DEPARTMENT OF DEFENSE
Department of the Navy

FINDING OF NO SIGNIFICANT IMPACT FOR THE PROGRAMMATIC ENVIRONMENTAL ASSESSMENT FOR WEST COAST CIVILIAN PORT DEFENSE TRAINING, Alternative 9 (LOS ANGELES/LONG BEACH PROPOSED ACTION AREA)

Attachments:

(1) Letter of Concurrence for Endangered Species Act Informal Consultation for 2015 CPD Activities in LA/Long Beach, California, October 6, 2015.
(2) Letter of Concurrence from California Coastal Commission for Coastal Zone Management Act Negative Determination, July 17, 2015.

Pursuant to the United States (U.S.) Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) implementing the National Environmental Policy Act (NEPA) and Department of the Navy (DON) NEPA regulations (32 CFR Part 775), DON gives notice that a Programmatic Environmental Assessment (PEA) has been prepared and an Environmental Impact Statement (EIS) is not required for West Coast Civilian Port Defense (CPD) training activities described in Alternative 9 (conduct CPD training in Los Angeles [LA]/Long Beach, California [CA]).

Proposed Action: The Proposed Action is to conduct a maritime threat response exercise at the Port of LA (which is reduced in scope from the action described in the PEA and prior 2015 EA for a similar event in this location). The exercise would include the placement, discovery, and recovery of three to four bottom-placed, non-explosive mine training shapes between 03 - 10 December 2022. The in-water portion of this exercise will occur on 05 - 06 December. Assets to be used during the Proposed Action include unmanned underwater vehicles, remotely operated vehicles, and small Navy and U.S. Coast Guard vessels. Participants from the Navy, U.S. Coast Guard (USCG), and the LA Port Police will support the event.

A beachside component is also planned for this exercise at Cabrillo Beach, where mine shapes will be pulled onto the beach to simulate neutralization of a mine. Although the PEA listed Seal Beach as the anticipated beachside location, Cabrillo Beach still falls within the LA/Long Beach proposed action area.

FINDING OF NO SIGNIFICANT IMPACT FOR THE PROGRAMMATIC ENVIRONMENTAL ASSESSMENT FOR WEST COAST CIVILIAN PORT DEFENSE TRAINING

Purpose and Need: The purpose of the Proposed Action is to train personnel in the skills necessary to ensure U.S. ports remain free of mine threats. Ultimately, these training activities are needed to support the Department of Defense (DOD) mission to defend the U.S. territory from attacks by State and Non-State entities. Naval forces provide mine warfare capabilities to defend the homeland per the Maritime Operational Threat Response Plan (POTUS Nov 8, 2006).

Alternatives Considered: The PEA analyzes the potential environmental impacts of the following alternatives:

Under the **No Action Alternative**, CPD training activities would not occur in any areas considered within this PEA. This alternative required no analysis of potential consequences to environmental resources, as no new action would occur.

Under **Alternative 1**, CPD training activities would be conducted in the Kodiak, AK proposed action area, in the waters of Chiniak Bay.

Under **Alternative 2**, CPD training activities would be conducted in the Anchorage, AK proposed action area, in the waters of Cook Inlet.

Under **Alternative 3**, CPD training activities would be conducted in the Seward, AK proposed action area, in the waters of Resurrection Bay.

Under **Alternative 4**, CPD training activities would be conducted in the Juneau, AK proposed action area, in the waters of Stephens Passage and Gastineau Channel.

Under **Alternative 5**, CPD training activities would be conducted in the San Francisco, CA proposed action area, in the waters of San Francisco Bay, with a beaching location in San Francisco, CA.

Under **Alternative 6**, CPD training activities would be conducted in the Richmond, CA proposed action area, in the waters of San Francisco Bay, with a beaching location in Richmond, CA.

Under **Alternative 7**, CPD training activities would be conducted in the Concord, CA proposed action area, in the waters of San Francisco Bay, with a beaching location in Concord, CA.

Under **Alternative 8**, CPD training activities would be conducted in the Port Hueneme, CA proposed action area, in the waters of the Pacific Ocean.

Under **Alternative 9**, CPD training activities would be conducted in the LA/Long Beach, CA proposed action area, in the waters of San Pedro Bay. This is the Action Alternative that has been selected for implementation in December 2022.

Under **Alternative 10**, CPD training activities would be conducted in multiple proposed action areas over the course of one year. Events under Alternative 10 could occur either simultaneously or at different times throughout the year, depending on asset availability and schedules.

Alternative locations were selected based on the following screening criteria:

- Water depths less than 300 ft (91 m);
- Near shipping lanes proximate to major ports; and,
- Beaching locations outside of sensitive habitats.

Alternatives considered but not carried forward for detailed analysis included 17 additional port locations. However, these additional ports were eliminated from consideration because they did not meet all three screening criteria listed above.

A Preferred Alternative was not identified in the PEA due to the programmatic nature of the analysis. This Finding of No Significant Impact (FONSI), however, has been prepared specifically for planned CPD activities in LA/Long Beach, CA in December 2022 (Alternative 9).

Although Alternative 9 is the Action Alternative selected in support of the 2022 planned CPD activity, other locations defined by Alternatives 1-10 may be selected in subsequent years. When additional future training activities are proposed, the Navy will review the PEA and prepare supplemental NEPA as needed, as well as a determination of significance as to the potential impacts to the human environment for that future action.

The LA/Long Beach proposed action area supported a CPD training event in October 2015, which was covered under a separate EA. After review of the 2015 EA and the PEA, there has not been significant new information or changes to the proposed action that alter the best available scientific information or would

require the completion of any new regulatory consultations. The analysis of effects to this location from the 2015 EA as well as amplifying information from the PEA are incorporated herein to support this FONSI.

Environmental Effects: No significant direct, indirect, or cumulative environmental impacts would occur from implementing the Proposed Action under Alternative 9. Certain environmental resources (water quality, land use, visual resources, airspace, infrastructure, public health and safety, hazardous materials and wastes, and environmental justice) were not analyzed in detail in this PEA because implementation of the Proposed Action would not be likely to result in any environmental impacts on these resources or impacts would be negligible (e.g., no modification of existing infrastructure would be required in order to implement the Proposed Action). Full justification for eliminating these resources from analysis can be found in Chapter 3 of the PEA. Potential impacts, as analyzed in the PEA, on physical resources, biological resources, and cultural and socioeconomic resources are summarized here. Not all stressors analyzed in the PEA apply to the implementation of Alternative 9 in LA/Long Beach, CA in December 2022, as not all activities and assets considered in the prior analysis are available or necessary for this particular exercise.

Physical Resources: Physical resources analyzed include air quality, benthic habitat, and ambient acoustic environment. Although the LA/Long Beach proposed action area is classified as an extreme nonattainment area under the Clean Air Act for the federal 8-hour ozone standard, a nonattainment area for lead, a moderate nonattainment area for particulate matter less than 2.5 microns in diameter, and a maintenance area for nitrogen dioxide, particulate matter less than 10 microns in diameter, and carbon monoxide, under no operating scenario would emissions associated with the Proposed Action reach or exceed the *de minimis* threshold. (PEA, 3.1.1.1-3.1.1.2; 4.1.2.1 & 4.1.2.1.9). All training mine shapes would be removed during or after the Proposed Action, so no materials would be expended, and the seafloor would not be permanently altered. As the LA/Long Beach proposed action area is primarily comprised of mud, benthic habitat is expected to shift back in the same manner that it would following a disturbance of tidal energy, and no long-term increases in turbidity are anticipated. (PEA, 4.1.2.2.9). All sound associated with the Proposed Action would cease upon completion of the training event, and therefore any addition to the ambient noise environment would be temporary. Increases to

the acoustic environment would be insignificant when compared to the typical industrial and commercial shipping traffic transiting in the LA/Long Beach proposed action area. (PEA, 4.1.2.3.9) Therefore, implementation of Alternative 9 would not result in significant impacts on physical resources.

Biological Resources: Biological resources analyzed include: marine invertebrates, benthic communities, and marine vegetation; fish; Essential Fish Habitat (EFH); birds, and; marine mammals. The Proposed Action would involve: the movement of vessels and in-water devices (i.e., unmanned underwater vehicles and remotely operated vehicles); seafloor device deployment and presence for approximately one week, and; the noise associated with vessels and acoustic transmissions. The PEA also analyzes use of aircraft and active acoustic transmission (i.e., high-frequency sonar) as parts of the Proposed Action, but the exercise at LA/Long Beach in December 2022 will not include use of those assets. All acoustic sources proposed for this December event are considered *de minimis*, as they produce sound at a higher frequency than can be heard by any biological resources that could be in the LA/Long Beach proposed action area. Sonar systems such as the AN/SQQ-32 and AN/AQS-20, which require quantitative acoustic effects analysis, are not anticipated for this event. Therefore, the Navy is not requesting incidental take authorization under the Marine Mammal Protection Act (MMPA) and consultation under the Endangered Species Act (ESA) is not necessary for acoustic sources.

Vessel movement, seafloor device presence, and in-water device use were considered for their potential impacts to marine invertebrates, benthic communities, and marine vegetation; only short-term and localized disturbances are anticipated. (PEA, 4.2.2.2). Vessel movement, seafloor device presence, in-water device use, and vessel noise were considered for their potential impacts to fish species. The only ESA-listed fish species that has the potential to be in the proposed action area is the scalloped hammerhead shark (*Sphyrna lewini*); the Navy prepared an informal consultation under section 7 of the ESA for a larger CPD exercise occurring within the LA/Long Beach proposed action area in 2015 (Attachment (1)). Any impacts to fishes would be short-term and temporary. (PEA, 4.2.2.3). Vessel movement, in-water device use, and seafloor devices were considered for their potential impacts to EFH designated in the LA/Long Beach proposed action area; EFH in the proposed action area has been designated for Pacific groundfish, coastal pelagics, highly migratory species, and salmon. Only short-term and localized

disturbances are anticipated, and the Proposed Action would not adversely affect the quality or quantity of EFH in the LA/Long Beach proposed action area. (PEA, 4.2.2.4).

Vessel movement, in-water device use, and vessel noise were considered for their potential impacts to marine birds. No ESA-listed marine bird species that may be present in the LA/Long Beach proposed action area during the time of the Proposed Action would be expected to overlap with the Proposed Action. Any impacts associated with the implementation of Alternative 9 would be short-term and localized. (PEA, 4.2.2.5).

Vessel movement, seafloor device presence, in-water device use, and vessel noise were considered for their potential impacts to sea turtles and marine mammals. Although any associated impacts would be short-term and localized, the Navy prepared an informal consultation under section 7 of the ESA for a larger CPD exercise occurring within the LA/Long Beach proposed action area in 2015 (Attachment (1)). ESA-listed species consulted on included loggerhead sea turtle (*Caretta* caretta), green sea turtle (*Chelonia mydas*), leatherback sea turtle (*Dermochelys coriacea*), Olive ridley sea turtle (*Lepidochelys olivacea*), humpback whale (*Megaptera novaeangliae*) and Guadalupe fur seal (*Arctocephalus townsendi*). Neither the Port of LA nor Cabrillo Beach landing location are habitat for the ESA-listed species consulted upon previously; no interaction between ESA-listed species and the proposed action is anticipated. (PEA, 4.2.2.6, 4.2.2.7). Due to the reduced scope of the proposed activity and use of only *de minimis* sound sources, there are no predicted "takes" of marine mammals under the Marine Mammal Protection Act and therefore authorization under the Marine Mammal Protection Act is not required.

Implementation of Alternative 9 would not be expected to have any long-term or population-level effects to biological resources. Implementation of Alternative 9 would not result in significant impacts to biological resources.

Cultural and Socioeconomic Resources: Cultural resources analyzed include protected historic properties and shipwrecks. Socioeconomic resources analyzed include transportation and shipping, commercial and recreational fishing, subsistence use, and tourism. Implementation of Alternative 9 would not impact any known historical sites or in any way compromise the integrity of existing infrastructure of cultural resources. (PEA, 4.3.2.1). Cabrillo Beach is used recreationally by the

public, and only a portion will be cordoned off from public access during the beachside component of the Proposed Action.

Issuance of a Notice to Mariners prior to the start of implementation of Alternative 9 would inform any vessels of military activity occurring in the proposed action area, allowing for the activity site to be avoided in advance of the CPD training activity. However, the length of time the space would be restricted would be limited to the duration of the Proposed Action. Implementation of Alternative 9 would not result in significant impact to cultural and socioeconomic resources.

Other considerations: The Navy obtained concurrence from the California Coastal Commission in 2015 on the Negative Determination that concluded there would be no reasonably foreseeable effects on the coastal zone or any coastal resources of the State of California (Attachment (2)). As this activity would be smaller in scope (i.e., no helicopters, no sonars requiring quantitative analysis, and shorter duration) there would be even less potential for effects to coastal zone resources. Therefore, the Navy has concluded there will be no effect on coastal use or resources and a Negative Determination is not required.

Mitigation Measures: The Navy will implement mitigation measures as specified by Table 4-10 of the PEA to specifically avoid or reduce potential impacts on marine species and socioeconomic resources. Mitigation measures for marine species include use of one or more lookout on Navy vessels to visually observe for marine mammal presence while vessels are underway, and during use of in-water devices and maintain a mitigation zone.

Public Outreach: The Navy prepared the Final PEA with consideration of comments received during public review of the Draft PEA. The Navy solicited public and agency comments during a public outreach period from December 4, 2019 through January 3, 2020. Notification of Availability was provided via newspaper advertisements throughout each of the proposed action areas. Newspapers that published legal ads soliciting comments included: Kodiak Daily Mirror (Kodiak, AK on December 11, 2019); Anchorage Daily News (Anchorage, AK on December 4, 2019); Peninsula Clarion (Seward, AK on December 15, 2019); Juneau Empire (Juneau, AK on December 15, 2019); San Francisco Chronicle (San Francisco, CA on December 11, 2019); Costa Contra Times (Contra Costa County, CA on December 11, 2019); Alameda

Times-Star (Alameda County, CA on December 11, 2019); Vida Newspaper (Oxnard, CA on December 12, 2019); Ventura County Star (Ventura County, CA on December 9, 2019); Los Angeles Daily News (Los Angeles, CA on December 12, 2019); Orange County Register (Orange County, CA on December 5, 2019), and; Long Beach Press Telegram (Long Beach, CA on December 10, 2019). The Draft PEA was available for viewing at libraries throughout Alaska and California, and on a website hosted by the Naval Facilities Engineering Command Northwest (https://navfac.navy.mil/NWNEPA). Libraries acting as repositories for physical and digital copies of the PEA included: Kodiak Public Library (Kodiak, AK), Z.J. Loussac Library (Anchorage, AK), Seward Community Library and Museum (Seward, AK), Juneau Public Library Downtown Branch (Juneau, AK), Alaska State Library (Juneau, AK), San Francisco Public Library (San Francisco, CA), Concord Public Library (Concord, CA), Oakland Public Library (Oakland, CA), Richmond Public Library (Richmond, CA), South Oxnard Branch Library (Oxnard, CA), Ray D. Preuter Library (Port Hueneme, CA), Seal Beach Public Library (Seal Beach, CA), Long Beach Public Library (Long Beach, CA), and Los Angeles Central Library (Los Angeles, CA). Digital copies were sent to 51 stakeholders and 10 regional tribal community leaders in total. The Navy received two agency comments in response regarding historic properties, from the National Parks Service and the Alaska SHPO; both comments were considered and addressed in the Final PEA. In addition, the 2015 EA was made public from 07 – 22 August 2015 with notice in the Orange County Register and Long Beach Press Telegram as well as capability for online and library viewing; no comments were received.

Finding: Based on the analysis presented in the PEA, which has been prepared in accordance with the requirements of NEPA and DON policies and procedures (32 CFR Part 775) DON finds that implementation of the Proposed Action as described in Alternative 9 will not significantly impact the quality of the human or natural environment. Therefore, an EIS need not be prepared.

Electronic copies of the PEA and FONSI may be obtained by written request to: Commander, Pacific Fleet, ATTN: Alex Stone, N465, 250 Makalapa Drive, Pearl Harbor, HI 96860.

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12/1/2022
Date

CAPT Alexander Hutchison
Department of the Navy
Deputy Fleet Civil Engineer
U.S. Pacific Fleet

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

October 6, 2015

In reply refer to:
2015/3358

Larry M. Foster
Director, Environmental Readiness
Department of the Navy
Commander
United States Pacific Fleet
250 Makalapa Drive
Pearl Harbor, Hawaii 96860-3131

Re: Endangered Species Act Section 7(a) (2) Concurrence Letter, Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response, and Marine Mammal Protection Act Comments for the Civilian Port Defense Training

Dear Mr. Foster:

On July 27, 2015, NOAA's National Marine Fisheries Service (NMFS) received your request for a written concurrence that the United States Navy (Navy) Civilian Port Defense training is not likely to adversely affect (NLAA) species listed as threated or endangered designated under the Endangered Species Act (ESA). This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding potential effects of the action in the EFH Assessment. This review was pursuant to section 305(b)(2) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance on the use of the ESA consultation process to complete the EFH consultation. In this case, NMFS concluded that the action would not adversely affect EFH. Thus, consultation under the MSA is not required for this action.

NMFS also provides preliminary comments concerning potential effects on whales, dolphins, porpoises, seals, and sea lions which are protected under the Marine Mammal Protection Act (MMPA). *See* 16 U.S.C. § 1361 *et seq.* Under the MMPA, it is generally illegal to "take" a marine mammal without prior authorization from NMFS. "Take" is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal. Except with respect to military readiness activities and certain scientific research conducted by, or on behalf of, the Federal Government, "harassment" is defined as any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal in the wild, or has the potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The concurrence letter will be available through NMFS' Public Consultation Tracking System [https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts]. A complete record of this consultation is on file at the NMFS West Coast Regional Office.

Proposed Action and Action Area

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. Assets used during Civilian Port Defense training activities would occur on the U.S. West Coast in the fall of 2015 within the Los Angeles/Long Beach proposed action area identified by Naval Mine and Anti-Submarine Warfare Command (Figure 1).

Civilian Port Defense training events are conducted in ports or major surrounding waterways, within the shipping lanes, and seaward to the 300 foot (ft, 91 meter [m]) depth contour). The events employ the use of various mine detection sensors, some of which utilize high frequency (greater than 10 kilohertz [kHz]) active acoustics for detection of mines and mine-like objects in and around various ports. Active acoustic transmission would be used for approximately 8 days during the two week long training event during the October-November 2015 timeframe. Assets used during Civilian Port Defense training could include up to four unmanned underwater vehicles, marine mammal systems, up to two helicopters operating (two to four hours during daylight) 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 a Mine Warfare Ship. The Mine Warfare Class ship (*e.g.*, AVENGER) is a surface mine countermeasure vessel specifically outfitted for mine countermeasure capability.

The proposed action also includes the placement, use, and recovery of up to 20 bottom placed non-explosive mine training shapes. These mine training shapes, are relatively small, and generally less than 6 ft (1.8 m) in length. 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 in training is a beach side activity that involves explosive ordnance disposal personnel assessing the retrieved mine shape to gather facts (intelligence) on the type and identifying how the mine works, disassembling the non-explosive mine shape, neutralizing it, or disposing of it. The entire training event is expected to take place over two weeks utilizing a variety of assets and scenarios.

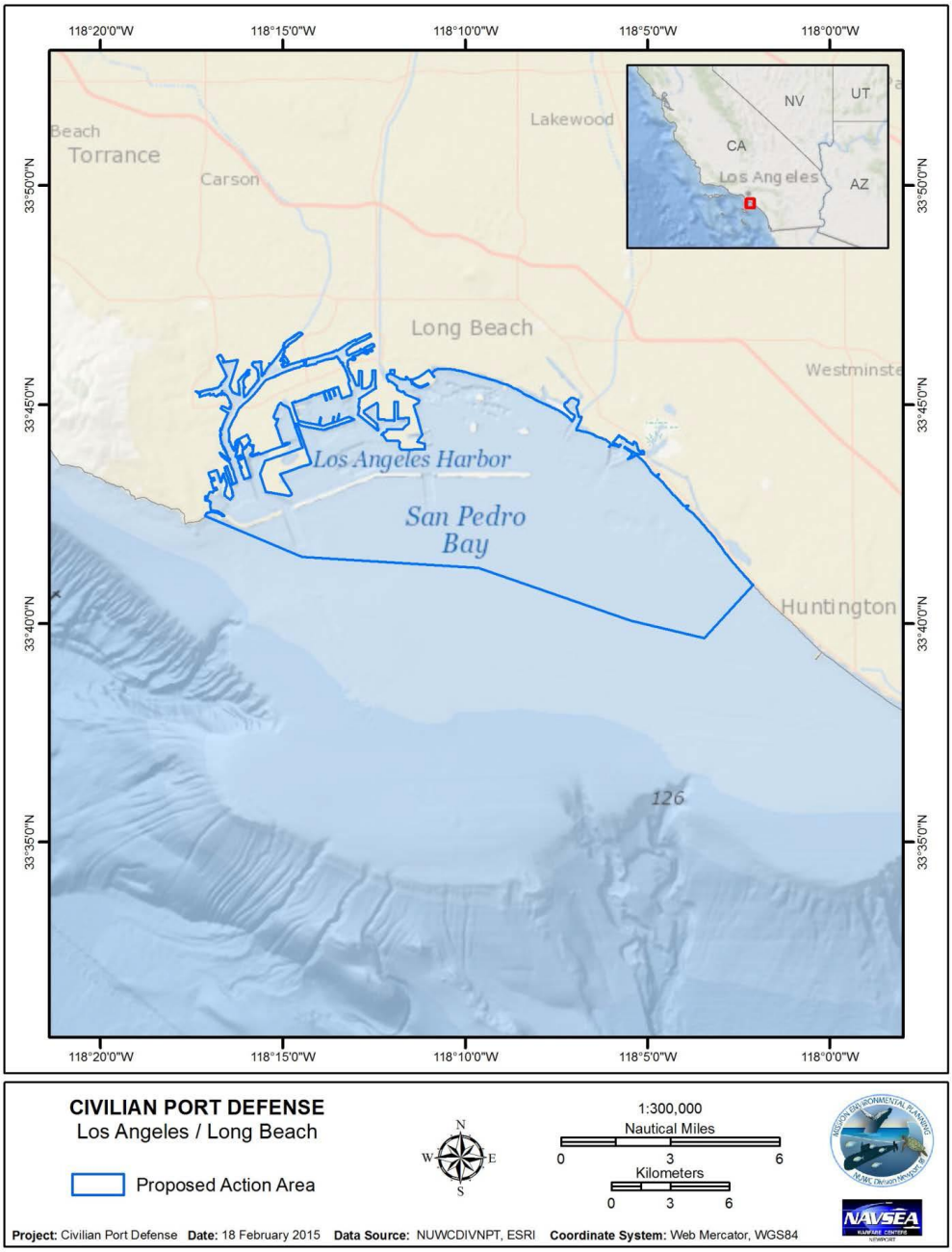

Figure 1. Los Angeles/Long Beach proposed action area identified by Naval Mine and Anti-Submarine Warfare Command

The following descriptions detail the possible range of activities which could take place during a Civilian Port Defense training event. The descriptions are inclusive, but many activities are not included within the analysis of this specific event because mine detection, including towed or hull-mounted sources, would be the only portion of Civilian Port Defense training that the Navy is seeking concurrence. The Navy concluded that all other activities that could take place during a Civilian Port Defense training event would have no effect on species listed as threated or endangered; furthermore, the Navy determined that the proposed activities will have no effect on critical habitats designated under the ESA.

Mine Detection Systems

Mine detection systems are used to locate, classify, and map suspected mines (Figure 2). 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/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; however, the specific source parameters of the AN/SQQ-32 are classified. The Navy considers the AN/AQS-24 and handheld sonars as *de minimis* sources, which are defined as devices with low source levels, narrow beams, downward directed transmission, short pulse lengths, frequencies above known hearing ranges for marine species, or some combination of these factors (Department of the Navy 2013).

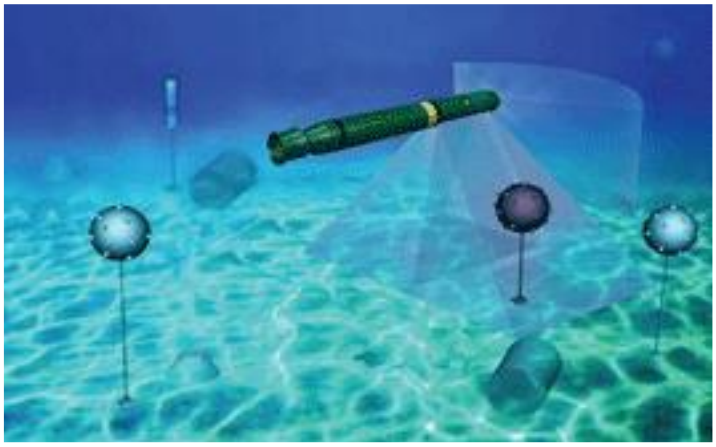

Figure 2. Example Mine Detection System

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 in-water detonations would occur as part of the proposed action).

Agency's Effects Determination

The Navy has determined that the Project is not likely to adversely affect the threatened: Guadalupe fur seal (*Arctocephalus townsendi*), green sea turtle, East Pacific distinct population segment (*Chelonia mydas*), olive Ridley sea turtle (*Lepidochelys olivacea*), or the endangered: humpback whale (*Megaptera novaeangliae*), loggerhead sea turtle (*Caretta caretta*), leatherback sea turtle (*Dermochelys coriacea*), and scalloped hammerhead shark, Eastern Pacific distinct population segment (*Sphyrna lewini*).

The Navy did not make an initial determination for the blue whale (*Balaenoptera musculus*) or fin whale (*B. physalus*), but after further consultation, the Navy determined that a similar evaluation and determination of not likely to adversely affect would pertain to the blue whale and fin whale as it did for the humpback whale.

Their reasoning for the above determinations include the low likelihood that sharks and sea turtles would perceive any of the acoustic transmissions, the model output results and current acoustic criteria for acoustic impacts to marine mammals predicting zero Level A and Level B[1] exposures, the Navy's standard practices and mitigation measures ensuring that all marine mammals and sea turtles are clear of the action area, and the short duration of the proposed activity.

Consultation History

On April 23, 2015, NMFS West Coast Regional Office received a hard copy and two CD-ROMs of the Civilian Port Defense training Incidental Harassment Authorization (IHA) request, draft Environmental Assessment, and Navy transmittal letter of April 16, 2015, that was sent to NOAA Fisheries' Office of Protected Resources in Silver Spring, Maryland. On August 4, 2015, NMFS staff received an email with attachments of the Civilian Port Defense training IHA request and Navy transmittal letter of April 16, 2015, sent to NOAA Fisheries' Office of Protected Resources in Silver Spring, Maryland. The initial ESA consultation request was received by NMFS from the Navy on July 27, 2015. NMFS deemed the information complete, but on August 26, 2015, NMFS emailed Navy staff requesting clarification regarding the criteria for the Navy's *de minimus* determinations, further clarification on the acoustic sound sources and modeling results, and reasoning why blue and

[1] The term "take," as defined in Section 3 (16 United States Code [U.S.C.] § 1362 (13)) of the MMPA, means "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." "Harassment" was further defined in the 1994 amendments to the MMPA, which provided two levels of harassment: Level A (potential injury) and Level B (potential disturbance). The National Defense Authorization Act of Fiscal Year 2004 (PL 108-136) amended the definition of "harassment" as applied to military readiness activities or scientific research activities conducted by or on behalf of the federal government, consistent with Section 104(c)(3) [16 U.S.C. § 1374(c)(3)]. For military readiness activities, the relevant definition of harassment is 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

• Disturbs or is likely to disturb a marine mammal or marine mammal stock in the wild by causing disruption of natural behavioral patterns including, but not limited to, migration, surfacing, nursing, breeding, feeding, or sheltering to a point where such behavioral patterns are abandoned or significantly altered ("Level B harassment") [16 U.S.C. § 1362(18)(B)(i) and (ii)]

fin whales were not included. On August 26 and 27, 2015, the Navy responded via email with extensive information on the Navy's model and results, the *de minimus* criteria, and the explanation that the Navy did initially consider blue and fin whales, but because of the inshore nature of the activities, high frequency sound source, limited duration of the proposed training event, and standard mitigation for shutdown for any marine mammal, modeling for a relatively rare occurrence (blue and fin whales) that close to shore was not warranted. On September 1, 2015, NMFS staff recommended to Navy staff to reconsider their determination to exclude blue and fin whales from the proposed action because of the possibility that both may be present in the action area, especially given the unpredictable nature of these animals and the current oceanographic anomalies present off the U.S. West Coast. On September 2, 2015, NMFS staff received an email from the Navy indicating that they would like to include blue and fin whales in the proposed action.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

The proposed action includes four potential impacts that may cause adverse effects on ESA-listed marine mammals, sea turtles, and fish species that occur in the vicinity of the proposed training area. These include physical (vessel movement, seafloor devices and in-water devices), energy (electromagnetic devices and laser), acoustic (vessel/aircraft noise, acoustic transmission), and secondary stressors. For those species for which non-impulsive acoustic thresholds have not been established and/or appropriate information was not available, a qualitative approach was taken (*e.g.*, acoustic impacts on fish and sea turtles).

Vessel Movement

The vessels that would be utilized during the proposed action include a Mine Warfare ship, particularly mine countermeasure class ship (225 ft [68.5 m]), an afloat forward staging base (Littoral Combat Ship [387 ft; 118 m] or Landing Dock Platform [684 ft; 208 m]), and small support boats. All vessels would operate at speeds of 10 knots or less (18 kilometers [km]/hour), but do have the potential to affect ESA-listed fish, sea turtles, and marine mammals by altering their behavior patterns or causing mortality or serious injury from collisions.

Sharks

Scalloped hammerhead sharks (*Sphyrna lewini*) give birth to live pups, which tend to be coastal bottom-dwellers (Castro 1983). Thus, vessel movement at the surface would have no effect on the pups, and no measurable effects to shark recruitment would occur. Scalloped hammerhead sharks are likely not present in significant quantities in the proposed action area; however, individuals may be observed in the proposed action area during extreme warm water conditions. Transiting vessels may elicit a behavioral reaction from fish, like sharks, though any response would be considered minor, transitory, and temporary in nature. In the upper portions of the water column, sharks could potentially be displaced, injured, or killed by vessel and propeller movements. The likelihood of

collision between vessels and adult or juvenile shark is extremely low because sharks are highly mobile and are capable of detecting and avoiding approaching objects. Any behavioral reactions by adult or juvenile sharks are not expected to result in substantial changes in an individual's fitness, or species recruitment, and are not expected to result in long-term or population-level effects. Given the expected speeds of surface vessels and underwater vehicles during the proposed action, we conclude that a collision between a scalloped hammerhead shark and vessels is not likely to occur. As a result, vessel movement may affect, but is not likely to adversely affect the scalloped hammerhead shark.

Marine Mammals

Marine mammals, such as the ESA-listed Guadalupe fur seal (*Arctocephalus townsendi*), blue whale (*Balaenoptera musculus*), fin whale (*B. physalus*), and humpback whale (*Megaptera novaeangliae*), react to vessels in a variety of ways. Some may respond (*i.e.*, avoid the vessel), while other animals ignore the stimulus altogether. Silber *et al.* (2010) concludes that large whales that are in close proximity to a vessel may not regard the vessel as a threat, or may be involved in a vital activity (*i.e.*, mating or feeding) which may reduce the likelihood of an avoidance response. Cetacean species generally pay little attention to transiting vessel traffic as it approaches, although they may engage in last minute avoidance maneuvers (Laist *et al.* 2001). Baleen whale responses to vessel traffic range from avoidance maneuvers to disinterest in the presence of vessels (Nowacek *et al.* 2007; Scheidat *et al.* 2004).

The size of a ship and speed of travel affect the likelihood and severity of a collision. Reviews of stranding and collision records indicate that larger ships (262.5 ft [80 m] or larger) and ships traveling at or above 14 knots (26 km/hour) have a much higher instance of collisions with whales that result in mortality or serious injury (Laist *et al.* 2001). During the proposed activities, vessels would operate at speeds not exceeding 10 knots (18 km/hour) during transit and 3 knots (5.5 km/hr) during training, which would lessen the likelihood of a vessel collision with a marine mammal resulting in serious injury or mortality. Additionally, the vessels associated with the proposed action would follow the standard operating procedures (*e.g.*, lookouts to detect biological resources) and mitigation measures (*e.g.*, maneuvers to maintain 500 yard safety zone away from observed whales and at least a 200 yard safety zone away from other marine mammals), to avoid impacting marine mammals and therefore, the probability of vessel collision during training activities is reduced. The Navy also proposes to cease activities if a marine mammals is observed within the safety zones described above. More importantly, the use of biological monitors will ensure that these safety zones are clear of marine mammals (and sea turtles and sharks) which will reduce the likelihood of potential impacts to a marine mammal (and a sea turtle or shark). As a result, the likelihood that vessel movement will impact a marine mammal is extremely low. Due to the short duration of the proposed action (two weeks), any non-collision impact to marine mammals from vessel, *i.e.*, short-term avoidance of the area or the momentary interruption of feeding, is not likely because listed individuals are not expected to be feeding in the area and the likelihood that a listed marine mammal is present in the action is extremely low; thus, we expect that behavioral reactions from vessel movement are extremely unlikely to occur and will be discountable. Taking into account the speed of the vessels and the preventative measures described above, we conclude that it would be extremely unlikely that a blue whale, fin whale, humpback whale, or Guadalupe fur seal would be struck by a vessel. Similarly we conclude that it would be extremely unlikely that any non-collision effects would occur as a result of the Civilian Port Defense training activities. As a result, vessel movement may affect, but is not likely to adversely affect the Guadalupe fur seal, blue whale, fin whale, and humpback whale.

Sea Turtles

The probability of impact with a sea turtle was estimated using the same approach presented above for marine mammals for the following ESA-listed sea turtles: green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), olive Ridley sea turtle (*Lepidochelys olivacea*), and leatherback sea turtle (*Dermochelys coriacea*). Sea turtles have been observed to elicit short-term responses in their reactions to vessels, and their reaction time was greatly dependent on the speed of the vessel (Hazel *et al.* 2007). Sea turtles have been documented to flee frequently when encountering a vessel traveling at 2 knots (4 km/hour), but infrequently when encountering a vessel traveling at 6 knots (11 km/hour), and only rarely when encountering a vessel traveling at 10 knots (18 km/hour). The proportion of turtles that fled to avoid a vessel decreased significantly as vessel speed increased, and turtles that fled from vessels traveling between 6 and 10 knots (11 and 18 km/hour, respectively) did so at significantly shorter distances from the vessel than turtles that fled from slow approaches (Hazel *et al.* 2007). First, the fact that sea turtles are not commonly present in the proposed action area diminishes the likelihood of a collision. Furthermore, during the proposed activities, vessels would operate at speeds not exceeding 10 knots (18 km/hour) during transit and 3 knots (5.5 km/hr) during training. We expect that the slower speeds will be predominate based on the extent of the proposed training activities compared to the time vessels are expected to be in transit. Given the similarity of speeds (*i.e.*, 3 knots and 2 knots), we expect that a turtle will flee from oncoming vessels operating at three knots or less, thereby making the chances of a collision between the vessel and turtle extremely unlikely. With regard to vessels operating at up to 10 knots, based on Hazel *et al.* (2007), even though it is unlikely or rare for turtles to flee at these speeds, the Navy's standard operating procedures (*e.g.*, lookouts to detect biological resources) would ensure that the mitigation safety zone is clear before and during activities. As a result, the likelihood that vessel movement will impact a sea turtle is extremely low. Due to the short duration of the proposed action (two weeks), any non-collision impact to sea turtles from vessel movement, *i.e.*, short-term avoidance of the area, is not likely because the likelihood that a listed sea turtle is present in the action is extremely low; thus, we expect that behavioral reactions from vessel movement are extremely unlikely to occur and will be discountable. Taking into account the speed of the vessels and the preventative measures described above, we conclude that it would be extremely unlikely that a green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle would be struck by a vessel. Similarly we conclude that it would be extremely unlikely that any non-collision effects would occur as a result of the Civilian Port Defense training activities. As a result, vessel movement may affect, but is not likely to adversely affect the green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle.

Sea floor devices

Seafloor objects, such as mine training shapes, are relatively small, generally less than 6 ft (1.8 m) in length. No more than 20 mine training shapes would be deployed over the course of the Civilian Port Defense training. These devices will be temporarily (7 to 30 days) deployed on the seafloor. Because of the short duration of their interaction with the seafloor, no corrosion of the devices is anticipated and, therefore, no metals are expected to be introduced into the environment. Seafloor devices would be deployed by a surface vessel through the water column and once placed, are stationary and do not pose a threat to highly mobile organisms.

The placement and removal of objects on the seafloor could result in a minor sediment disruption in the training area. The sediment disruption would be limited to the area immediately surrounding the object placed on the seafloor. The potential impact would be temporary and localized due to the

minimal number of objects and the infrequency of training activities, and soft sediment is expected to recover quickly, shifting back following a disturbance of tidal energy. No long-term increases in turbidity would be anticipated.

Seafloor devices would be deployed by a surface vessel through the water column; this is where the potential for strike would occur. However, the potential for a marine mammal or sea turtle to be close to a device near the seafloor or during deployment is low because of the small geographic area within which the mine training shapes would be deployed, the low number of individuals expected to be in the area, and the wide distribution of marine mammal and sea turtle habitat. Before a potential seafloor device strike, we expect that a shark could sense the device traveling through the water and respond by darting away from a deployed sea floor device (Kajiura and Holland 2002; Hart and Collin 2015). However, any shark, marine mammal, or sea turtle displaced a small distance away by the movements from a sinking object nearby would likely resume normal activities after such a brief disturbance.

If the seafloor device collided with an organism, direct injury in addition to stress may result. The stress response in vertebrates is to rapidly raise the blood sugar level to prepare the animal for the fight or flight response (Helfman *et al.* 2009). The ability of a shark, marine mammal, or sea turtle to return to what it was doing following a physical strike (or near miss resulting in a stress response) is a function of fitness, genetic, and environmental factors. Within a species, the rate at which an individual recovers from a physical disturbance or strike may be influenced by its age, sex, reproductive state, and general condition. A fish, like the shark, that has reacted to a sudden disturbance by swimming at burst speed could tire after some time and its blood hormone and sugar levels may not return to normal for 24 hours (Helfman *et al.* 2009). However, the potential for a shark to be close to a seafloor device during deployment, and therefore to be at risk for collision or disturbance, is extremely low due to the low numbers of scalloped hammerhead sharks and their expected avoidance behavior described above. The use of the Navy's standard operating procedures and mitigation measures (*e.g.*, lookouts to detect biological resources that would ensure that the mitigation safety zone is clear before and during activities) would further reduce the likelihood of impact to ESA-listed marine mammals, sea turtles, and sharks. Therefore, the risk of collision with a sea floor device is expected to be discountable. Due to the short duration of the proposed action, any impact to marine mammals, sea turtles, and sharks from the deployment of sea floor devices, *i.e.* avoidance of the area or the momentary action of fleeing, is extremely unlike to occur because the likelihood that a listed individual is present in the action is extremely low; thus, we expect that behavioral reactions from the deployment of sea floor devices will be discountable. As a result, deployment of sea floor devices may affect, but is not likely to adversely affect the scalloped hammerhead shark, blue whale, fin whale, humpback whale, Guadalupe fur seal, green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle.

In-Water Devices

In-water devices associated with the proposed action include unmanned underwater vehicles and towed devices. These devices are self-propelled or towed through the water from helicopters. In-water devices range from 27 ft (8 m) to about 49 ft (15 m) and can operate anywhere from the water surface to near-bottom. Unmanned underwater vehicles are slow moving through the water column and have very limited potential to strike marine species because, based on our understanding of the physical capabilities and natural inclinations of the aforementioned animals, animals in the water are expected to avoid a slow moving object. Unmanned underwater vehicles and towed devices are closely monitored by observers manning other platforms in use during the training event. The devices which are towed through the water column by a helicopter are generally less than 33 ft (10 m) in length and operate at 10 to 40 knots (18 to 74 km/hour). Due to the potential speed of the towed

system by helicopter, there is a potential for strike to marine resources. The use of in-water towed devices may cause short-term and localized disturbance to an individual marine species and these short-term disturbances could cause injury or mortality due to strikes. Scalloped hammerhead sharks give birth to live pups, which tend to be coastal bottom-dwellers (Castro 1983). However, in-water devices do not come in contact with the seafloor because of potential damage to the device. We conclude that in-water devices would likely have no effect on the pups of ESA-listed sharks, and no measurable effects to shark recruitment would occur.

The potential for a shark, marine mammal, or sea turtle to be struck by either an unmanned underwater vehicle or a towed system is similar to that identified for vessels. Unmanned underwater vehicles move slowly through the water column and have a limited potential to strike sharks, marine mammals, or sea turtles. Additionally, the observer vessels associated with the proposed action would follow the standard operating procedures (*e.g.,* lookouts to detect biological resources) and mitigation measures (*e.g.,* maneuvers to maintain 500 yard safety zone away from observed whales and at least a 200 yard safety zone away from other marine mammals), and would ensure that these safety zones are clear to avoid impacting marine mammals and therefore, the probability of a collision with an unmanned underwater vehicle during training activities is reduced. Therefore, collision with a moving unmanned underwater vehicles is extremely unlikely.

Towed mine warfare systems operate at higher speeds than the unmanned underwater vehicles and could pose a greater collision risk to sharks, marine mammals, or sea turtles. However, the implementation of mitigation measures and the Navy's standard operating procedures (*e.g.,* lookouts to detect biological resources that would ensure that the mitigation safety zone is clear before and during activities) and the short duration (2 weeks) of the proposed action would reduce the likelihood of impact to ESA-listed species in the area. Taking into account the speed of the vessels and the preventative measures described above, we conclude that it would be extremely unlikely that a marine mammal, shark, or sea turtle would be struck by a vessel. Therefore, moving towed mine warfare systems pose only a slight collision risk and are expected to be discountable. Physical disturbance from the use of in-water devices is not expected to result in more than a momentary behavioral response, possibly resulting in short-term and localized displacement in the water column. We conclude that it would be extremely unlikely that any non-collision effects would occur as a result of the Civilian Port Defense training activities because the likelihood that a listed individual is present in the action is extremely low.

Due to the short duration of the proposed action (two weeks), any impact to marine mammals from in-water devices, such as temporary avoidance of the area or the momentary interruption of feeding, is not likely because listed individuals are not expected to be feeding in the area and the likelihood that a listed individual is present in the action is extremely low; thus, we expect that behavioral reactions from vessel movement are extremely unlikely to occur and will be discountable. As a result, the use of unmanned underwater vehicles or a towed system may affect, but is not likely to adversely affect the scalloped hammerhead shark, the blue whale, fin whale, humpback whale, Guadalupe fur seal, green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle.

Electromagnetic Devices

The magnetic field generated by electromagnetic devices that are proposed for use for Civilian Port Defense training is of relatively minute strength, moving through the water column creating a transient magnetic field. Typically, the maximum magnetic field generated at the source would be approximately 23 gauss (G). This level of electromagnetic density is very low compared to magnetic fields generated by other everyday items. The magnetic field generated is between the levels of a

refrigerator magnet (150 to 200 G) and a standard household can opener (up to 4 G at 4 inches [10 cm] away). At a distance of 13.12 ft (4 m), the magnetic field generated from the mine warfare sources declines to approximately the equivalent of the Earth's magnetic field (approximately 0.5 G). The strength of the field at just under 26 ft (8 m) is only 40 percent of the earth's field, and only 10 percent at 79 ft (24 m). At a radius of 656 ft (200 m), the magnetic field would be approximately 0.002 G (U.S Department of the Navy 2005).

We are unaware of quantitative threshold criteria to determine the significance of the potential effects from activities that involve the use of varying electromagnetic frequencies. Many organisms, primarily marine vertebrates, have been studied to determine their thresholds for detecting electromagnetic fields (Normandeau Associates Inc. *et al.* 2011); however, no data are available on predictable responses to exposure above or below detection thresholds.

Sharks

The primary fish that have been identified as capable of detecting electromagnetic fields include salmonids (trout, salmon char, etc.), elasmobranchs (sharks, skates, and rays), tuna, eels, and stargazers.

For any electromagnetically sensitive fish in close proximity to the source, the generation of electromagnetic fields has the potential to interfere with prey detection and navigation. They may also experience temporary disturbance of normal sensory perception or could experience avoidance reactions (Kalmijn 2000), resulting in alterations of behavior and avoidance of normal foraging areas or migration routes. Potential impacts of electromagnetic activity on fish may not be relevant to early life stages (eggs, larvae, juveniles) due to ontogenic (lifestage-based) shifts in habitat utilization (Botsford *et al.* 2009; Sabates *et al.* 2007). However, these effects would occur to individuals within close proximity to the electromagnetic field. The proposed devices would be moving through the water and would only be deployed for a temporary period during a typical four hour operation period. We conclude that no individual short- or long-term effects are anticipated and mortality from electromagnetic devices is not expected due to the low level electromagnetic field generated from the mine warfare systems used in training. As a result, the use of electromagnetic devices may affect, but is not likely to adversely affect the scalloped hammerhead shark.

Marine Mammals

Based on the available literature, no evidence of electrosensitivity in marine mammals was found except recently in the Guiana dolphin (Czech-Damal *et al.* 2011). Normandeau *et al.* (2011) reviewed available information on electromagnetic and magnetic field sensitivity of marine organisms (including marine mammals) for an impact assessment of offshore wind farms for the U.S. Department of the Interior and concluded there was no evidence to suggest any magnetic sensitivity for sea lions or fur seals.

Fin whales, humpback whales, and sperm whales have shown positive correlations with geomagnetic field differences (Walker *et al.* 1992), although none of the studies have determined the mechanism for magnetosensitivity. The suggestion from these studies is that whales can sense the Earth's magnetic field and may use it to migrate long distances (Kirschvink *et al.* 1986). Cetaceans appear to use the Earth's magnetic field for migration in two ways: as a "map" by moving parallel to the contours of the local field bathymetry and topography, and as a timer based on the regular fluctuations in the field, which is assumed to allow animals to monitor their progress on the "map" (Klinowska 1990). Cetaceans do not appear to use the Earth's magnetic field for directional information (*i.e.,* they do not use magnetic fields as an internal compass; Klinowska 1990). Potential impacts to marine mammals associated with electromagnetic fields are dependent on the marine

mammal's proximity to the source and the strength of the magnetic field. Mazzuca *et al.* (1999) reviewed mass stranding events between 1957 and 1998 of cetaceans in the Hawaii Archipelago and while it was possible that the results of their study shared certain similarities with other events worldwide, none were as curious as those consistent with the hypotheses that certain coastal configurations, bottom topography, and geomagnetic anomalies may play a role in the cause and location of mass strandings. Electromagnetic fields associated with the proposed action are relatively weak (only 10 percent of the Earth's magnetic field at 79 ft [24 m]), temporary in duration, and localized. Once the source is turned off or moves from a location, the electromagnetic field is gone. If a marine mammal is sensitive to electromagnetic fields, it would have to be present within the electromagnetic field (approximately 656 ft [200 m] from the source) during the activity in order to detect it. Due to the standard operating procedures and the Navy's mitigation measures, we conclude that the chance occurrence of a marine mammal in close enough vicinity to the electromagnetic device is unlikely. Research suggests that pinnipeds, like the Guadalupe fur seal, are not sensitive to electromagnetic fields (Normandeau Associates Inc. *et al.* 2011) and we conclude would likely have no effect on the Guadalupe fur seal.

Detection does not necessarily signify a significant biological response rising to the level of take as defined under the ESA. Given the small area associated with mine fields, the infrequency and short duration of magnetic energy use, the low intensity of electromagnetic energy sources, and the density of cetaceans in these areas, the likelihood of ESA-listed cetaceans being exposed to electromagnetic energy at sufficient intensities to create a biologically relevant response is so low as to be discountable. As a result, the use of electromagnetic devices may affect, but is not likely to adversely affect the blue whale, fin whale, and humpback whale.

Sea Turtles

Sea turtles use geomagnetic fields to navigate while at sea; changes in or interference with those fields may impact their movement (Lohmann and Lohmann 1996; Lohmann *et al.* 1997). Experiments show that sea turtles can detect changes in magnetic fields, which may cause them to deviate from their original direction (Lohmann and Lohmann 1996; Lohmann *et al*. 1997). If located in the immediate area (within about 650 ft [200 m]) where electromagnetic devices are being used, ESA-listed sea turtles could deviate from their original movements, but the extent of this disturbance is likely to be inconsequential. The proposed electromagnetic devices are relatively low intensity (0.002 G at 650 ft [200 m] from the source), temporary in duration, and very localized, and are, therefore, not expected to cause more than short term behavioral disturbances. Given the small area associated with mine fields, the infrequency and short duration of magnetic energy use, the low intensity of electromagnetic energy sources, and the density of sea turtles in these areas, the likelihood of ESA-listed sea turtles being exposed to electromagnetic energy at sufficient intensities to create a biologically relevant response is so low as to be discountable. As a result, use of electromagnetic devices may affect, but is not likely to adversely affect the green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle.

Lasers

The highest potential level of exposure from low energy lasers would be from an airborne laser beam directed at the ocean's surface. An assessment on the use of low energy lasers by the Navy determined that low energy lasers have an extremely low potential to impact marine biological resources (Swope 2010). The assessment determined that the maximum potential for laser exposure is at the ocean's surface, where laser intensity is greatest (Swope 2010). Any heat that the laser generates would rapidly dissipate due to the large heat capacity of water and the large volume of water in which the laser is used. Low energy lasers have an extremely low potential to impact

invertebrates or fish, due to attenuation of the laser's energy in the water column. Based on the parameters of the low energy lasers and the behavior and life history of major biological groups, it was determined the area vulnerable to laser energy would be at or above the water's surface, to the eye of a sea turtle or marine mammal. Sharks are not expected at or above the water's surface. Swope (2010) evaluated light detection and ranging (LIDAR) and calculated the single exposure limit for various species of marine mammals and sea turtles and determined that the energy associated with the laser at the surface was below a single exposure limit for all species. There is no suspected effect due to heat from the laser beam. Furthermore, 96 percent of a laser beam projected into the ocean is absorbed, scattered, or otherwise lost (Guenther *et al.* 1996). Although all points on a sea turtle's body would have roughly the same probability of laser exposure, only eye exposure is of concern for low-energy lasers. Given the usage characteristics, platform movement, and animal movement, we conclude that it would not be possible for a marine mammal or turtle to experience eye damage from the lasers proposed for use during Civilian Port Defense training. As a result, the use of lasers would have no effect on the scalloped hammerhead shark, blue whale, fin whale, humpback whale, Guadalupe fur seal, green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle.

Acoustic Impacts

Potential acoustic impacts associated with the Civilian Port Defense training include vessel noise, aircraft noise, and high frequency acoustic transmissions. In order to determine the potential acoustic impacts on the ESA-listed species, hearing capabilities are discussed as well as each acoustic source as it relates to the ability of the ESA-listed species to perceive and react to each sound source. NOAA is developing comprehensive guidance on sound characteristics likely to cause injury and behavioral disruption in the context of the MMPA, ESA, and other statutes. Until formal guidance is available, NMFS uses conservative thresholds of received sound pressure levels from broad band sounds that may cause behavioral disturbance and injury. These conservative thresholds are applied in both MMPA permits and ESA Section 7 consultations for marine mammals to evaluate the potential for sound effects. The criterion levels specified here are specific to the levels of harassment as defined under the MMPA. Level A criterion for in-water Permanent Threshold Shift (PTS; injury) is 190 $dB_{Root\ Mean\ Square\ (rms)}$ re 1 μPa for pinnipeds and 180 dB_{rms} re 1 μPa. Level B criterion for in-water for behavioral disruption for impulsive noise, is 160 dB_{rms} re 1 μPa; Level B criterion for in-water for behavioral disruption for non-pulse noise is 120 dB_{rms} re 1 μPa. There is no threshold established for Level A criterion for in-air PTS (injury), but for the Level B criterion in-air for harbor seals it is 90 dB_{rms} and for all other pinniped species, it is 80 dB_{rms}. We evaluated the proposed project activities using the above acoustic thresholds. In the ESA context, these thresholds are informative as the thresholds at which we might expect either behavioral changes or physical injury to an animal to occur, but the actual anticipated effects would be the result of the specific circumstances of the action (as further explained below).

Vessel Noise

Vessel noise could disturb fish, sea turtles, and marine mammals, and potentially elicit an alert, avoidance, or other behavioral reactions such as diving and moving away from the source. The types of disturbance of concern in this consultation are: 1) masking and 2) animal disturbance from in water sound.

The proposed action area has high levels of anthropogenic noise due to the industrialized waterfronts (*e.g.*, harbors, marinas, shipping lanes) caused by research, ecotourism, commercial or private vessels, or government activities. The proposed activities are not expected to accumulate anymore noise into that already noisy environment. Some marine species may have habituated to vessel noise,

and may be more likely to respond to the sight of a vessel rather than the sound of a vessel, although both may play a role in prompting reactions (Hazel *et al.* 2007). The ambient noise level within active shipping areas of Los Angeles/Long Beach has been estimated around 140 dB sound pressure level (Tetra Tech Inc 2011). Existing ambient acoustic levels in non-shipping areas around Terminal Island in the Port of Long Beach ranged between 120 dB and 132 dB (Tetra Tech Inc. 2011). 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 2015). This level of shipping would mean approximately 9,000 large ship transits to and from these ports and through the proposed action area. By comparison, the next nearest large regional port, Port of San Diego, only had 318 vessel calls in 2012. With ambient noise levels being so elevated, the vessel noise would likely be masked by the existing environmental noise.

Masking

Masking, or "auditory interference," is the obscuring of sounds of interest by other interfering sounds, generally at similar frequencies. When this occurs, noises interfere with an animal's ability to hear calls of its conspecifics or have its own calls heard. Marine mammals use acoustic signals for a variety of purposes, which differ among species, but include communication between individuals, navigation, foraging, reproduction, and acquisition of information about their environment (Erbe and Farmer 2000; Tyack and Clark 2000). Masking generally occurs when the interfering noise is louder than, and of a similar frequency to, the auditory signal received or produced by the animal. Masking of important acoustic cues may threaten community-scale life processes, affecting the behavior and perhaps reducing an animal's ability to perform normal life functions (Southall *et al.* 2007; McWilliams and Hawkins 2013).

An increase in background sound can have an effect on the ability of a marine mammal, sea turtle, or shark to hear a potential mate or predator or to glean information about its general environment. In effect, acoustic communication and orientation of a marine mammal, sea turtle, or shark may potentially be restricted by noise regimes in their environment that are within their hearing range. Masking occurs when a loud sound drowns out a softer sound or when noise is at the same frequency as a sound signal. This is of particular concern to marine animals when the noise is at frequencies similar to those of biologically important signals, such as mating calls.

Masking and Marine Mammals:

Critical ratios have been determined for pinnipeds (Southall *et al.* 2000, 2003) and detections of signals under varying masking conditions have been determined for active echolocation and passive listening tasks in odontocetes (Au and Pawloski 1989; Erbe 2000; Johnson 1971). These studies provide baseline information from which the probability of masking can be estimated. Clark *et al.* (2009) developed a methodology for estimating masking effects on communication signals for low frequency cetaceans, including calculating the cumulative impact of multiple noise sources. This technique was used on in Stellwagen Bank National Marine Sanctuary (U.S. East Coast) and showed, when two commercial vessels pass through a North Atlantic right whale's (*Eubalaena glacialis*) optimal communication space (estimated as a sphere of water with a diameter of 12 miles [20 km]), that space decreased by 84 percent. This methodology relied on empirical data on source levels of calls (which is unknown for many species), and requires many assumptions about ambient noise conditions and simplifications of animal behavior, but is an important step in determining the impact of anthropogenic noise on animal communication. Vocal changes in response to anthropogenic noise can occur across the repertoire of sound production modes used by marine mammals, such as whistling, echolocation click production, calling, and singing. Changes to vocal behavior and call structure may result from a need to compensate for an increase in background noise. In cetaceans,

vocalization changes have been reported from exposure to anthropogenic sources such as sonar, vessel noise, and seismic surveying.

While masking is a concern for marine mammals as it may interfere with their ability to hear acoustics signals from their environment, the proposed action is not expected to influence the existing ambient noise in the proposed action area or the already present masking effect in the environment.

Masking and Turtles

Based on knowledge of their sensory biology (Bartol and Ketten 2006; Bartol and Musick 2002; Levenson *et al.* 2004), sea turtles may be able to detect objects within the water column (*e.g.,* vessels, prey, predators) via some combination of auditory and visual cues. However, research examining the ability of sea turtles to avoid collisions with vessels shows they may rely more on their vision than auditory cues (Hazel *et al.* 2007). Similarly, while sea turtles may rely on acoustic cues to identify nesting beaches, they appear to rely on other non-acoustic cues for navigation, such as magnetic fields (Lohmann and Lohmann 1996) and light (Avens and Lohmann 2003). Additionally, they are not known to produce sounds underwater for communication. As a result, sound may play a limited role in a sea turtle's environment. With the ambient noise levels of the proposed action area being elevated, the vessel noise from the proposed action would have no additional masking effect to the environment and therefore would not impact a sea turtle's ability to perceive other biologically relevant sounds. Sea turtles are frequently exposed to research, ecotourism, commercial, government, and private vessel traffic. Some sea turtles may have even habituated to vessel noise (Hazel *et al.* 2007).

Masking and Sharks

Sharks hear sounds with frequencies ranging from 10 Hz to 800 Hz, and are especially responsive to sounds lower than 375 Hz, easily detecting prey at distances of more than 800 feet. Based on knowledge of their sensory biology (Carrier *et al.* 2012), sharks may be able to detect objects within the water column (*e.g.,* vessels, prey, predators) via some combination of auditory and visual cues. The otolithic organs in other fish respond directionally to sound due to the polarizations of the sensory hair cells (Lu and Popper 2001). This is likely to be the case with sharks, as well. However, very little is known about hearing sensitivity, masking by noise, and temporal sensitivity in sharks. Additionally, they are not known to produce sounds underwater for communication. As a result, sound may play a limited role in the shark's environment. With the ambient noise levels of the proposed action area being elevated, the vessel noise from the proposed action would have no additional masking effect to the environment and therefore would not impact a shark's ability to perceive other biologically relevant sounds.

Animal Disturbance from In-water Sound

Vessel noise has the potential to create in-water sound that could disturb sharks, sea turtles, or marine mammals which could result in behavioral (*e.g.,* avoidance) or physiological responses (*e.g.,* stress, increased heart rate). Individual response to vessel noise can be variable and influenced by the number of vessels in their perceptual field, the distance between a vessel and animal, a vessel's speed and vector, the predictability of a vessel's path, noise associated with a vessel (particularly engine noise which on Navy ships is minimized as much as engineering design will allow), the length of time a vessel is present, the duration of vessel presence (including rate of occurrence), and behavioral state of the animal.

While vessel movements have the potential to expose sharks, marine mammals, or sea turtles occupying the water column to noise and general disturbance, potentially resulting in short-term

behavioral or physiological responses, such responses would not be expected to compromise the health, condition, or fitness of an individual animal, because the impacts from vessel noise would be temporary, infrequent, and localized. Based on studies of a number of species, mysticetes (*e.g.*, blue whale, fin whale, humpback whale) are not expected to be disturbed by vessels that maintain a reasonable distance from the animal, which varies with vessel size, geographic location, and tolerance levels of individuals. For pinnipeds, like the Guadalupe fur seal, data indicate tolerance of vessel approaches, especially for animals in the water. The vessels associated with the proposed action would follow the standard operating procedures (*e.g.*, lookouts to detect biological resources) and mitigation measures (*e.g.*, maneuvers to maintain 500 yard safety zone away from observed whales and at least a 200 yard safety zone away from other marine mammals), to minimize or avoid impacting marine mammals.

We conclude that any reactions are likely to be minor, since any short-term avoidance reactions will not lead to long-term consequences for the individual shark, marine mammal, or sea turtle or their population in the action area. We also expect that individual sharks, marine mammals, or sea turtles are either not likely to respond to vessel noise or are not likely to measurably respond in ways that would significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Any reactions are likely to be minor and short-term avoidance reactions, leading to no long-term consequences for the individual. The implementation of the Navy's mitigation measures would further reduce any potential impacts of vessel noise. As a result, vessel noise generated by the Civilian Port Defense training may affect, but is not likely to adversely affect the scalloped hammerhead shark, blue whale, fin whale, humpback whale, Guadalupe fur seal, green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle.

Aircraft Noise

Sharks, sea turtles, and marine mammals may be exposed to aircraft-generated noise wherever aircraft overflights occur in the proposed action area. Rotary-wing aircraft (helicopters) are used throughout the proposed action area. Helicopters produce low-frequency sound and vibration (Pepper *et al.* 2003; Richardson *et al.* 1995). Most marine invertebrates would not sense low-frequency sounds above the ambient noise levels, distant sounds, or aircraft noise transmitted through the air-water interface.

Noise generated from helicopters is transient in nature and variable in intensity. Helicopter sounds contain dominant tones from the rotors that are generally below 500 Hz. Helicopters often radiate more sound forward than aft. The underwater noise produced is generally brief when compared with the duration of audibility in the air. The sound pressure level from an H-60 helicopter hovering at a 50 ft (15 m) altitude would be approximately 125 dB re 1 µPa at 1m below the water surface, which is lower than the ambient sound that has been estimated in and around the Ports of Los Angeles/Long Beach. Helicopter flights associated with the Civilian Port Defense training could occur at altitudes as low as 75 to 100 ft (23 to 31 m), and typically last two to four hours.

Sharks

Scalloped hammerhead sharks may be exposed to aircraft-generated noise wherever aircraft overflights occur; however, sound is primarily transferred into the water from air in a narrow cone under the aircraft. Some species of fish, not necessarily sharks, could respond to noise associated with low-altitude aircraft overflights or to the surface disturbance created by downdrafts from helicopters. Aircraft overflights have the potential to affect surface waters and, therefore, to expose sharks if occupying those upper portions of the water column to sound and general disturbance potentially resulting in short-term behavioral or physiological responses. If sharks were to respond to aircraft overflights, only minor, short-term behavioral or physiological reactions (*e.g.*, swimming

away and increased heart rate with no resulting diminution in fitness) would be expected; however, no long-term on sharks are expected from aircraft noise.

Marine mammals and sea turtles may respond to both the physical presence and to the noise generated by the aircraft. Aircraft produce noise at frequencies that are well within the frequency range of cetacean calls and also produce visual signals such as the aircraft itself and the shadow (Richardson *et al.* 1995; Richardson and Würsig 1997). Underwater sounds from aircraft are strongest just below the surface and directly under the aircraft. Underwater sounds from aircraft are strongest just below the surface and directly under the aircraft. Low flight altitudes of helicopters may occur under 100 ft (31 m) and may elicit a somewhat stronger behavioral response due to the proximity to marine mammals and sea turtles, the slower airspeed and therefore longer exposure duration, and the downdraft created by the helicopter's rotor. Luksenburg and Parsons (2009) confirmed that even brief straight line helicopter overflights can affect the behavior of bowhead whales (*B. mysticetus*), but the behavioral effects may not be biologically significant (Patenaude *et al.* 2002). However, the sensitivity to aircraft may depend on the animals' behavioral state at the time of exposure (*e.g.*, resting, socializing, foraging, or traveling). Resting individuals appeared to be most sensitive to disturbance (Würsig *et al.* 1998) and the altitude and lateral distance of the aircraft to the animal is an important factor affecting the response (Luksenburg and Parsons 2009). The role of vision in observed responses of cetaceans to aircraft remains unclear (Richardson *et al.* 1995; Richardson and Würsig 1997). The aircraft or its shadow may represent a disturbing factor, in addition to noise, but this has not been adequately studied (Luksenburg and Parsons 2009). Marine mammals, like sea turtles, would likely avoid the area under the helicopter. Based on the potential physical presence and the noise generated by the aircraft, we expect that, should the low altitude overflights affect marine mammals or sea turtles located at or near the surface at all, they may be startled, divert their attention to the aircraft, or avoid the immediate area by swimming away or diving; such minor, short-term reactions to aircraft are not expected to rise to the level of disrupting major behavior patterns such as migrating, breeding, feeding, and sheltering, nor could they be expected to injure or kill any listed marine mammals or sea turtles. As a result, aircraft noise generated by the Civilian Port Defense training may affect, but is not likely to adversely affect the scalloped hammerhead shark, blue whale, fin whale, humpback whale, Guadalupe fur seal, green sea turtle, loggerhead sea turtle, olive Ridley sea turtle, and leatherback sea turtle.

Sonar Systems

Sonar systems to be used during proposed Civilian Port Defense training would include AN/SQQ-32, AN/AQS-24 and handheld sonars (AN/PQS 2A). Of these sonar sources, only the AN/SQQ-32 requires quantitative acoustic effects analysis, given its source parameters, which are classified. The remaining sources have been classified as *de minimis* sources, which are either above the hearing range of marine species or have narrow beam widths and short pulse lengths that would not result in any effects to marine species, including marine mammals, sea turtles, and the scalloped hammerhead shark. All active acoustic sources proposed for Civilian Port Defense training would emit signals considered to be high-frequency (greater than 10 kHz).

Sharks

Few fish species have been shown to be able to detect the high-frequency sounds associated expected by the Civilian Port Defense training activities. Although hearing capability data only exist for fewer than 100 of the 32,000 fish species, current data suggest that most species of fish detect sounds from 50 to 1,000 Hz, with few fish hearing sounds above 4 kHz (Popper 2008). It is believed that most fish have their best hearing sensitivity from 100 to 400 Hz (Popper 2003). Studies have also shown that high-frequency emissions may be detected by some fish species. Experiments on several species of

the Clupeidae (*i.e.*, herrings, shads, and menhadens) have obtained responses to frequencies between 40 and 180 kHz (Astrup 1999); however, no hearing specialists are listed as threatened or endangered under the ESA in the proposed action area. The scalloped hammerhead shark, which is a hearing generalist has a hearing range well below the transmit frequencies expected to be produced by the proposed activities. The highest sensitivity hearing range for sharks is from 40 Hz to roughly 800 Hz (Myrberg 2001). We conclude that the scalloped hammerhead shark is able to detect low-frequency sounds only and would not be affected by the high frequency acoustic sources from the proposed action.

Marine Mammals

In assessing the potential effects on marine mammals expected to occur in the proposed action area from acoustic transmissions, a variety of factors must be considered, including source characteristics, animal presence and hearing range, duration of exposure, and impact thresholds for species that may be present.

Mine warfare sonar employs high frequencies (above 10 kHz) that attenuate rapidly in the water, thus producing only a small area of potential auditory masking. Anatomical and paleontological evidence suggests that the inner ears of mysticetes (baleen whales), like the humpback whale, are well adapted for hearing at lower frequencies (Ketten 1998; Richardson 1995). Functional hearing in low-frequency mysticetes is conservatively estimated to be between 7 Hz and 22 kHz (Southall *et al.* 2007). Some calls of humpback whales have been found to exceed 10 kHz (Ketten 1998; Richardson 1995). Higher-frequency mine warfare sonar systems are typically outside the hearing and vocalization ranges of mysticetes; therefore, mysticetes are unlikely to be able to detect the higher frequency mine warfare sonar, and these systems would not interfere with their communication or detection of biologically relevant sounds. Otariids, like the Guadalupe fur seal, have functional hearing limits that are estimated to be 50 Hz to 50 kHz in water and 50 Hz to 75 kHz in air (Babushina *et al.* 1991; Moore and Schusterman 1976).

Potential acoustic impacts to ESA-listed marine mammals could include non-recoverable physiological effects, recoverable physiological effects, and behavioral effects. Criteria and thresholds for measuring these effects induced from underwater acoustic energy have been established for marine mammals. PTS in hearing, is the criterion used to establish the onset of non-recoverable physiological effects, Temporary Threshold Shift (TTS) in hearing, is the criterion used to establish the onset of recoverable physiological effects, and a behavioral response function is used to determine non-physiological behavioral effects. The MMPA describes Level A harassment as potential injury and Level B harassment as potential disturbance. An analysis of the potential effects to marine mammals for the proposed acoustic sources was conducted using a methodology that calculates the total sound exposures level and maximum sound pressure level that a marine mammal may receive from the acoustic transmissions. The Navy Acoustic Effects Model (NAEMO) was used for all modeling analysis (Marine Species Modeling Team 2012). Environmental characteristics (*e.g.*, bathymetry, wind speed, and sound speed profiles) and source characteristics (*i.e.*, source level, source frequency, transmit length and interval, and horizontal beam width) are used to determine the propagation loss of the acoustic energy, which was completed using the Comprehensive Acoustic System Simulation/Gaussian Ray Bundle propagation model. The propagation loss then was used in NAEMO to create acoustic footprints, model source movements, and calculate received energy levels around the source. Animats, or representative animals, are distributed based on density data obtained from the Navy Marine Species Density Database (Department of the Navy 2012). This database is based on surveys, published population estimates, and a Relative Environmental Suitability model (Kaschner *et al.* 2006). The energy received by each distributed animat within the model is summed into a total sound exposure level, which is compared to the acoustic effects criteria to calculate

potential exposures at the PTS and TTS level. Additionally, the maximum sound pressure level received by each animat predicts probability of behavioral harassment via the behavioral risk function. The estimated sound exposure level and sound pressure level received by each animat is then compared to a set of thresholds (Finneran and Jenkins 2012). The output from the acoustic modeling provided both the predicted ranges to the various levels of effect as well as estimated exposures of marine mammal species.

The model and current acoustic criteria for assessing acoustic effects to humpback whales (results would be the same for blue whales and fin whales) and Guadalupe fur seals was used and zero Level A and Level B exposures were predicted. Additionally, the use of the Navy's standard practices and mitigation measures would ensure the area is generally clear of marine mammals, including ESA-listed marine mammals, during training events. As a result, aircraft noise generated by the Civilian Port Defense training may affect, but is not likely to adversely affect the blue whale, fin whale, humpback whale, and Guadalupe fur seal.

Sea Turtles

Sea turtles are low-frequency hearing specialists, typically hearing frequencies from 30 to 2 kHz, with a range of maximum sensitivity between 100 and 800 Hz (Bartol and Ketten 2006; Bartol *et al.* 1999; Lenhardt 1994, 2002; Ridgway *et al.* 1969). Hearing below 80 Hz is less sensitive but still potentially usable (Lenhardt 1994). Given that the acoustic sources associated with the proposed action are high frequency (above 10 kHz), we conclude that sea turtles would not be able to perceive the acoustic transmission and would likely not be affected by the high frequency acoustic sources from the proposed action.

Transmission of Marine Mammal Diseases and Parasites

The U.S. Navy deploys trained Atlantic bottlenose dolphins (*Tursiops truncatus*) and California sea lions (*Zalophus californianus*) for integrated training involving two primary mission areas; to find objects such as inert mine shapes, and to detect swimmers or other intruders around Navy facilities such as piers. When deployed, the animals are part of what the Navy refers to as Marine Mammal Systems. Based on the standard procedures with which these systems are deployed, it is not reasonably foreseeable that use of these marine mammals systems would result in the transmission of disease or parasites to cetacea or pinnipeds in the proposed action area. Due to the very small amount of time that the Navy marine mammals spend in the open ocean; the control that the trainers have over the animals; the collection and proper disposal of marine mammal waste; the exceptional screening and veterinarian care given to the Navy's animals; the visual monitoring for indigenous marine mammals; and an over forty year track record with zero known incidents, we conclude that the use of Navy marine mammals during training activities would have no effect on the blue whale, fin whale, humpback whale and Guadalupe fur seal.

Conclusion

Based on this analysis, NMFS concurs with the Navy that the proposed action is not likely to adversely affect the subject listed species.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Navy or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently

modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

MARINE MAMMAL PROTECTION ACT

Although several marine mammal species are listed as federally endangered or threatened under the ESA, the Marine Mammal Protection Act of 1972 (MMPA) is the principal Federal legislation that guides marine mammal species protection and conservation. Under the MMPA, "take" of a marine mammal is permitted by NMFS under an Incidental Harassment Authorization (IHA) when the specified activity is incidental, but not intentional, of a small number of marine mammals.

The Navy has submitted an application to NMFS requesting an IHA for this action, but only for non-ESA listed marine mammals. This application is currently under review by NMFS' Office of Protected Resources.

Thank you for coordinating with NMFS regarding this project. We appreciate your efforts to comply with Federal regulations and to conserve and protect marine mammals, sea turtles, fish, and essential fish habitat. Please direct questions regarding this letter to Monica.DeAngelis, 562-980-3232, Monica.DeAngelis@noaa.gov.

Sincerely,

for

William W. Stelle, Jr.
Regional Administrator

cc: Chip Johnson, U.S. Pacific Fleet, Environmental Readiness, San Diego Detachment, N465CJ
Administrative File: 151422WCR2015PR00227

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CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200

July 17, 2015

L.M. Foster
Department of the Navy
Commander
United States Pacific Fleet
250 Makalapa Drive
Pearl Harbor, HA 96860-3131

Attn: John Van Name

Re: **ND-0024-15,** Department of the Navy, Negative Determination, 2015 West Coast Civilian Port Defense Training, Ports of Los Angeles and Long Beach, Los Angeles Co.

Dear L.M. Foster:

The Navy has submitted a negative determination for a two-week Civilian Port Defense Training event for training its west coast personnel on the skills needed to keep civilian ports free of mine threats. These training events alternate annually between the east and west coasts of the U.S. The training involves air, surface, and subsurface vehicles and other assets that transport various acoustic, laser, and video sensors which seek out and neutralize mines and mine-shaped objects deployed. The activities would occur inside and outside the breakwater in the two ports, out to the 300 ft. depth contour. The Navy summarizes the training as follows:

> *Naval forces provide mine warfare capabilities to defend the homeland 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 may be used in order to ensure that strategic U.S. ports are cleared of mine threats.*
>
> *Assets used during Civilian Port Defense training include up to four unmanned underwater vehicles, marine mammal systems, up to two helicopters, Explosive Ordnance Disposal platoons, and AVENGER class ships (225 ft [69 m]). The AVENGER is a surface mine countermeasure vessel specifically outfitted for mine countermeasure capability. The Proposed Action also includes the placement, use, and recovery of up to 20 bottom placed non-explosive mine training shapes, mine detection (identifying objects), and mine neutralization (disrupting, disabling or detonating [not part of the Proposed Action]).*

As noted in the above passage, no actual detonations would occur during the training. All equipment would be removed from the seafloor at the end of the training. Vessel speeds would be less than 10 knots during training, to minimize the potential for collisions with marine mammals, sea turtles and other vessels. Underwater unmanned vehicles are slow-moving and would be closely monitored. Recreational and commercial boating activities would not be restricted, and the Navy will coordinate with the Coast Guard to provide Notices to Mariners (and develop safety zones, if warranted). The Navy will also coordinate with the two Ports.

The two types of activities raising potential marine resource concerns are sonar use and helicopter tows, and the Navy is also coordinating with the National Marine Fisheries Service (NMFS) concerning these potential effects. Only one of the four types of sonar sources has the potential to affect or disturb marine resources: AN/SQQ-32, a high frequency (10-200 kHz) source. Helicopter-towed devices would move rapidly through the water, at speeds of up to 40 knots (46 mph). To protect marine resources from these activities, the Navy has included the following monitoring, avoidance, and minimization measures:

> *5.2.1.1 High-Frequency Active Sonar*
> *The Navy will have one Lookout on ships or aircraft conducting high-frequency active sonar 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 (yd, 183 m) from the active sonar source. If the source can be turned off during the activity, 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 yd (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).*
>
> *5.2.2.1 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 yd (457 m) around observed whales, and 200 yd (183 m) around all other marine mammals (except bow riding dolphins), providing it is safe to do so.*

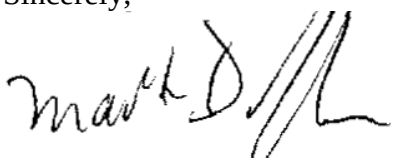
5.2.2.2 Towed In-Water Devices

> *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 yd (229 m) around any observed marine mammal, providing it is safe to do so.*

Under the federal consistency regulations (Section 930.35), a negative determination can be submitted for an activity "which is the same as or similar to activities for which consistency determinations have been prepared in the past." The Commission staff has concurred with negative determinations submitted by the Navy for similar training activities in various locations in coastal waters off San Diego County (ND-032-02, ND-015-01, ND-024-99). The Navy has agreed, as it did during these past reviews, to provide the Commission staff with copies of any post-monitoring reports provided to NMFS. In reviewing the past monitoring reports prepared for NMFS (and copied to us), the Commission staff notes that the monitoring reports did not document any adverse effects on marine mammals or sea turtles. Moreover, it appears fairly clear that, based on the information provided in the Navy's Draft Environmental Assessment for the proposed training, the marine mammals potentially affected - dolphins, seals and sea lions - are frequently-surfacing species, and thus easily spotted and avoided.

In conclusion, with the commitments described above, and given the short term nature of the training and past monitoring results from similar activities conducted in the various San Diego County offshore areas (and which involved use of similar equipment), we agree that the proposed training at POLA/POLB would be similar to these previously-concurred-with San Diego County Navy mine threat training events, and would not adversely affect coastal zone resources. We therefore **concur** with your negative determination made pursuant to 15 CFR 930.35 of the NOAA implementing regulations. Please contact Mark Delaplaine at (415) 904-5289 if you have any questions regarding this matter.

Sincerely,



(for) CHARLES LESTER
Executive Director

cc: Long Beach District
Port of Long Beach
Port of Los Angeles
NMFS