along the US West Coast. The size of the California/Oregon/ Washington Stock is estimated to be 6,272 (CV=0.30) individuals (Forney 2007; Barlow 2010; Carretta et al. 2010). Using a more stratified approach, Barlow et al. (2010) estimated abundance within a Southern California-specific strata of 3,974 (CV=0.39) Risso's dolphins based on analysis of pooled sighting data from 1991-2008.

Short-Beaked Common Dolphin (Delphinus delphis), California/Oregon/Washington Stock

Short-beaked common dolphins are the most abundant cetacean off California, and are widely distributed between the coast and at least 300 nm distance from shore (Dohl et al. 1981; Forney et al. 1995; Barlow 2010; Carretta et al. 2010). Along the US West Coast, portions of the short-beaked common dolphins' distribution overlap with that of the long-beaked common dolphin. The northward extent of short-beaked common dolphin distribution appears to vary inter-annually and with changing oceanographic conditions (Forney and Barlow 1998). Barlow (2010) reported average group size for short-beaked common dolphins within a Southern California-specific stratum as 122 from a 2008 survey along the US West Coast. The size of the California/Oregon/ Washington Stock is estimated to be 411,211 (CV=0.21) individuals (Carretta et al. 2010). Using a more stratified approach, Barlow et al. (2010) estimated abundance within a Southern California-specific strata of 152,000 (CV=0.17) Risso's dolphins based on analysis of pooled sighting data from 1991-2008.

Potential Effects on Marine Mammals

Anticipated impacts resulting from the Navy's proposed SSTC training activities include disturbance from underwater detonation events and pile driving from the Elevated Causeway System (ELCAS) training events, if marine mammals are in the vicinity of these action areas.

Detailed description and comprehensive analysis of the overall potential effects on marine mammals that could result from the Navy's proposed exercises involving ELCAS training events at the SSTC action area are provided in the Federal Register notice for the original proposed IHA (75 FR 64276; October 19, 2010). The anticipated impacts from marine mammal exposure to explosive detonations and pile-driving remain unchanged, however, the nature of potential exposure has changed due to the inclusion of TDFDs and is described and analyzed below.

As noted earlier, the use of TDFDs was not addressed in the original Federal Register notice regarding the proposed IHA. (75 FR 64276; October 19, 2010).

As mentioned earlier, a TDFD begins a countdown to a detonation event with a time-delaying device, and there is no mechanism to stop (abort) the pre-set explosion once the device has been set. Therefore, in the absence of any additional mitigation, the potential danger exists in the scenario that during the brief period after the exclusion zone is cleared and before the charges are detonated, marine mammals could enter the exclusion zone and approach close enough to the explosive to be injured or killed upon detonation. Nevertheless, the anticipated level of impacts to marine mammals without any mitigation and monitoring measures, which is assessed solely based on the density and distribution of the animals within the vicinity of the action, remains the same as analyzed in the proposed IHA.

To address, and ultimately reduce and minimize the risks from underwater detonations that involve TDFDs, the Navy and NMFS developed a set of robust monitoring and mitigation measures (such as increasing the size of exclusion zones to account for the distance that a marine mammal might travel during the TDFD delay and increased pre-exercise monitoring). With the implementation of these monitoring and mitigation measures, NMFS believes that the potential effects to marine mammals that would result from the proposed SSTC training activities will

remain the same as analyzed in the Federal Register notice for the proposed IHA (75 FR 64276; October 19, 2010). These monitoring and mitigation measures are further discussed in detail below, as well as the estimated number of takes.

Specific analysis on additional species with infrequent occurrence that could be affected is provided below, since they were not included in the initial proposed IHA (75 FR 64276; October 19, 2010).

Long-beaked common dolphins

With the implementation of enhanced monitoring and mitigation measures (see below), there is no predicted mortality or Level A injury for long-beaked common dolphins. Modeling predicted there would potentially be 52 Level B exposures from underwater explosions and 54 Level B exposures from ELCAS pile driving and removal. Of all the relatively rare species within SSTC, the long-beaked common dolphin is the most possible given its more near-shore coastal distribution (Bearzi 2005; Carretta et al. 2010). Given low site fidelity to areas without significant bathymetric relief such as the low slope sandy bottom under the SSTC boat lanes (Hui 1979; Heyning and Perrin 1994; Bearzi 2005; 2006), NMFS believes that pre-detonation mitigation would detect long-beaked common dolphins and avoid exposure to pressure or energy levels associated with injury or mortality.

Pacific white-side dolphins

With the implementation of enhanced monitoring and mitigation measures (see below), there is no predicted mortality or Level A injury for Pacific white-sided dolphins. Modeling predicted there would potentially be 13 Level B exposures from underwater explosions and 12 Level B exposures from ELCAS pile driving and removal. There is limited empirical data available to confirm Pacific white-sided dolphin species occurrence in the near shore water

adjacent to the SSTC boat lanes. Movement of Pacific white-side dolphins into the SSTC boat lanes would likely be rare to very infrequent and limited in duration. NMFS believes that pre-detonation mitigation would detect Pacific white-sided dolphins, if present at all, and avoid exposure to energy or pressure levels associated with injury or mortality.

Risso's dolphins

With the implementation of enhanced monitoring and mitigation measures (see below), there is no predicted mortality or Level A injury for Risso's dolphins. Modeling predicted there would potentially be 32 Level B exposures from underwater explosions and 30 Level B exposures from ELCAS pile driving and removal. There is limited empirical data available to confirm Risso's dolphin species occurrence in the near shore water adjacent to the SSTC boat lanes. More Risso's dolphin sightings occur further offshore (DoN 2009; Barlow 2010; Carretta et al. 2010; DoN 2010a). Movement of Risso's dolphins into the SSTC boat lanes would likely be rare to very infrequent and limited in duration. NMFS believes that pre-detonation mitigation would detect Risso's dolphins, if present at all, and avoid exposure to energy or pressure levels associated with injury or mortality.

Short-beaked common dolphins

With the implementation of enhanced monitoring and mitigation measures (see below), there is no predicted mortality or Level A injury for short-beaked common dolphins. Modeling predicted there would potentially be 448 Level B exposures from underwater explosions and 542 Level B exposures from ELCAS pile driving and removal. There is limited empirical data available to confirm short-beaked common dolphin species occurrence in the near shore water adjacent to the SSTC boat lanes. More short-beaked common dolphin sightings occur further offshore (Bearzi 2005; DoN 2009; Barlow 2010; Carretta et al. 2010; DoN 2010a). Movement

of short-beaked common dolphins into the SSTC boat lanes would likely be rare to very infrequent and limited in duration. NMFS believes that pre-detonation mitigation would detect short-beaked common dolphins, if present at all, and avoid exposure to energy or pressure levels associated with injury or mortality.

Anticipated Effects on Habitat

Detailed description and comprehensive analysis of the overall potential effects on marine mammal habitat that could result from the Navy's proposed training exercises at the SSTC action area are provided in the Federal Register notice for the proposed IHA (75 FR 64276; October 19, 2010). There is no change to the original assessment of the overall potential environmental effects, therefore, they are not repeated here.

Proposed Additional Mitigation Measures

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

For the Navy's proposed SSTC training activities, the Navy worked with NMFS and proposed a set of monitoring and mitigation measures to reduce potential impacts to marine mammals. These initial monitoring and mitigation measures were published in the Federal Register notice for the proposed IHA published on October 19, 2010 (75 FR 64276). Those monitoring and mitigation measures were based on the Navy's training protocols for mine detonation that had been used over decades. As a consequence of the March 4, 2011, incident, in

which long-beaked common dolphins were killed during these exercises, NMFS suspended the processing of the proposed IHA and began to re-evaluate its marine mammal effects analysis and the monitoring and mitigation measures. NMFS worked with the Navy to develop monitoring and mitigation measures to address the use of TDFDs by accounting for dolphin swim speed with an enlarged safety zone and by increasing monitoring efforts. These revised monitoring and mitigation measures are proposed specifically for underwater mine neutralization using TDFDs, in addition to overarching general monitoring and mitigation measures developed for the Navy's general training activities at the SSTC study area, which were described in detail in the Federal Register notice for the proposed IHA (75 FR 64276; October 19, 2010). The derivation and description of the revised monitoring and mitigation measures are set forth below.

Derivation of Timed Delayed Mitigation Zones

To increase the effectiveness of the shallow water mitigation zone when using time-delayed detonations (i.e., TDFD), the existing Navy modeled zone of influence (ZOI) for a particular charge weight is enlarged to account for the distance an animal could swim during the time delay given known dolphin speed.

In essence, this should allow sighting of marine mammals outside of a final mitigation zone swimming into the zone prior to starting a timed-delay detonation.

Final TDFD mitigation zones are determined in a three step process:

First, the distance that a dolphin could swim during the length of an individual time-delay is calculated based on swim speed. Onto this distance, another 200 yds is added as an additional buffer to account for varying individual swim speed.

Second, the potential distance traveled during a time-delay is added to SSTC specific model results showing range distances to the applicable NMFS injury criteria for underwater detonations.

Third, the Navy rounds the range distances calculated in Step 2 to appropriate mitigation ranges more likely to be practical in the field.

A detailed discussion on each of these steps is provided below.

(1) Swim Speed Estimation

Using an average swim speed of 3 knots (102 yd/min) for a delphinid, the Navy provided the approximate distance that an animal would typically travel within a given time-delay period (Table 1).

To account for differences between species or faster swimming by individuals within a species, the Navy and NMFS also agreed to add still another 200 yds to the original 3 knot derived ranges to account for variation in individual swim speeds. Table 1 shows both the initial 3 knot range plus the additional 200 yard buffer.

Table 1. Potential Distance Traveled Based on Swim speed and Length of Time-Delay and Additional 200 Yards Buffer

Species Group	Swim Speed	Time-delay	Potential Distance Traveled	Potential Distance Traveled with Additional 200 Yds Buffer
Delphinid	102 yd/min	5 min	510 yd	710 yd
		6 min	612 yd	812 yd
		7 min	714 yd	914 yd
		8 min	816 yd	1,016 yd
		9 min	918 yd	1,118 yd
		10 min	1,020 yd	1,220 yd

(2) ZOI and Swim Speed-time-buffer Addition

Based on acoustic propagation modeling and anticipated zones of influences (ZOI) to NMFS injury criteria (13 psi-msec) by training event type and charge weight, potential dolphin

travel distances by time at 3 knots plus buffer can be added to event specific ZOI to produce a matrix of charge weight, selected delay time, and applicable buffer zone (Table 2).

As long as animals are not observed within a given time-delayed mitigation zone before the time-delay detonation is set, then the animals would be unlikely to swim into the injury zone from outside the zone within the time-delay window.

Table 2. Revised Radius for Timed-delay Firing Devices Based on Charge Size, Length of Time Delay, and Additional Buffer from Table 1

Charge Weight (NEW)	Navy Modeled ZOI to injury (13 psi-msec)	Time-delay					
		5 min	6 min	7min	8 min	9 min	10 min
5lb	80 yd	790 yd	892 yd	994 yd	1,006 yd	1,198 yd	1,300 yd
10 lb	160 yd	870 yd	972 yd	1,074 yd	1,176 yd	1,278 yd	1,380 yd
15-29 lb	360 yd	1,070 yd	1,172 yd	1,274 yd	1,376 yd	1,478 yd	1,580 yd

(3) Final TDFD Detonation Mitigation zones

Table 3 shows the final mitigation zones and application for SSTC TDFD underwater detonations. This required in most cases rounding (mostly upward) the calculated ranges from Table 2 to the appropriate range category (1,000, 1,400, and 1,500 yds). As long as animals are not observed within the buffer zones before the time-delay detonation is set, then the animals would be unlikely to swim into the injury zone from outside the area within the time-delay window.

Table 3. Updated Buffer Zone Radius (yd) for TDFDs Based on Size of Charge and Length of Time-Delay, with Additional Buffer Added to Account for Faster Swim Speeds

		Time-delay					
		5 min	6 min	7min	8 min	9 min	10 min
Charge Size (lb NEW)	5lb	1,000 yd	1,000 yd	1,000 yd	1,000 yd	1,400 yd	1,400 yd
	10 lb	1,000 yd	1,000 yd	1,000 yd	1,400 yd	1,400 yd	1,400 yd
	15-29 lb	1,000 yd	1,400 yd	1,400 yd	1,400 yd	1,500 yd	1,500 yd

1,000 yds: minimum of 2 observation boats
1,400/1,500 yds: minimum of 3 observation boats or 2 boats and 1 helicopter

Finally, to create a marine mammal mitigation regime that is more likely to achieve success in practical execution, Navy worked with NMFS and divided the span of training events

associated with different charge weights (as derived in Table 2) into those requiring a 1,000 yard buffer zone (with 2 boats monitoring), and those requiring greater than a 1,400 yard buffer zone (3 boats monitoring, or 2 boats and 1 helicopter). Proposed monitoring measures that support these mitigation zones and monitoring protocols are described in detail in the following sections for different types of charges in different environments.

While the buffer zones vary between the different types of underwater detonation, the Navy proposes three broad types of monitoring and mitigation protocols based on different types of training events and environments, and the practicability and effectiveness of monitoring and mitigation measures in different environmental settings. These monitoring and mitigation protocols are:

- Very shallow water (VSW, < 24 feet) underwater detonation monitoring and mitigation:
- Shallow water (> 24 feet) underwater detonation monitoring and mitigation; and
- ELCAS pile driving and removal monitoring and mitigation.

Although these mitigation protocols were discussed extensively in the Federal Register notice for the proposed IHA (75 FR 64276; October 19, 2010), except for the ELCAS pile driving and removal mitigation, there are significant revisions to the other two mitigation measure protocols to reduce and minimize the risks from underwater detonation events involving TDFDs, as discussed above. Therefore, the proposed revised monitoring and mitigation measures for VSW underwater detonation and shallow water underwater events are listed below in their entireties.

Proposed Mitigation and Monitoring Measures for Underwater Detonations in Very Shallow Water (VSW, water depth < 24 ft)

(1) Mitigation and Monitoring Measures for VSW Underwater Detonations Using Positive Control

1. Underwater detonations using positive control (remote firing devices) will only be conducted during daylight.

2. Easily visible anchored floats will be positioned on 700 yard radius of a roughly semi-circular zone (the shoreward half being bounded by shoreline and immediate off-shore water) around the detonation location for small explosive exercises at the SSTC. These mark the outer limits of the mitigation zone.

3. For each VSW underwater detonation event, a safety-boat with a minimum of one observer is launched 30 or more minutes prior to detonation and moves through the area around the detonation site. The task of the safety observer is to exclude humans from coming into the area and to augment a shore observer's visual search of the mitigation zone for marine mammals. The safety-boat observer is in constant radio communication with the exercise coordinator and shore observer discussed below.

4. A shore-based observer will also be deployed for VSW detonations in addition to boat based observers. The shore observer will indicate that the area is clear of marine mammals after 10 or more minutes of continuous observation with no marine mammals having been seen in the mitigation zone or moving toward it.

5. At least 10 minutes prior to the planned initiation of the detonation event-sequence, the shore observer, on an elevated on-shore position, begins a continuous visual search with binoculars of the mitigation zone. At this time, the safety-boat observer informs the shore observer if any marine mammal has been seen in the zone

and, together, both search the surface within and beyond the mitigation zone for marine mammals.

6. The observers (boat and shore based) will indicate that the area is not clear any time a marine mammal is sighted in the mitigation zone or moving toward it and, subsequently, indicate that the area is clear of marine mammals when the animal is out and moving away and no other marine mammals have been sited.

7. Initiation of the detonation sequence will only begin on final receipt of an indication from the shore observer that the area is clear of marine mammals and will be postponed on receipt of an indication from any observer that the area is not clear of marine mammals.

8. Following the detonation, visual monitoring of the mitigation zone continues for 30 minutes for the appearance of any marine mammal in the zone. Any marine mammal appearing in the area will be observed for signs of possible injury.

9. Any marine mammal observed after a VSW underwater detonation either injured or exhibiting signs of distress will be reported via operational chain of command to Navy environmental representatives from U.S. Pacific Fleet, Environmental Office, San Diego Detachment. Using Marine Mammal Stranding communication trees and contact procedures established for the Southern California Range Complex, the Navy will report these events to the Stranding Coordinator of NMFS' Southwest Regional Office. These voice or email reports will contain the date and time of the sighting, location (or if precise latitude and longitude is not currently available, then the approximate location in reference to an established SSTC beach feature), species description (if known), and indication of the animal's status.

(2) Mitigation and Monitoring Measures for VSW Underwater Detonations Using Time-Delay (TDFD Only)

1. Underwater detonations using timed delay devices will only be conducted during daylight.

2. Time-delays longer than 10 minutes will not be used. The initiation of the device will not start until the mitigation area below is clear for a full 30 minutes prior to initiation of the timer.

3. A mitigation zone will be established around each underwater detonation location as indicated in Table 3 (1,000 or 1,400 yards) based on charge weight and length of time delay used.

4. VSW ranges 1,000 yds:

- For each VSW underwater detonation event with a mitigation zone of 1,000 yds, a safety boat with a minimum of one observer is launched 30 or more minutes prior to detonation and moves through the area around the detonation site at the seaward edge of the mitigation zone. The task of the boat is to exclude humans from coming into the area and to augment a shore observer's visual search of the mitigation zone for marine mammals. The safety-boat observer is in constant radio communication with the exercise coordinator and shore observer discussed below. To the best extent practical, boats will try to maintain a 10 knot search speed.
- A shore-based observer will also be deployed for VSW detonations in addition to boat based observers. At least 10 minutes prior to the planned initiation of the detonation event-sequence, the shore observer, on an elevated on-shore position,

begins a continuous visual search with binoculars of the mitigation zone. At this time, the safety-boat observer informs the shore observer if any marine mammal has been seen in the zone and, together, both search the surface within and beyond the mitigation zone for marine mammals. The shore observer will indicate that the area is clear of marine mammals after 10 or more minutes of continuous observation with no marine mammals having been seen in the mitigation zone or moving toward it.

5. VSW ranges larger than 1,400 yards:

- A minimum of 2 boats will be used to survey for marine mammals at mitigation ranges larger than 1,400 yards.
- When conducting the surveys within a mitigation zone >1,400 yds, boats will position themselves near the mid-point of the mitigation zone radius (but always outside the detonation plume radius/human safety zone) and travel in a semi-circular pattern around the detonation location surveying both the inner (toward detonation site) and outer (away from detonation site) areas. When using 2 boats, each boat will be positioned on opposite sides of the detonation location, separated by 180 degrees. If using more than 2 boats, each boat will be positioned equidistant from one another (120 degrees separation for 3 boats, 90 degrees separation for 4 boats, etc.). If available, aerial visual survey support from Navy helicopters can be utilized, so long as it will not jeopardize safety of flight. Helicopters will travel in a circular pattern around the detonation location.

6. A mitigation zone will be surveyed from 30 minutes prior to the detonation and for 30 minutes after the detonation.

7. Other personnel besides boat observers can also maintain situational awareness on the presence of marine mammals within the mitigation zone to the best extent practical given dive safety considerations.

Divers placing the charges on mines will observe the immediate underwater area around a detonation site for marine mammals and report sightings to surface observers.

8. If a marine mammal is sighted within an established mitigation zone or moving towards it, underwater detonation events will be suspended until the marine mammal has voluntarily left the area and the area is clear of marine mammals for at least 30 minutes.

9. Immediately following the detonation, visual monitoring for affected marine mammals within the mitigation zone will continue for 30 minutes.

10. Any marine mammal observed after an underwater detonation either injured or exhibiting signs of distress will be reported via Navy operational chain of command to Navy environmental representatives from U.S. Pacific Fleet, Environmental Office, San Diego Detachment. Using Marine Mammal Stranding communication trees and contact procedures established for the Southern California Range Complex, the Navy will report these events to the Stranding Coordinator of NMFS' Southwest Regional Office. These voice or email reports will contain the date and time of the sighting, location (or if precise latitude and longitude is not currently available, then the approximate location in reference to an established SSTC beach feature), species description (if known), and indication of the animal's status.

Proposed Mitigation and Monitoring Measures for Underwater Detonations in Shallow Water (>24 Feet)

(1) Mitigation and Monitoring Measures for Underwater Detonations Using Positive Control (Except SWAG and Timed Detonations)

1. Underwater detonations using positive control devices will only be conducted during daylight.

2. A mitigation zone of 700 yards will be established around each underwater detonation point.

3. A minimum of two boats, including but not limited to small zodiacs and 7-m Rigid Hulled Inflatable Boats (RHIB) will be deployed. One boat will act as an observer platform, while the other boat is typically the diver support boat.

4. Two observers with binoculars on one small craft/boat will survey the detonation area and the mitigation zone for marine mammals from at least 30 minutes prior to commencement of the scheduled explosive event and until at least 30 minutes after detonation.

5. In addition to the dedicated observers, all divers and boat operators engaged in detonation events can potentially monitor the area immediately surrounding the point of detonation for marine mammals.

6. If a marine mammal is sighted within the 700 yard mitigation zone or moving towards it, underwater detonation events will be suspended until the marine mammal has voluntarily left the area and the area is clear of marine mammals for at least 30 minutes.

7. Immediately following the detonation, visual monitoring for marine mammals within the mitigation zone will continue for 30 minutes. Any marine mammal observed after an underwater detonation either injured or exhibiting signs of distress will be reported to via Navy operational chain of command to Navy environmental

representatives from U.S. Pacific Fleet, Environmental Office, San Diego Detachment. Using Marine Mammal Stranding communication trees and contact procedures established for the Southern California Range Complex, the Navy will report these events to the Stranding Coordinator of NMFS' Southwest Regional Office. These voice or email reports will contain the date and time of the sighting, location (or if precise latitude and longitude is not currently available, then the approximate location in reference to an established SSTC beach feature), species description (if known), and indication of the animals status.

(2) Mitigation and Monitoring Measures for Underwater Detonations Using Time-Delay (TDFD Detonations Only)

1. Underwater detonations using timed delay devices will only be conducted during daylight.

2. Time-delays longer than 10 minutes will not be used. The initiation of the device will not start until the mitigation area below is clear for a full 30 minutes prior to initiation of the timer.

3. A mitigation zone will be established around each underwater detonation location as indicated in Table 3 based on charge weight and length of time-delay used. When conducting the surveys within a mitigation zone (either 1,000 or 1,400 yds), boats will position themselves near the mid-point of the mitigation zone radius (but always outside the detonation plume radius/human safety zone) and travel in a circular pattern around the detonation location surveying both the inner (toward detonation site) and outer (away from detonation site) areas.

4. Shallow water TDFD detonations range 1,000 yds:

- A minimum of 2 boats will be used to survey for marine mammals at mitigation ranges of 1,000 yds.
- When using 2 boats, each boat will be positioned on opposite sides of the detonation location, separated by 180 degrees.
- Two observers in each of the boats will conduct continuous visual survey of the mitigation zone for the entire duration of a training event.
- To the best extent practical, boats will try to maintain a 10 knot search speed. This search speed was added to ensure adequate coverage of the buffer zone during observation periods. While weather conditions and sea states may require slower speeds in some instances, 10 knots is a prudent, safe, and executable speed that will allow for adequate surveillance. For a 1,000 yd radius buffer zone a boat travelling at 10 knots and 500 yds away from the detonation point would circle the detonation point 3.22 times during a 30 minute survey period. By using 2 boats, 6.44 circles around the detonation point would be completed in a 30 minute span.

5. Shallow water TDFD detonations greater than 1,400 yds:

- A minimum of 3 boats or 2 boats and 1 helicopter will be used to survey for marine mammals at mitigation ranges of 1,400 yds.
- When using 3 (or more) boats, each boat will be positioned equidistant from one another (120 degrees separation for 3 boats, 90 degrees separation for 4 boats, etc.).

- For a 1,400 yd radius mitigation zone, a 10 knot speed results in 2.3 circles for each of the three boats, or nearly 7 circles around the detonation point over a 30 minute span.
- If available, aerial visual survey support from Navy helicopters can be utilized, so long as it will not jeopardize safety of flight.
- Helicopters, if available, can be used in lieu of one of the boat requirements. Navy helicopter pilots are trained to conduct searches for relatively small objects in the water, such as a missing person. A helicopter search pattern is dictated by standard Navy protocols and accounts for multiple variables, such as the size and shape of the search area, size of the object being searched for, and local environmental conditions, among others.

6. A mitigation zone will be surveyed from 30 minutes prior to the detonation and for 30 minutes after the detonation.

7. Other personnel besides boat observers can also maintain situational awareness on the presence of marine mammals within the mitigation zone to the best extent practical given dive safety considerations.

Divers placing the charges on mines will observe the immediate underwater area around a detonation site for marine mammals and report sightings to surface observers.

8. If a marine mammal is sighted within an established mitigation zone or moving towards it, underwater detonation events will be suspended until the marine mammal has voluntarily left the area and the area is clear of marine mammals for at least 30 minutes.

9. Immediately following the detonation, visual monitoring for affected marine mammals within the mitigation zone will continue for 30 minutes.

10. Any marine mammal observed after an underwater detonation either injured or exhibiting signs of distress will be reported via Navy operational chain of command to Navy environmental representatives from U.S. Pacific Fleet, Environmental Office, San Diego Detachment or Pearl Harbor. Using Marine Mammal Stranding protocols and communication trees established for the Southern California and Hawaii Range Complexes, the Navy will report these events to the Stranding Coordinator of NMFS' Southwest or Pacific Islands Regional Office. These voice or email reports will contain the date and time of the sighting, location (or if precise latitude and longitude is not currently available, then the approximate location in reference to an established SSTC beach feature), species description (if known), and indication of the animal's status.

(3) Proposed Mitigation and Monitoring Measures for Underwater SWAG Detonations (SWAG Only)

A modified set of mitigation measures would be implemented for SWAG detonations, which involve much smaller charges of 0.03 lbs NEW.

1. Underwater detonations using SWAG will only be conducted during daylight.

2. A mitigation zone of 60 yards will be established around each SWAG detonation site.

3. A minimum of two boats, including but not limited to small zodiacs and 7-m Rigid Hulled Inflatable Boats (RHIB) will be deployed. One boat will act as an observer platform, while the other boat is typically the diver support boat.

4. Two observers with binoculars on one small craft\boat will survey the detonation area and the mitigation zone for marine mammals from at least 10 minutes prior to

commencement of the scheduled explosive event and until at least 10 minutes after detonation.

5. In addition to the dedicated observers, all divers and boat operators engaged in detonation events can potentially monitor the area immediately surrounding the point of detonation for marine mammals.

6. Divers and personnel in support boats would monitor for marine mammals out to the 60 yard mitigation zone for 10 minutes prior to any detonation.

7. After the detonation, visual monitoring for marine mammals would continue for 10 minutes. Any marine mammal observed after an underwater detonation either injured or exhibiting signs of distress will be reported via Navy operational chain of command to Navy environmental representatives from U.S. Pacific Fleet, Environmental Office, San Diego Detachment. Using Marine Mammal Stranding communication trees and contact procedures established for the Southern California Range Complex, the Navy will report these events to the Stranding Coordinator of NMFS' Southwest Regional Office. These voice or email reports will contain the date and time of the sighting, location (or if precise latitude and longitude is not currently available, then the approximate location in reference to an established SSTC beach feature), species description (if known), and indication of the animal's status.

Estimated Take by Incidental Harassment

There is no change for marine mammal take estimates for the four marine mammal species analyzed in the Federal Register for the proposed IHA (75 FR 64276; October 19, 2010) for underwater detonations and from ELCAS trainings at the SSTC Study Area. Take estimates were based on marine mammal densities and distribution data in the action areas, computed with

modeled explosive sources and the sizes of the buffer zones. Without the inclusion of additional mitigation measures, the use of TDFDs could increase the likelihood that marine mammals are exposed to explosive detonations at injurious levels – however, with the enlarged exclusion zone to account for the distance that an animal might swim during the timed delay, this likelihood is minimized.

The same methodology was used for calculating take estimates for the additional four dolphin species. The estimated takes are presented in Tables 4 and 5 below.

Table 4. SSTC Modeled Estimates of Species Exposed to Underwater Detonations without Implementation of Mitigation Measures.

Species		Annual Marine Mammal Exposure (All Sources)			
		Level B Behavior (Multiple Successive Explosive Events Only)	Level B TTS	Level A	Mortality
		177 dB re 1 µPa	182 dB re 1 μPa^2-s / 23 psi	205 dB re 1 μPa^2-s / 13.0 psi-ms	30.5 psi-ms
Gray Whale	Warm	-	-	-	-
	Cold	0	0	0	0
Bottlenose Dolphin	Warm	30	43	0	0
	Cold	40	55	0	0
California Sea Lion	Warm	4	4	0	0
	Cold	40	51	0	0
Harbor Seal	Warm	0	0	0	0
	Cold	0	0	0	0
Long-beaked common dolphin	Warm	14	21	0	0
	Cold	7	10	0	0
Pacific white-sided dolphin	Warm	2	3	0	0
	Cold	3	4	0	0
Risso's dolphin	Warm	3	4	0	0
	Cold	11	15	0	0
Short-beaked common dolphin	Warm	123	177	0	0
	Cold	62	86	0	0
Total Annual Exposures		**453**	**626**	**0**	**0**

Table 5. Exposure Estimates from ELCAS Pile Driving and Removal Prior to Implementation of Mitigation Measures.

Species		Annual Marine Mammal Exposure (All Sources)			
		Level B Behavior (Non-Impulse)	Level B Behavior (Impulse)	Level A (Cetacean)	Level A (Pinniped)
		120 dB_{rms} re 1 µPa	120 dB_{rms} re 1 µPa	120 dB_{rms} re 1 µPa	120 dB_{rms} re 1 µPa
Gray Whale	Installation	N/A	0	0	0
	Removal	6	N/A	0	0
Bottlenose	Installation	N/A	40	0	0

Dolphin	Removal	168	N/A	0	0
California Sea Lion	Installation	N/A	20	0	0
	Removal	102	N/A	0	0
Harbor Seal	Installation	N/A	0	0	0
	Removal	12	N/A	0	0
Long-beaked common dolphin	Installation	N/A	0	0	0
	Removal	54	N/A	0	0
Pacific white-sided dolphin	Installation	N/A	0	0	0
	Removal	12	N/A	0	0
Risso's dolphin	Installation	N/A	0	0	0
	Removal	30	N/A	0	0
Short-beaked common dolphin	Installation	N/A	80	0	0
	Removal	462	N/A	0	0
Total Annual Exposures		**846**	**140**	**0**	**0**

In summary, for all underwater detonations and ELCAS pile driving activities, the Navy's impact model predicted that no mortality and/or Level A harassment (injury) would occur to marine mammal species and stocks within the proposed action area.

For non-sequential (i.e., single detonation) training events, the Navy's impact model predicted a total of 473 annual exposures that could result in Level B harassment (TTS), which include 98, 55, 31, 7, 19, and 263 annual exposures to bottlenose dolphins, California sea lions, long-beaked common dolphins, Pacific white-sided dolphins, Risso's dolphins, and short-beaked common dolphins, respectively.

For sequential (Multiple Successive Explosive events) training events, the Navy's impact model predicted a total of 339 annual exposures that could result in Level B behavioral harassment, which include 70, 44, 21, 5, 14, and 185 annual exposures to bottlenose dolphins, California sea lions, long-beaked common dolphins, Pacific white-sided dolphins, Risso's dolphins, and short-beaked common dolphins, respectively.

Subsistence Harvest of Marine Mammals

NMFS has preliminarily determined the Navy's proposed training activities at the SSTC would not have an unmitigable adverse impact on the availability of the affected species or stocks for subsistence use since there are no such uses in the specified area.

Negligible Impact and Small Numbers Analysis and Determination

Pursuant to NMFS' regulations implementing the MMPA, an applicant is required to estimate the number of animals that will be "taken" by the specified activities (i.e., takes by harassment only, or takes by harassment, injury, and/or death). This estimate informs the analysis that NMFS must perform to determine whether the activity will have a "negligible impact" on the species or stock. Level B (behavioral) harassment occurs at the level of the individual(s) and does not assume any resulting population-level consequences, though there are known avenues through which behavioral disturbance of individuals can result in population-level effects. 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.), or any of the other variables mentioned in the first paragraph (if known), as well as the number and nature of estimated Level A takes, the number of estimated mortalities, and effects on habitat.

A detailed description on the negligible impacts and small number analyses and determination was provided in the Federal Register for the proposed IHA (75 FR 64276; October

19, 2010), and is not repeated here. This section provides additional analysis on the use of TDFD during the Navy's underwater detonation training activities.

The aforementioned additional mitigation and monitoring measures will increase the buffer zone to account for marine mammal movement during the delay time of the detonation by TDFDs and increase marine mammal visual monitoring efforts to ensure that no marine mammal would be in a zone where injury and/or mortality could occur as a result of time-delayed detonation.

In addition, the estimated exposures are based on the probability of the animals occurring in the area when a training event is occurring, and this probability does not change based on the use of TDFDs or implementation of mitigation measures (i.e., the exposure model does not account for how the charge is initiated and assumes no mitigation is being implemented). Other potential effects to marine mammal species and stocks as a result of the proposed mine neutralization training activities remain the same as those analyzed in the proposed IHA (75 FR 64276; October 19, 2010).

Based on the analyses of the potential impacts from the proposed underwater detonation training exercises conducted within the Navy's SSTC action area, including the consideration of TDFD use and the implementation of the improved marine mammal monitoring and mitigation measures, NMFS has preliminarily determined that the modification of the Navy's proposed activities that include taking of marine mammals incidental to underwater detonation using TDFD within the SSTC action area will have a negligible impact on the marine mammal species and stocks, provided that additional mitigation and monitoring measures are implemented.

Endangered Species Act (ESA)

No marine mammal species are listed as endangered or threatened under the ESA with confirmed or possible occurrence in the study area. Therefore, section 7 consultation under the ESA for NMFS's proposed issuance of an MMPA authorization is not warranted.

National Environmental Policy Act (NEPA)

The Navy has prepared a Final Environmental Impact Statement (EIS) for the proposed SSTC training activities. The FEIS was released in January 2011 and it is available at http://www.silverstrandtrainingcomplexeis.com/EIS.aspx/. NMFS is a cooperating agency (as defined by the Council on Environmental Quality (40 CFR 1501.6)) in the preparation of the EIS. NMFS has subsequently adopted the FEIS for the SSTC training activities.

Dated: March 20, 2012

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James H. Lecky
Director
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[FR Doc. 2012-7593 Filed 03/29/2012 at 8:45 am; Publication Date: 03/30/2012]