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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XE131

Takes of Marine Mammals Incidental to Specified Activities; U.S. Navy Civilian Port Defense Activities at the Ports of Los Angeles/Long Beach, California

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

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with regulations implementing the Marine Mammal Protection Act (MMPA), notification is hereby given that NMFS has issued an Incidental Harassment Authorization (IHA) to the U.S. Navy (Navy) to take marine mammals, by harassment, incidental to Civilian Port Defense training activities within and near the Ports of Los Angeles and Long Beach, California.

DATES: Effective October 25, 2015, through December 31, 2015.

FOR FURTHER INFORMATION CONTACT: John Fiorentino, Office of Protected Resources, NMFS, (301) 427-8477.

SUPPLEMENTARY INFORMATION:

Availability

An electronic copy of the Navy's application, which contains a list of the references used in this document, may be obtained by visiting the internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental/military.htm*. The Navy's final

Environmental Assessment (EA), *2015 West Coast Civilian Port Defense*, which also contains a list of the references used in this document, may also be viewed on our website. In case of problems accessing these documents, please call the contact listed above (see **FOR FURTHER INFORMATION CONTACT**).

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.

An 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].

Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Summary of Request

On April 16, 2015, NMFS received a final application from the Navy requesting an IHA for the taking of marine mammals incidental to 2015 Civilian Port Defense activities at the Ports of Los Angeles and Long Beach, California.

The Study Area includes the waters within and near the Ports of Los Angeles and Long Beach, California. Since the Ports of Los Angeles and Long Beach are adjacent and are both encompassed within the larger proposed action area (Study Area) they will be described collectively as Los Angeles/Long Beach (see Figure 2-1 of the application for a map of the Study Area). These activities are classified as military readiness activities. Marine mammals present in the Study Area may be exposed to sound from active acoustic sources (sonar). The Navy is requesting authorization to take 7 marine

mammal species by Level B harassment (behavioral). No injurious takes (Level A harassment) of marine mammals are predicted and, therefore, none are being authorized.

Description of the Specified Activity

Additional detail regarding the specified activity was provided in our **Federal Register** notice of proposed authorization (80 FR 53658; September 4, 2015; pages 53658-53659); please see that document or the Navy's application for more information.

Overview of Training Activities

Civilian Port Defense activities are naval mine warfare exercises conducted in support of maritime homeland defense, per the Maritime Operational Threat Response Plan. These activities are conducted in conjunction with other federal agencies, principally the Department of Homeland Security. The three pillars of Mine Warfare include airborne (helicopter), surface (ship and unmanned vehicles), and undersea (divers, marine mammal systems, and unmanned vehicles), all of which are used in order to ensure that strategic U.S. ports are cleared of mine threats. Civilian Port Defense events are conducted in ports or major surrounding waterways, within the shipping lanes, and seaward to the 300 feet (ft, 91 meters [m]) depth contour. The events employ the use of various mine detection sensors, some of which utilize active acoustics for detection of mines and mine-like objects in and around various ports. Assets used during Civilian Port Defense training include up to four unmanned underwater vehicles, marine mammal systems, up to two helicopters operating (two to four hours) at altitudes as low as 75 to 100 ft (23 to 31 m), explosive ordnance disposal platoons, a Littoral Combat Ship or Landing Dock Platform and AVENGER class ships. The AVENGER is a surface mine countermeasure vessel specifically outfitted for mine countermeasure capability. The

proposed Civilian Port Defense activities for Los Angeles/Long Beach include the use of up to 20 bottom placed non explosive mine training shapes. Mine shapes may be retrieved by Navy divers, typically explosive ordnance disposal personnel, and may be brought to beach side locations to ensure that the neutralization measures are effective and the shapes are secured. The final step to the beach side activity is the intelligence gathering and identifying how the mine works, disassembling it or neutralizing it. The entire training event takes place over multiple weeks utilizing a variety of assets and scenarios. The following descriptions detail the possible range of activities which could take place during a Civilian Port Defense training event. This is all inclusive and many of these activities are not included within the analysis of this specific event. Mine detection including towed or hull mounted sources would be the only portion of this event which we are proposing authorization.

Mine Detection Systems

Mine detection systems are used to locate, classify, and map suspected mines. Once located, the mines can either be neutralized or avoided. These systems are specialized to either locate mines on the surface, in the water column, or on the sea floor.

- Towed or Hull-Mounted Mine Detection Systems. These detection systems use acoustic and laser or video sensors to locate and classify suspect mines. Helicopters, ships, and unmanned vehicles are used with towed systems, which can rapidly assess large areas.
- Unmanned/Remotely Operated Vehicles. These vehicles use acoustic and video or lasers systems to locate and classify mines. Unmanned/remotely operated vehicles provide mine warfare capabilities in nearshore littoral areas, surf zones, ports, and channels.

- Airborne Laser Mine Detection Systems. Airborne laser detection systems work in concert with neutralization systems. The detection system initially locates mines and a neutralization system is then used to relocate and neutralize the mine.
- Marine Mammal Systems. Navy personnel and Navy marine mammals work together to detect specified underwater objects. The Navy deploys trained bottlenose dolphins and California sea lions as part of the marine mammal mine-hunting and object-recovery system.

Sonar systems to be used during Civilian Port Defense Mine Detection training would include AN/SQQ-32, AN/SLQ-48, AN/AQS-24, and handheld sonars (*e.g.*, AN/PQS-2A). Of these sonar sources, only the AN/SQQ-32 would require quantitative acoustic effects analysis, given its source parameters. The AN/SQQ-32 is a high frequency (between 10 and 200 kilohertz [kHz]) sonar system; the specific source parameters of the AN/SQQ-32 are classified. The AN/AQS-24, AN/SLQ-48 and handheld sonars are considered *de minimis* sources, which are defined as sources with low source levels, narrow beams, downward directed transmission, short pulse lengths, frequencies above known hearing ranges, or some combination of these factors (U.S. Department of the Navy 2013). *De minimis* sources have been determined to not have potential impact to marine mammals.

Mine Neutralization

Mine neutralization systems disrupt, disable, or detonate mines to clear ports and shipping lanes. Mine neutralization systems can clear individual mines or a large number of mines quickly. Two types of mine neutralization could be conducted, mechanical minesweeping and influence system minesweeping. Mechanical minesweeping consists

of cutting the tether of mines moored in the water column or other means of physically releasing the mine. Moored mines cut loose by mechanical sweeping must then be neutralized or rendered safe for subsequent analysis. Influence minesweeping consists of simulating the magnetic, electric, acoustic, seismic, or pressure signature of a ship so that the mine detonates (no detonations would occur as part of the proposed training activities). Mine neutralization is included here to present the full spectrum of Civilian Port Defense Mine Warfare activities. The mine neutralization component of the proposed Civilian Port Defense training activities will not result in the incidental taking of marine mammals.

Dates, Duration, and Geographic Region

The description of the Dates, Duration, and Geographic Region of authorized activities has not changed from what was provided in the notice of the proposed IHA (80 FR 53658; September 4, 2015; page 53659). Civilian Port Defense training activities are scheduled every year, typically alternating between the east and west coasts of the United States. Civilian Port Defense activities in 2015 are proposed to occur on the U.S. west coast near Los Angeles/Long Beach, California. Civilian Port Defense events are typically conducted in areas of ports or major surrounding waterways and within the shipping lanes and seaward to the 300 ft (91 m) depth contour.

Civilian Port Defense activities would occur at the Ports of Los Angeles/Long Beach from October through December 2015. The training exercise would occur for a period of two weeks in which active sonar would be utilized for two separate periods of four-day events. The AN/SQQ-32 sonar could be active for up to 24 hours a day during these training events; however, the use of the AN/SQQ-32 would not be continuously

active during the four-day period. Additional activities would occur during this time and are analyzed within the Navy's Environmental Assessment for 2015 Civilian Port Defense training activities. The Navy has determined there is potential for take as defined under MMPA for military readiness activities. Specifically, take has potential to occur from utilization of active sonar sources. This stressor is the only aspect of the proposed training activities for which this IHA is being requested.

The Ports of Los Angeles and Long Beach combined represent the busiest port along the U.S. West Coast and second busiest in the United States. In 2012 and 2013, approximately 4,550 and 4,500 vessel calls, respectively, for ships over 10,000 deadweight tons arrived at the Ports of Los Angeles and Long Beach (Louttit and Chavez, 2014; U.S. Department of Transportation). This level of shipping would mean approximately 9,000 large ship transits to and from these ports and through the Study Area. By comparison, the next nearest large regional port, Port of San Diego, only had 318 vessel calls in 2012.

Description of Marine Mammals in the Area of the Specified Activity

Nineteen marine mammal species are known to occur in the study area, including five mysticetes (baleen whales), nine odontocetes (dolphins and toothed whales), and five pinnipeds (seals and sea lions). The Description of Marine Mammals in the Area of the Specified Activities section has not changed from what was in the notice of the proposed IHA (80 FR 53658; September 4, 2015; page 53660). All species were quantitatively analyzed in the Navy Acoustic Effects Model (NAEMO; see Chapter 6.4 of the application for additional information on the modeling process). After completing the modeling simulations, seven species (each with a single stock) are estimated to

potentially be taken by harassment as defined by the MMPA, as it applies to military readiness, during the proposed Civilian Port Defense activities due to use of active sonar sources. Based on a variety of factors, including source characterization, species presence, species hearing range, duration of exposure, and impact thresholds for species that may be present, the remainder of the species were not quantitatively predicted to be exposed to or affected by active acoustic transmissions related to the proposed activities that would result in harassment under the MMPA and, therefore, are not discussed further. Other potential stressors related to the proposed Civilian Port Defense activities (*e.g.*, vessel movement/noise, in water device use) would not result in disruption or alteration of breeding, feeding, or nursing patterns that that would rise to a level of significance under the MMPA. The seven species with the potential to be taken by harassment during the proposed training activities were presented in Table 1 of the notice of the proposed IHA (80 FR 53658; September 4, 2015; page 53660).

The proposed IHA and the Navy's application include a complete description of information on the status, distribution, abundance, vocalizations, density estimates, and general biology of marine mammal species in the Study Area. In addition, NMFS publishes annual stock assessment reports for marine mammals, including some stocks that occur within the Study Area (*http://www.nmfs.noaa.gov/pr/species/mammals*).

Potential Effects of the Specified Activity on Marine Mammals and Their Habitat

We provided a detailed discussion of the potential effects of the specified activity on marine mammals and their habitat in the notice of the proposed IHA (80 FR 53658; September 4, 2015; pages 53663-53674). Please see that document for more information.

Mitigation

In order to issue an incidental take authorization under section 101(a)(5)(A) and (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." NMFS' duty under this "least practicable adverse impact" standard is to prescribe mitigation reasonably designed to minimize, to the extent practicable, any adverse population-level impacts, as well as habitat impacts. While population-level impacts can be minimized by reducing impacts on individual marine mammals, not all takes translate to population-level impacts. NMFS' primary objective under the "least practicable adverse impact" standard is to design mitigation targeting those impacts on individual marine mammals that are most likely to lead to adverse population-level effects.

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

NMFS reviewed the proposed activities and the suite of mitigation measures as described in the application to determine if they would result in the least practicable adverse effect on marine mammals, which includes a careful balancing of the likely benefit of any particular measure to the marine mammals with the likely effect of that measure on personnel safety, practicality of implementation, and impact on the effectiveness of the "military-readiness activity." NMFS described the Navy's proposed

mitigation measures in detail in the notice of the proposed IHA (80 FR 53658; September 4, 2015; pages 53674-53675), and they have not changed. NMFS worked with the Navy to develop these proposed measures, and they are informed by years of experience and monitoring.

The Navy's proposed mitigation measures are modifications to the proposed activities that are implemented for the sole purpose of reducing a specific potential environmental impact on a particular resource. These do not include standard operating procedures, which are established for reasons other than environmental benefit. Most of the following mitigation measures are currently, or were previously, implemented as a result of past environmental compliance documents. The Navy's overall approach to assessing potential mitigation measures is based on two principles: (1) mitigation measures will be effective at reducing potential impacts on the resource, and (2) from a military perspective, the mitigation measures are practicable, executable, and safety and readiness will not be impacted.

The mitigation measures applicable to the proposed Civilian Port Defense training activities are the same as those identified in the Mariana Islands Training and Testing Environmental Impact Statement/Overseas Environmental Impact Statement (MITT EIS/OEIS), Chapter 5. All mitigation measures which could be applicable to the proposed activities are provided below. For the mitigation measures described below, the Lookout Procedures and Mitigation Zone Procedure sections from the MITT EIS/OEIS have been combined. For details regarding the methodology for analyzing each measure, see the MITT EIS/OEIS, Chapter 5.

Lookout Procedure Measures

The Navy will have two types of lookouts for the purposes of conducting visual observations: (1) those positioned on surface ships, and (2) those positioned in aircraft or on boats. Lookouts positioned on surface ships will be dedicated solely to diligent observation of the air and surface of the water. They will have multiple observation objectives, which include but are not limited to detecting the presence of biological resources and recreational or fishing boats, observing mitigation zones, and monitoring for vessel and personnel safety concerns. Lookouts positioned on surface ships will typically be personnel already standing watch or existing members of the bridge watch team who become temporarily relieved of job responsibilities that would divert their attention from observing the air or surface of the water (such as navigation of a vessel).

Due to aircraft and boat manning and space restrictions, Lookouts positioned in aircraft or on boats will consist of the aircraft crew, pilot, or boat crew. Lookouts positioned in aircraft and boats may necessarily be responsible for tasks in addition to observing the air or surface of the water (for example, navigation of a helicopter or rigid hull inflatable boat). However, aircraft and boat lookouts will, to the maximum extent practicable and consistent with aircraft and boat safety and training requirements, comply with the observation objectives described above for Lookouts positioned on surface ships.

Mitigation Measures

High-Frequency Active Sonar

The Navy will have one Lookout on ships or aircraft conducting high-frequency active sonar (HFAS) activities associated with mine warfare activities at sea.

Mitigation will include visual observation from a vessel or aircraft (with the exception of platforms operating at high altitudes) immediately before and during active

transmission within a mitigation zone of 200 yards (yds. [183 m]) from the active sonar source. Active transmission will cease if a marine mammal is sighted within the mitigation zone. Active transmission will recommence if any one of the following conditions is met: (1) the animal is observed exiting the mitigation zone, (2) the animal is thought to have exited the mitigation zone based on a determination of its course and speed and the relative motion between the animal and the source, (3) the mitigation zone has been clear from any additional sightings for a period of 10 minutes for an aircraft-deployed source, (4) the mitigation zone has been clear from any additional sightings for a period of 30 minutes for a vessel-deployed source, (5) the vessel or aircraft has repositioned itself more than 400 yds (366 m) away from the location of the last sighting, or (6) the vessel concludes that dolphins are deliberately closing in to ride the vessel's bow wave (and there are no other marine mammal sightings within the mitigation zone).

Physical Disturbance and Strike

Although the Navy does not anticipate that any marine mammals would be struck during the conduct of Civilian Port Defense training activities, the mitigation measures below will be implemented and adhered to.

Vessels - While underway, vessels will have a minimum of one Lookout. Vessels will avoid approaching marine mammals head on and will maneuver to maintain a mitigation zone of 500 yds (457 m) around observed whales, and 200 yds (183 m) around all other marine mammals (except bow riding dolphins), providing it is safe to do so.

Towed In-Water Devices - The Navy will have one Lookout during activities using towed in-water devices when towed from a manned platform.

The Navy will ensure that towed in-water devices being towed from manned platforms avoid coming within a mitigation zone of 250 yds (229 m) around any observed marine mammal, providing it is safe to do so.

Mitigation Conclusions

NMFS has carefully evaluated the Navy's proposed mitigation measures – many of which were developed with NMFS' input during previous Navy Training and Testing authorizations – and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable adverse 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 mitigation measures is expected to reduce the likelihood and/or magnitude of adverse impacts to marine mammal species and stocks and their habitat; the proven or likely efficacy of the measures; and the practicability of the suite of measures 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 accomplishing one or more of the general goals listed below:

a. Avoid or minimize injury or death of marine mammals wherever possible (goals b, c, and d may contribute to this goal).
b. Reduce the number of marine mammals (total number or number at biologically important time or location) exposed to received levels of mid-frequency active

sonar/high-frequency active sonar (MFAS/HFAS), underwater detonations, or other activities expected to result in the take of marine mammals (this goal may contribute to a, above, or to reducing harassment takes only).

c. Reduce the number of times (total number or number at biologically important time or location) individuals would be exposed to received levels of MFAS/HFAS, underwater detonations, or other activities expected to result in the take of marine mammals (this goal may contribute to a, above, or to reducing harassment takes only).

d. Reduce the intensity of exposures (either total number or number at biologically important time or location) to received levels of MFAS/HFAS, underwater detonations, 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).

e. Avoid or minimize 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.

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

Based on our evaluation of the Navy's proposed measures, as well as other measures considered by NMFS, NMFS has determined that the Navy's proposed mitigation measures are adequate means of effecting the least practicable adverse impacts

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

The proposed IHA comment period provided the public an opportunity to submit recommendations, views, and/or concerns regarding this action and the proposed mitigation measures. NMFS did not receive any public comments on the proposed mitigation measures.

Monitoring and Reporting

Section 101(a)(5)(A) and (D) of the MMPA states that in order to issue an ITA for an activity, 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. NMFS described the Navy's proposed Monitoring and Reporting in the notice of the proposed IHA (80 FR 53658; September 4, 2015; pages 53675-53677), and they have not changed.

Integrated Comprehensive Monitoring Program

The U.S. Navy has coordinated with NMFS to develop an overarching program plan in which specific monitoring would occur. This plan is called the Integrated Comprehensive Monitoring Program (ICMP) (U.S. Department of the Navy, 2011). The ICMP has been developed in direct response to Navy permitting requirements established

in various MMPA Final Rules, Endangered Species Act consultations, Biological Opinions, and applicable regulations. As a framework document, the ICMP applies by regulation to those activities on ranges and operating areas for which the Navy is seeking or has sought incidental take authorizations. The ICMP is intended to coordinate monitoring efforts across all regions and to allocate the most appropriate level and type of effort based on set of standardized research goals, and in acknowledgement of regional scientific value and resource availability.

The ICMP is designed to be a flexible, scalable, and adjustable plan. The ICMP is evaluated annually through the adaptive management process to assess progress, provide a matrix of goals for the following year, and make recommendations for refinement. Future monitoring will address the following ICMP top-level goals through a series of regional and ocean basin study questions with a priority study and funding focus on species of interest as identified for each range complex.

- An increase in our understanding of the likely occurrence of marine mammals and/or ESA-listed marine species in the vicinity of the action (*i.e.*, presence, abundance, distribution, and/or density of species);
- An increase in our understanding of the nature, scope, or context of the likely exposure of marine mammals and/or ESA-listed species to any of the potential stressor(s) associated with the action (*e.g.*, tonal and impulsive sound), through better understanding of one or more of the following: (1) the action and the environment in which it occurs (*e.g.*, sound source characterization, propagation, and ambient noise levels); (2) the affected species (*e.g.*, life history or dive patterns); (3) the likely co-occurrence of marine mammals and/or ESA-listed

marine species with the action (in whole or part) associated with specific adverse effects, and/or; (4) the likely biological or behavioral context of exposure to the stressor for the marine mammal and/or ESA-listed marine species (*e.g.*, age class of exposed animals or known pupping, calving or feeding areas);

- An increase in our understanding of how individual marine mammals or ESA-listed marine species respond (behaviorally or physiologically) to the specific stressors associated with the action (in specific contexts, where possible, *e.g.*, at what distance or received level);
- An increase in our understanding of how anticipated individual responses, to individual stressors or anticipated combinations of stressors, may impact either: (1) the long-term fitness and survival of an individual; or (2) the population, species, or stock (*e.g.*, through effects on annual rates of recruitment or survival);
- An increase in our understanding of the effectiveness of mitigation and monitoring measures;
- A better understanding and record of the manner in which the authorized entity complies with the ITA and Incidental Take Statement;
- An increase in the probability of detecting marine mammals (through improved technology or methods), both specifically within the safety zone (thus allowing for more effective implementation of the mitigation) and in general, to better achieve the above goals; and
- A reduction in the adverse impact of activities to the least practicable level, as defined in the MMPA.

The ICMP will also address relative investments to different range complexes based on goals across all range complexes, and monitoring will leverage multiple techniques for data acquisition and analysis whenever possible. Because the ICMP does not specify actual monitoring field work or projects in a given area, it allows the Navy to coordinate its monitoring to gather the best scientific data possible across all areas in which the Navy operates. The Navy continually improves the level of marine mammal scientific information in support of ongoing environmental documentation or permit compliance. Numerous Navy monitoring projects associated with the Southern California Range Complex are ongoing (details are available at *http://www.nmfs.noaa.gov/pr/pdfs/permits/hstt_monitoring.pdf* and *http://www.navymarinespeciesmonitoring.us/*), and data from those region-specific-species-specific monitoring efforts will continue to inform our knowledge of marine mammals resources in Southern California. Details of the ICMP are available online (*http://www.navymarinespeciesmonitoring.us/*).

Strategic Planning Process for Marine Species Monitoring

The Navy also developed the Strategic Planning Process for Marine Species Monitoring, which establishes the guidelines and processes necessary to develop, evaluate, and fund individual projects based on objective scientific study questions. The process uses an underlying framework designed around top-level goals, a conceptual framework incorporating a progression of knowledge, and in consultation with a Scientific Advisory Group and other regional experts. The Strategic Planning Process for Marine Species Monitoring would be used to set intermediate scientific objectives, identify potential species of interest at a regional scale, and evaluate and select specific

monitoring projects to fund or continue supporting for a given fiscal year. This process would also address relative investments to different range complexes based on goals across all range complexes, and monitoring would leverage multiple techniques for data acquisition and analysis whenever possible. The Strategic Planning Process for Marine Species Monitoring is also available online (*http://www.navymarinespeciesmonitoring.us/*).

Reporting

Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring. Reports from individual monitoring events, results of analyses, publications, and periodic progress reports for specific monitoring projects would be posted to the Navy's Marine Species Monitoring web portal: *http://www.navymarinespeciesmonitoring.us*.

General Notification of Injured or Dead Marine Mammals – If any injury or death of a marine mammal is observed during the Civilian Port Defense training activities, the Navy will immediately halt the activity and report the incident to NMFS following the standard monitoring and reporting measures consistent with the MITT EIS/OEIS and Hawaii-Southern California Training and Testing EIS/OEIS. The reporting measures include the following procedures:

Navy personnel shall ensure that NMFS (regional stranding coordinator) is notified immediately (or as soon as clearance procedures allow) if an injured or dead marine mammal is found during or shortly after, and in the vicinity of, any Navy training activity utilizing high-frequency active sonar. The Navy shall provide NMFS with species or description of the animal(s), the condition of the animal(s) (including carcass

condition if the animal is dead), location, time of first discovery, observed behaviors (if alive), and photo or video (if available). The Navy shall consult the Stranding Response and Communication Plan to obtain more specific reporting requirements for specific circumstances.

Vessel Strike – Vessel strike during Navy Civilian Port Defense activities in the Study Area is not anticipated; however, in the event that a Navy vessel strikes a whale, the Navy shall do the following:

Immediately report to NMFS (pursuant to the established Communication Protocol) the:

- Species identification (if known);
- Location (latitude/longitude) of the animal (or location of the strike if the animal has disappeared);
- Whether the animal is alive or dead (or unknown); and
- The time of the strike.

As soon as feasible, the Navy shall report to or provide to NMFS, the:

- Size, length, and description (critical if species is not known) of animal;
- An estimate of the injury status (*e.g.*, dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared, etc.);
- Description of the behavior of the whale during event, immediately after the strike, and following the strike (until the report is made or the animal is no longer sighted);
- Vessel class/type and operational status;
- Vessel length;

- Vessel speed and heading; and
- To the best extent possible, obtain a photo or video of the struck animal, if the animal is still in view.

Within 2 weeks of the strike, provide NMFS:

- A detailed description of the specific actions of the vessel in the 30-minute timeframe immediately preceding the strike, during the event, and immediately after the strike (*e.g.*, the speed and changes in speed, the direction and changes in direction, other maneuvers, sonar use, etc., if not classified);
- A narrative description of marine mammal sightings during the event and immediately after, and any information as to sightings prior to the strike, if available; and use established Navy shipboard procedures to make a camera available to attempt to capture photographs following a ship strike.

NMFS and the Navy will coordinate to determine the services the Navy may provide to assist NMFS with the investigation of the strike. The response and support activities to be provided by the Navy are dependent on resource availability, must be consistent with military security, and must be logistically feasible without compromising Navy personnel safety. Assistance requested and provided may vary based on distance of strike from shore, the nature of the vessel that hit the whale, available nearby Navy resources, operational and installation commitments, or other factors.

Comments

A notice of the proposed IHA and request for public comments was published in the **Federal Register** on September 4, 2015 (80 FR 53658; September 4, 2015). During the 30-day public comment period, NMFS only received one comment from the Marine

Mammal Commission, who concurred with our preliminary determination and recommended that NMFS issue the IHA, subject to inclusion of the proposed mitigation, monitoring, and reporting measures.

Estimated Take

In the Potential Effects of the Specified Activity on Marine Mammals section of the notice of the proposed IHA (80 FR 53658; September 4, 2015; pages 53663-53672), NMFS' analysis identified the lethal responses, physical trauma, sensory impairment (PTS, TTS, and acoustic masking), physiological responses (particular stress responses), and behavioral responses that could potentially result from exposure to active sonar. In the Estimated Take by Incidental Harassment section of the notice of the proposed IHA, NMFS described the potential effects to marine mammals from active sonar in relation to the MMPA regulatory definitions of Level A and Level B harassment (80 FR 53658; September 4, 2015; pages 53677-53678). That information has not changed and is not repeated here.

As mentioned previously, behavioral responses are context-dependent, complex, and influenced to varying degrees by a number of factors other than just received level. For example, an animal may respond differently to a sound emanating from a ship that is moving towards the animal than it would to an identical received level coming from a vessel that is moving away, or to a ship traveling at a different speed or at a different distance from the animal. At greater distances, though, the nature of vessel movements could also potentially not have any effect on the animal's response to the sound. In any case, a full description of the suite of factors that elicited a behavioral response would require a mention of the vicinity, speed and movement of the vessel, or other factors. So,

while sound sources and the received levels are the primary focus of the analysis, it is with the understanding that other factors related to the training are sometimes contributing to the behavioral responses of marine mammals, although they cannot be quantified.

Criteria and thresholds used for determining the potential effects from the Civilian Port Defense activities are consistent with those used in the Navy's Phase II Training and Testing EISs (*e.g.*, HSTT, MITT). The Estimated Take by Incidental Harassment section of the notice of the proposed IHA (80 FR 53658; September 4, 2015; page 53678, see Table 3 for Injury [PTS] and disturbance [TTS, Behavioral] thresholds and weighting criteria) provides the criteria and thresholds used in the analysis for estimating quantitative acoustic exposures of marine mammals from the proposed training activities. Southall *et al*. (2007) proposed frequency-weighting to account for the frequency bandwidth of hearing in marine mammals. Frequency-weighting functions are used to adjust the received sound level based on the sensitivity of the animal to the frequency of the sound. Details regarding these criteria and thresholds can be found in Finneran and Jenkins (2012).

As discussed earlier, factors other than received level (such as distance from or bearing to the sound source, context of animal at time of exposure) can affect the way that marine mammals respond; however, data to support a quantitative analysis of those (and other factors) do not currently exist. It is also worth specifically noting that while context is very important in marine mammal response, given otherwise equivalent context, the severity of a marine mammal behavioral response is also expected to increase

with received level (Houser and Moore, 2014). NMFS will continue to modify these criteria as new data become available and can be appropriately and effectively incorporated.

Incidental Take Request

The Navy's Final EA for 2015 West Coast Civilian Port Defense training activities analyzed the following stressors for potential impacts to marine mammals:

- Acoustic (sonar sources, vessel noise, aircraft noise)
- Energy (electromagnetic devices and lasers)
- Physical disturbance and strikes (vessels, in-water devices, seafloor objects)

NMFS and the Navy determined the only stressor that could potentially result in the incidental taking of marine mammals per the definition of MMPA harassment from the Civilian Port Defense activities within the Study Area is from acoustic transmissions related to high-frequency sonar.

The methods of incidental take associated with the acoustic transmissions from the proposed Civilian Port Defense are described within Chapter 2 of the application. Acoustic transmissions have the potential to temporarily disturb or displace marine mammals. Specifically, only underwater active transmissions may result in the "take" in the form of Level B harassment.

Level A harassment and mortality are not anticipated to result from any of the proposed Civilian Port Defense activities. Furthermore, Navy mitigation and monitoring measures will be implemented to further minimize the potential for Level B takes of marine mammals.

A detailed analysis of effects due to marine mammal exposures to non-impulsive sources (*i.e.*, active sonar) in the Study Area is presented in Chapter 6 of the application and in the Estimated Take by Incidental Harassment section of the notice of the proposed IHA (80 FR 53658; September 4, 2015; pages 53677-53680). Based on the quantitative acoustic modeling and analysis described in Chapter 6 of the application and in the Estimated Take by Incidental Harassment section of the notice of the proposed IHA, Table 1 summarizes the Navy's final take request for the 2015 Civilian Port Defense training activities.

Table 1. Total number of exposures modeled and requested per species for Civilian Port Defense training activities.

COMMON NAME	LEVEL B TAKES REQUESTED	PERCENTAGE OF STOCK TAKEN (%)
Long-beaked common dolphin	8	0.007
Short-beaked common dolphin	727	0.177
Risso's dolphin	21	0.330
Pacific white-sided dolphin	40	0.149
Bottlenose dolphin coastal	48	14.985
Harbor seal	8	0.026
California sea lion	46	0.015
Total	898	

Analysis and Negligible Impact Determination

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 takes, alone, is not enough information on which to base an impact determination, as the severity of harassment may vary greatly depending on the context and duration of the

behavioral response, many of which would not be expected to have deleterious impacts on the fitness of any individuals. In determining whether the expected takes will have a negligible impact, in addition to considering estimates of the number of marine mammals that might be "taken", 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 (*e.g.*, severity) of estimated Level A harassment takes, the number of estimated mortalities, and the status of the species.

To avoid repetition, we provide some general analysis immediately below that applies to all the species listed in Table 1, given that some of the anticipated effects (or lack thereof) of the Navy's training activities on marine mammals are expected to be relatively similar in nature. However, below that, we break our analysis into species or groups to provide more specific information related to the anticipated effects on individuals or where there is information about the status or structure of any species that would lead to a differing assessment of the effects on the population.

Behavioral Harassment

As discussed previously in the notice of the proposed IHA, marine mammals can respond to MFAS/HFAS in many different ways, a subset of which qualifies as harassment (see Behavioral Harassment). One thing that the Level B harassment take estimates do not take into account is the fact that most marine mammals will likely avoid strong sound sources to one extent or another. Although an animal that avoids the sound source will likely still be taken in some instances (such as if the avoidance results in a missed opportunity to feed, interruption of reproductive behaviors, etc.), in other cases

avoidance may result in fewer instances of take than were estimated or in the takes resulting from exposure to a lower received level than was estimated, which could result in a less severe response. An animal's exposure to a higher received level is more likely to result in a behavioral response that is more likely to adversely affect the health of the animal.

Specifically, given a range of behavioral responses that may be classified as Level B harassment, to the degree that higher received levels are expected to result in more severe behavioral responses, only a small percentage of the anticipated Level B harassment from Navy activities might necessarily be expected to potentially result in more severe responses, especially when the distance from the source at which the levels below are received is considered. Marine mammals are able to discern the distance of a given sound source, and given other equal factors (including received level), they have been reported to respond more to sounds that are closer (DeRuiter *et al*., 2013). Further, the estimated number of responses do not reflect either the duration or context of those anticipated responses, some of which will be of very short duration, and other factors should be considered when predicting how the estimated takes may affect individual fitness.

Although the Navy has been monitoring the effects of MFAS/HFAS on marine mammals since 2006, and research on the effects of active sonar is advancing, our understanding of exactly how marine mammals in the Study Area will respond to active sonar is still growing. The Navy has submitted reports from more than 60 major exercises across Navy range complexes that indicate no behavioral disturbance was observed. One cannot conclude from these results that marine mammals were not

harassed from MFAS/HFAS, as a portion of animals within the area of concern were not seen, the full series of behaviors that would more accurately show an important change is not typically seen (*i.e.*, only the surface behaviors are observed), and some of the non-biologist watchstanders might not be well-qualified to characterize behaviors. However, one can say that the animals that were observed did not respond in any of the obviously more severe ways, such as panic, aggression, or anti-predator response.

Diel Cycle

As noted previously, many animals perform vital functions, such as feeding, resting, traveling, and socializing on a diel cycle (24-hour cycle). Behavioral reactions to noise exposure (when taking place in a biologically important context, such as disruption of critical life functions, displacement, or avoidance of important habitat) are more likely to be significant if they last more than one diel cycle or recur on subsequent days (Southall *et al*., 2007). Consequently, a behavioral response lasting less than one day and not recurring on subsequent days is not considered severe unless it could directly affect reproduction or survival (Southall *et al*., 2007). Note that there is a difference between multiple-day substantive behavioral reactions and multiple-day anthropogenic activities. For example, just because at-sea exercises last for multiple days does not necessarily mean that individual animals are either exposed to those exercises for multiple days or, further, exposed in a manner resulting in a sustained multiple day substantive behavioral response. Additionally, the Navy does not necessarily operate active sonar the entire time during an exercise. While it is certainly possible that these sorts of exercises could overlap with individual marine mammals multiple days in a row at levels above those anticipated to result in a take, because of the factors mentioned above, it is considered not

to be likely for the majority of takes, does not mean that a behavioral response is necessarily sustained for multiple days, and still necessitates the consideration of likely duration and context to assess any effects on the individual's fitness.

TTS

As mentioned previously, TTS can last from a few minutes to days, be of varying degree, and occur across various frequency bandwidths, all of which determine the severity of the impacts on the affected individual, which can range from minor to more severe. The TTS sustained by an animal is primarily classified by three characteristics:

1. Frequency – Available data (of mid-frequency hearing specialists exposed to mid- or high-frequency sounds; Southall *et al*., 2007) suggest that most TTS occurs in the frequency range of the source up to one octave higher than the source (with the maximum TTS at ½ octave above). The more powerful MF sources used have center frequencies between 3.5 and 8 kHz and the other unidentified MF sources are, by definition, less than 10 kHz, which suggests that TTS induced by any of these MF sources would be in a frequency band somewhere between approximately 2 and 20 kHz. There are fewer hours of HF source use and the sounds would attenuate more quickly, plus they have lower source levels, but if an animal were to incur TTS from these sources, it would cover a higher frequency range (sources are between 20 and 100 kHz, which means that TTS could range up to 200 kHz; however, HF systems are typically used less frequently and for shorter time periods than surface ship and aircraft MF systems, so TTS from these sources is even less likely).

2. Degree of the shift (*i.e.*, by how many dB the sensitivity of the hearing is reduced) – Generally, both the degree of TTS and the duration of TTS will be greater if the marine

mammal is exposed to a higher level of energy (which would occur when the peak dB level is higher or the duration is longer). The threshold for the onset of TTS was discussed previously in this document. An animal would have to approach closer to the source or remain in the vicinity of the sound source appreciably longer to increase the received SEL, which would be difficult considering the Lookouts and the nominal speed of an active sonar vessel (10-15 knots). In the TTS studies, some using exposures of almost an hour in duration or up to 217 SEL, most of the TTS induced was 15 dB or less, though Finneran *et al*. (2007) induced 43 dB of TTS with a 64-second exposure to a 20 kHz source. However, MFAS/HFAS emits a nominal ping every 50 seconds, and incurring those levels of TTS is highly unlikely.

3. Duration of TTS (recovery time) – In the TTS laboratory studies, some using exposures of almost an hour in duration or up to 217 SEL, almost all individuals recovered within 1 day (or less, often in minutes), although in one study (Finneran *et al*., 2007), recovery took 4 days.

Based on the range of degree and duration of TTS reportedly induced by exposures to non-pulse sounds of energy higher than that to which free-swimming marine mammals in the field are likely to be exposed during MFAS/HFAS training exercises in the Study Area, it is unlikely that marine mammals would ever sustain a TTS from active sonar that alters their sensitivity by more than 20 dB for more than a few days (and any incident of TTS would likely be far less severe due to the short duration of the majority of the exercises and the speed of a typical vessel). Also, for the same reasons discussed in the Diel Cycle section, and because of the short distance within which animals would need to approach the sound source, it is unlikely that animals would be exposed to the

levels necessary to induce TTS in subsequent time periods such that their recovery is impeded. Additionally, though the frequency range of TTS that marine mammals might sustain would overlap with some of the frequency ranges of their vocalization types, the frequency range of TTS from MFAS/HFAS (the source from which TTS would most likely be sustained because the higher source level and slower attenuation make it more likely that an animal would be exposed to a higher received level) would not usually span the entire frequency range of one vocalization type, much less span all types of vocalizations or other critical auditory cues. If impaired, marine mammals would typically be aware of their impairment and are sometimes able to implement behaviors to compensate (see Acoustic Masking or Communication Impairment section), though these compensations may incur energetic costs.

Acoustic Masking or Communication Impairment

Masking only occurs during the time of the signal (and potential secondary arrivals of indirect rays), versus TTS, which continues beyond the duration of the signal. Standard MFAS/HFAS nominally pings every 50 seconds for hull-mounted sources. For the sources for which we know the pulse length, most are significantly shorter than hull-mounted active sonar, on the order of several microseconds to tens of microseconds. For hull-mounted active sonar, though some of the vocalizations that marine mammals make are less than one second long, there is only a 1 in 50 chance that they would occur exactly when the ping was received, and when vocalizations are longer than one second, only parts of them are masked. Alternately, when the pulses are only several microseconds long, the majority of most animals' vocalizations would not be masked. Masking effects from MFAS/HFAS are expected to be minimal. If masking or communication

impairment were to occur briefly, it would be in the frequency range of MFAS/HFAS, which overlaps with some marine mammal vocalizations; however, it would likely not mask the entirety of any particular vocalization, communication series, or other critical auditory cue, because the signal length, frequency, and duty cycle of the MFAS/HFAS signal does not perfectly mimic the characteristics of any marine mammal's vocalizations.

Species and Group-Specific Analysis

Long-beaked Common Dolphin - Long-beaked common dolphins that may be found in the Study Area belong to the California stock (Carretta *et al*., 2014). The Navy's acoustic analysis (quantitative modeling) predicts that 8 instances of Level B harassment of long-beaked common dolphin may occur from active sonar in the Study Area during Civilian Port Defense training activities. These Level B takes are anticipated to be in the form of behavioral reactions (3) and TTS (5) and no injurious takes of long-beaked common dolphin are requested or proposed for authorization. Relative to population size, these activities are anticipated to result only in a limited number of level B harassment takes. When the numbers of behavioral takes are compared to the estimated stock abundance (stock abundance estimates are shown in Table 1 of the notice of the proposed IHA) and if one assumes that each take happens to a separate animal, less than 0.01 percent of the California stock of long-beaked common dolphin would be behaviorally harassed during proposed training activities.

Behavioral reactions of marine mammals to sound are known to occur but are difficult to predict. Recent behavioral studies indicate that reactions to sounds, if any, are highly contextual and vary between species and individuals within a species (Moretti *et*

al., 2010; Southall *et al*., 2011; Thompson *et al*., 2010; Tyack, 2009; Tyack *et al*., 2011). Behavioral responses can range from alerting, to changing their behavior or vocalizations, to avoiding the sound source by swimming away or diving (Richardson, 1995; Nowacek, 2007; Southall *et al*., 2007; Finneran and Jenkins, 2012). Long-beaked common dolphins generally travel in large pods and should be visible from a distance in order to implement mitigation measures and reduce potential impacts. Many of the recorded long-beaked common dolphin vocalizations overlap with the MFAS/HFAS TTS frequency range (2–20 kHz) (Moore and Ridgway, 1995; Ketten, 1998); however, NMFS does not anticipate TTS of a serious degree or extended duration to occur as a result of exposure to MFAS/HFAS. Recovery from a threshold shift (TTS) can take a few minutes to a few days, depending on the exposure duration, sound exposure level, and the magnitude of the initial shift, with larger threshold shifts and longer exposure durations requiring longer recovery times (Finneran *et al*., 2005; Mooney *et al*., 2009a; Mooney *et al*., 2009b; Finneran and Schlundt, 2010). Large threshold shifts are not anticipated for these activities because of the unlikelihood that animals will remain within the ensonified area at high levels for the duration necessary to induce larger threshold shifts. Threshold shifts do not necessarily affect all hearing frequencies equally, so some threshold shifts may not interfere with an animal's hearing of biologically relevant sounds.

Overall, the number of predicted behavioral reactions is low and temporary behavioral reactions in long-beaked common dolphins are unlikely to cause long-term consequences for individual animals or the population. The Civilian Port Defense activities are not expected to occur in an area/time of specific importance for reproductive, feeding, or other known critical behaviors for long-beaked common

dolphin. No evidence suggests any major reproductive differences in comparison to short-beaked common dolphins (Reeves *et al*., 2002). Short-beaked common dolphin gestation is approximately 11 to 11.5 months in duration (Danil, 2004; Murphy and Rogan, 2006) with most calves born from May to September (Murphy and Rogan, 2006). Therefore, calving would not occur during the Civilian Port Defense training timeframe. The California stock of long-beaked common dolphin is not depleted under the MMPA. Although there is no formal statistical trend analysis, over the last 30 years sighting and stranding data shows an increasing trend of long-beaked common dolphins in California waters (Carretta *et al*., 2014). Consequently, the activities are not expected to adversely impact annual rates of recruitment or survival of long-beaked common dolphin.

Short-beaked Common Dolphin - Short-beaked common dolphins that may be found in the Study Area belong to the California/Washington/Oregon stock (Carretta *et al*., 2014). The Navy's acoustic analysis (quantitative modeling) predicts that 727 instances of Level B harassment of short-beaked common dolphin may occur from active sonar in the Study Area during Civilian Port Defense training activities. These Level B takes are anticipated to be in the form of behavioral reactions (422) and TTS (305) and no injurious takes of short-beaked common dolphin are requested or proposed for authorization. Relative to population size, these activities are anticipated to result only in a limited number of level B harassment takes. When the numbers of behavioral takes are compared to the estimated stock abundance (stock abundance estimates are shown in Table 1 of the notice of the proposed IHA) and if one assumes that each take happens to a separate animal, less than 0.18 percent of the California/Washington/Oregon stock of

short-beaked common dolphin would be behaviorally harassed during proposed training activities.

Behavioral reactions of marine mammals to sound are known to occur but are difficult to predict. Recent behavioral studies indicate that reactions to sounds, if any, are highly contextual and vary between species and individuals within a species (Moretti *et al*., 2010; Southall *et al*., 2011; Thompson *et al*., 2010; Tyack, 2009; Tyack *et al*., 2011). Behavioral responses can range from alerting, to changing their behavior or vocalizations, to avoiding the sound source by swimming away or diving (Richardson, 1995; Nowacek, 2007; Southall *et al*., 2007; Finneran and Jenkins, 2012). Short-beaked common dolphins generally travel in large pods and should be visible from a distance in order to implement mitigation measures and reduce potential impacts. Many of the recorded short-beaked common dolphin vocalizations overlap with the MFAS/HFAS TTS frequency range (2–20 kHz) (Moore and Ridgway, 1995; Ketten, 1998); however, NMFS does not anticipate TTS of a serious degree or extended duration to occur as a result of exposure to MFAS/HFAS. Recovery from a threshold shift (TTS) can take a few minutes to a few days, depending on the exposure duration, sound exposure level, and the magnitude of the initial shift, with larger threshold shifts and longer exposure durations requiring longer recovery times (Finneran *et al*., 2005; Mooney *et al*., 2009a; Mooney *et al*., 2009b; Finneran and Schlundt, 2010). Large threshold shifts are not anticipated for these activities because of the unlikelihood that animals will remain within the ensonified area at high levels for the duration necessary to induce larger threshold shifts. Threshold shifts do not necessarily affect all hearing frequencies equally, so some

threshold shifts may not interfere with an animal's hearing of biologically relevant sounds.

Overall, the number of predicted behavioral reactions is low and temporary behavioral reactions in short-beaked common dolphins are unlikely to cause long-term consequences for individual animals or the population. The Civilian Port Defense activities are not expected to occur in an area/time of specific importance for reproductive, feeding, or other known critical behaviors for long-beaked common dolphin. Short-beaked common dolphin gestation is approximately 11 to 11.5 months in duration (Danil, 2004; Murphy and Rogan, 2006) with most calves born from May to September (Murphy and Rogan, 2006). Therefore, calving would not occur during the Civilian Port Defense training timeframe. The California/Washington/Oregon stock of short-beaked common dolphin is not depleted under the MMPA. Abundance off California has increased dramatically since the late 1970s, along with a smaller decrease in abundance in the eastern tropical Pacific, suggesting a large-scale northward shift in the distribution of this species in the eastern north Pacific (Forney and Barlow, 1998; Forney *et al*., 1995). Consequently, the activities are not expected to adversely impact annual rates of recruitment or survival of short-beaked common dolphin.

Risso's Dolphin – Risso's dolphins that may be found in the Study Area belong to the California/Washington/Oregon stock (Carretta *et al*., 2014). The Navy's acoustic analysis (quantitative modeling) predicts that 21 instances of Level B harassment of Risso's dolphin may occur from active sonar in the Study Area during Civilian Port Defense training activities. These Level B takes are anticipated to be in the form of behavioral reactions (16) and TTS (5) and no injurious takes of Risso's dolphin are

requested or proposed for authorization. Relative to population size, these activities are anticipated to result only in a limited number of level B harassment takes. When the numbers of behavioral takes are compared to the estimated stock abundance (stock abundance estimates are shown in Table 1 of the notice of the proposed IHA) and if one assumes that each take happens to a separate animal, approximately 0.33 percent of the California/Washington/Oregon stock of Risso's dolphin would be behaviorally harassed during proposed training activities.

Behavioral reactions of marine mammals to sound are known to occur but are difficult to predict. Recent behavioral studies indicate that reactions to sounds, if any, are highly contextual and vary between species and individuals within a species (Moretti *et al*., 2010; Southall *et al*., 2011; Thompson *et al*., 2010; Tyack, 2009; Tyack *et al*., 2011). Behavioral responses can range from alerting, to changing their behavior or vocalizations, to avoiding the sound source by swimming away or diving (Richardson, 1995; Nowacek, 2007; Southall *et al*., 2007; Finneran and Jenkins, 2012). Risso's dolphins generally travel in large pods and should be visible from a distance in order to implement mitigation measures and reduce potential impacts. Many of the recorded Risso's dolphin vocalizations overlap with the MFAS/HFAS TTS frequency range (2–20 kHz) (Corkeron and Van Parijs 2001); however, NMFS does not anticipate TTS of a serious degree or extended duration to occur as a result of exposure to MFAS/HFAS. Recovery from a threshold shift (TTS) can take a few minutes to a few days, depending on the exposure duration, sound exposure level, and the magnitude of the initial shift, with larger threshold shifts and longer exposure durations requiring longer recovery times (Finneran *et al*., 2005; Mooney *et al*., 2009a; Mooney *et al*., 2009b; Finneran and

Schlundt, 2010). Large threshold shifts are not anticipated for these activities because of the unlikelihood that animals will remain within the ensonified area at high levels for the duration necessary to induce larger threshold shifts. Threshold shifts do not necessarily affect all hearing frequencies equally, so some threshold shifts may not interfere with an animal's hearing of biologically relevant sounds.

Overall, the number of predicted behavioral reactions is low and temporary behavioral reactions in Risso's dolphins are unlikely to cause long-term consequences for individual animals or the population. The Civilian Port Defense activities are not expected to occur in an area/time of specific importance for reproductive, feeding, or other known critical behaviors for Risso's dolphin. The California/Washington/Oregon stock of Risso's dolphin is not depleted under the MMPA. The distribution of Risso's dolphins throughout the region is highly variable, apparently in response to oceanographic changes (Forney and Barlow, 1998). The status of Risso's dolphins off California, Oregon and Washington relative to optimum sustainable population is not known, and there are insufficient data to evaluate potential trends in abundance. However, Civilian Port Defense training activities are not expected to adversely impact annual rates of recruitment or survival of Risso's dolphin for the reasons stated above.

Pacific White-Sided Dolphin – Pacific white-sided dolphins that may be found in the Study Area belong to the California/Washington/Oregon stock (Carretta *et al*., 2014). The Navy's acoustic analysis (quantitative modeling) predicts that 40 instances of Level B harassment of Pacific white-sided dolphin may occur from active sonar in the Study Area during Civilian Port Defense training activities. These Level B takes are anticipated to be in the form of behavioral reactions (21) and TTS (19) and no injurious takes of

Pacific white-sided dolphin are requested or proposed for authorization. Relative to population size, these activities are anticipated to result only in a limited number of level B harassment takes. When the numbers of behavioral takes are compared to the estimated stock abundance (stock abundance estimates are shown in Table 1 of the notice of the proposed IHA) and if one assumes that each take happens to a separate animal, less than 0.15 percent of the California/Washington/Oregon stock of Pacific white-sided dolphin would be behaviorally harassed during proposed training activities.

Behavioral reactions of marine mammals to sound are known to occur but are difficult to predict. Recent behavioral studies indicate that reactions to sounds, if any, are highly contextual and vary between species and individuals within a species (Moretti *et al*., 2010; Southall *et al*., 2011; Thompson *et al*., 2010; Tyack, 2009; Tyack *et al*., 2011). Behavioral responses can range from alerting, to changing their behavior or vocalizations, to avoiding the sound source by swimming away or diving (Richardson, 1995; Nowacek, 2007; Southall *et al*., 2007; Finneran and Jenkins, 2012). Pacific white-sided dolphins generally travel in large pods and should be visible from a distance in order to implement mitigation measures and reduce potential impacts. Many of the recorded Pacific white-sided dolphin vocalizations overlap with the MFAS/HFAS TTS frequency range (2–20 kHz); however, NMFS does not anticipate TTS of a serious degree or extended duration to occur as a result of exposure to MFAS/HFAS. Recovery from a threshold shift (TTS) can take a few minutes to a few days, depending on the exposure duration, sound exposure level, and the magnitude of the initial shift, with larger threshold shifts and longer exposure durations requiring longer recovery times (Finneran *et al*., 2005; Mooney *et al*., 2009a; Mooney *et al*., 2009b; Finneran and

Schlundt, 2010). Large threshold shifts are not anticipated for these activities because of the unlikelihood that animals will remain within the ensonified area at high levels for the duration necessary to induce larger threshold shifts. Threshold shifts do not necessarily affect all hearing frequencies equally, so some threshold shifts may not interfere with an animal's hearing of biologically relevant sounds.

Overall, the number of predicted behavioral reactions is low and temporary behavioral reactions in Pacific white-sided dolphins are unlikely to cause long-term consequences for individual animals or the population. The Civilian Port Defense activities are not expected to occur in an area/time of specific importance for reproductive, feeding, or other known critical behaviors for long-beaked common dolphin. Pacific white-sided dolphin calves are typically born in the summer months between April and early September (Black, 1994; NOAA, 2012; Reidenberg and Laitman, 2002). This species is predominantly located around the proposed Study Area in the colder winter months when neither mating nor calving is expected, as both occur off the coast of Oregon and Washington outside of the timeframe for the proposed activities. The California/Washington/Oregon stock of Pacific white-sided dolphin is not depleted under the MMPA. The stock is considered stable, with no indications of any positive or negative trends in abundance (NOAA, 2014). Consequently, the activities are not expected to adversely impact annual rates of recruitment or survival of Pacific white-sided dolphin.

Bottlenose Dolphin – Bottlenose dolphins that may be found in the Study Area belong to the California Coastal stock (Carretta *et al*., 2014). The Navy's acoustic analysis (quantitative modeling) predicts that 48 instances of Level B harassment of

bottlenose dolphin may occur from active sonar in the Study Area during Civilian Port Defense training activities. These Level B takes are anticipated to be in the form of behavioral reactions (29) and TTS (19) and no injurious takes of bottlenose dolphin are requested or proposed for authorization. Relative to population size, these activities are anticipated to result only in a limited number of level B harassment takes. When the numbers of behavioral takes are compared to the estimated stock abundance (stock abundance estimates are shown in Table 1 of the notice of the proposed IHA) and if one assumes that each take happens to a separate animal, less than 15 percent of the Coastal stock of bottlenose dolphin would be behaviorally harassed during proposed training activities.

Behavioral reactions of marine mammals to sound are known to occur but are difficult to predict. Recent behavioral studies indicate that reactions to sounds, if any, are highly contextual and vary between species and individuals within a species (Moretti *et al*., 2010; Southall *et al*., 2011; Thompson *et al*., 2010; Tyack, 2009; Tyack *et al*., 2011). Behavioral responses can range from alerting, to changing their behavior or vocalizations, to avoiding the sound source by swimming away or diving (Richardson, 1995; Nowacek, 2007; Southall *et al*., 2007; Finneran and Jenkins, 2012). Bottlenose dolphins generally travel in large pods and should be visible from a distance in order to implement mitigation measures and reduce potential impacts. Many of the recorded bottlenose dolphin vocalizations overlap with the MFAS/HFAS TTS frequency range (2–20 kHz); however, NMFS does not anticipate TTS of a serious degree or extended duration to occur as a result of exposure to MFAS/HFAS. Recovery from a threshold shift (TTS) can take a few minutes to a few days, depending on the exposure duration,

sound exposure level, and the magnitude of the initial shift, with larger threshold shifts and longer exposure durations requiring longer recovery times (Finneran *et al*., 2005; Mooney *et al*., 2009a; Mooney *et al*., 2009b; Finneran and Schlundt, 2010). Large threshold shifts are not anticipated for these activities because of the unlikelihood that animals will remain within the ensonified area at high levels for the duration necessary to induce larger threshold shifts. Threshold shifts do not necessarily affect all hearing frequencies equally, so some threshold shifts may not interfere with an animal's hearing of biologically relevant sounds.

Overall, the number of predicted behavioral reactions is low and temporary behavioral reactions in bottlenose dolphins are unlikely to cause long-term consequences for individual animals or the population. The Civilian Port Defense activities are not expected to occur in an area/time of specific importance for reproductive, feeding, or other known critical behaviors for bottlenose dolphin. The California/Washington/Oregon stock of bottlenose dolphin is not depleted under the MMPA. In a comparison of abundance estimates from 1987-89 (n = 354), 1996-98 (n = 356), and 2004-05 (n = 323), Dudzik *et al*. (2006) found that the population size has remained stable over this period of approximately 20 years. Consequently, the activities are not expected to adversely impact annual rates of recruitment or survival of bottlenose dolphin.

Harbor Seal – Harbor seals that may be found in the Study Area belong to the California stock (Carretta *et al*., 2014). Harbor seals have not been observed on the mainland coast of Los Angeles, Orange, and northern San Diego Counties (Henkel and Harvey, 2008; Lowry *et al.*, 2008). Thus, no harbor seal haul-outs are located within the

proposed Study Area. The Navy's acoustic analysis (quantitative modeling) predicts that 8 instances of Level B harassment of harbor seal may occur from active sonar in the Study Area during Civilian Port Defense training activities. These Level B takes are anticipated to be in the form of non-TTS behavioral reactions only and no injurious takes of harbor seal are requested or proposed for authorization. Relative to population size, these activities are anticipated to result only in a limited number of level B harassment takes. When the numbers of behavioral takes are compared to the estimated stock abundance (stock abundance estimates are shown in Table 1 of the notice of the proposed IHA) and if one assumes that each take happens to a separate animal, less than 0.03 percent of the California stock of harbor seal would be behaviorally harassed during proposed training activities.

Research and observations show that pinnipeds in the water may be tolerant of anthropogenic noise and activity (a review of behavioral reactions by pinnipeds to impulsive and non-impulsive noise can be found in Richardson *et al*., 1995 and Southall *et al*., 2007). Available data, though limited, suggest that exposures between approximately 90 and 140 dB SPL do not appear to induce strong behavioral responses in pinnipeds exposed to nonpulse sounds in water (Jacobs and Terhune, 2002; Costa *et al*., 2003; Kastelein *et al*., 2006c). Based on the limited data on pinnipeds in the water exposed to multiple pulses (small explosives, impact pile driving, and seismic sources), exposures in the approximately 150 to 180 dB SPL range generally have limited potential to induce avoidance behavior in pinnipeds (Harris *et al*., 2001; Blackwell *et al*., 2004; Miller *et al*., 2004). If pinnipeds are exposed to sonar or other active acoustic sources they may react in a number of ways depending on their experience with the sound source

and what activity they are engaged in at the time of the acoustic exposure. Pinnipeds may not react at all until the sound source is approaching within a few hundred meters and then may alert, ignore the stimulus, change their behaviors, or avoid the immediate area by swimming away or diving. Effects on pinnipeds in the Study Area that are taken by Level B harassment, on the basis of reports in the literature as well as Navy monitoring from past activities, will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring). Most likely, individuals will simply move away from the sound source and be temporarily displaced from those areas, or not respond at all. In areas of repeated and frequent acoustic disturbance, some animals may habituate or learn to tolerate the new baseline or fluctuations in noise level. Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al*., 2003). While some animals may not return to an area, or may begin using an area differently due to training activities, most animals are expected to return to their usual locations and behavior. Given their documented tolerance of anthropogenic sound (Richardson *et al*., 1995 and Southall *et al*., 2007), repeated exposures of harbor seals to levels of sound that may cause Level B harassment are unlikely to result in hearing impairment or to significantly disrupt foraging behavior.

Overall, the number of predicted behavioral reactions is low and temporary behavioral reactions in harbor seals are unlikely to cause long-term consequences for individual animals or the population. The Civilian Port Defense activities are not expected to occur in an area/time of specific importance for reproductive, feeding, or other known critical behaviors for harbor seal. In California, harbor seals breed from

March to May and pupping occurs between April and May (Alden *et al*., 2002; Reeves *et al*., 2002), neither of which occur within the timeframe of the proposed activities. The California stock of harbor seal is not depleted under the MMPA. Counts of harbor seals in California increased from 1981 to 2004, although a review of harbor seal dynamics through 1991 concluded that their status could not be determined with certainty (Hanan, 1996). The population appears to be stabilizing at what may be its carrying capacity. Consequently, the activities are not expected to adversely impact annual rates of recruitment or survival of harbor seal.

California Sea Lion – California sea lions that may be found in the Study Area belong to the U.S. stock (Carretta *et al*., 2014). The Navy's acoustic analysis (quantitative modeling) predicts that 46 instances of Level B harassment of California sea lion may occur from active sonar in the Study Area during Civilian Port Defense training activities. These Level B takes are anticipated to be in the form of non-TTS behavioral reactions only and no injurious takes of California sea lions are requested or proposed for authorization. Relative to population size, these activities are anticipated to result only in a limited number of level B harassment takes. When the numbers of behavioral takes are compared to the estimated stock abundance (stock abundance estimates are shown in Table 1 of the notice of the proposed IHA) and if one assumes that each take happens to a separate animal, less than 0.02 percent of the U.S. stock of California sea lions would be behaviorally harassed during proposed training activities.

Research and observations show that pinnipeds in the water may be tolerant of anthropogenic noise and activity (a review of behavioral reactions by pinnipeds to impulsive and non-impulsive noise can be found in Richardson *et al*., 1995 and Southall

et al., 2007). Available data, though limited, suggest that exposures between approximately 90 and 140 dB SPL do not appear to induce strong behavioral responses in pinnipeds exposed to nonpulse sounds in water (Jacobs and Terhune, 2002; Costa *et al*., 2003; Kastelein *et al*., 2006c). Based on the limited data on pinnipeds in the water exposed to multiple pulses (small explosives, impact pile driving, and seismic sources), exposures in the approximately 150 to 180 dB SPL range generally have limited potential to induce avoidance behavior in pinnipeds (Harris *et al*., 2001; Blackwell *et al*., 2004; Miller *et al*., 2004). If pinnipeds are exposed to sonar or other active acoustic sources they may react in a number of ways depending on their experience with the sound source and what activity they are engaged in at the time of the acoustic exposure. Pinnipeds may not react at all until the sound source is approaching within a few hundred meters and then may alert, ignore the stimulus, change their behaviors, or avoid the immediate area by swimming away or diving. Effects on pinnipeds in the Study Area that are taken by Level B harassment, on the basis of reports in the literature as well as Navy monitoring from past activities will likely be limited to reactions such as increased swimming speeds, increased surfacing time, or decreased foraging (if such activity were occurring). Most likely, individuals will simply move away from the sound source and be temporarily displaced from those areas, or not respond at all. In areas of repeated and frequent acoustic disturbance, some animals may habituate or learn to tolerate the new baseline or fluctuations in noise level. Habituation can occur when an animal's response to a stimulus wanes with repeated exposure, usually in the absence of unpleasant associated events (Wartzok *et al*., 2003). While some animals may not return to an area, or may begin using an area differently due to training activities, most animals are

expected to return to their usual locations and behavior. Given their documented tolerance of anthropogenic sound (Richardson *et al*., 1995 and Southall *et al*., 2007), repeated exposures of individuals to levels of sound that may cause Level B harassment are unlikely to result in hearing impairment or to significantly disrupt foraging behavior.

Overall, the number of predicted behavioral reactions is low and temporary behavioral reactions in California sea lions are unlikely to cause long-term consequences for individual animals or the population. The Civilian Port Defense activities are not expected to occur in an area/time of specific importance for reproductive, feeding, or other known critical behaviors for California sea lions. It is likely that male California sea lions will be primarily outside of the Study Area during the timeframe of the proposed activities, but females may be present. Typically during the summer, California sea lions congregate near rookery islands and specific open-water areas. The primary rookeries off the coast of California are on San Nicolas, San Miguel, Santa Barbara, and San Clemente Islands (Boeuf and Bonnell, 1980; Carretta *et al*., 2000; Lowry *et al*., 1992; Lowry and Forney, 2005). In May or June, female sea lions give birth, either on land or in water. Adult males establish breeding territories, both on land and in water, from May to July. In addition to the rookery sites, Santa Catalina Island is a major haul-out site within the Southern California Bight (Boeuf, 2002). Thus, breeding and pupping take place outside of the timeframe and location of the proposed training activities. The U.S. stock of California sea lions is not depleted under the MMPA. A regression of the natural logarithm of the pup counts against year indicates that the counts of pups increased at an annual rate of 5.4 percent between 1975 and 2008 (when pup counts for El Niño years were removed from the 1975-2005 time series). These records of pup

counts from 1975 to 2008 were compiled from Lowry and Maravilla-Chavez (2005) and unpublished NMFS data. Consequently, the activities are not expected to adversely impact annual rates of recruitment or survival of California sea lion.

Final Determination

Overall, the conclusions and predicted exposures in this analysis find that overall impacts on marine mammal species and stocks would be negligible for the following reasons:

- All estimated acoustic harassments for the proposed Civilian Port Defense training activities are within the non-injurious temporary threshold shift (TTS) or behavioral effects zones (Level B harassment), and these harassments (take numbers) represent only a small percentage (less than 15 percent of bottlenose dolphin coastal stock; less than 0.5 percent for all other species) of the respective stock abundance for each species taken.
- Marine mammal densities inputted into the acoustic effects model are overly conservative, particularly when considering species where data is limited in portions of the proposed Study Area and seasonal migrations extend throughout the Study Area.
- The protective measures described in Mitigation are designed to reduce sound exposure on marine mammals to levels below those that may cause physiological effects (injury).
- Animals exposed to acoustics from this two-week event are habituated to a bustling industrial port environment.

This final IHA assumes that short-term non-injurious SELs predicted to cause onset-TTS or predicted SPLs predicted to cause temporary behavioral disruptions (non-TTS) qualify as Level B harassment. This approach predominately overestimates disturbances from acoustic transmissions as qualifying as harassment under MMPA's definition for military readiness activities because there is no established scientific correlation between short term sonar use and long term abandonment or significant alteration of behavioral patterns in marine mammals.

Consideration of negligible impact is required for NMFS to authorize incidental take of marine mammals. By definition, an activity has a "negligible impact" on a species or stock when it is determined that the total taking is not likely to reduce annual rates of adult survival or recruitment (*i.e.*, offspring survival, birth rates).

Behavioral reactions of marine mammals to sound are known to occur but are difficult to predict. Recent behavioral studies indicate that reactions to sounds, if any, are highly contextual and vary between species and individuals within a species (Moretti *et al*., 2010; Southall *et al*., 2011; Thompson *et al*., 2010; Tyack, 2009; Tyack *et al*., 2011). Depending on the context, marine mammals often change their activity when exposed to disruptive levels of sound. When sound becomes potentially disruptive, cetaceans at rest become active, feeding or socializing cetaceans or pinnipeds often interrupt these events by diving or swimming away. If the sound disturbance occurs around a haul out site, pinnipeds may move back and forth between water and land or eventually abandon the haul out. When attempting to understand behavioral disruption by anthropogenic sound, a key question to ask is whether the exposures have biologically significant consequences

for the individual or population (National Research Council of the National Academies, 2005).

If a marine mammal does react to an underwater sound by changing its behavior or moving a small distance, the impacts of the change may not be detrimental to the individual. For example, researchers have found during a study focusing on dolphins response to whale watching vessels in New Zealand, that when animals can cope with constraint and easily feed or move elsewhere, there's little effect on survival (Lusseau and Bejder, 2007). On the other hand, if a sound source displaces marine mammals from an important feeding or breeding area for a prolonged period and they do not have an alternate equally desirable area, impacts on the marine mammal could be negative because the disruption has biological consequences. Biological parameters or key elements having greatest importance to a marine mammal relate to its ability to mature, reproduce, and survive. For example, some elements that should be considered include the following:

- Growth: adverse effects on ability to feed;
- Reproduction: the range at which reproductive displays can be heard and the quality of mating/calving grounds; and
- Survival: sound exposure may directly affect survival, for example where sources of a certain type are deployed in a manner that could lead to a stranding response.

The importance of the disruption and degree of consequence for individual marine mammals often has much to do with the frequency, intensity, and duration of the disturbance. Isolated acoustic disturbances such as acoustic transmissions usually have minimal consequences or no lasting effects for marine mammals. Marine mammals

regularly cope with occasional disruption of their activities by predators, adverse weather, and other natural phenomena. It is also reasonable to assume that they can tolerate occasional or brief disturbances by anthropogenic sound without significant consequences.

The exposure estimates calculated by predictive models currently available reliably predict propagation of sound and received levels and measure a short-term, immediate response of an individual using applicable criteria. Consequences to populations are much more difficult to predict and empirical measurement of population effects from anthropogenic stressors is limited (National Research Council of the National Academies, 2005). To predict indirect, long-term, and cumulative effects, the processes must be well understood and the underlying data available for models. Based on each species' life history information, expected behavioral patterns in the Study Area, all of the modeled exposures resulting in temporary behavioral disturbance (Table 1), and the application of mitigation procedures proposed above, the proposed Civilian Port Defense activities are anticipated to have a negligible impact on marine mammal stocks within the Study Area.

NMFS concludes that Civilian Port Defense training activities within the Study Area would result in Level B takes only, as summarized in Table 1. The effects of these military readiness activities will be limited to short-term, localized changes in behavior and possible temporary threshold shift in the hearing of marine mammal species. 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. Based on best available

science NMFS concludes that exposures to marine mammal species and stocks due to the proposed training activities would result in only short-term effects from those Level B takes to most individuals exposed and would likely not affect annual rates of recruitment or survival.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat and dependent upon the implementation of the mitigation and monitoring measures, NMFS finds that the total taking from Civilian Port Defense training activities in the Study Area will have a negligible impact on the affected species or stocks.

Subsistence Harvest of Marine Mammals

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

NEPA

In compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code 4321 *et seq*.), as implemented by the regulations published by the Council on Environmental Quality (40 CFR parts 1500-1508), the Navy prepared an Environmental Assessment (EA) to consider the direct, indirect and cumulative effects to the human environment resulting from all components of the proposed 2015 Civilian Port Defense training activities. Also in compliance with NEPA and the CEQ regulations, as well as NOAA Administrative Order 216-6, NMFS has reviewed the Navy's EA, determined it to be sufficient, and adopted that EA and signed a Finding of No

Significant Impact (FONSI). The Navy's EA and NMFS' FONSI for this action may be found on the internet at *http://www.nmfs.noaa.gov/pr/permits/incidental/militay.htm.*

ESA

No species listed under the Endangered Species Act (ESA) are expected to be affected by the proposed Civilian Port Defense training activities and no takes of any ESA-listed species are authorized under the MMPA. Therefore, NMFS has determined that a formal section 7 consultation under the ESA is not required.

Dated: October 19, 2015.

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