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STAFF REPORT: REGULAR CALENDAR

Consistency Determination No.	**CD-0003-25**
Applicant:	Department of the Navy
Location:	California portion of Hawaii-California Training and Testing Study Area offshore of all coastal counties of California from Mendocino to San Diego (Exhibit 1)
Project Description:	Continuation and expansion of military readiness program activities of the California portion of Hawaii- California Training and Testing Program
Staff Recommendation:	Objection

SUMMARY OF STAFF RECOMMENDATION

The proposed project described by the U.S. Navy in its consistency determination includes a wide range of military training and testing activities that would be carried out over seven years across approximately 330,000 square miles of ocean offshore of California. The activities would be mostly focused in open ocean waters far from shore but would extend to nearshore waters and the mean-high tide line in several locations. Proposed activities include various types of air, surface, and underwater warfare and would involve widespread operation of crewed and uncrewed surface and submarine vessels and aircraft, the use of active high-energy sonar, explosives and other munitions, high-energy lasers, air guns, the deployment of training structures, underwater platforms and fiber optic cables and instrumentation on the seafloor, and other activities that would affect coastal resources.

Although this is the fifth such multi-year Navy offshore training and testing program for which the Navy has submitted a consistency determination for the Commission's review, the currently proposed program includes several notable differences: (1) rather than limited to areas offshore of San Diego and southern California like previous programs, the current proposal includes extensive training areas and activities offshore of central and northern California as well; (2) new and expanded use of large uncrewed surface and underwater vessels; (3) reductions in the amount of area offshore of southern California (by approximately 478 square miles) designated for seasonal avoidance due to the presence of sensitive marine mammals and habitats; and (4) significant increases in the number of individual marine mammals (particularly whales, dolphins and porpoises) estimated to be subjected to disturbance and injury. Maximum estimates of each over the full seven year program are 38,629,542 disturbances ("level B take"), 30,905 injuries ("level A take") and 231 mortalities.

Given the extensive scope of the proposed project, involving hundreds of individual actions spread across multiple years and much of the state's offshore waters, and the limited time provided for staff review, that review effort was focused primarily on areas of the most sensitive coastal resources and activities with the highest levels of anticipated and potential adverse impacts rather than a detailed evaluation of everything proposed.

Based on that review, the proposed project would result in significant adverse impacts to California's marine resources, particularly areas and species of special biological and economic significance. These adverse impacts would primarily result from the Navy's proposed use of high-energy mid-frequency sonar that generates impulse sounds that can travel dozens of miles within the hearing and communication ranges of a wide variety of marine mammals, as well as detonations of explosives and other ordinance that can injury and destroy marine wildlife and habitats, and the widespread use of vessels, including some at high speeds without crew, that pose a mortality risk for whales due to collisions.

The scale and scope of these anticipated and potential adverse impacts poses a fundamental inconsistency with the coastal and marine resources protection policy of the California Coastal Management Program, Section 30230. To address this inconsistency Commission staff has identified a variety of alternative measures that would help reduce and avoid the proposed project's anticipated and potential adverse impacts. These alternative measures include: (1) Expansion and extension of proposed sonar and explosives avoidance areas, including inclusion of National Marine Sanctuaries and State-designated Marine Protected Areas; (2) Establishment of larger safety buffers for marine mammals during high-energy mid-frequency (MF1) sonar use; (3) Reduction in sonar intensity under low-visibility conditions; (4) Limitations on uncrewed vessel speeds in sensitive areas to 10 knots (unless higher speeds are critical to meet training needs); (5) Use of more effective marine mammal observers on all ships during the use of MF1 sonar sources and explosives; (5) Mandatory use of support vessels with assigned lookouts for uncrewed surface vessels when they are traveling faster than 10 knots; (6) Seasonal limits to amphibious vehicle operations in the surf-zone to protect nesting birds and seal and sea lion haul-outs; and (7)

Development and implementation of a rocky reef and hard substrate impact mitigation plan to offset habitat loss and damage resulting from seafloor cable and infrastructure construction.

However, in recent communications with Commission staff, the Navy has rejected these measures. As such, Commission staff is recommending the Commission object to the proposed seven-year Navy offshore training and testing program.

The current program is the fifth of these Navy multi-year offshore training and testing programs reviewed by the Commission since the Navy began submitting consistency determinations for them in 2006. The Commission's review has resulted in an objection in each of those prior instances. However, in each case, as allowed for in the Coastal Zone Management Act's federal consistency regulations, the Navy has disagreed with the Commission, provided notice of its conclusion that its proposed activity is fully consistent with the enforceable policies of the state's coastal management program and has proceeded with implementation of its training and testing programs. Following past Commission objections, the Navy has often worked to help address the concerns raised by the Commission as a result of its review, including through refinement and addition of adverse impact avoidance and minimization measures.

The staff recommends that the Commission **object** to the Navy's consistency determination CD-0003-25. The motion and resolution are on **Page 6** of this report. The standard of review for this Commission review of federal consistency determinations is whether the project described in the consistency determination is consistent with the enforceable policies of the California Coastal Management Program (i.e., with Chapter 3 of the Coastal Act).

Table of Contents

I. FEDERAL AGENCY'S CONSISTENCY DETERMINATION 6

II. MOTION AND RESOLUTION 6

III. APPLICABLE LEGAL AUTHORITIES 6
A. Standard of Review 6
B. State Agency Objections 7

IV. FINDINGS AND DECLARATIONS 8
A. Project Description 8
Expanded Southern California (SOCAL) Range Complex 10
Point Mugu Sea Range (PMSR) 12
NOCAL Range Complex 13
Amphibious Lanes 14
Activities Occurring in Multiple Ranges 14
Standard Operating Procedures and Proposed Mitigation Areas 18
B. Previous Commission Actions 19
C. Other Agency Approvals and Consultations 21
National Marine Fisheries Service (NMFS) 21
U.S. Fish and Wildlife Service (USFWS) 22
State of Hawaii 22
Tribal Governments 22
California Office of Historic Preservation 23
NOAA Office of National Marine Sanctuaries 23
D. Marine Resources 23
Overview 23
Types of Marine Species and Marine Resources 24
Sonar Use 24
Explosives Use and Expendable Materials 40
Potential for Vessel Strikes 43
Installation of New Seafloor Infrastructure 45
Marine Mammals - Navy Conclusion 45
Sea Turtles and Other Marine Species - Navy Conclusion 46
Commission Analysis of Effects of HCTT Activities on Marine Resources 47
Modifications Needed for Consistency with Section 30230 of the CCMP 53
Conclusion 60
E. Cultural Resources 61
F. Commercial and Recreational Fishing / Access and Recreation 63

Appendices

Appendix A – Substantive File Documents
Appendix B – Navy Consistency Determination CD-0003-25
Appendix C – CD Appendix A: Military Readiness Activities
Appendix D – CD Appendix C: Mitigation

EXHIBITS

Exhibit 1 – California Study Area
Exhibit 2 – HCTT Study Area
Exhibit 3 – SOCAL Range Complex Expansion
Exhibit 4 – New Activities Table
Exhibit 5 – Eastern SOCAL Range Complex
Exhibit 6 – SOCAL Nearshore Training Areas
Exhibit 7 – Areas Offshore San Clemente Island
Exhibit 8 – New Shallow Water Training Ranges
Exhibit 9 – Special Use Airspace
Exhibit 10 – Cable Expansion Area
Exhibit 11 – Point Mugu Sea Range
Exhibit 12 – Port Hueneme Pile Driving
Exhibit 13 – NOCAL Range Complex
Exhibit 14 – Amphibious Approach Lanes
Exhibit 15 – Navy Systems Descriptions
Exhibit 16 – Acoustic Stressors Summary
Exhibit 17 – Sonar Impact Summary Tables
Exhibit 18 – Incidental Take Request Summaries
Exhibit 19 – Marine Mammal Stocks
Exhibit 20 – Proposed Mitigation Areas
Exhibit 21 – Blue Whale BIAs
Exhibit 22 – Fin Whale BIAs
Exhibit 23 – Humpback Whale BIAs
Exhibit 24 – Gray Whale BIAs
Exhibit 25 – Harbor Porpoise BIAs
Exhibit 26 – Killer Whale BIAs
Exhibit 26 – BIAs Off California
Exhibit 28 – Bottom Substrate Maps
Exhibit 29 – Sea Turtle Impact Summaries
Exhibit 30 – Sea Turtles Impacts by Stressor
Exhibit 31 – Mitigation Area and BIA Coverage

I. FEDERAL AGENCY'S CONSISTENCY DETERMINATION

The Department of the Navy (Navy) has determined the project is consistent to the maximum extent practicable with the California Coastal Management Program (CCMP).

II. MOTION AND RESOLUTION

Motion:

> *I move that the Commission **concur** with Consistency Determination CD-0003-25 on the grounds that the project described therein would be fully consistent, and thus consistent to the maximum extent practicable, with the enforceable policies of the CCMP.*

Staff recommends a **NO** vote on the forgoing motion. Failure of this motion will result in an objection with the determination of consistency, and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

> *The Commission hereby **objects** with Consistency Determination CD-0003-25 on the grounds that the project would not be consistent to the maximum extent practicable, with the enforceable policies of the CCMP.*

III. APPLICABLE LEGAL AUTHORITIES

A. STANDARD OF REVIEW

The federal Coastal Zone Management Act ("CZMA"), 16 U.S.C. § 1451-1464, requires that federal agency activities affecting coastal resources be "carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs." Id. at § 1456(c)(1)(A). The implementing regulations for the CZMA ("federal consistency regulations"), at 15 C.F.R. § 930.32(a)(1), define the phrase "consistent to the maximum extent practicable" to mean:

> … fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency.

This standard allows a federal activity that is not fully consistent with California's Coastal Management Program ("CCMP") to proceed, if full compliance with the CCMP would be "prohibited by existing law applicable to the Federal agency." In its consistency determination, the Navy did not argue that full consistency is prohibited by existing law applicable to it or provide any documentation to support a maximum extent practicable argument. Therefore, there is no basis to conclude that existing law applicable to the Federal agency prohibits full consistency. Since the Navy has raised no issue of practicability, as so defined, the standard before the Commission is full

consistency with the enforceable policies of the CCMP, which are the policies of Chapter 3 of the Coastal Act (Cal. Pub. Res. Code §§ 30200-30265.5).

B. State Agency Objections

The current program is the fifth multi-year offshore training and testing program reviewed by the Commission since the Navy began submitting consistency determinations for them in 2006. The Commission's review has resulted in an objection in each of those prior instances. In the initial two reviews, the objection resulted from the Navy's rejection of the conditions of approval the Commission adopted and in the subsequent reviews, the Commission objected based on a finding that the proposed activities were inconsistent with the marine resource protection policies of the California Coastal Management Program. However, these objections by the Commission have not resulted in any impediment or delay to the Navy's implementation of its training and testing programs. The Coastal Zone Management Act's federal consistency regulations that establish the Commission's review authority allow a federal agency to proceed with its proposed activity despite an objection from a coastal state after it notifies the state agency that it still concludes its proposed agency activity is fully consistent with the enforceable policies of the state's coastal management program. Following past Commission objections, however, the Navy has often worked to help address the concerns raised by the Commission as a result of its review, including through refinement and addition of adverse impact avoidance and minimization measures, and has moved forward with its training and testing programs, as provided by the federal consistency regulations.

Specifically, the federal consistency regulations (15 CFR § 930.43) provide:

> (a) In the event the State agency objects to the Federal agency's consistency determination, the State agency shall accompany its response to the Federal agency with its reasons for the objection and supporting information. The State agency response shall describe:
>
> > (1) How the proposed activity will be inconsistent with specific enforceable policies of the management program; and
> >
> > (2) The specific enforceable policies (including citations).
> >
> > (3) The State agency should also describe alternative measures (if they exist) which, if adopted by the Federal agency, would allow the activity to proceed in a manner consistent to the maximum extent practicable with the enforceable policies of the management program. Failure to describe alternatives does not affect the validity of the State agency's objection.
>
> (b) If the State agency's objection is based upon a finding that the Federal agency has failed to supply sufficient information, the State agency's response must describe the nature of the information requested and the necessity of having such information to determine the consistency of the Federal agency activity with the enforceable policies of the management program.

(c) State agencies shall send to the Director a copy of objections to Federal agency consistency determinations.

(d) In the event of an objection, Federal and State agencies should use the remaining portion of the 90-day notice period (see § 930.36(b)) to attempt to resolve their differences. If resolution has not been reached at the end of the 90-day period, Federal agencies should consider using the dispute resolution mechanisms of this part and postponing final federal action until the problems have been resolved. At the end of the 90-day period the Federal agency shall not proceed with the activity over a State agency's objection unless:

(1) the Federal agency has concluded that under the "consistent to the maximum extent practicable" standard described in section 930.32 consistency with the enforceable policies of the management program is prohibited by existing law applicable to the Federal agency and the Federal agency has clearly described, in writing, to the State agency the legal impediments to full consistency (See §§ 930.32(a) and 930.39(a)), or

(2) the Federal agency has concluded that its proposed action is fully consistent with the enforceable policies of the management program, though the State agency objects.

(e) If a Federal agency decides to proceed with a Federal agency activity that is objected to by a State agency, or to follow an alternative suggested by the State agency, the Federal agency shall notify the State agency of its decision to proceed before the project commences.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION

The proposed action[1] in the U.S. Navy (Navy) consistency determination (CD) submittal is for the continuation and expansion of military readiness program activities from December 2025 to December 2032[2], comprised of a wide and diverse range of training and testing efforts and the installation and upgrading of subsea infrastructure. Proposed program activities for various types of air, surface, and underwater warfare would involve widespread operation of crewed and uncrewed surface and submarine vessels and aircraft, the use of active sonar, explosives and other munitions, high-energy lasers,

[1] The CD clarifies: "The Action Proponents include the U.S. Department of the Navy (Navy) (including both the U.S. Navy and the U.S. Marine Corps [USMC]) jointly with the U.S. Coast Guard (USCG), U.S. Army (Army), and U.S. Air Force (USAF). The Navy is the lead agency and as the lead agency, the Navy represents the Action Proponents."

[2] Consistent with past practice, the Navy's current CD covers a multi-year period of training and testing activities. While the first consistency determination reviewed by the Commission was for a two-year period, this was extended to a five year period in the Navy's 2008 CD and to a seven year period in its 2018 CD, aligning with the term of the Marine Mammal Protection Act (MMPA) authorization sought by the Navy from the National Marine Fisheries Service. The current CD describes a seven year period (from 2025-2032) that similarly aligns with the currently sought term of MMPA authorization.

air guns, the deployment of training structures, underwater platforms and fiber optic cables and instrumentation on the seafloor, temporary testing of small underwater energy generation devices, and other activities that would affect coastal resources. The Navy states in its CD that the purpose of the Proposed Action: "…is to ensure the U.S. military services are able to organize, train, and equip service members and personnel, needed to meet their respective national defense missions, in accordance with their Congressionally mandated requirements under Title 10[3]."

The proposed project would occur in the California Study Area (**Exhibit 1**), the portion of the larger Hawaii-California Training and Testing (HCTT) Study Area[4] (**Exhibit 2**) occurring offshore of California and extending seaward from the mean high-water mark to offshore training and testing areas in the Pacific Ocean up to approximately 690 mi offshore. The California Study Area encompasses an area of roughly 330,000 square miles (mi^2), and includes within it, airspace, ocean surface and underwater areas. While the project area includes some nearshore areas within the state's Coastal Zone, as defined in section 30103 of the Coastal Act, the bulk of the proposed activities would occur seaward of the state's Coastal Zone, in federal and international waters.[5]

The California Study Area is comprised of several distinct geographic areas referred to by the Navy as "ranges," that have historically supported different types of training exercises and related infrastructure, including structures and equipment located underwater or on adjacent land areas. The Navy proposes expansion of several of its ranges in its CD and has included in the proposed project activities within portions of California's offshore waters that have not been included in prior federal consistency reviews carried out by the Commission (such as an area offshore of Northern California) or have been reviewed separately in previous years (such as the Point Mugu Sea Range offshore of Los Angeles, Ventura, Santa Barbara and San Luis Obispo Counties). As such, the proposed project represents a change from CDs reviewed by the Commission in the past that focused on Navy training and testing activities offshore of southern California and now encompasses activities offshore of most of the state. The distinct ranges covered by the current CD include: (1) an expanded Southern California (SOCAL) Range Complex (including the Silver Strand Complex and San

[3] Footnote from CD: "See Title 10, Sections 8062 (Navy), 8063 (USMC), 7062 (Army), 9062 (USAF) U.S.C. and Title 14, Sections 101 and 102 U.S.C. (USCG) for each service's specific language. Army and USAF are included only for their activities in Hawaii with potential in-water effects."

[4] The full HCTT Study Area, combining the California Study Area with the Hawaii Study Area and Transit Corridor portions of the HCTT, is analyzed in the Navy's 2024 HCTT Draft EIS/OEIS (Environmental Impact Statement/Overseas Environmental Impact Statement), which can be found at the Navy's project website: https://www.nepa.navy.mil/hctteis/

[5] The Navy further specifies in its CD: "While only the at-sea components of the range complexes are considered in the HCTT Draft EIS/OEIS, the potential effects of sound related to missiles, targets, or artillery projectiles fired from SNI on pinnipeds hauled out along the coastline are analyzed in the HCTT Draft EIS/OEIS for the purpose of the MMPA. All other land-based activities remain valid and continue to be covered by other NEPA documents and consultations. The Action Proponents did not re-analyze its activities on the land ranges in the California Study Area, with the exception of SNI land-based launches, because the [National Historic Preservation Act (NHPA)] compliance, incidental take statements, and biological opinions of non-jeopardy for land activities remain valid and would not be altered by the Proposed Action."

Clemente Island Offshore Training and Testing Areas that fall within its bounds) with new sea space extensions and corresponding special use airspace; (2) the Point Mugu Sea Range (PMSR) (including activities associated with missile launches at San Nicolas Island and pierside activities at Port Hueneme); (3) the Northern California (NOCAL) Range Complex, and (4) four new amphibious approach lanes between mainland California and the NOCAL Range Complex and PMSR.

In general, the Navy indicates that the level of training and testing that would occur under the HCTT program is similar to that of past phases previously reviewed by the Commission[6], but with the expanded Study Area combining the SOCAL Range Complex, the PMSR, and offshore areas of the NOCAL Range Complex, the training and testing activities would be distributed across a much larger area. Certain activities will continue to be focused on specific ranges, but these areas will also provide contiguous sea and airspace for several range-spanning training and testing activities. The activities proposed for each range/activity area are summarized below and compared to the activities considered by the Commission in 2018 and 2020 for each area. Following those descriptions, updated information is provided about activities that occur in multiple ranges. More detailed descriptions of HCTT activities occurring within and across the range areas are also provided in Appendix A (Military Readiness Activities in the California Study Area) to the Navy's CD, included here as **Appendix C**, while **Exhibit 4** provides a more granular comparison between the proposed scope of the HCTT activities and prior phases of Navy training and testing. Broad descriptions of notable new activities proposed for the HCTT by range area are also included below.

Expanded Southern California (SOCAL) Range Complex

The Southern California (SOCAL) Range Complex is an offshore area situated between Dana Point and San Diego, extending more than 690 miles southwest into the Pacific Ocean (**Exhibit 1 and 3)**. The two primary components of the SOCAL Range Complex are the operating areas and the special use airspace. These components traditionally have encompassed 159,000 square miles (mi^2) of sea space; 150,000 mi^2 of special use airspace; the Silver Strand Training Complex; and over 56 mi^2 of land area on San Clemente Island (however, land activities are not part of the proposed activities) and the offshore training and testing areas adjacent to it. Most activities would occur in the eastern portion of the range complex, as they would be closer to established range infrastructure and facilities.

The Navy's CD states: "The SOCAL Range Complex includes instrumented underwater training ranges, mine training ranges, laser training ranges, and access to the seaside of Naval Base Point Loma. The Study Area also extends to the pierside locations at Naval Base Point Loma and Naval Base San Diego." **Exhibits 5** and **6** provide overviews of the more nearshore portions of the SOCAL Range Complex and Table 2-1

[6] The Navy CD refers to the HCTT as "Phase IV" of its California training and testing activities; Phase III is the combined program of activities previously considered in most recent CDs from 2018 for the SOCAL Range Complex in the HSTT (CD-0001-18) and from 2020 for PMSR (CD-0003-20).

of the CD (**Appendix B**) provides descriptions of the types of activities associated with each of those designated areas.

Air and sea ranges associated with ongoing training and testing offshore of San Clemente Island (SCI) include the Shore Bombardment Area, two mine training ranges, two Training Areas and Ranges for underwater demolition, and the Southern California Anti-Submarine Warfare Range (SOAR) (**Exhibit 7**; see also **Appendix B**, Table 2-2). The CD also includes proposed updates to underwater infrastructure at SOAR for anti-submarine warfare training, and the installation of two new Shallow Water Training Ranges as extensions to the SOAR. The Navy proposes to refurbish and upgrade the existing SOAR underwater tracking and communication range[7], including installing new undersea cables integrated with hydrophones and underwater telephones, to support its undersea warfare training and testing within the SOAR.

The establishment of two new proposed Shallow Water Training Ranges (**Exhibit 8**) at Tanner Bank (514 mi^2) and SCI (171 mi^2) would involve installation of a new network of seafloor telecommunications cables, nodes, transducers and hydrophones, connected to the western side of SCI via existing bores. Per the Navy's CD, the expanded underwater instrumentation would "significantly enhance training effectiveness, increasing the use of these areas for [Anti-Submarine Warfare] training involving mid-frequency active sonar" and "support a seamless tracking interface from deep to shallow water, which is an essential element of effective [Anti-Submarine Warfare] training."

The Silver Strand Training Complex is also located within the boundaries of the SOCAL Range Complex (**Exhibit 6**) and is an integrated set of training areas located on and adjacent to the Silver Strand, a narrow, sandy isthmus separating the San Diego Bay from the Pacific Ocean. Those existing training areas on the seaside of the Silver Strand and in San Diego Bay (bayside) are described in more detail in Table 2-3 of the CD (**Appendix B**).

The CD also mentions that the expanded SOCAL Range Complex is proposed to include special use airspace Warning Areas[8] W-293 and W-294 (**Exhibit 9**) and the sea space beneath them. As seen in **Exhibit 3,** which shows the proposed range complex expansions, there are also two new sea space areas added to the California Study Area that connect to the existing SOCAL Range Complex: (1) areas along the Southern California coastline from approximately Dana Point to Port Hueneme; and (2) new testing sea space between warning area W-293 and PMSR.

Activities that would be new[9] to the SOCAL Range Complex include: new types of air, amphibious, anti-submarine, expeditionary, mine, and surface warfare activities[10]; at-

[7] Which has an 890 square mile instrumented area.
[8] As defined in the CD: "Warning areas: Areas of defined dimensions, extending from 3 NM [(3.45 mi)] outward from the coast of the United States, that serve to warn non-participating aircraft of potential danger (FAA Order 7400.2P, Chapter 24)."
[9] Where activities by ranges are indicated as "new", **Exhibit 4** and **Appendix C** of this report provide more detail of activities and the ranges they are proposed to occur in.
[10] These include use of mines, missiles, and other munitions.

sea vessel refueling training; several types of uncrewed systems training and testing exercises (using uncrewed surface, underwater, and aerial, vehicles); undersea range system testing; and several types of research activities. Activities that would be new to the SSTC and other designated areas within the SOCAL Range Complex include ship-to-shore fuel transfer training[11] and mine warfare activities that include amphibious breaching operations and nearshore underwater mine countermeasure training. Also, combat swimmer/diver training and certification would be a new activity specific to the SSTC.

Underwater Infrastructure

In addition to the changes in activity levels discussed above, the HCTT program includes several underwater infrastructure projects in the SOCAL Range Complex, collectively referred to as "Proposed Modernization and Sustainment of Ranges" (Table A-8). These include the new installations at SOAR and the Shallow Water Training Ranges discussed above, and installation and maintenance of mine warfare and other training areas and underwater landing platforms to support underwater vehicle pilot proficiency training. Additionally, the Navy proposes to expand an existing submarine fiber-optic cable system offshore of San Clemente Island (**Exhibit 10**). The expansion would add approximately 600 kilometers of fiber-optic cable, likely in the form of up to three new cables attached to the existing trunk cable, and new connected instrumentation (e.g., communication units and sensors).

Point Mugu Sea Range (PMSR)

Point Mugu Sea Range (PMSR), is an approximately 36,000 mi^2 area of ocean and controlled airspace, roughly 230 mi long (north to south) and extending up to approximately 207 mi offshore of San Luis Obispo, Santa Barbara, Ventura and Los Angeles counties (**Exhibit 11**). The PMSR includes San Nicolas Island (SNI) and portions of the northern Channel Islands (Anacapa, Santa Barbara, Santa Cruz, Santa Rosa and San Miguel Islands) and is directly north of the SOCAL Range Complex. Ongoing activities in the PMSR include flight and vessel operations throughout the range, as well as directed energy (laser and high-powered microwave) activities, missile and target launch operations[12] originating from Naval Base Ventura County Point Mugu and San Nicolas Island, and other training and testing activities previously considered by the Commission in CD-0003-20.[13]

Sea space in the southwestern portion of PMSR has been designated to facilitate testing activities by the Office of Naval Research described in **Appendix C** of this report. Additionally, the PMSR currently supports the training and testing of extra-large uncrewed undersea vehicles and uncrewed surface vessels operating out of Naval

[11] Note: only sea water is used during this training
[12] The Navy's CD notes: "National Environmental Policy Act coverage of these land areas is included in the 2022 PMSR EIS/OEIS and the associated CD with the exception of the launches from SNI, which are included in the Proposed Action, as noted in Section 2.2.3 (California Study Area)."
[13] See Section IV.B below for more detail on previous Commission actions.

Base Ventura County[14]; ongoing operations that are included in the current HCTT program CD. A variety of new activities at Naval Base Ventura County Port Hueneme[15], located in Ventura County, are also included in the Navy's CD, including pile driving activities as part of the Port Damage Repair training activity (at the pierside locations shown in **Exhibit 12**) as well as pierside sonar testing; in-port maintenance testing for vessel evaluation, and underwater search, deployment, and recovery using uncrewed systems.

Some activities occur in multiple range complexes, including ones that would be new to both the PMSR and NOCAL Range Complex (described separately below). These include various scales of anti-submarine warfare training exercises (which is notable since sonar has not been historically used in these areas under the Navy's previous CDs); amphibious warfare operations; new types of air, electronic, and surface warfare activities; small boat attack training; several new types of uncrewed systems training and testing exercises (using uncrewed surface, underwater, and aerial, vehicles); undersea range system testing; U.S. Coast Guard search and rescue training; and several types of research activities. Other activities that would be new to the PMSR but not proposed as new in the NORCAL Range Complex include: mine warfare, torpedo exercises and testing, submarine sonar maintenance and systems checks; and other specific types of research.

NOCAL Range Complex

The HCTT program includes an expansion of training and testing activities into the new proposed Northern California (NOCAL) Range Complex, which consists of two separate areas located southwest of Monterey Bay and northwest of San Francisco, respectively (**Exhibit 13**). The southern area includes approximately 13,000 mi^2 of airspace within Warning Area 283 (W283) and W285A/B/C/D. The northern area includes approximately 8,000 mi^2 of airspace within W260 and W513.[16] Both areas of the NOCAL Range Complex are located at least 12 NM (13.8 mi) from shore, outside the coastal zone. The Navy's CD notes the importance of the NOCAL Range Complex's proximity to Naval Air Station Lemoore, where the Navy's Pacific Fleet Strike Fighter squadrons are based, in supporting training, certifications, and testing. Activities that would be new to the NOCAL Range Complex (but not proposed as new in PMSR) include[17]: high-energy laser testing; high-powered microwave testing; uncrewed underwater vehicle training and testing; and other types of air and surface warfare

[14] The initial period of limited uncrewed vessel testing and training was reviewed by the Executive Director under ND-0022-24.
[15] The CD explains: "NBVC Port Hueneme provides port and docking facilities for PMSR support ships, target surface craft, the Navy's Self Defense Test Ship, Fleet units, Naval Facilities Engineering and Expeditionary Warfare Center test vessels, and Naval Sea Systems Command uncrewed surface and underwater vehicles using PMSR for testing and combat system qualification trials. NBVC Port Hueneme is also home to Naval Construction Group 1, the Seabees, who conduct important pre-deployment training in waterfront and in-water construction methods."
[16] Airspace in these warning areas extends from the ocean surface to at least 45,000 feet (ft.) altitude, and in the cases of W260, W283, and W513, to a ceiling of 60,000 ft.
[17] See above for activities that would be new to both the PMSR and NOCAL Range Complex. Several activities considered new to the NOCAL Range Complex are ongoing at PMSR.

activities, including testing missiles, surface-to-surface gunnery, chaff, flares, and electronic systems.

Amphibious Lanes

The Navy also proposes four new amphibious approach lanes/corridors, providing land access from the NOCAL Range Complex and PMSR, offshore of Big Sur, Morro Bay, Pismo/Oceano Dunes, and Vandenberg Space Force Base (**Exhibit 14**). As described in the CD:

> Amphibious approach lanes are used by amphibious assault landing craft to approach and land on a beach to move personnel and equipment from ship to shore. Unlike the warning areas previously discussed, only vessel movement from sea to land would occur in the proposed amphibious approach lanes. In this CD, only the at-sea components of amphibious warfare activities utilizing the amphibious approach lanes (e.g., amphibious assault) are analyzed. The land areas associated with the lanes will be covered under separate environmental analyses and use agreements as planning for future activities matures

In correspondence dated May 6, 2025, the Navy stated that the amphibious lanes would be used for small boat operations, with no sonar or explosives use proposed.

Activities Occurring in Multiple Ranges

There are also many types of activities proposed as part of the HCTT that occur in multiple ranges. Based on the detailed activity descriptions provided by the Navy (Tables A-1 through A-8, **Appendix C**), the HCTT program would include a number of new training and testing activities as well as changes in the frequency and intensity of existing, ongoing activities. Activities that are considered new to the California Study Area as a whole, according to **Exhibit 4**, include: (1) a Naval Air Systems Command surface warfare testing activity called “Long-Range Weapons Delivery Systems (Over-the-Horizon)/Hypersonic Vehicle Test”; (2) a Naval Air Systems Command air warfare testing activity called “Large Force Test Event”; and (3) a Navy and U.S. Marine Corps training air warfare training activity called “Gunnery Exercise Air-to-Air Small Caliber.” Within several major training and testing categories, notable changes include, but are not limited to:

- Changes to Navy and U.S. Marine Corps “integrated/coordinated training” (Table A-1):
  - New large-scale amphibious exercises, including use of explosives in the SOCAL Range Complex and Silver Strand Training Complex and use of shore-to-surface artillery and missiles, uncrewed surface vessels, uncrewed underwater vehicle, uncrewed aerial vehicles, torpedoes, gunnery, mobile mines, underwater mine countermeasures, submarine-launched missiles, laser targeting from ships, at-sea vessel refueling, multidomain uncrewed autonomous systems, port damage repair, underwater survey, and aerial firefighting;
  - Large increases (two-fold or greater) in certain activities involving coordinated anti-submarine warfare, missiles, torpedoes, maritime patrol

aircraft, swimmer and divers, laser mine detection, mines (laying via submarine, neutralization with explosives, countermeasure/avoidance), uncrewed aerial systems, uncrewed underwater vehicle certification;
    - Overall decreases in major training exercises (despite expansions to PMSR and NOCAL), and in activities involving types of gunnery, helicopter-based anti-submarine warfare, airborne mine laying (nonexplosive), mine countermeasures/neutralization using remotely operated vehicles and helicopters, underwater demolition qualification and certification, some gunnery and missiles from helicopters, kilo dips/dipping sonar, and precision anchoring;
- New environmental analysis of previously unevaluated, ongoing "Coast Guard Training" activities (Table A-2);
- A general increase in "Naval Air Systems Command Testing" (Table A-3), including more than doubling tests proposed for air combat maneuvers, sonobuoys, flares, airborne mine neutralization with uncrewed underwater vehicles, air-to-surface bombing, air-to-surface high energy lasers, air-to-surface missiles;
- New "Naval Facilities Engineering and Expeditionary Warfare Center Training" (Table A-4) in the SOCAL Range Complex, including use of uncrewed systems and interaction with the seafloor;
- Changes to "Naval Sea Systems Command Testing" (Table A-5):
    - On average, decreases in tests for anti-submarine warfare missions, torpedoes radar and other electronic and communication systems, mine countermeasure missions, guns, vessel signature evaluations, and chemical-biological agent simulants;
    - Large increases in testing activities for uncrewed surface vessels, mine neutralization, uncrewed underwater vehicles, submarine weapons and sonar, missiles and rockets, and pierside sonar; and
    - New activities including acoustic and oceanographic research and equipment testing, underwater research and recovery, and up to one annual small ship shock trial (using underwater destinations);
- An overall increase in "Office of Naval Research Testing" (Table A-6), including acoustics research and uncrewed underwater vehicle testing; and
- For "Naval Information Warfare Systems Command Testing" (Table A-7), a significant decrease in testing for vehicles and underwater communications, but a fourfold increase in testing deployable autonomous undersea technologies, and entirely new acoustic, oceanographic, and energy research.

Among the numerous training and testing activities occurring in multiple ranges proposed under the HCTT program, several represent significant potential stressors to marine resources, including the use of mid-frequency sonar, military expended materials (including in-water explosives), and high-speed vessels. **Exhibit 15** (from Section H.1 of Appendix H of the Navy's 2024 HCTT Draft EIS/OEIS) provides descriptions of sonar systems, munitions, targets, and other systems employed in HCTT activities and includes diagrams and photographs of these project elements. The scope of these proposed activities, including changes from prior phases of Navy training and testing, are briefly summarized below.

Sonar Use

The Navy estimates that the HCTT program will include some 4,112 to 7,570 total hours of hull-mounted mid-frequency sonar use per year, concentrated in the SOCAL Range Complex and predominantly consisting of MF1 "regular duty-cycle" sonar (**Table 1**, **Figure 1**).[18] The Navy also noted in correspondence with Commission staff that "hull-mounted surface ship sonar is acknowledged as the most powerful sonar with HCTT." Overall, the Navy's CD proposes a substantial increase in both the total number of hours of mid-frequency hull-mounted sonar use per year and the geographical area in which it would be used, extending sonar training and testing into the PMSR and NOCAL Range Complex for the first time (**Figure 2**).[19]. As stated in the Navy CD:

> Under the Proposed Action, the overall use of sonar and other transducers would increase from the 2018 HSTT EIS/OEIS for both training and testing activities for most sources. For regular duty cycle (MF1) hull-mounted sonar, the maximum year of training and testing activities includes greater than 20 percent more hours in the California Study Area compared to the prior analysis. For high duty cycle (MF1C) hull-mounted sonar, the maximum year of training and testing activities includes approximately 50 percent more hours in the California Study Area compared to the prior analysis.

Table 1: Approximation of HCTT Sonar Hours Across Range Areas

Sonar Bin	SOCAL (hr)	PMSR (hr)	NOCAL (hr)	Total (hr)
MF1	2,710 – 4,774	322 – 876	201 – 641	**3,233 – 6,291**
MF1C	432 – 737	55 – 145	30 – 96	**517 – 917**
MF1K[20]	362	0	0	**362**

[18] Supplemental information provided by the Navy, dated April 2, 2025 and May 8, 2025.
[19] However, the Navy confirmed in correspondence provided on May 8, 2025, that there would be no sonar used in the amphibious approach lanes or any other new nearshore areas.
[20] Hull-mounted anti-submarine sonars can also be used in an object detection mode known as "Kingfisher" mode (MFK1); MF1K would not be used in PMSR or NOCAL.

Figure 1: Proposed Annual Mid-Frequency Sonar Hours by Range Area and Type

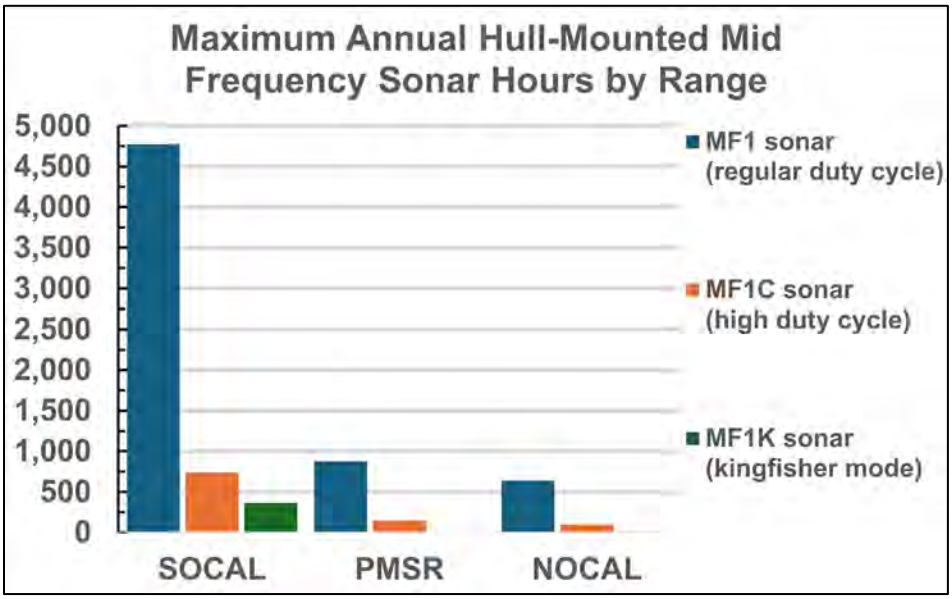
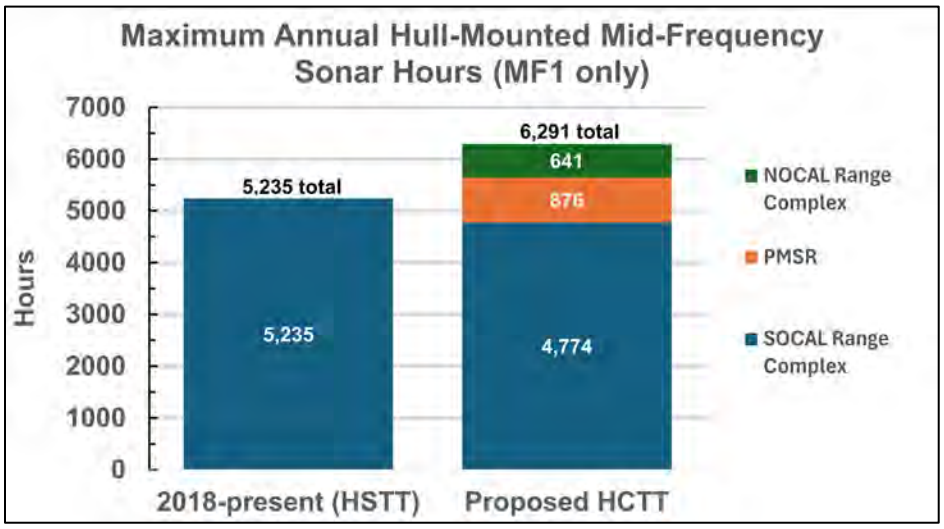


Figure 2: Comparison of Annual MF1 hours, current vs. proposed



Military Expended Materials and In-Water Explosives

As described in detail in the Navy's prior environmental assessments,[21] the military readiness activities included in the HCTT program involve the extensive use of large amounts of several types of military expended materials and explosives. While there are differences in the way the proposed use of materials is categorized and quantified in the HCTT versus prior programs, several broad observations can be made about the proposed use of military expendable materials in the HCTT in comparison to past testing and training programs:

[21] See Section 3.0 of each of the Navy's EIS/OEISs for previous/ongoing activities for the HSTT (2018) and PMSR (2022) and the HCTT DEIS/OEIS (2024).

- Increase in the number of missiles, bombs, rockets, and gun ammunition (including small, medium, and large caliber projectiles) relative to current levels (as reflected in the 2018 HSTT and 2020 PMSR EIS/OEISs).
- Increase in the number of mine shapes, chaff, anchors, and decelerators/parachutes (particularly in the extra large/large/medium size categories) compared to current levels; and a decrease in the number of torpedoes, flares, canisters, and marine markers.[22]
- Approximately 40 nets are expected to be deployed (but recovered after the activity) annually which were not included in the prior programs.

The Navy's CD states that the use of in-water explosives would increase from the current level (based on the 2018 HSTT EIS/OEIS) for training activities and would decrease slightly for testing, with overall reductions in the use some of the larger explosives (e.g., 250 – 500 lbs, 500 – 650 lbs), but notable increases in the use of some of the smaller explosive types. The HCTT program also proposes new testing activities in the SOCAL Range Complex, specifically, small ship shock trials using large explosives (7,250–14,500 lbs.)), that were not previously included or evaluated under prior programs. The Navy states that "[m]ost activities involving in-water (including surface) explosives associated with large caliber naval gunfire, missiles, bombs, or other munitions are conducted more than 12 NM [(13.8 mi)] from shore" and that "Sinking Exercises are conducted greater than 50 NM [(57.5 mi)] from shore." Certain activities with explosives, including mine and expeditionary warfare activities, may be conducted close to shore at multiple locations.[23] In the SOCAL Range Complex, explosive activities could occur near San Clemente Island, in the SSTC, and in other designated mine training areas along the Southern California coast.

Standard Operating Procedures and Proposed Mitigation Areas

The Navy's CD also proposes a suite of standard operating procedures and mitigation measures as part of the HCTT program. Standard operating procedures are discussed as they apply by coastal resource policy and/or sensitive species throughout the CD and are outlined fully in Section 3.0.4 (Standard Operating Procedures) of the Navy's 2024 HCTT DEIS/OEIS.

The CD also provides a set of mitigation measures which fall into two general categories: (1) activity-based mitigation; and (2) geographic mitigation. These mitigation measures are discussed in more detail in the findings below by resource category and **Appendix D** of this staff report provides a full list and discussion of all proposed mitigation measures. Table C-14 in **Appendix D** of this report also provides a summary of changes to existing mitigation requirements from the ongoing HSTT and PMSR requirements, as well as new mitigation measures.

[22] Although the Navy noted in correspondence dated May 21, 2025, that mine shapes and torpedoes are not proposed to be expended (torpedoes are typically recovered immediately and mine shapes are periodically removed from the water for maintenance/cleaning).
[23] Locations for explosives testing and training activities are provided in Appendix A (Activity Descriptions) and Appendix H (Descriptions of Systems and Ranges) of the 2024 HCTT Draft EIS/OEIS.

B. Previous Commission Actions

The Navy states in its CD that: "These military readiness activities are generally consistent with those analyzed in the HSTT[24] Final EIS/OEIS completed in October 2018 and the PMSR EIS/OEIS completed in January 2022 and are representative of the military readiness activities that the Action Proponents have been conducting in the HCTT Study Area for decades." The Commission has previously objected to four prior consistency determinations by the Navy over the past two decades for training and testing exercises in the Southern California (SOCAL) Range Complex (including most recently in 2018 through Consistency Determination No. CD-0001-18). However, the Commission has also concurred with certain past CDs that covered less extensive scopes of activities (e.g. for Point Mugu Sea Range activities in CD-0003-20). The proposed action in the new CD submittal combines training and testing programs off the coast of California that were previously considered separately into one new program and also proposes to expand them to include additional geographic areas, activity types and levels of activity that have not been previously considered by the Commission. Based on this, the currently proposed program exceeds the scope and scale of previous Navy training and testing programs.

On January 10, 2007, the Commission conditionally concurred with the Navy's consistency determination for offshore and onshore military training and testing exercises in SOCAL offshore waters for a two-year period (CD-086-06). The Commission's conditions focused primarily on the need for additional protection for marine mammals from Navy active sonar use, including increasing the size of safety zones (including a shutdown zone of at least 2 km) around the sonar source, avoiding sonar use within areas with high concentrations of marine mammals to the maximum extent feasible, and increasing protection (reduced sonar intensity) under low visibility and surface ducting conditions (surface ducting can result in amplification of sound levels or cause sounds to disperse farther than anticipated). Because the Navy did not agree to comply with most of the Commission's conditions, the Commission's action was treated as an objection under the federal consistency procedures. (15 C.F.R. § 930.4(b).) The Navy informed the Commission it intended to proceed without agreeing to most of the conditions, and in March 2007 the Commission filed a lawsuit in federal court, the outcome of which is described in the Commission's adopted findings in support of its decision of objection on the Navy's 2018 consistency determination (CD) for its HSTT program for the SOCAL Range Complex (CD-0001-18), available here[25].

Pages 14-16 of the adopted findings for CD-0001-18 summarize the Commission's previous actions on offshore and onshore military training and testing exercises in SOCAL offshore waters (including the de facto objections for CD-086-06 and CD-049-08, and objection for lack of information on CD-008-13), and related litigation.

[24] Hawaii-Southern California Training and Testing

[25] The Commission's adopted findings in support of its decision on CD-0001-18 is available here: https://documents.coastal.ca.gov/assets/marine-acoustics/1%20CD-0001-18%20CD%20Navy%20HSTT%20Adopted%20Findings.pdf

On October 15, 2008, the Commission conditionally concurred with a follow-up Navy consistency determination (CD-049-08) for the next round of Navy SOCAL training and testing exercises, covering the period from January 1, 2009, through December 31, 2013. The Commission adopted conditions similar to those in CD-086-06 (Exhibit 14, which contains both sets of Commission conditions). On January 16, 2009, the Navy again indicated its intent to proceed without agreeing to the conditions. By this time the U.S. Supreme Court had published its ruling in the case described above arising from the earlier training and testing program, and in this instance the Commission did not file a lawsuit.

On March 8, 2013, the Commission objected to the Navy's consistency determination for the following five-year period (CD-008-13). The Commission's objection to this consistency determination was based on lack of information:

> …because the Navy's analysis: (1) only looked at population-level effects; (2) arbitrarily limited its analysis to only 10 of the 32 coastal species present in the southern California study area; (3) did not include the type of population-level analysis Pacific Gas and Electric Company had provided in its high energy seismic survey consistency certification (CC-027-12); (4) provided no explanation as to why significant intensification of use of mid-frequency sonar was needed for military training and testing; and (5) failed to analyze and consider alternatives such as implementing "time-area" closures, as well as other mitigation measures previously adopted by the Commission or identified by Commission staff in its report on the present consistency determination.

The Navy provided additional information to staff following the Commission's objection. Nevertheless, the staff did not agree that the Navy had adequately addressed the concerns raised by the Commission in its objection. On December 17, 2013, the Navy informed the Commission that it intended to proceed despite the objection. In the meantime, litigation brought by other parties challenging the Navy's program proceeded (based on NEPA, MMPA, ESA claims) in Hawaii federal district court. In July 2014, the California Attorney General informed the Navy that the Commission intended to pursue its own litigation, and the parties entered into negotiations. On March 31, 2015, while those negotiations were ongoing, the Hawaii district court issued an order granting summary judgment to two of the plaintiffs in that case[26] ; however, subsequent to that, the parties entered into a settlement agreement. On May 15, 2016, the Commission and the Navy also agreed to a Settlement Agreement[27], under which the Commission agreed not to pursue litigation through the remainder of the 5-Year period (i.e., until late December 2018).

On June 6, 2018, the Commission objected to the Navy's CD for continuation of and modifications to ongoing Navy training and testing activities in the SOCAL Range Complex (CD-0001-18) based on lack of consistency with Section 30230 of the California Coastal Management Program (CCMP). The Navy provided additional

[26] Conservation Council for Hawaii et al. v. NMFS et al. and Natural Resources Defense Council et al. v. NMFS et al.
[27] See CD-0001-18 findings – Exhibit 11

information to staff following the Commission's objection, including identifying two new mitigation areas and avoidance of certain Marine Protected Areas. Nevertheless, the staff did not agree that the Navy had adequately addressed the concerns raised by the Commission in its objection.[28] On October 16, 2018, the Navy informed the Commission that it intended to proceed despite the objection.

On December 11, 2020, the Commission concurred with CD-0003-20 for the continuation and expansion of military readiness training and testing activities on the Point Mugu Sea Range and portions of San Nicolas Island, Naval Base Ventura County (NBVC) Point Mugu, and NBVC Port Hueneme. That concurrence was based on the limited scope of the project, several commitments provided by the Navy and the continued implementation of avoidance, minimization and mitigation measures. However, it is important to note that the scope of that CD did not include use of sonar or in-water explosives in the PMSR, as is proposed in CD-0003-25 for the new, expanded HCTT program. Additionally, the Executive Director concurred with a negative determination (ND-0022-24)[29] on September 27, 2024, for "Training and Testing of Extra Large Unmanned Undersea Vehicles and Unmanned Surface Vessels at Naval Base Ventura County", which included a short-term (through the end of 2025) program of in-water training and testing activities of the uncrewed vessels in the Pacific Ocean waters nearshore and offshore to the west of Naval Base Ventura County Port Hueneme.

C. Other Agency Approvals and Consultations

National Marine Fisheries Service (NMFS)

The Navy initiated formal consultation with the National Marine Fisheries Service (NMFS) under the Endangered Species Act in October 2024. The Navy also submitted a request for authorization to NMFS under the Marine Mammal Protection Act (MMPA) in September 2024, requesting seven-year Letters of Authorization (LOA) for Navy training, Navy testing, U.S. Coast Guard and Army exercises. [30] The Navy also initiated essential fish habitat consultation with NMFS under the Magnuson-Stevens Fishery Conservation and Management Act, prepared a designated Essential Fish Habitat Assessment that analyzes potential adverse effects from the Proposed Action on Essential Fish Habitat, received conservation recommendations from NMFS in March 2025, and submitted a response in April 2025. NMFS review of all three is ongoing and will be completed prior to issuance of a final Record of Decision and implementation of the proposed project. The Navy expects to have a final Record of Decision of the MMPA by December 2025.

[28] See Commission Staff status report dated August 30, 2018, on Navy Response to Commission Objection to Consistency Determination CD-0001-18 - Navy Southern California Testing and Training Program: https://documents.coastal.ca.gov/reports/2018/9/W12a/w12a-9-2018-report.pdf
[29] See letter in November 2024 Deputy Director's Report: https://documents.coastal.ca.gov/reports/2024/11/W9/W9-11-2024-report.pdf
[30] The Navy's 2024 LOA Application is available here: https://www.fisheries.noaa.gov/action/military-readiness-activities-hawaii-california-training-and-testing-hctt-study-area-2025

U.S. Fish and Wildlife Service (USFWS)

The Navy initiated informal consultation with the U.S. Fish and Wildlife Service under Section 7 of the ESA for listed species under USFWS' jurisdiction, and estimates completion of the informal consultation in June 2025.

State of Hawaii

The Navy submitted a consistency determination to the Hawaii Coastal Zone Management Program on April 1, 2025, for the portions of the training and testing located offshore of that state.

Tribal Governments

The Navy provided supplemental information to its CD related to tribal consultation on April 2, 2024, stating:

> The Navy submitted a Sacred Lands File (SLF) and Native American Contacts List request to the Native American Heritage Commission (NAHC) in order to identify tribes, tribal groups, or individuals that have an interest in the cultural resources within the CA [operating area], to include Mendocino through San Diego Counties. The NAHC responded to the Navy's request on October 16, 2023 with results of the SLF record search. The SLF included 39 federally recognized and 39 non-federally recognized tribes and tribal groups. In May 2024, the Navy invited all 39 federally recognized tribes to Government-to-Government Consultation. The Pechanga Band of Indians, Rincon Band of Luiseño Indians, Santa Ynez Band of Chumash Indians and San Pasqual Band of Diegueño Indians responded requesting consultation. The Navy held consultation meetings with the four tribes between June and September 2024. In addition, the HCTT EIS was discussed regularly at the ongoing monthly tribal meeting established to discuss projects at [San Clemente Island]. In October 2024, prior to DEIS public release, the four tribes were provided copies of Chapter 2 and the Cultural Resource Chapter for review and comment. Pechanga was the only tribe to submit comments. The Navy consulted with Pechanga and provided the tribe with a comment/response matrix that addressed all questions, comments and concerns, and their comments were addressed in the Cultural Resource chapter prior to DEIS release. The Navy provided all tribes identified in the SLF a 60-day DEIS review period from December 13-February 11, 2025; however, no tribes provided comments on the DEIS. In late February, the Navy followed up with the four tribes to ask if they had any additional comments. Santa Ynez was the only tribe to respond. They confirmed they had no additional comments. [..]

Commission staff also reached out to representatives from a list of Tribes provided by the NAHC to inform them of the Commission's federal consistency review process and timing and to invite further consultation. The results of this consultation are discussed below in the section on cultural resources.

California Office of Historic Preservation

The Navy initiated a National Historic Preservation Act (NHPA) Section 106 consultation with the State Historic Preservation Officer for potential effects on historic properties resulting from the Proposed Action, and that process is ongoing.

NOAA Office of National Marine Sanctuaries

The Navy has prepared Sanctuary Resource Statements, in accordance with Section 304(d) of the National Marine Sanctuaries Act, that describe the potential effects of the Proposed Activity on resources found within the established National Marine Sanctuaries within the HCTT Study Area. The Navy submitted their draft to the NOAA Office of National Marine Sanctuaries at the end of March 2025 and that process is ongoing but estimated to be completed in August 2025.

D. MARINE RESOURCES

Section 30230 of the Coastal Act states:

> Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Overview

The Navy's consistency determination and supporting 2024 Draft Environmental Impact Statement /OEIS for the HCTT analyzed a number of marine resources that could be adversely affected by the Proposed Action, including sensitive marine areas and habitats (e.g., eelgrass and kelp), commercial and recreational fish stocks, and protected marine species (i.e., sea turtles, marine mammals, and abalone). Specifically, the proposed expansion of ranges, described in detail in Section IV.A above, will expose marine species to new stressors not present in these areas historically, such as high energy sonar, underwater explosives and use of uncrewed vessels with high speed capabilities. The proposed expansion of subsea infrastructure also has the potential to result in adverse impacts to marine resources.

The Navy's consistency determination and accompanying 2024 Draft Environmental Impact Statement describe the effects of both current levels and expanded operations on marine resources.[31] As discussed further below, these effects are most likely to be associated with the potential for: (1) death or injury of marine mammals from the use of sonar and explosives; (2) the release of contaminants and debris into marine waters; (3) collisions of Navy vessels with marine mammals (ship strikes); and (4) degradation of hard bottom habitat from the expansion of subsea infrastructure.

[31] For additional information on this analysis, please refer to the project's 2024 DEIS, available online: https://www.nepa.navy.mil/hctteis/

Types of Marine Species and Marine Resources

The Navy's CD lists 35 marine mammal species in the project area, including seven mysticetes (baleen whales), 21 odontocetes (dolphins and toothed whales), six pinnipeds (seals and sea lions), and the southern sea otter. The document further notes four species of sea turtles (green, loggerhead, olive ridley, and leatherback sea turtles) that may occur off Southern California and are listed as endangered under the Endangered Species Act.

The Navy's CD identifies the following sources of adverse impacts to marine mammals[32] and sea turtles associated with the proposed project:

- Acoustic (sonar and other transducers; air guns; pile driving; vessel noise; aircraft noise; and weapons noise)
- Explosive (explosions in-air; explosions in-water)
- Energy (in-water electromagnetic devices; high-energy lasers; high-power microwave devices)
- Physical disturbance and strikes (vessels and in-water devices; military expended materials (MEM);[33] seafloor devices; and pile driving)
- Entanglement (wires and cables; decelerators/parachutes)
- Ingestion (MEM – munitions; MEM other than munitions)
- Secondary (e.g., effects on habitat, effects on prey availability)

The Navy's CD also analyzes a similar set of stressors that could affect seabirds (including the endangered California least tern and the short-tailed albatross, and the threatened marbled murrelet), fishes, invertebrates (including black abalone, white abalone, and sunflower sea star). Potential impacts to sensitive habitats (including areas with kelp, seagrasses, and hard bottom communities) from explosives and physical disturbance and strikes are also analyzed.

Sonar Use

The Commission has been consistent for over two decades in expressing concerns over the effects of anthropogenic sounds on the marine environment, particularly on marine mammals. Anthropogenic noise is a recognized, but largely unregulated, form of ocean pollution that can deafen, disturb, injure, and kill marine life. Many species of marine mammals are known to be highly sensitive to sound and rely upon sound to navigate, find food, locate mates, avoid predators, and communicate with one another. A combination of noise sources, including shipping, oil and gas exploration and production, dredging, construction, and military activities, has resulted in dramatic increases in noise levels throughout the oceans. Over approximately the last fifteen years, a growing body of evidence has shown that some forms of ocean noise can kill, injure, and deafen whales and other marine mammals. In particular, a sequence of

[32] However, energy, entanglement, and ingestion stressors, are not listed for marine mammals in Section 3.2.3.2.6 of the CD, which explains that, for those stressors, a complete reanalysis under each alternative in the 2024 HCTT Draft EIS/OEIS was deemed unnecessary, based on the results of past analyses from the Navy and NMFS.

[33] See **Exhibit 15** and descriptions in Section IV.A – MEM includes explosive munitions, decelerators/parachutes, etc.

marine mammal mass strandings and mortalities has been linked to exposure to high-energy mid-frequency[34] sonar. There is also evidence that some affected animals do not strand but die at sea. This has increased public concern about the effects of anthropogenic noise on marine mammals, which has been acknowledged in a variety of domestic and international forums.

Marine mammals rely on sound for vital life functions and have evolved specialized sensory capabilities to take advantage of the physics of sound in the ocean. Anthropogenic noise in the oceans has increased since the start of the industrial revolution and increases in ambient noise levels, as well as individual sound sources, can cause adverse effects, the extent and type of which are not well understood. Military technology and scientific research using low frequency active acoustics attempting to cover large distances have specifically targeted the ecological sound niches that low frequency specialist whales have evolved to rely on, necessarily competing with those marine mammal species. Peer-reviewed scientific literature indicates that marine mammals are affected by exposure to anthropogenic noise in a variety of ways that can be harmful or even lethal. However, there are significant gaps in information available to understand and manage these effects. This is particularly the case because marine mammals are extremely difficult to study and the marine environment is extraordinarily complex and dynamic. In addition, this is a relatively new field of concern and the amount of research undertaken to date has been limited in scope and duration.

In light of these concerns,[35] during its first two reviews of Navy SOCAL offshore testing and training (CD-049-08 and CD-086-06), the Commission adopted conditions intended to increase protection for marine mammals, seeking, among other things, larger preclusion areas around sonar sources, avoidance of sonar use within biologically sensitive areas, and lowering of maximum sound levels during times of low-visibility conditions. However, in both cases the Navy rejected the conditions adopted by the Commission, thus changing the Commission's conditional concurrence decisions to objections. In its two most recent reviews (in 2013 and 2018, see Section IV.B above for more details), the Commission has objected to the Navy offshore testing and training program in the SOCAL Range Complex. For CD-008-13, the objection was based on a lack of information about a variety of key details, including consideration and analysis of the feasibility of implementing the types of adverse impact avoidance measures identified above. For CD-0001-18, the objection was based on inconsistency with the policies of Chapter 3 of the CCMP. As described above, the Commission did concur with the Navy's CD for continuation and expansion of activities in the PMSR (CD-0003-

[34] From CD Appendix H:"Mid-frequency active sonar emits sounds at frequencies from 1 to 10 kHz. Mid-frequency active sonar is the Navy's primary tool for detecting and identifying submarines. Active sonar in this frequency range provides a valuable combination of range and target accuracy."
[35] As previously noted by the Commission in CD-008-13, and originally contained in the Commission's December 13, 2005, comments to the Marine Mammal Commission's Advisory Committee on Acoustic Impacts on Marine Mammals.

20), based on several commitments from the Navy, but notably, only a limited range of activities was proposed and no mid-frequency sonar use was included.

The Navy and the Commission have not historically agreed as to the adequacy of the preclusion zones the Navy has proposed around high-energy mid-frequency sonar sources, or the scope of activities to be conducted within areas of particular sensitivity (such as marine sanctuaries and areas of seasonal concentrations of marine mammals). In its past and current consistency determinations, the Navy has maintained that its suite of mitigation and monitoring measures are adequate to protect marine mammals (and other marine species). Although the Commission has consistently disagreed with it, the Navy's position has been that the lack of documented population-level effects, combined with the mitigation measures it has agreed to implement, support its conclusion that its activities are consistent with Section 30230 of the CCMP.

Marine Mammal Protection Act (MMPA)

The Navy has also historically cited its Marine Mammal Protection Act (MMPA) authorizations issued by the National Marine Fisheries Service (NMFS) as further evidence of a lack of adverse effects on marine resources from its programs. The MMPA sets forth the regulatory mechanisms for NMFS' authorizations of "takes" or "harassment" under that law. The Commission notes that the standard NMFS relies on under the MMPA differs from the CCMP's marine resource policies. NMFS must make the following determinations under the MMPA[36]: whether the "taking" will have a negligible impact on the species or stock(s); whether the "taking" will have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant); and whether the permissible methods of taking and requirements pertaining to the mitigation, monitoring, and reporting of such takings are set forth.

NMFS defines ''negligible impact'' in 50 CFR 216.103 as ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.'' The MMPA was amended in 2004 to modify what constitutes a "take" or "harassment" in the context of "military readiness activities." Under the MMPA, for military readiness activities, the relevant definition of harassment is any act that: (i) injures or has the significant potential to injure a marine mammal or marine mammal stock in the wild (also referred to as "Level A harassment"); or (ii) 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 (also referred to as "Level B harassment") [16 U.S.C. § 1362(18)(B)(i) and (ii)].

While these standards are unique to the Marine Mammal Protection Act and not included in the Coastal Act or CCMP, they nevertheless provide a useful metric for describing and evaluating the anticipated effects of the proposed Navy training and testing program on the marine resources protected by the CCMP's enforceable policies,

[36] https://www.fisheries.noaa.gov/permit/incidental-take-authorizations-under-marine-mammal-protection-act

including areas and species of special biological or economic significance. The Commission has long considered marine mammals and their habitats, National Marine Sanctuaries, state-designated marine protected areas, and sensitive habitats such as kelp forests, reefs and eelgrass beds to be areas and species of special biological or economic significance.

Impacts to Marine Mammal Species

The Navy's CD and supporting documents, particularly the Draft Environmental Impact Statement (DEIS), include a variety of tables and appendices that establish its position regarding potential impacts of its proposed training and testing activities on marine mammals. Several of these sources of information are described and excerpted below to summarize the Navy's analysis.

Table 3.7-5 of the 2024 DEIS (provided as **Exhibit 16**) summarizes the potential impacts of several types of acoustic stressors (including sonar and other sound transducers) to different groups of marine mammals (mysticetes, odontocetes, pinnipeds, and sea otter). This table shows that sonar and other transducers and impulsive noise from air guns, pile driving, and weapons may result in hearing loss, masking, physiological stress, or behavioral reactions, while vessel and aircraft noise are more limited to masking, physiological stress, or behavioral reactions. Section D.4 of Appendix D[37] (Acoustic and Explosive Impacts Supporting Information) to the 2024 DEIS describes general effects to the different types of marine mammals from exposure to acoustic sources, and discusses various effects categories in detail, with summaries of scientific research, for hearing, acoustic signaling, hearing loss and auditory injury, masking, behavioral reactions, physiological response, direct injury, and population consequences. Section 2.1.1 of Appendix E (Explosive and Acoustic Analysis Report) to the 2024 DEIS summarizes the differences in sensitivity to behavioral disturbance due to sonar by marine mammal groups, noting that beaked whales and harbor porpoise are the most sensitive:

- *Responses of beaked whales have been carefully studied on Navy ranges, including the Southern California Anti-Submarine Warfare Range (SOAR) west of San Clemente Island in the SOCAL Range Complex and the [Pacific Missile Range Facility] west of Kauai, Hawaii. Beaked whales exposed to sonar or other active acoustic sources may discontinue feeding dives and avoid the area during anti-submarine warfare activities […] (e.g., Henderson et al., 2015; Henderson et al., 2016; Jacobson et al., 2022; Manzano-Roth et al., 2016; Tyack et al., 2011). Population levels of beaked whales and other odontocetes on Navy fixed ranges that have been operating for decades appear to be stable. In areas where beaked whales are unlikely to regularly encounter naval sonar activity, beaked whales may be more likely to be displaced for longer periods of time (e.g., Stanistreet et al., 2022). Significant behavioral reactions to sonar are likely when beaked whales are exposed to anti-submarine sonar within a few tens of kilometers, especially for prolonged*

[37] Appendix D and Appendix E of the DEIS are both available at https://www.nepa.navy.mil/Current-Projects/At-Sea-Ranges/Hawaii-California-Training-and-Testing-EIS-OEIS/Draft-EIS-OEIS/

periods (a few hours or more). Avoidance likely decreases the potential for hearing loss for these species.

- *Harbor porpoises are small odontocetes that are sensitive to anthropogenic activity and avoid anthropogenic sound sources at low received levels. Behavioral reactions are more likely than with most other odontocetes.*

The CD also summarizes the potential effects on marine mammals from sonar and other transducers, and the factors contributing to changes in the impacts analyzed for the proposed HCTT program compared to ongoing training and testing activities. As noted below, some of these changes are the result of modifications to the predictive model used to estimate the number and type of marine mammals that would be subjected to injury or disturbance from the proposed activities. As the scientific understanding of marine mammal hearing and response thresholds has improved over the years since the last training and testing program was evaluated, the predictive model has also been updated, in some cases demonstrating that prior model estimates were too low. The model has also been changed to no longer assume the effectiveness of the Navy's mitigation measures:

> Sonar and other transducers (hereinafter inclusively referred to as sonar) have the potential to affect marine mammals by causing auditory injuries, TTS [temporary threshold shift[38]], masking, non-injurious physiological responses (such as stress), or behavioral reactions. Low- (less than 1 kHz), mid- (1 to 10 kHz), and some high (10 to 100 kHz) frequency sonars are within the hearing range of all marine mammals. Additionally, all high- and very high-frequency (100 to 200 kHz) sonars are in the hearing range of all odontocetes (HF [high frequency[39]] and VLF [very low frequency[40]] hearing groups).
>
> Sonars with higher source levels, longer durations, higher duty cycles, and frequencies near the best range of hearing are more likely to affect hearing. Due to their high source levels and low transmission loss (compared to higher frequency sources), [anti-submarine warfare] sonar sources, including hull-mounted sonar (MF1) and high duty cycle hull-mounted sonar (MF1C), have large zones of effects.
>
> In general, the estimated number of predicted auditory effects have increased since the 2018 HSTT EIS/OEIS. While some increases may be attributable to changes in the Proposed Action and increase in action areas (e.g., inclusion of NOCAL Range Complex), many increases are due to changes in methodologies used to model effects that are listed in Section 3.7.3.1 (Mitigation Summary) of the 2024 HCTT Draft EIS/OEIS. Notably, the updated criteria for the HF cetacean auditory group, which includes delphinids and most other odontocetes, and the Phocid in Water (PCW) auditory group indicate increased susceptibility to auditory effects at low and mid-frequencies compared to the prior auditory criteria.

[38] Exposure to sound with sufficient duration and sound pressure level may result in a loss of hearing sensitivity, which is considered temporary threshold shift (TTS) if it eventually returns to normal.
[39] The high frequency (HF) cetacean auditory group includes delphinids and most other odontocetes
[40] The very low frequency (VLF) cetacean auditory group includes blue, fin, right, and bowhead whales

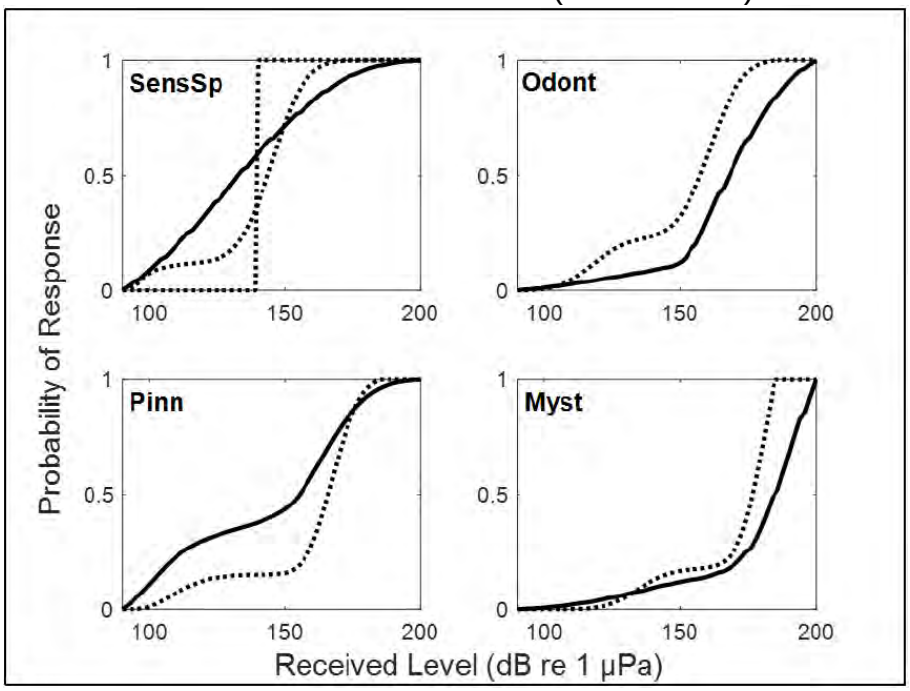
> Consequently, predicted auditory effects due to most [anti-submarine warfare] sonars are substantially higher for these groups than in prior analyses of the same activities. The change in susceptibility to auditory effects due to sonars is less pronounced for other auditory groups. For most auditory groups, the revision to the avoidance model [assumes] that some marine mammals may avoid sound levels that can cause particularly certain high duty cycle sources. The revised avoidance method bases the initiation of an avoidance response on the behavioral response criteria. The ability to avoid a sonar exposure that may cause auditory effects in the model depends on a species' susceptibility to auditory effects, a species' sensitivity to behavioral disturbance, and characteristics of the sonar source, including duty cycle, source level, and frequency. Thus, predicted auditory effects for species that are less sensitive to disturbance compared to susceptibility to auditory effects have increased.
>
> Most [anti-submarine warfare] sonars are composed of individual sounds which are short, lasting up to a few seconds each. Systems typically operate with low-duty cycles (less frequent pulses with longer intervals between them) for most tactical sources, but some systems may operate nearly continuously or with higher duty cycles (more frequent pulses with shorter intervals between them). Some testing activities may also use sonars with high duty cycles. These higher duty cycle sources would pose a greater risk of masking than intermittent sources. Most [anti-submarine warfare] activities are geographically dispersed, have a limited duration, and intermittently use sonars with a narrow frequency band. These factors reduce the potential for significant or extended masking in marine mammals.
>
> The number of predicted behavioral effects has changed for all stocks since the prior analysis. These changes are primarily due to revisions to the behavioral response functions. The updated behavioral response functions predict greater sensitivity for the pinniped behavioral group and lower sensitivity for the odontocete and mysticete behavioral groups compared to the previous behavioral response functions. The new function for the sensitive species behavioral group predicts greater sensitivity at lower received levels for beaked whales and harbor porpoises. In addition, the cut-off conditions for predicting behavioral responses have been revised. These factors interact in complex ways that make comparing the predicted behavioral responses in this analysis to the prior analyses challenging.

More extensive discussion of sonar impacts and the revised modeling and categorization for impacts can be found in 2024 DEIS Section 3.7 (Marine Mammals, in subsection 3.7.3.2.1) and its supporting materials. It is also important to note that, as discussed in the project description above (in Section IV.A), mid-frequency sonar hours are proposed to increase for the HCTT compared to current activities (including for high duty cycle MF1C hull-mounted sonar hours) and would be expanded to vast new geographical areas: the PMSR and the NOCAL Range Complex.

Acoustic Modeling/Estimates of Harassments and Mortalities

Section 3.7.3.2 of the 2024 DEIS and Section 2.2 of Appendix E of the 2024 DEIS summarize the Navy's approach to estimating impacts on marine mammals from sonar and other active acoustic transducers[41]. The Navy divides impacts into MMPA Criteria for thresholds, which include mortality, "Level A" harassments, and "Level B" harassments. The Navy also divides marine mammals into four overall groups for purposes of its analysis - odontocetes, mysticetes, sensitive species (beaked whale and harbor porpoise), and pinnipeds, with differing behavioral response functions for each group, as shown in the graphs below in **Figure 3** (which are included as Figure 2.2-3 in Appendix E of the 2024 DEIS). As described above, the response functions were revised by the Navy since the Commission's review of the 2018 HSTT CD. For comparison, the earlier versions are included as dashed lines in the graphs. In general, the graphs show that for each group of species, as the sound level increases from right to left, the likelihood that the animal will be affected and respond also increases (from a zero percent chance at the bottom of the graph to a 100% chance at the top of the graph).

Figure 3[42]: Revised behavioral response functions for proposed HCTT/Phase 4 (solid lines) and prior versions from 2018 HSTT/Phase 3 (dashed lines)



[41] The Navy's acoustic model is described in detail in 2024 DEIS Technical Report "Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase 4) (April 2025)", which can be found at https://www.nepa.navy.mil/Current-Projects/At-Sea-Ranges/Hawaii-California-Training-and-Testing-EIS-OEIS/Draft-EIS-OEIS/

[42] Note from Figure 2.3-3 of Appendix E to the 2024 DEIS: "Revised behavioral response functions (solid lines) and prior behavioral response functions (Phase 3, dotted lines). SensSp = Sensitive Species, Odont = Odontocetes, Pinn = Pinnipeds, Myst = Mysticetes. Both the Phase 3 beaked whale behavioral response function and the Phase 3 harbor porpoise step function are plotted against the new Sensitive Species curve."

Using these data from its analysis quantifying impacts on marine mammals from acoustic and explosive sources, the Navy has provided several charts, in both its application (2024 LOA Application)[43] to NMFS for authorization under the MMPA and in Appendix E of its 2024 DEIS (**Exhibit 17**), quantifying marine mammals being "harassed" (predominantly due to behavioral, or Level B, harassment). Regarding these impacts, the Navy also states in its CD:

> Depending on the stock, effects on individuals may be permanent (auditory injuries) or temporary (TTS, masking, stress, or behavioral response). Behavioral patterns of some individuals, which may include communication, foraging, or breeding, are likely to be temporarily disrupted. Individuals or groups may avoid areas around sonar activities and be temporarily displaced from a preferred habitat. Displacement may be brief for short duration activities or extended for multi-day events and would depend on the behavioral sensitivity of the species. Sensitive species, particularly beaked whales, may avoid for farther distances and for longer durations. Most activities do not occur for extended multi-day periods and would occur over small areas relative to population ranges. The average rate of predicted effects on individuals in most populations would range from less than once per year to several times per year. Individuals of some behaviorally sensitive species or in populations concentrated near range complexes in the Pacific may have higher repeated effects. These effects are not expected to interfere with feeding, reproduction, or other biologically important functions such that the continued viability of the population would be threatened.

Also, the Navy maintains that its estimates of Level B harassment are overestimated; Chapter 7 of the Navy's 2024 LOA Application states:

> This request for [a Letter of Authorization (LOA) from NMFS] assumes that short-term non-injurious sound exposure levels predicted to cause onset-TTS or temporary behavioral disruptions (non-TTS) qualify as Level B harassment. Therefore, this analysis overestimates reactions qualifying as harassment under MMPA because there is no established scientific correlation between short-term use of sonars, explosives, pile driving/extraction, air guns, or missile and aerial target launches, and long-term abandonment or significant alteration of behavioral patterns in marine mammals.

In addition to estimating the behavioral changes and Level B take, the Navy generated estimates of more significant hearing loss and injury or mortality that could result from the proposed activities. Level A take includes injury and permanent auditory injury. **Table 2** (below) provides the Navy's model-based estimates of maximum annual and total seven-year "takes" of marine mammals – including potential mortalities, Level A takes, Level B takes -- from all acoustic and explosive sources over the full HCTT area (combined California and Hawaii activities), as presented in its 2024 LOA Application to NMFS.

[43] Navy's Letters of Authorization (LOA) Application for the MMPA, dated September 16, 2024, can be found at https://www.fisheries.noaa.gov/action/military-readiness-activities-hawaii-california-training-and-testing-hctt-study-area-2025

Table 2: Summary of Annual and Seven-year Take Request from Acoustic and Explosive Sources for HCTT Military Readiness Activities[44]

MMPA Category	Source	Maximum Annual				7-Year Total			
		Navy Training	Navy Testing	USCG Training	Army Training	Navy Training	Navy Testing	USCG Training	Army Training
Mortality	Explosive	28	11	0	0	146	27	0	0
Level A	Acoustic & Explosive	4,070	2,233	9	40	23,913	12,104	22	203
Level B	Acoustic & Explosive	3,692,549	2,385,569	36,897	246	20,688,799	13,031,706	257,890	1,610

While the take estimates provided in this table include those occurring in the Hawaii Study Area, outside the Commission's purview, these totals nonetheless provide cumulative context for the full proposed HCTT program. For the Commission's purposes, the more relevant data are provided in the 2024 LOA Application Tables 5-2, 5-3, and 5-4 (**Exhibit 18)**, which separate California from Hawaii activity estimates.[45] By combining the modeled mortalities, Level A and Level B takes listed in the LOA Tables 5-2 (Navy and Marine Corps Training), 5-3 (Navy Testing), and 5-4 (Coast Guard Training) (i.e., by adding all Training and Testing activities together, and reducing the totals to exclude the Hawaii stocks), it is possible to estimate the maximum annual MMPA "takes" of marine mammals in California waters related to proposed HCTT acoustic and explosive sound sources. These species-specific impact estimates are provided in **Table 3**, below.

Table 3: Maximum Annual Species-Specific Take Requests from Modeling Estimates of Acoustic and Explosive Sound Source Effects for Combined Training and Testing Activities in CA Study Area

Species	HCTT Totals in CA Study Area		
	Level B	Level A	Mortality
Blue Whales	4,571	27	0
Fin Whales	13,501	55	0
Humpback Whales (Mainland Mexico - CA/OR/WA)	4,449	44	0
Humpback Whales (Central America/S Mexico - CA/OR/WA)	1,888	19	0
Minke Whales	2,993	32	0
Sei Whales	302	3	0
Gray Whales (Eastern N Pacific)	16,711	167	0
Gray Whales (Western N Pacific)	169	2	0
Sperm Whales (Physeteridae family)	3,891	3	0
Dwarf Sperm Whales	5,664	94	0
Pygmy Sperm Whales	5,615	107	0
Baird's Beaked Whales	10,174	0	0
Goose-Beaked Whale (formerly Cuvier's)	166,816	2	0

[44] Annual take estimates for acoustic and explosive sources are based on the maximum number of activities in a 12-month period.

[45] Additionally, Appendix E of the 2024 DEIS (Tables 2.4-82 to 2.4-98) provides California-specific data on potential marine mammal impacts separated into Significant Behavioral Response (BEH), TTS, AINJ, non-auditory injury (INJ), and mortality (**Exhibit 17**).

Mesoplodont Beaked Whales	92,839	2	0
Bottlenose Dolphins (CA coastal)	1,350	7	0
Bottlenose Dolphins (CA/OR/WA offshore)	28,058	15	0
Killer Whale (Eastern N. Pacific)	1,023	4	0
Killer Whale (Eastern N Pacific & West Coast Transient)	55	0	0
Pygmy Killer Whale	795	0	0
Long-Beaked Common Dolphin	296,878	152	4
Northern Right Whale Dolphin	45,514	21	1
Pacific White-Sided Dolphin	69,210	42	2
Risso's Dolphin	43,833	21	0
Short-Beaked Common Dolphin	2,169,554	877	18
Short-Finned Pilot Whale	4,279	11	1
Striped Dolphin	133,399	44	1
Dall's Porpoise	59,619	1,237	0
Harbor Porpoise (San Francisco Russian River)	9,960	26	0
Harbor Porpoise (Northern California/ Southern Oregon)	481	0	0
Harbor Porpoise (Morro Bay)	4,373	88	0
Harbor Porpoise (Monterey Bay)	2,179	0	0
California Sea Lion	1,888,749	723	5
Guadalupe Fur Seal (Mexico stock CA/HI study area)	167,984	27	0
Northern Fur Seal (Eastern Pacific)	33,195	12	0
Northern Fur Seal (CA)	22,098	10	0
Harbor Seal	70,983	261	1
Northern Elephant Seal	118,474	111	0
TOTAL MAXIMUM ANNUAL	**5,518,506**	**4415**	**33**

Based on these data, the increased use of sonar and explosives under the proposed HCTT program has the potential to result in substantially greater impacts to marine mammals than the prior HSTT program (as calculated from tables in the exhibits to the Commission's adopted findings in support of its decision on the Navy's 2018 HSTT CD). This includes an approximately 115 percent increase in the total Level B take estimated over all species (from 2,556820, to 5,518,506) and an approximately 617 percent increase (from 616 to 4,415) in the total Level A take estimated over all species.

While the estimated annual Level B take would increase for most species, a number of species stocks would experience reductions in Level B take[46]; these reductions, however would be offset by increases in Level A take for the majority of those species stocks, indicating they would be subjected to a more severe and injurious effect. Species for which drastic increases (over 500 percent increase) in annual Level B take is anticipated include fin whales and eastern north Pacific killer whales. Extreme increases in annual Level B take (over 13-fold increases) are estimated for goose-beaked whales, Mesoplodont beaked whales, California sea lions, Guadalupe fur seals,

[46] These include: bottlenose dolphins, transient killer whales, northern right whale dolphin, Risso's dolphin, and striped dolphin.

and harbor seals. All species for which Level A take was estimated for the 2018 HSTT have greater annual Level A take estimates under the currently proposed HCTT program, and several species for which no Level A take was expected previously now include Level A take estimates (sei whales, sperm whales of the Physeteridae family, goose-beaked whales, Mesoplodont beaked whales, CA coastal stock of bottlenose dolphins, eastern north Pacific killer whale, and Guadalupe fur seal). At least ten-fold increases in annual Level A take are expected for blue, fin, humpback, minke, gray, and short-finned pilot whales, striped dolphins, northern fur seals, and harbor seals.

Some of the changes between the proposed HCTT take numbers by species and those analyzed in the 2018 HSTT CD are the result of changes in methodologies used by the Navy to model auditory effects. However, as discussed above, it cannot be discounted that the proposed HCTT also represents a significant expansion in both space and time of proposed training and testing activities (as described above in Section IV.A), including an increase in proposed maximum annual mid-frequency sonar hours and an expansion of the use of that type of sonar into the PMSR and NOCAL Range Complex areas (which together encompass roughly 56,300 square miles of marine habitat). In fact, the HCTT includes take requests estimates for several stocks of harbor porpoise occurring in central and northern California waters that did not appear in the take estimates for the 2018 HSTT, which was centered on the SOCAL Range Complex. As one of the smallest of California's marine mammal species, harbor porpoise are known to be particularly sensitive to elevated levels of underwater sound and susceptible to adverse impacts from disturbance and displacement. It should also be noted that the take numbers presented above do account for other stressors besides sonar (which are discussed in sections below), but the bulk of those Level B and Level A harassment estimates are the result to sonar effects.

Further, when comparing the requested annual Level B take numbers to estimated stock abundances (see Table 3.7-2 from the 2024 DEIS, included here as **Exhibit 19**), the Level B take numbers represent over 100 percent of the stock abundance for the majority of the species stocks included[47] in the take requests for the California Study Area. Notably, for goose-beaked whales and Mesoplodont beaked whales, the Level B take estimates are over 3000 percent of the stock abundance estimates for the CA/OR/WA stocks of each of those species. In a statistical sense, this means that each individual animal from most of the species stocks evaluated could experience disturbance or harassment from sonar and/or explosives multiple times each year or a subset of the populations affected much more frequently.

Navy's Proposed Mitigation Measures

The Navy proposes a variety of mitigation measures intended to reduce impacts to marine mammals from sonar use, explosives and other sources of underwater sound, generally divided into two categories: (1) activity-based mitigation, and (2) geographic

[47] This is not the case for sei whales, gray whales, transient killer whales, northern CA/southern OR and Monterey Bay harbor porpoise stocks, eastern pacific northern fur seal stock, or northern elephant seals.

mitigation. A complete list of the Navy's proposed mitigation measures is provided in **Appendix D** to this staff report.

The proposed activity-based mitigation (CD Section C.6, Tables C-2 to C-4)[48] includes specific measures to be implemented (as appropriate) in response to an applicable sighting of marine animals within or entering established mitigation zones for acoustic stressors (e.g., sonar, air guns, pile driving), explosives, and non-explosive practice munitions. Generally, if mitigation is triggered before a testing or training activity is to commence, the activity would be relocated or delayed, and if mitigation is triggered during an activity, the proponents would "(1) power down or shut down active acoustic transmissions, (2) cease air gun use, (3) cease pile driving or pile removal, (4) cease weapon firing or ordnance deployment, or (5) cease explosive detonations or fuse initiations" until all-clear conditions are met.

Proposed geographic mitigation areas (CD Section C.7) for physical habitats, marine species habitats, and cultural resources are summarized in Figure C-2 (provided here as **Exhibit 20**), and presented in greater detail in **Appendix D**. The Navy proposes three geographic mitigation areas in which a seasonal limit (from June 1 to October 31) of 300 hours of use of MF1 surface ship hull-mounted mid-frequency active sonar would be instituted collectively among the three areas on an annual basis. These areas, shown in **Exhibit 20**, include:

- The Northern California Large Whale Mitigation Area (Table C-8), extending north to south from Point Arena in Mendocino County to San Francisco Bay;
- The Central California Large Whale Mitigation Area (Table C-9), extending from Pigeon Point in San Mateo County to offshore of the Northern Channel Islands;
- The Southern California Blue Whale Mitigation Area (Table C-10), extending from La Jolla (San Diego) to the border with Mexico.

However, it is also important to note that while the new Northern and Central California mitigation areas would be subject to seasonal acoustic limits shared with the Southern area, use of mid-frequency sonar has not previously been authorized in these areas of the PMSR and NOCAL Range Complex. This means it would be a wholly new stressor for marine mammals in these areas, potentially resulting in a greater likelihood or greater severity of effects. Section IV.A, above, provides an estimate of where sonar would be used most frequently under the HCTT program.

The Southern California Blue Whale Mitigation Area also includes a seasonal prohibition (Jun 1 – Oct 31), on detonating in-water explosives during large-caliber gunnery, torpedo, bombing, and missile training and testing. While this area is in a similar location to the San Diego Arc mitigation area from the HSTT (CD-0001-18), it covers a smaller area, in part due to changes to the NMFS-designated Biologically Important Areas (BIAs), described below.

Additionally, the Navy proposes to implement several awareness measures intended to reduce the risk of harm to large whales during HCTT activities, including those involving

[48] See also the list of mitigation measures specific to marine mammals on CD p. 3-96 (in **Appendix B**)

sonar, explosives and other acoustic stressors. The “California Large Whale Awareness Message Requirements” (Table C-11) include the broadcasting of alerts to personnel throughout the California Study Area of the possible presence of concentrations of large whales based on their seasonal patterns, including gray, fin, blue, and humpback, whales. The mitigation measure is a continuation of ongoing HSTT requirements, with an updated geographic extent. Within a more limited area, the proposed California Real-Time Notification Large Whale Mitigation Area (in a portion of the SOCAL Range Complex, as shown in **Exhibit 20**), real-time notifications would be issued to alert lookouts on vessels operating in the vicinity of large whale aggregations (defined as four or more whales of any species) sighted within 1 NM of an Action Proponent vessel, to inform their visual observations of applicable mitigation zones (see CD Table C-12). Additionally, the San Nicolas Island pinniped haulout mitigation areas (see zoomed in portion of **Exhibit 20**) would be subject to protective measures including altitude limits for missiles, scheduling to avoid peak pupping season, and implementing a video and acoustic monitoring plan (CD Table C-13).

Biologically Important Areas (BIAs)

To a large extent, the potential for adverse effects to marine mammals from acoustic and explosive stressors associated with the HCTT program depends on the overlap between the proposed activity areas and ocean areas used by marine mammals during their life-cycles, and on the strategic distribution of mitigation areas intended to protect the most crucial habitat areas. A key tool in determining the habitat areas in need of protection is the set of Biologically Important Areas (BIAs) established by NOAA based on available scientific data.

As the Commission found in Consistency Determination No. CD-0001-18 for the Navy’s 2018-2025 HSTT program:

> The [Biologically Important Areas] designation was created to synthesize decades of scientific research, monitoring and marine mammal surveys and to serve as a tool for resource management agencies responsible for integrating the best available scientific understanding into decision making. Each Biologically Important Area (BIA) was established as a result of a four year long process involving scores of scientific experts and decades of research results and data on marine mammal biology, behavior, and spatial use trends. The BIA sites represent spatially explicit migratory corridors, feeding grounds, breeding aggregations, and critical habitats for small resident populations of marine mammals. The only sites that received the designation are those for which an overwhelming amount of data and scientific consensus is available. As noted in the report describing the BIA designation process and intent of the designation (Calambokidis et al, 2015): “The goal of identifying BIAs is to synthesize existing biological information in a transparent format that is easily accessible to scientists, managers, policymakers, and the public for use during the planning and design phase of anthropogenic activities for which U.S. statutes require the characterization and minimization of impacts on marine mammals.”

In Appendix K[49] (Geographic Mitigation Assessment) of the 2024 DEIS, the Navy explains:

> The BIAs located… off California (Calambokidis et al., 2024), have since been reviewed and revised based on new data and information collected since the original BIAs were defined based on how species use these areas. The original BIAs defined by Ferguson et al. ([2015]) and Van Parijs et al. (2015), and those recently revised (Calambokidis et al., 2024; Kratofil et al., 2023), are defined as biologically important for a particular species or stock and for an associated behavior exhibited by the species in that area. The four types of BIAs are reproductive, feeding, migratory, and small and resident… (Harrison et al., 2023).

The revised BIAs also designate "parent" and "core" areas for several species, reflecting data indicating that the full "parent" BIAs contained smaller sub-areas ("core areas") with intensified (e.g., high density) use by the given species. Notable revisions to the BIAs are briefly described below, with reference to the more detailed information provided by the Navy in Appendix K of the 2024 DEIS.

Blue whale BIAs for feeding (**Exhibit 21**) have recently been redefined based on new data (see Appendix K, pp. K-67 to K-70). The Navy summarizes the revised areas as follows:

> In 2015, feeding BIAs were delineated off the U.S. west coast for the Eastern North Pacific stock of blue whales (Calambokidis et al., [2015]). The BIAs were redefined for blue whale feeding behavior off the U.S. West Coast by Calambokidis et al. (2024) (Figure [K-19]) and incorporated tagging and additional line-transect survey data not previously considered (Calambokidis et al., [2015]). The parent BIA encompass 173,000 km^2 equivalent to 21 percent of the U.S. West Coast EEZ and include coastal, shelf beak, and offshore waters (Figure [K-19]). The core BIA, which is approximately 54,000 km^2, is 30 percent of the parent BIA but still larger than the previous blue whale feeding BIAs defined in 2015. The BIAs are in effect from June through November.

Entirely new BIAs were designated for fin whale feeding areas (**Exhibit 22**; Appendix K, pp. K-77 to K-82). The Navy summarizes the new identified areas as follows:

> During the first phase of BIA development, the best available science was not sufficient to define BIAs for fin whale behavior off California (Calambokidis et al., [2015]). A combination of sightings, satellite tagging data, and habitat-based distribution models has since enabled researchers to define fin whale feeding BIAs along the west coast (Calambokidis et al., 2024) (Figure [K-22]). The parent BIA encompasses approximately 315,000 km^2 and 38 percent of the U.S. West Coast EEZ and is the largest BIA designated off the West Coast. The core BIA is 49 percent of the parent BIA (approximately 155,000 km^2) (Calambokidis et al., 2024). The BIAs are in effect from June through November.

[49] Appendix K of the 2024 DEIS is available at https://www.nepa.navy.mil/Current-Projects/At-Sea-Ranges/Hawaii-California-Training-and-Testing-EIS-OEIS/Draft-EIS-OEIS/

Revised BIAs were also designated for humpback whale feeding areas (**Exhibit 23**; Appendix K pp. K-82 to K-87). The Navy summarizes revised areas as follows:

> Two BIAs (parent and core) for humpback whale feeding behavior have been identified in the California Study Area (Figure [K-23]). The parent BIA encompasses approximately 140,000 km^2 equivalent to 20% of the area of the U.S. West Coast EEZ, and the core BIA encompasses approximately 38,000 km^2 (Calambokidis et al., 2024). The BIAs are only in effect from March through November when foraging humpback whales are expected to be present. The core BIA is 27% of the parent BIA but is still a little over 50% larger than the previous Humpback Whale feeding BIAs defined in 2015.

Finally, several other new BIAs have been designated off the coast of California, including:

- Gray Whale BIAs for migration and reproduction (Appendix K pp. K-71 to K-77 and **Exhibit 24**;
- Harbor Porpoise BIAs for small and resident populations near Monterey Bay and Morro Bay (Appendix K pp. K-87 to K-90 and **Exhibit 25**); and
- Killer Whale BIAs for small and resident populations (Appendix K pp. K-71 to K-77 and **Exhibit 26**).

Appendix K of the 2024 DEIS also provides a general description of how the Navy considered the revised BIAs in determining the extent of its new proposed geographic mitigation areas for the HCTT:

> For this assessment, the Action Proponents used the revisions to the Cetacean Density and Distribution Mapping Working Group source literature (Calambokidis et al., 2024; Kratofil et al., 2023) in combination with Navy marine species monitoring reports, available tagging data, and the most up-to-date scientific literature, to assess the potential likelihood that additional mitigation in these areas would be warranted. In many instances, data from the Navy's marine mammal tagging studies were particularly helpful in providing context about the full extent of habitats used by cetaceans for biologically important behaviors in the Study Area, since oftentimes the biologically important areas identified in Calambokidis et al. (2024) and Kratofil et al. (2023) represent only a portion of the habitats used by marine mammals throughout their range.

However, as shown in **Exhibit 31**, the Navy's proposed whale mitigation areas cover only a fraction of the revised core BIAs designated by NMFS. Given that these core BIAs represent the ocean areas of most intense use (and greatest habitat value) by these whale species, it is questionable whether the relatively small mitigation areas for whales would provide adequate protection from acoustic, explosive and other stressors. A map overlaying the "Core" BIA areas for blue, fin, and humpback whales, along with BIAs for gray whales, harbor porpoise, and killer whales, is provided as **Exhibit 27**[50]. Notably, the Navy's proposed geographic mitigation areas for the new HCTT provide

[50] Originally Figure K-2 of Appendix K of the 2024 DEIS

significantly less extensive coverage of these new, larger BIAs, than the mitigation areas included in CD-0001-18 did for the older BIAs.

Beaked Whales

The Commission's adopted findings from its review of the Navy's 2018-2025 HSTT program (CD-0001-18, available here) discussed the Navy's considerations regarding goose-beaked[51] whales for habitats for potential BIA consideration, population trends, and recent studies, on pages 34-36. An update on population trends discussed for goose-beaked whales is provided below in the "Commission Analysis" section on "Population-Level Effects". Section D.4.5.2.1.1 of Appendix D to the 2024 DEIS provides a science update on behavioral reactions of beaked whales to sonar and other transducers and Section C.6.3.25 of Appendix C to the 2024 DEIS provides the Navy's review of current scientific literature on goose-beaked whales regarding the status and management, habitat and geographic range, and population trends and threats, for the species in the HCTT action areas, including the California/Oregon/ Washington stock.

In the 2024 BIA revisions, Calambokidis et al. (2024) noted for goose-beaked whales:

> No watch list areas were formally designated for the West Coast region in this assessment, but we initially considered developing a BIA for [goose-beaked] whales. Accurate information on the distribution and abundance of this species has been limited due to their cryptic nature and occurrence primarily in deep offshore waters making it hard to define its habitat preference across the entire region. This species has been documented as sensitive to anthropogenic disturbance, in particular Navy Sonar (e.g. DeRuiter et al., 2013; Falcone et al., 2017). Recently, however, additional information and approaches are providing a better picture of this species off the U.S. West Coast (Curtis et al., 2021; Barlow et al., 2021a; 2021b, Schorr et al., 2014; Bernaldo de Quirós et al., 2019). […] While the species is broadly distributed along the U.S. West Coast, there is increasing evidence using satellite telemetry suggesting there may be small discrete populations which have high site fidelity over long time periods (e.g. Schorr et al., 2014; 2022a; 2022b). In addition, the development of mark-recapture abundance models for this species in the San Nicolas Basin in Southern California has provided abundance and preliminary trend data for this region, indicating a localized population estimated at 121 (71-219) individuals (Curtis et al., 2021) with individual sighting histories spanning as long as 15 years (Schorr et al., 2022a). The combination of high site fidelity, mark-recapture studies, and acoustic monitoring indicate some areas, including the San Nicolas Basin appear to have higher densities of beaked whales (Falcone et al., 2009; Barlow et al., 2021a, 2021b; Curtis et al., 2021) and may warrant future consideration as a BIA.

The Navy's CD does not propose any geographic mitigation areas in the San Nicolas basin or specific to beaked whales. In fact, the Submarine Warfare Range (SOAR) is located in that basin, flanked by the two newly proposed Shallow Water Training Ranges. However, it should be noted that the Navy's CD does indicate that it has spent a "total of $20.3M on marine species monitoring within HCTT over the seven-year

[51] Formerly "Cuvier's beaked".

period from 2018 through 2024" which "supported field surveys in California and Hawaii, data analysis, and final reporting". The Navy lists 36 specific projects[52] that are "currently either starting or ongoing within the California Study Area from 2018 through 2024", including six that mention beaked whales. While many questions remain about the behavioral responses of beaked whales to mid-frequency sonar activities in the coastal waters off California, the Navy has continued to make an effort to fund research to better understand these potential impacts.

Explosives Use and Expendable Materials

As discussed in more detail above in Section IV.A for "Activities Spanning Ranges," the HCTT program includes the use of many types of in-water explosives and other military expended materials, and proposes to increase the numbers of missiles, bombs, rockets, and gun ammunition used in comparison to previous training and testing programs. **Table 4** (2024 DEIS Table 3.0-10) summarizes the quantities of explosive sources (listed in ascending order by explosive weight) that "could be used" underwater or at the surface during training and testing activities, on an annual basis, throughout the full HCTT Study Area (California and Hawaii.

Table 4: Explosive Sources Quantitatively Analyzed that Could be Used Underwater or at the Surface

Bin	Net Explosive Weight	Example Explosive Source	Annual Training	Annual Testing
E1	0.1–0.25	Medium-caliber projectile	1,750–4,303	7,305–7,430
E2	> 0.25–0.5		2,950–3,000	-
E3	> 0.5–2.5	2.75-in. rocket	5,588–5,870	4,744–6,568
E4	> 2.5–5	Mine neutralization charge	179–190	1,324–2,624
E5	> 5–10	5 in. projectile	5,059–5,984	2,024–2,676
E6	> 10–20	Hellfire missile	2,293–2,357	144–148
E7	> 20–60	Demo block/shaped charge	115–190	549–622
E8	> 60–100	Lightweight torpedo	3–5	213–234
E9	> 100–250	500 lb. bomb	386–408	111–115
E10	> 250–500	Harpoon missile	89	13
E11	> 500–675	650 lb. mine	7–11	1–2
E12	> 675–1,000	2,000 lb. bomb	17–19	-
E13	> 1,000–1,740	Underwater demolitions – large area clearance	6	-
E16	10,000	Ship shock detonation	-	0–3

Notes: > = greater than; in. = inch; lb. = pound

These types of explosive sources have the potential to adversely affect marine mammals and wildlife through direct and acoustic injury if animals are in proximity to

[52] Listed on pages 3-101 to 3-103 of the CD

associated explosions. Direct injury would occur to marine mammals located within an explosive blast radius or exposed to sound, materials or fragments ejected from an explosion. Exposure to explosive energy waves underwater are particularly likely to result in injury to air- or gas-filled organs such as lungs and digestive organs. Acoustic injury could result in temporary or permanent loss of hearing ability, either of which would be significant for marine mammals that rely on sound and hearing to communicate and maintain social cohesion, find food, avoid predators, reproduce and care for young.

In Table 3.7-14 of the DEIS, the Navy summarizes potential effects of explosives on marine mammals as follows:

> Explosives may result in mortality and non-auditory injury. Direct injury due to explosives depends on the charge size, the geometry of the exposure (e.g., distance and depth), and the size of the animal. The intermittent nature of most impulsive sounds would result in very limited probability of any masking effects. Due to the rapid rise time and higher instantaneous peak pressure of impulsive noise, nearby noise is more likely to cause startle or avoidance responses. Few studies on reactions to explosives exist, but responses to seismic surveys, pile driving and other impulsive noises have been recorded. Different groups of marine mammals may respond in different ways to impulsive noise, as summarized in Table 3.7-5.[53]

Table 2, presented above in the Sonar Use section, includes the Navy's full HCTT take estimates and Tables 2.4-92 to 2.4-98 of Appendix E of the DEIS (shown in **Exhibit 17**), provide estimated effects to marine mammal stocks from explosives, specifically, by impact type. While sonar impacts make up the vast majority of estimated marine mammal take (**Table 3**[54], above), it is clear from the explosives-specific tables in **Exhibit 17** and in **Table 2**, that explosives would also result in modest levels of take, including estimated annual mortalities. As described above in the discussion of proposed mitigation measures for sonar use, the Southern California Blue Whale Mitigation Area (Table C-10, see **Appendix D**) includes a seasonal prohibition (Jun 1 – Oct 31) on detonating in-water explosives during large-caliber gunnery, torpedo, bombing, and missile training and testing. However, the Northern and Central Large Whale Mitigation areas do not include these seasonal explosives prohibitions in the coastal waters of the PMSR and NOCAL Range Complex – both ranges where the use of in-water explosives has not previously been authorized.

The Navy's CD also analyzes the potential impacts of explosives on other marine resources including sensitive seafloor habitats. The Navy proposes to implement mitigation to avoid impacts on seafloor resources from explosives and physical disturbance and strikes from military expended materials and anchorages in mitigation areas throughout the California Study Area, as described in detail in Table C-7 for artificial reef, hard bottom substrate, and shipwreck mitigation areas on page C-22 of

[53] Table 3.7-5 is included as **Exhibit 16** to this report.
[54] Based on the Tables 5-2 through 5-4 in the 2024 LOA Application for maximum annual "Species-Specific Take Requests from Modeling Estimates of Acoustic and Explosive Sound Source Effects"

Appendix C of the CD (see **Appendix D**). These measures include maintaining a 350 yard (radius) buffer[55] when using explosives, to avoid damage from vibrations and avoid expendable material being deposited on sensitive seafloor resources. The proposed seafloor mitigation areas are depicted in **Exhibit 20**. Hard bottom habitats in the SOCAL Range Complex and for a zoomed in area covering SOAR and the two proposed Submarine Warfare Training Ranges (which are described in Section IV.A) are depicted in **Exhibit 28**, which was provided by the Navy in correspondence dated May 6, 2025.

Marine Debris

As part of the proposed project, discussed above in Section IV.A, the Navy would also intentionally and accidentally release other materials into the marine environment, including target-related materials, chaff, flares, and decelerators/parachutes. In its analyses of potential impacts to marine mammals, sea turtles, fish, and invertebrates, in the CD, the Navy notes that "[d]uring activities that involve recoverable targets (e.g., aerial drones), the Action Proponents recover the target and any associated decelerators/parachutes to the maximum extent practicable consistent with personnel and equipment safety" and "[r]ecovery of these items helps minimize the amount of remaining materials." The CD emphasizes, for the various species analyzed, that these standard operating procedures "[reduce] the potential for physical disturbance and strike, ingestion, and entanglement of applicable targets and any associated decelerators/parachutes."

The Commission's adopted findings in support of its decision on the Navy's Point Mugu Sea Range (PMSR) consistency determination (No. CD-0003-20) included a summary of the Navy's efforts over the past decade to collect and remove marine debris (including several beach cleanup efforts) from the Sea Range, and described new efforts at that time that the Navy was initiating on San Nicolas Island (annual cleanups, debris characterization study and inclusion of marine debris in the island's Integrated Natural Resources Management Plan). The Navy also provided an update in correspondence dated May 21, 2025, for recent and ongoing marine debris cleanup efforts in southern California, including: (1) three annual marine debris characterization and removal events as part of a study at San Clemente Island from November 2022 through March 2024; (2) semi-annual marine debris removal at Naval Base Coronado and Silver Strand Training Complex; (3) trash collection at the mouth of Chollas Creek in San Diego up to twice a year; (4) multiple marine debris removal events per year at Seal Beach; (5) beach clean-ups at Marine Corps Base Camp Pendleton; and (6) over seven debris removals in the PMSR area, conducted between November 2014 and October 2024, including removal of 10,758 pounds of marine debris from the shoreline of San Nicolas Island and other marine debris efforts at naval Base Ventura County.

The continuation of these marine debris removal efforts would offset expended materials that are discharged into the marine environment and cannot be immediately

[55] Except in designated operating areas, such as the nearshore areas of San Clemente Island and in the Silver Strand Training Complex, where these features will be avoided to the maximum extent practical.

recovered and help provide for an overall reduction in marine debris within the California Study Area of the HCTT and surrounding areas.

Potential for Vessel Strikes

Collisions with large vessels (“ship strikes”) have been recognized as the leading cause of death for blue and fin whales, and the second highest source of mortality for humpback whales, off of the U.S. West Coast (Carretta et al 2015; Rockwood et al 2017). All three species are recognized as Endangered under the federal Endangered Species Act. Along with gray whales, these are four of the most common whale species found off of the California coast and within the several proposed HCTT ranges. The proposed HCTT program would include the frequent use of a wide variety of naval vessels, at times operated at high speeds, over broad ocean areas overlapping the BIAs for large whale species that are known to support their highest densities and frequencies, and thus would necessarily involve the risk of vessel strikes.

The Navy analyzes the potential for vessel strikes to marine mammals in Section 3.7 (Marine Mammals) of the 2024 DEIS, with the following summary in Table 3.7-18 of that section:

> Vessel strikes may adversely affect marine mammal species, particularly large whales, but mitigation measures are in place which should reduce the potential for a strike to occur.
>
> - Vessel strikes from commercial, recreational, and military vessels are known to have resulted in serious injury and occasional fatalities to cetaceans. Most military readiness activities under all alternatives involve some level of vessel activity.
> - An examination of vessel traffic within the Study Area determined that military vessel occurrence is approximately 4 percent of total vessel traffic in the Study Area.
> - Standard operating procedures for vessel safety will benefit marine mammals through a reduction in the potential for vessel strike, as well as additional mitigation measures.

Table C-5 (CD Section C.6.2, in **Appendix D** of this report) describes Activity-based mitigations for vessels, vehicles, towed in-water devices, and net deployment. These mitigations include the use of lookouts to monitor for marine mammals and sea turtles. Use of lookouts/observers is a widely accepted measure for reducing (though not eliminating) the risk of vessel strikes. However, as discussed below, the effectiveness of observers has been shown to be dependent on their training and experience, as well as physical factors such as sea-state and visibility. The implementation of these mitigation measures and standard operating procedures, including the use of lookouts, is expected to help reduce ship strike risks. However, recent evidence indicates their efficacy may be limited.

In its 2024 application to the National Marine Fisheries Service for authorization under the Marine Mammal Protection Act, the Navy states that “[i]n the seven-year period between 2017 and 2023 within the HCTT Study Area, there were three large whales

struck by Navy surface ships", all in Southern California (two in 2021 and one in 2023). For the Coast Guard, the Navy explains that while "[t]here were zero strikes within the California portion of the HCTT Study Area", "[t]here were two Coast Guard strikes outside of and inshore of the California portion of the HCTT Study Area, a humpback whale in 2023 and a gray whale in 2024."

As the Commission found in its 2020 review of Navy activities within the Point Mugu Sea Range (CD-0003-20[56]), "the use of slow vessel speeds – particularly those at or below 10 knots – would be expected to provide some of the greatest benefits in terms of reducing ship strike risks." This vessel speed reduction approach is well supported by scientific research which has found that the probability of a lethal strike increases with vessel speed (Conn and Silber, 2013; Vanderlaan and Taggart, 2007) and that slower speeds may allow whales and vessel operators more time to engage in avoidance behavior (Gende et al., 2019; Vanderlaan and Taggart, 2007). In support of these findings, it is notable that the two vessel strike events involving U.S. Coast Guard vessels offshore of California in 2023 and 2024 were further described by the Navy as vessels "moving at slow speed less than six knots and no obvious injury to the whales were observed after the strikes." While the Navy has rejected inclusion of vessel speed reductions as a mitigation measure, as discussed further below, it would doubtless be an effective means of reducing ship strike risks and has been widely adopted as a voluntary measure by much of the commercial shipping industry offshore of California and has provided the additional benefits of reducing air pollution emissions and underwater engine noise.[57]

Given that the HCTT program proposes significant increases in the use of uncrewed vessels, it is also worth noting the additional ship strike risks posed by these vessels and uncertainty about how application of mitigation measures developed for crewed vessels would be accomplished. As noted in the 2024 DEIS, in Table 3.0-16[58], speeds for these uncrewed vessels can be quite high - exceeding 50 knots - and they can be up to 300 feet long. While smaller than container ships, which can reach 1,300 feet long, these Navy vessels would still pose a significant injury or mortality risk to a whale in the event of a collision. In some cases, the Navy has acknowledged that these vessels would be assigned lookouts stationed on supporting vessels, it has also explained that this would not be the case for all activities. In its 2024 application to NMFS for authorization of the proposed HCTT program under the Marine Mammal Protection Act for the period covering December 2025 through December 2032, the Navy "is requesting five (5) large whale strikes" and the Coast Guard "is requesting four (4) large whale strikes". The Navy's calculations in support of this application did include analysis of uncrewed surface vessels.

[56] The staff report for CD-0003-20 is available at https://documents.coastal.ca.gov/reports/2020/12/F13b/F13b-12-2020-report.pdf (with addendum at https://documents.coastal.ca.gov/reports/2020/12/F13b/F13b-12-2020-addenda.pdf)
[57] www.bluewhalesblueskies.org
[58] Table for Representative Types, Sizes, and Speeds of In-Water Devices

Installation of New Seafloor Infrastructure

As described above in the Project Description section of this report, the proposed project includes installation of new seafloor infrastructure (including cables and sensors) at the Southern California Anti-Submarine Warfare Range (SOAR) and the two proposed Shallow Water Training Ranges, as well as infrastructure upgrades at mine warfare and other training areas, and new underwater landing platforms (**Exhibits 5-8**). The proposed new San Clemente Shallow Water Training Range includes areas within the State's Coastal Zone. Additionally, an expansion of a submarine fiber-optic cable system offshore of San Clemente Island (**Exhibit 15**) with new connected instrumentation (e.g., communication units and sensors) is proposed. As described above, in the "Explosives Use and Expendable Materials" section, the Navy's CD includes mitigation measures to avoid impacts on seafloor resources from physical disturbance to artificial reef, hard bottom substrate, and shipwreck mitigation areas with a 350-yard buffer (Table C-7 on page C-22 of Appendix C of the CD - see **Appendix D**). **Exhibit 20** shows the proposed seafloor mitigation areas and **Exhibit 28** shows a survey of hard bottom habitats in the SOCAL Range Complex and near San Clemente Island. As shown in that figure, hard bottom substrate covers significant portions of the proposed Tanner Bank and San Clemente Island Shallow Water Training Ranges.

However, the Navy CD also notes that in designated areas, such as the nearshore areas of San Clemente Island and in the Silver Strand Training Complex, the seafloor mitigation area features will be avoided only "to the maximum extent practical." In correspondence dated May 16, 2025, the Navy clarified that "[t]he excepted areas in California are around [San Clemente Island] and [the Silver Strand Training Complex], where the same areas that have been used for decades for these same activities are used" and that "[t]hey cannot comply with the mitigation and the use of these areas is required for these activities, consistent with decades of use". The Navy further communicated that, for proposed SOAR and Shallow Water Training Range seafloor installations and the fiber-optic cable system, "hard bottom is avoided during installation to the greatest extent possible" and "[p]roposed cable routes were selected to target sandy substrate and avoid steep slopes and areas of high relief (e.g., rocky outcrops)".[59] However, based on this information, it is reasonable to conclude that some of the proposed cables and other seafloor infrastructure will be installed over or around rocky reef or hard substrate and may damage seafloor habitat, and therefore may not consistently provide special protection to such areas of special biological significance, which is necessary for consistency with Section 30230 of the CCMP.

Marine Mammals - Navy Conclusion

Concerning marine mammals overall, notwithstanding the large number of marine mammal harassment authorizations the Navy has requested from NMFS (over 5.5 million annually and over 30 million total over the 7-year period), the Navy believes the

[59] The Navy also noted in this correspondence that "[s]eafloor cables will not be buried. Cables deployed in less than 100 ft. of water depth will be secured to the seafloor by divers using split pipe and clamps to prevent movement that could cause damage to both the equipment and the environment. It is anticipated that deep-water cables will become partially buried in unconsolidated sandy sediments that move or shift by slow-moving bottom currents or covered by encrusting algal and invertebrate communities."

mitigation measures it has committed to are adequate to protect all populations of marine mammals. The Navy therefore concludes in its CD:

> Based on a detailed stressor analysis presented in the 2024 HCTT Draft EIS/OEIS, Section 3.7 (Marine Mammals), specifically Section 3.7.3 (Environmental Consequences) and, as summarized earlier, the Action Proponents have determined that the Proposed Action would be carried out in a manner that would maintain, enhance, and, where feasible, restore marine resources, sustain the biological productivity of coastal waters, and maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes. No population-level impacts would be anticipated to marine mammals. As evident from the standard operating procedures and mitigation measures discussed earlier, the Action Proponents' Proposed Action provides special protection to marine mammals. Therefore, the Proposed Action would be consistent to the maximum extent practicable with Section 30230 of the California Coastal Act.

Sea Turtles and Other Marine Species - Navy Conclusion

The Navy predicts impacts based on modeling to all four sea turtle species in the California project area of the HCTT[60] (all listed as endangered under the Endangered Species Act). For example, the Navy predicts its activities in the SOCAL Range Complex involving use of explosives, air guns, and sonar, would, annually subject up to 40 green sea turtle (Chelonia mydas) to significant behavioral response, 568 to temporary threshold shift/hearing loss, 9 to auditory injury, and 1 to injury, mostly from proposed acoustic and oceanographic research activities. Tables 3.3-1, 3.3-4, and 3.3-6, of Appendix E of the DEIS (complied[61] as **Exhibit 29**), provide those estimates, as well as estimates for loggerhead and leatherback sea turtles (which include effects occurring in SOCAL, PMSR, and NOCAL, as well as outside of the California study area, in the Hawaii Range Complex or high seas). **Exhibit 30** also provides summaries of annual and seven-year effects estimates[62] by stressor for the entire HCTT study area (not just California) from Appendix E of the 2024 DEIS (Tables 3.3-7 through 3.3-21).[63]

As is the case described above for marine mammals, to minimize the potential for harm during activities potentially affecting sea turtles (including use of explosives, and use of mid-frequency sonar within the hearing range of sea turtles (i.e., <2 kHz), the Navy will implement mitigation measures involving monitoring and avoidance (i.e., cessation of the stressor until such time as an animal has left the area (or is believed to have left based on assumptions concerning its speed, direction and movement). With these measures, the Navy concludes:

> No population-level impacts would be anticipated to sea turtles. As evident from the standard operating procedures and mitigation measures discussed earlier, the

[60] As well as impacts to the Hawksbill sea turtle, which is not analyzed in the CD for the California Area
[61] Appendix E of the 2024 DEIS also includes similar tables for green (Central North Pacific DPS), hawksbill, Olive Ridley sea turtles, but only for effects in the Hawaii Range Complex of "high seas".
[62] Alternative 1 is the preferred alternative in the 2024 DEIS.
[63] Similar tables can also be found in Section 3.8 of the 2024 DEIS that combine training and testing activities by stressor.

> Action Proponents' Proposed Action provides special protection to sea turtles. Therefore, the Proposed Action would be consistent to the maximum extent practicable with Section 30230 of the California Coastal Act.

In analyzing other marine habitats (e.g., sensitive marine vegetation (e.g., kelp beds), seabirds (including several listed species), and commercial and recreational fish stocks), the Navy also anticipates that impacts would be low. As noted earlier, the Navy has designated seafloor mitigation areas to further protect these habitats.

Commission Analysis of Effects of HCTT Activities on Marine Resources

In its consideration of proposed Navy training and testing activities in 2013 (consistency determination no. CD-008-13)[64], the Commission discussed activities it has found to meet the "effect" test of the CZMA and found:

> [T]he Commission takes a broad … view … as to which activities may affect the coastal zone. Many of the species … potentially affected by the proposed training activities spend some portions of their life cycles within coastal waters…
>
> To support this position, during … review [of prior Navy training and testing activities in CD-86-06] the Commission cited the NOAA letter dated March 10, 1995, responding to the Commission's request from the Office of Coastal Resource Management (OCRM) to review the effects of the "ATOC" sound source[65], located 48 [NM] offshore of San Mateo County. In that letter NOAA affirmed that "sounds emanating from the ATOC sound source can be reasonably expected to affect marine mammals that are resources of both the outer continental shelf ("OCS") and the coastal zone…" and "OCRM has determined that the marine animals at issue that ply the waters of the coastal zone and the OCS are coastal resources."
>
> … the Commission's position [is] that … virtually all of the marine mammal species identified by the Navy as present in the SOCAL area are also present within the [state's] coastal zone at some point in their life cycle, and certainly at least "occasionally." Regarding the length of time a species must be present within the coastal zone to be considered a coastal resource, the Commission is in agreement that occasional observed or recorded presence is sufficient to establish this standard. Due to the significant challenges associated with wildlife observation in the marine environment (i.e. the cost of surveys, the short period of time most species are observable at the surface, the large areas, variable climactic and weather conditions, etc.) marine mammal surveyors typically assume that the number of animals successfully observed represent a small fraction of the actual number that are likely present. As such, the Commission considers even infrequent and seemingly rare sightings of particular marine wildlife species within the coastal zone as verification of that species' status as a coastal resource.

[64] And also included in the findings for CD-0001-18, as written here.
[65] ATOC is the acronym for Scripps Institution of Oceanography's Acoustic Thermometry of Ocean Climate, reviewed by the Commission as Consistency Certification CC-110-94.

> Finally, similar to the Commission's long held position regarding effects to commercial fishing that occur in federal waters, but which affect the coastal economy, the Commission takes a comparable position that effects on whale watching, even if occurring in federal waters outside the coastal zone, should also be considered coastal zone effects, since whale watching tours are also an important segment of the California coastal economy, as well as an important component of coastal recreation. Whale watching tours regularly ply federal waters and commonly include sightings of many of the marine mammals present in the SOCAL area.

In the years prior to and since the Commission made these findings, this concept and logic establishing the Commission's authority to consider marine mammals (and other marine species) outside of the state's Coastal Zone as a coastal resource has been further established and reinforced. As such, anticipated and potential effects to these species must be considered by the Commission as part of its analysis under the California Coastal Management Program's marine resource protection policies. In doing so as part of the review of the currently proposed project, a number of issues arise with acceptance of the Navy's conclusions included above. As will be discussed below, the Commission's predominant concerns with the Navy's conclusions involve the significant level of anticipated adverse effects to coastal resources, particularly to marine areas and species of special biological significance, that would result from the proposed Navy activities. Of particular concern are: (1) the proposed expansion of ranges that will expose marine species to new stressors not currently and previously present in these areas; (2) the limited effectiveness of Navy detection and monitoring measures upon which its implementation of adverse impact avoidance and minimization measures is often based; (3) uncertainties in assessing population-level effects on marine species that may be occurring; (4) the anticipated occurrence of substantial marine mammal disturbance and harassments outside the 1000 meter detection/source reduction zones adopted by the Navy around its sonar sources; (5) the Navy's rejection of meaningful limits on sonar and explosives testing and training in areas of special biological significance such as state and federally designated marine protected areas, national marine sanctuaries and NMFS-designated biologically important areas for certain marine species (blue, fin, and beaked whales); (6) the proposed increase in the use of uncrewed vessels with high speed capabilities and limited visual coverage of mitigation zones for sensitive species; and (7) and the expansion of subsea infrastructure with the potential to damage or disturb sensitive rocky reef and hard substrate habitat areas without compensatory mitigation.

Marine Mammal Observers

During the Commission's past CD reviews of training and testing activities in the SOCAL range (including CD-0001-18) and PMSR (CD-0003-20), concerns have been raised about the adequacy of the Navy's vessel-based lookouts when compared with experienced, NMFS-certified, marine mammal observers in detecting marine mammals. The Commission has previously recommended that if the results of the Lookout Effectiveness Study that was ongoing at that time showed significant differences in effectiveness in observing marine mammals, the Commission would request that the Navy, to the extent feasible, commit to including at least two experienced, NMFS-

certified marine mammal observers on all ships during the deployment of active sonar for training or testing purposes. The Commission's findings for CD-0001-18 (here: pages 39-40) also described the results of other previous studies which showed that nearly two-thirds of whales and dolphins sighted by NMFS-certified, marine mammal observers during the 2016 effort were missed by the Navy watchstander team. Combining those results with the four previous efforts, NMFS-certified marine mammal observers made 111 of 120 sightings (92%) while the Navy watchstanders made only 29 (24%). Although the Navy teams did make several sightings that the NMFS-certified observers did not, the specialized training and extensive experience of the NMFS-certified, marine mammal observers clearly provided them with a significant advantage in detecting marine mammals.

The Navy's report (Oedekoven and Thomas, 2022), dated March 22, 2022, on the results of its Lookout Effectiveness Study is now available[66] and has been reviewed by Commission staff. The data were collected from 27 embarks conducted between 2010 and 2019 (mostly on destroyer class ships) and "[a] total of 716 sightings of individual animals or groups were recorded across all embarks, of which, 544 sightings of cetaceans were used in the analysis." The report compares the effectiveness of Navy lookout teams and NMFS-certified, marine mammal observers in detecting marine mammals at ranges of 200, 500, and 1,000, yards. The report broke the results into four main groups: large baleen whales, sperm whales, and small cetaceans in small pods (6 or less) and in large pods (more than 6). The estimated effectiveness was highest for large baleen whales for both observer groups. For that category at the 200-, 500-, and 1,000-yard-ranges, the estimated effectiveness by lookout teams was 35%, 21%, and 13%, respectively, and by marine mammal observers, it was 74%, 10%, and 54%, respectively. For the category of large baleen whales, NMFS-certified, marine mammal observers made 256 of 277 sightings (92%) while the Navy watchstanders made only 65 (23%). Again, the Navy teams did make several sightings that the NMFS-certified, marine mammal observers did not, but the final results are similar to those the Commission reviewed from 2016.

However, as described in the Commission's findings in support of its decision on the Navy's consistency determination for its 2018-2025 training and testing program (No. CD-0001-18), the effectiveness and ability of these trained NMFS-certified, marine mammal observers should not be overstated. As discussed in Moore and Barlow (2017) and Barlow (2016), even the most highly trained and experienced scientific observers are likely to miss the vast majority of potential sightings of many marine mammals. For example, the "detection probability" (or likelihood that a particular whale or dolphin will be observed when it is present) is below 60% for 24 of the 30 types of whale or dolphin targeted during marine mammal population surveys. This means that even experienced observers typically miss seeing roughly half of the animals that are present. For some species, such as most beaked whales, the detection probability is 16% or less; meaning

[66] At https://www.navymarinespeciesmonitoring.us/reading-room/project-profiles/effectiveness-navy-lookout-teams-detecting-cetaceans-2/

that 84% of the time beaked whales are present, they are not being seen. Oedekoven and Thomas (2022) further estimated that the probability of large baleen whales approaching to within a 1,000-yard mitigation range **without** being detected was 91% for Navy lookout teams and 59% for NMFS-certified marine mammal observers.

That all being said, Appendix C of the Navy's CD does note that: "To qualify to stand watch as a Lookout, personnel undertake a training program that includes computer-based training, on-the-job instruction, and a formal qualification program. Lookouts are trained in accordance with the U.S. Navy Lookout Training Handbook or equivalent to use correct scanning procedures while monitoring assigned sectors, to estimate the relative bearing, range, position angle, and target angle of sighted objects, and to rapidly communicate accurate sighting reports. The U.S. Navy Lookout Training Handbook was updated in 2022 to include a more robust chapter on environmental compliance, mitigation, and marine species observation tools and techniques[.]" However, it is unclear to what extent lessons from the Lookout Effectiveness Study have been incorporated into these training efforts. The results of the Lookout Effectiveness Study indicate an opportunity for the Navy to help identify needs and opportunities for enhancing the abilities of Lookouts to detect marine mammals – including through revisions and improvements to the marine species awareness training module provided to all Navy Lookouts and through the integration of additional data sources from observation tools (such as infrared instruments and passive acoustic listening devices that can aid in determining marine mammal presence).

The Commission also raised concerns in its findings for CD-0001-18 regarding the inadequacy of the distances at which the Navy's protocol would first mandate a reduction in sonar intensity if a marine mammal is observed, since the vast majority of marine mammals would likely respond in a significant behavioral manner at those distances from the most intense of the mid-frequency sonars. When these virtual certainties of a response are combined with the above-cited difficulties in detection, the data do not inspire confidence that adequate protection for marine mammals will be assured by the Navy's agreed-upon detection and avoidance measures. Additionally, it is concerning that the Navy has not committed to ensuring that uncrewed surface vessels that have the capability to travel at very high speeds have dedicated lookouts for marine mammals assigned to them (either onboard the uncrewed vessels or on a nearby support vessel). While lookouts stationed on support vessels may not be able to provide as extensive visual coverage as would onboard lookouts, they would nevertheless provide a greater level of assurance than a total lack of lookouts.

Population-Level Effects

The Commission disagrees with the Navy that a definitive conclusion can be drawn that the proposed activities would not have population-level effects on marine mammals, for several reasons. First, for all the populations of affected marine mammals, it is simply impossible to establish whether population level effects have been occurring, or would occur with the increased levels of activity, given that the Navy has been using this

technology in the SOCAL Range Complex consistently for the past 40 years. As noted in the study cited by the Commission in 2013 and 2018,[67]

> High densities are not obviously consistent with a hypothesis that declines are due to military sonar, but they do not refute the possibility that declines have occurred in these areas (i.e., that densities were previously even higher).

The Commission previously noted in 2013 that this study posed a hypothesis that military sonar could be resulting in potential population-level effects for several species of beaked whales, which are the SOCAL species most sensitive to mid-frequency sonar, most likely to incur mortalities by stranding, and most difficult to detect by on-board observers. The Commission's 2018 findings provided an update from more recent studies (Barlow, 2016; Moore and Barlow 2017), provided by the Navy, in which the authors refined their statistical analysis and indicate that previously noted declines may be levelling off. The most recent NMFS stock assessment report (revised May 30, 2022) for the California/Oregon/Washington stock of the goose-beaked (formerly Cuvier's beaked) whale (Ziphius cavirostris)[68] describes a newer report, Barlow et al. (2021)[69], which used a different methodology to estimate the abundance of that stock of goose-beaked whales of 5,454 whales in 2016.

In the "status of stock" discussion, the assessment notes[70] that trend estimates "indicate evidence of a population decline between 1990 and 2014" and that "the degree of decline (trend-fitted 2014 abundance at approximately 67% of 1991 levels) suggest that this stock may be below its carrying capacity." That "status of stock" section also notes that: (1) "[a]ssessing changes in abundance for any species may also be confounded by distributional shifts within the California Current related to ocean-warming (Cavole et al. 2015)"; (2) "Moore and Barlow (2013) ruled out bycatch as a cause of the decline in Cuvier's beaked whale abundance and suggest that impacts from anthropogenic sounds such as naval sonar and deepwater ecosystem changes within the California Current are plausible hypotheses warranting further investigation"; and (3) "[t]he impacts of anthropogenic sound on beaked whales remains a concern (Barlow and Gisiner 2006, Cox et al. 2006, Hildebrand et al. 2005, Weilgart 2007)".

Therefore, with goose-beaked whales as an example given the disproportionately large Level B take levels proposed for that species stock compared to its abundance estimates, the Commission maintains its position from previous reviews of Navy training and testing activities that conclusions cannot be drawn at this time that the proposed activities would not have population-level effects on marine mammals. The significant expansion of the Navy's training and testing program, which would introduce stressors to new geographic areas (including sonar and underwater explosives in PMSR, sonar in NOCAL, and other activities never in those ranges before) also plays a significant role in

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[67] Moore and Barlow (2013).
[68] Stock assessment report for the California/Oregon/Washington stock of Ziphius cavirostris available at: https://www.fisheries.noaa.gov/s3/2023-08/Cuviers-CAORWA-2022.pdf
[69] Barlow, J., J.E. Moore, J.L.K. McCullough, and E.T. Griffiths. 2021. Acoustic-based estimates of Cuvier's beaked whale (Ziphius cavirostris) density and abundance along the U.S. West Coast from drifting hydrophone recorders. Marine Mammal Science 2021:1-22.
[70] With references to: Moore and Barlow (2013); and Moore and Barlow (2017)

the increase in take estimates of marine mammals compared to previous Commission reviews, and raises questions about the effect that these additional takes would have on the various marine mammal populations.

Biologically Significant Areas and Adequacy of Mitigation Measures

Even if the Navy's conclusion were supportable concerning a lack of population-level effects, the Commission notes that it is only one of the tests of Section 30230. The Commission finds, as it did in 2018 (and prior to that in 2008), that compliance with Section 30230 also requires enhancement (and where feasible restoration) of the overall marine environment, as well as special protection for areas and species of special biological or economic significance. These requirements have led the Commission to previously determine that they require the avoidance of the use of very loud active acoustics in biologically important and sensitive areas, in particular areas of high, or seasonally high, concentrations of marine mammals.

The Commission's findings for CD-0001-18 (here, on pages 42-44) describe the distance ranges to probable effect from the most intense of the mid-frequency sonars (Sonar Bin MF-1), referencing information provided in the 2018 DEIS for the HSTT program that showed that the vast majority of marine mammals would likely respond in a significant behavioral manner (including 100% of beaked whales and over 90% of odontocetes in general) at a 1,000 meter distance, which is approximately the distance at which the Navy would implement the first protocol in reducing sonar intensity (by 6 dB) if a marine mammal is observed. The CD-0001-18 findings also noted that "for beaked whales, which are most difficult to detect, the range at which the probability of a behavioral response exceeds 80% is in the order of [tens] of kilometers." This is well beyond the effective survey range for marine mammal observers. Section A.2.3.3 of the Navy's 2024 LOA Application also notes: "All behavioral responses within 40 km are assumed to be significant for sensitive species [(beaked whales and harbor porpoise)], with some significant responses predicted as far as 100 km for the highest-level sonar sources."

The Navy's mitigation measures, include reducing sonar by 6 dB if an animal is observed within 1000 yards, by 10 dB if within 500 yards., and shutting down if an animal is within 200 yards. As noted above, this measure for all mid-frequency sonar would be supplemented by the designation of seasonal geographic mitigation areas and awareness/notification areas. However, when the virtual certainties of a response are combined with the above-noted difficulties in detection, only a small percentage of mammals will be protected under the Navy's protocols (which partially explains why the estimates of "take" in **Table 3** above are so high). As noted previously, even highly trained and experienced scientific marine mammal surveyors have less than a 16% chance of observing beaked whales when they are present within four kilometers.

Thus, even setting aside the concern over areas warranting special protection, the Commission has a number of concerns over the adequacy of the mitigation measures. These concerns are primarily over the uncertainties inherent in marine mammal detection, the uncertainties over population trends, the fact that the detection areas observed by the Navy are insufficient to protect marine mammals from significant

behavioral impacts, the overall limited scientific understanding of the effects of mid-frequency sonar on marine mammals, and the extremely large number of harassments of marine mammals offshore of California expected under the Navy's activities, which, on an annualized average are estimated at 5.5 million marine mammals/year subject to Level B annual harassment, and 4.4 thousand marine mammals/year subject to Level A harassment. Additionally, some of the proposed cables and other seafloor infrastructure, including within state waters off San Clemente Island, are likely be installed over or around rocky reef or hard substrate and while some measures of avoidance are included "to the maximum extent practical," some level of disturbance of seafloor habitat is expected to occur and no compensatory mitigation is proposed. Further, the Navy did not specifically consider potential impacts to, or disturbances of, sensitive species populations (e.g. nesting birds or hauled-out pinnipeds) found along the shorelines and beaches where the proposed four new amphibious lanes would approach up to the mean high tide line.

Moreover, while the Navy currently acknowledges that biologically significant areas are present within the California training and testing areas, the Navy's conclusions regarding the proposal's consistency with Section 30230 rest on the question of whether the Navy believes that any measures to protect these areas must be balanced against military security needs, and, ultimately, whether population effects can be documented.

As noted above, the Commission does not believe definitive conclusions can be drawn based on available data concerning whether the activities would or would not result in reductions in populations of marine species. The Commission does, however, believe sufficient information exists to determine that "areas of special biological significance" warranting strict protection under Section 30230 of the CCMP are present within the proposed project area, and that the levels of protection offered by the Navy are insufficient. Accordingly, the Commission finds the activities, as proposed, would be inconsistent with the provision of Section 30230 that requires that "[s]pecial protection shall be given to areas and species of special biological or economic significance."

Modifications Needed for Consistency with Section 30230 of the CCMP

The adopted findings for the Commission's 2018 objection to the 2018-2025 Navy offshore training and testing program (consistency determination no. CD-0001-18) included several measures and project modifications that the Commission found to be necessary to bring that program into consistency with Section 30230. Similarly this report also includes several modifications that the Commission has concluded would be necessary for the Navy to adopt for its proposed HCTT activities off the coast of California to be consistent with Sections 30230 of the CCMP, as detailed in the findings below.

In order to bring the proposed activities into consistency with Section 30230 of the CCMP, the Commission concludes that the Navy would need to include the following eight modifications, listed below, into the proposed HCTT activities. Several of

these(nos. 2-5)[71] were also similarly identified as necessary modifications and included in the Commission's findings in support of its objection to the Navy's 2018-2025 program (CD-0001-18[72]). Those items remain essentially unchanged while others have been added or revised based on the Navy's new proposed mitigation measures and the change in project scope, including the significant proposed geographic expansion and introduction of stressors to new areas.

(1) Modifications to proposed geographic mitigation areas:
   a. Expand the boundaries of the geographic mitigation areas for large whales, with prohibitions on use of mid-frequency sonar and in-water explosives, to include sensitive areas: (i) the 2024 "Core" BIAs for blue, humpback, and fin whales, for their designated seasons; (ii) any biologically sensitive area NMFS may designate at a future date; (iii) nearshore areas; (iv) National Marine Sanctuaries; and (v) State-designated marine protected areas and adjacent Federal marine protected areas, year round;
   b. Seasonally limit the use of in-water explosives in the Central and Northern California Large Whale Mitigation Areas;
   c. Expand the seasonality of all three whale mitigation areas to April 1 – December 31;
   d. Reduce the threshold number of large whales in the real-time awareness area to one or more rather than four or more;

(2) Establishment of larger shutdown areas (up to 2 km) during use of MF-1 sonar (i.e., shut down if a marine mammal or sea turtle is detected within 2 km of the mid-frequency sonar source);

(3) Reduction in sonar intensity under low-visibility conditions;

(4) Limitations on vessel speeds in sensitive areas to 10 knots (unless higher speeds are critical to meet training needs); and

(5) Use of NMFS-certified marine mammal observers on all ships during the use of MF1 sonar sources and explosives for training and testing purposes

(6) Mandatory use of support vessels with assigned lookouts for uncrewed surface vessels when they are traveling faster than 10 knots

(7) Seasonal limits to amphibious vehicle operations in the surf-zone in the four new amphibious corridors to protect nesting birds and pinniped haul-outs

(8) Development and implementation of a rocky reef and hard substrate impact mitigation plan

Despite the Navy's rejection of the four measures carried over from CD-0001-18 and their reasoning provided in 2018 (as well as in their CD submittal and supplemental materials), the Commission maintains that those activity modifications are still

[71] Previously numbered as 1, 3, 4, and 5, in CD-0001-18.

[72] In its findings for CD-0001-18 (here), the Commission also recommended that the Navy strongly consider the information and mitigation recommendations made by the Natural Resources Defense Council (NRDC), and summarized four information requests and 12 recommendations. To the degree that those are still relevant, the Commission would support the Navy further exploring these possible measures, but they are not the focus of this report.

necessary to bring the activities into consistency with Section 30230 of the CCMP to the maximum extent practicable, as described further below.

(1) Modifications to proposed geographic mitigation areas

The establishment of mid-frequency sonar avoidance areas, including MPAs, National Marine Sanctuaries, NMFS-designated Biologically Important Areas (BIAs), and other areas of likely high marine mammal concentration, is a critical protective measure because it would help insulate marine mammals and habitats in these areas of special biological significance from disturbance, harassment, and take due to elevated sonar levels. In the case of the state and federal MPAs and the National Marine Sanctuaries, these sites were established at specific locations based on many years of scientific research, monitoring, and survey work that confirmed the presence of sensitive marine habitats and oceanographic features (highly productive persistent upwelling zones, seamounts, unique underwater canyons, etc.) and documented high levels of use by culturally, economically, and ecologically important species of marine wildlife (including protected seabirds, marine mammals, fish and invertebrates).

The BIAs were identified through a years-long, extensive, science-based, process focused on demarcating sites of persistent high-use and high-density of marine mammals. In many respects, the process used to identify and designate those sites was similar to that used to identify MPAs, with the primary difference being the more singular focus on whale and dolphin use rather than the wider range of habitat and wildlife use documented in the MPAs. The BIAs included along the coast of California south of Point Conception are particularly focused on blue whale, humpback whale, and fin whale use and their biological importance and the rationale for their designation is described above. **Exhibit 31** shows the Navy's currently proposed (Phase IV) geographic mitigation areas in comparison to: (1) the combined new core BIAs for blue, fin and humpback whales; (2) the National Marine Sanctuaries, State-designated marine protected areas and adjacent Federal marine protected areas; and (3) the Navy's 2018 HSTT mitigation areas (Phase III), for context.

While it largely rejected the Commission's efforts in 2018 to expand and strengthen the area protections integrated into its trailing and testing program, the Navy ultimately agreed to incorporate some new mitigation areas in Southern California. These included two additional blue whale Biologically Important Areas (BIA) as well as an agreement that training activities with active sonar or explosives would not be conducted in specific state Marine Protected Areas as shown on page 40 of Commission staff's memo dated August 30, 2018 (found here). However, those additional mitigation areas were not carried forward into the new proposed HCTT mitigation areas, despite the fact that the majority of the Phase III mitigation area off of Orange County is within the new fin whale BIA, and the Phase III north of San Nicholas Island is fully within the fin whale BIA and mostly within the revised blue whale BIA. This represents a reduction in size of the proposed whale mitigation areas south of Ventura County by approximately 478 square miles (from 608 mi^2 in Phase III to 130 mi^2 in Phase IV). While the new Northern and Central California proposed large whale mitigation areas represent roughly a combined 12,800 square miles, the level of activity proposed in these areas is significantly less than in the SOCAL area and seasonal restrictions in those areas are limited to MF1

sonar limits (not in-water explosives prohibitions) and are located in areas where MF1 sonar has not historically been used as part of these activities. The Navy has not provided a thorough explanation for why these previously protected mitigation areas are no longer proposed for protection from its activities (**Exhibit 31**), but noted that the new training and testing activities proposed and the expansion of their action areas were factors considered in addition to their assessment of updated science

Regarding the other elements of "modification 1": Measure (1b) would have the Navy, at the very least, seasonally limit the use of in-water explosives in the Central and Northern California Large Whale Mitigation Areas (similar to the seasonal limits in the Southern California Blue Whale Mitigation Area). Further, Measure (1c) would extend the seasonality of the three large whale mitigation areas to April 1 – December 31, rather than June through the end of October, to better reflect evidence (from sightings data and passive acoustic detections) indicating that blue whales occur off southern California on a nearly year-round bases (Szesciorka et al., 2020), with higher densities between April and December, and that humpback whales are increasingly present off central California through December due to changes in migratory patterns linked to climate change (Santora et al., 2020; Saez and DeAngelis, 2021). Finally, Measure (1d) would reduce the threshold number of large whales in awareness areas needed to trigger the Navy's awareness and notification protocols (described above in the Project Description), and thus providing greater assurance that training and testing activities would avoid disturbance or harm to groups and individuals, especially given that the identification of one whale does not preclude other whales being present nearby without being identified simultaneously.

In Table C-15 of Appendix C to the CD (**Appendix D** to this report) the Navy indicates that it considered potential measures such as these but eliminated them as impractical. These considered measures include additional geographic mitigation for active sonar in areas with certain bathymetric features (item 17 in table), restrictions on the locations and timing of training (items 18 and 19), prohibiting activities in areas with low historic use (item 21), additional seasonal restrictions for training and testing based on species occurrence or density (item 22), geographic restrictions within certain regions/areas (item 24), expansion of existing geographic mitigation to the full extent of newly identified biologically important areas (item 35). In correspondence dated May 21, 2025, the Navy confirmed that it currently does not plan to expand the extent of geographic mitigation areas. However, the Commission maintains that those activity modifications are necessary to bring the proposed project into consistency with the relevant enforceable policies of the CCMP.

(2) Shut-down Areas

The larger shutdown areas around sound sources are necessary because they would allow sound levels to attenuate further before being received, thus helping increase the likelihood that elevated levels of underwater sound are reduced or halted before they significantly affect marine mammal behavior. Compared to the 1,000-yard distance that the Navy is proposing, a two kilometer distance (approximately 2,187 yards) would reduce the probability of a behavioral reaction in many marine mammal species. Although an even greater distance would further reduce this probability, it may not be

significantly more effective due to the fact that the likelihood of detecting a marine mammal at sea declines sharply as distance increases. In Table C-15 of the CD (**Appendix D**), item number 15, includes the Navy's assessment of "Increasing mitigation zone sizes", the Navy indicates that it considered, but eliminated, this potential measure for safety, sustainability-of-implementing, and mission objective reasons. However, as it did in 2018, the Commission maintains that those activity modifications are still necessary to bring the proposed project into consistency with the relevant enforceable policies of the CCMP.

(3) Low Visibility Conditions

Even under daylight hours with calm sea-state conditions, it is extremely difficult to detect many species of marine mammals. This likelihood of detection declines sharply as sea-state conditions and visibility deteriorates. Therefore, under these types of low-visibility conditions, the effectiveness of ship-board marine mammal observers cannot be relied on as a meaningful impact avoidance or minimization measure. As such, Modification (3) calls for sonar levels to be reduced during such situations in order to help prevent marine mammals from being exposed to high-intensity levels of underwater sound. In Table C-15 of the CD(**Appendix D**), under item number 23, "Restricting active sonar based on time of day or visibility (e.g., weather conditions)", the Navy indicates that it considered, but eliminated this potential measure for mission objective reasons. However, as it did in 2018, the Commission maintains that those activity modifications are still necessary to bring the proposed project into consistency with the relevant enforceable policies of the CCMP.

(4) Vessel Speed Limit

The relationship between vessel speed and the likelihood and consequences of collisions with large whales has been closely evaluated over the past two decades as a result of the significant threat posed by ships to the highly endangered North Atlantic right whale and the series of ship strike mortalities recorded within the Santa Barbara Channel in 2007 (five blue whale mortalities from ship strikes within two months). This research has shown that a 10-knot speed limit reduced the risk of fatal ship strikes to right whales by 57% (Wiley et al. 2011) and that generally, vessel speed restrictions reduced total ship strike mortality risk levels to whales by 80–90% (Conn and Silber 2013). The need for the issue of ship strikes to be comprehensively and consistently addressed is increasingly recognized. For example, research modeling ship strike mortality for blue, fin, and humpback, whales in U.S. West Coast waters indicates that even under the most conservative assumptions, "estimated mortality [is] 7.8x, 2.0x and 2.7x the U.S. recommended limit for blue, humpback and fin whales, respectively, suggesting that death from vessel collisions may be a significant impediment to population growth and recovery" (Rockwood et al. 2017). While work is currently underway to investigate opportunities for addressing ship strikes involving commercial vessels - including efforts by the Marine Shipping Working Group convened by the Channel Islands National Marine Sanctuary (CINMS) and the Voluntary Ship Speed Reduction Program developed by CINMS, the Santa Barbara County Air Pollution

Control District and the Environmental Defense Center[73], Modification (4) above would expand them to incorporate another significant source of marine traffic, the Navy's proposed training and testing program. In Table C-15 of the CD (**Appendix D**), under item number 16, "Implementing mandatory vessel speed restrictions", the Navy indicates that it considered, but eliminated this potential measure for safety, sustainability-of-implementing, mission objective reasons. However, as it did in 2018, the Commission maintains that those activity modifications are still necessary to bring the activities into consistency. At a minimum, seasonal vessel speed limits (including for uncrewed vessels) for the three whale mitigation areas and National Marine Sanctuaries, would be needed for consistency with 30230.

(5) NMFS-certified Marine Mammal Observers

For several years, the Navy has been periodically including trained non-Navy marine mammal observers (MMOs) on its vessels during training operations to study their effectiveness at detecting marine mammals compared to teams of Navy watchstanders. Six of these "lookout effectiveness studies" were carried out between 2011 and 2016, and the results unequivocally show that trained, NMFS-certified MMOs are significantly more likely to detect marine mammals, often overwhelmingly so. As discussed above, this basic conclusion was recently corroborated by the Navy's own Lookout Effectiveness Study (Oedekoven and Thomas, 2022). Given the heavy reliance placed on detecting and reacting to the presence of marine mammals as an adverse impact avoidance and minimization measure, it is clear that if this approach is to continue to be relied on as an effective impact avoidance and minimization strategy, it should be combined with observers that are more likely to make successful detections. As such, Modification (5) calls for the Navy to commit to using NMFS-certified MMOs on all ships during the deployment of MF1 sonar sources and explosives for training or testing purposes. These marine mammal observers would notify appropriate Navy personnel of all marine mammal detections and would assist in the enforcement of marine mammal safety zones. In Table C-15 of the CD (**Appendix D**), under item numbers 6 ("Adding third-party marine species observers to conduct visual observations that inform mitigations for additional event types") and 39 ("Requiring NMFS [Protected Species Observer] certification for Navy Lookouts"), the Navy indicates that it considered, but eliminated this potential measure as requiring substantial additional resources and being impractical and not sufficiently beneficial. The Navy claims that their lookout training and qualification program already achieves the appropriate level of training. However, the results of the Lookout Effectiveness Study discussed above do not sufficiently support that assertion. However, as it did in 2018, the Commission maintains that those activity modifications are still necessary to bring the activities into consistency.

(6) Lookouts for Uncrewed Vessels at High Speeds

In correspondence dated May 21, 2025, the Navy stated: "While there are some activities where USVs would have support vessels, the Navy is unable to commit to providing dedicated support vessels during USV use in [the large whale] mitigation

[73] bluewhalesblueskies.org

areas. USVs are designed to operate autonomously and it is important that Navy trains in a realistic manner to how USVs would be used operationally." However, for the reasons described above for vessel speeds and marine mammal observers, the Commission finds that, at a minimum, uncrewed surface vessels should use accompanying support vessels with assigned lookouts (ideally certified marine mammal observers, consistent with the above measure) when they are traveling faster than 10 knots.

(7) Limits on Surf-Zone Amphibious Lane Use In Sensitive Species Seasons

In its CD submittal, the Navy did not specifically consider potential impacts to, or disturbances of, sensitive species populations (e.g. nesting birds, such as western snowy plover, or hauled-out pinnipeds) found along the shorelines and beaches where the proposed four new amphibious lanes would approach up to the mean high tide line. These operations could have the potential to startle and disturb such species, inconsistent with the CCMP's policies for areas of special biological significance and environmentally sensitive habitat areas[74]. In correspondence dated May 21, 2025, the Navy has indicated that the potential for such impacts would be evaluated at a later date, in conjunction with the U.S. Marine Corps as the planning for amphibious training exercises matures. Nonetheless, given that there are several beaches in the proposed amphibious lane areas with known seasonal breeding populations of sensitive species, including at Oceano Dunes and along the shoreline of Vandenberg Space Force Base, the Navy should commit to seasonal limits on amphibious vehicle operations in the surf-zone in the four new amphibious corridors to protect nesting birds and pinniped haul-outs.

(8) Rocky Reef and Hard Substrate Impact Mitigation

As described above in the "Installation of New Seafloor Infrastructure" section, some of the proposed cables and other seafloor infrastructure are likely be installed over or around rocky reef or hard substrate and some level of damage to or disturbance of seafloor habitat is expected to occur. In correspondence dated May 16, 2015, the Navy stated that for cable and seafloor instrumentation installation: "…hard bottom is avoided during installation and routes are determined by bathymetric surveys. Committing to mitigation measures beyond the standard operating procedures already in place would not add sufficient benefit to the resource and would be impractical to implement because there is no way to verify exactly how close the cable is to the 350 yd. buffer during cable laying." However, the Commission disagrees with the Navy's assessment, and notes that the verification of seafloor cable position and habitat impacts is done routinely following the laying of commercial fiber optic cables. A reasonable modification would be for the Navy to evaluate any sensitive habitat damage or disturbance caused

[74] Section 30240 of the Coastal At states: "(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas."

by the installation of seafloor infrastructure and if such damage occurred, commit to an offsetting level of compensatory mitigation such as through commitments to remove existing anthropogenic material (retired/defunct seafloor infrastructure or other marine debris) with the potential to harm rocky reef and hard substrate in areas adjacent to these new installations. Debris removal could be implemented as part of retrieval activities of some materials used during training and testing activities or through other targeted removal efforts or could be carried out through partnerships with other agencies or organizations.

Navy's Elimination of Other Measures Considered

In addition to the rejection by the Navy of proposed measures as described above, in Table C-15 of the CD (**Appendix D**) the Navy presents a total of 39 mitigation measures that were considered but eliminated based on their practicality assessment for safety, sustainability, and mission, as well as if they consider a measure to be "not sufficiently beneficial". Table C-14 of the CD (**Appendix D**) also provides a summary of new or modified mitigation requirements compared to those included in CD-0001-18 for the HSTT and CD-0003-20 for the PMSR.

Conclusion

Therefore, based on the analysis and findings above, the Commission finds that the activities proposed in the Navy's consistency determination for the HCTT program off the coast of California are inconsistent with Section 30230 of the California Coastal Management Program. This finding is based primarily on: (1) the proposed expansion of ranges that will expose marine species to new stressors not currently and previously present in these areas; (2) the limited effectiveness of Navy detection and monitoring measures upon which its implementation of adverse impact avoidance and minimization measures is often based; (3) uncertainties in assessing population-level effects on marine species that may be occurring; (4) the anticipated occurrence of substantial marine mammal disturbance and harassments outside the 1000 meter detection/source reduction zones adopted by the Navy around its sonar sources; (5) the Navy's rejection of meaningful limits on sonar and explosives testing and training in areas of special biological significance such as state and federally designated marine protected areas, national marine sanctuaries and NMFS-designated biologically important areas for certain marine species (blue, fin, and beaked whales); (6) the proposed increase in the use of uncrewed vessels with high speed capabilities and limited visual coverage of mitigation zones for sensitive species; and (7) and the expansion of subsea infrastructure with the potential to damage or disturb sensitive rocky reef and hard substrate habitat areas without compensatory mitigation.

E. CULTURAL RESOURCES

Section 30244 of the Coastal Act states:

> Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The Navy's evaluation of the proposed project's potential to affect cultural resources in its CD is primarily focused on proposed geographic mitigation measures to avoid impacts to shipwrecks (**Exhibit 20**) from explosives and physical disturbances/strikes by anchors or other devices interacting with the seafloor, as described in Section C.7.1 of Appendix C of the CD (see **Appendix D**). Section 3.10 (Cultural Resources) of the 2024 DEIS focuses on these submerged cultural resources as well and the Navy notes that "[l]and components are excluded from this EIS/OEIS, except for acoustic impacts on pinnipeds from ongoing land-based launch activities at [San Nicolas Island], which are considered for MMPA authorization". In that section of the 2024 DEIS, the Navy concludes:

> Although potential effects on cultural resources from military readiness activities may occur, they are not expected to lead to permanent damage or alteration to the character-defining features of the resource.
>
> Overall types and locations of military readiness activities are not expected to change from those currently conducted by the military in the Study Area, and the associated [standard operating procedures] that protect submerged cultural resources and historic properties remain in place and would continue to be implemented. As a result, the analysis of the effects on cultural resources from explosives and physical disturbance and strike stressors during military readiness activities under [the proposed project alternative] are consistent with a less than significant determination.

The Navy's efforts to reach out to and consult with potentially affected Native American Tribes as part of the proposed project are described above in Section IV.C. Section 3.10 (Cultural Resources) of the 2024 DEIS.

As part of its review of the Navy's proposed activities, Commission staff requested a tribal consultation list from the Native American Heritage Commission (NAHC) for all of the coastal areas of the following counties: San Diego, Orange, Los Angeles, Ventura, Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, San Mateo (from approximately Ano Nuevo State Park to San Gregorio), San Francisco, Marin, Sonoma, and Mendocino (from southern border, up to approximately the City of Manchester). The NAHC responded with a list of representatives from 98 different Tribes. Commission staff sent a letter to each of these Tribes to inform them of the Commission's federal consistency review process and timing and to invite further consultation. This outreach resulted in a conference call with representatives of two individual tribes, the Campo Band of Diegueno Mission Indians and the Rincon Band of Luiseno Indians.

The representative of the Campo Band of Diegueno Mission Indians noted that the Tribe's concerns with the proposed project are in the area of San Diego County. The Tribe noted historical issues, including the fact that Silver Strand was the site of a large Kumeyaay village until the late 19th century, and that tribal members were relocated for the construction of the naval base (now Silver Strand Training Complex). As noted in the Project Description (above) a number of HCTT activities are proposed just offshore of Silver Strand.

The Tribe also noted that that tribal knowledge is older and broader than archaeology, and is not the same as cultural resources monitoring, and historic that shipwrecks can be of interest since Spanish ships were sometimes transporting tribal cultural resources back to Spain; depending on how old a shipwreck is it could hold important cultural resources.

The representatives of the Rincon Band of Luiseno Indians noted that while their reservation is in San Digo County, their Tribe's traditional use of areas includes the southern Channel Islands and areas of Camp Pendleton as well as other counties, and that San Clemente and San Nicholas islands have been determined to hold traditional cultural significance. They expressed that their cultural resources concerns cover the full spectrum of interconnections between island and mainland and noted that the shoreline has shifted over time and there are tribal cultural resources that are now underwater. They expressed concern about cumulative or aggravating effects to cultural resources in these areas and mentioned that additional mitigation measures may be appropriate. They noted tribal values of kinship and relation to animals, and that natural resources are also cultural resources.

Commission Staff also received correspondence from the Salinan Tribe of Monterey and San Luis Obispo Counties, indicating that the proposed project would occur in in coastal waters of their traditional territories and expressing opposition to the proposed activities, including the following comments:

> The[re] are many recorded sacred site and burial areas along the coastline. We have many concerns that submerged village and cultural sites may be impacted by the project. Also we consider the waters of the Pacific as Sacred. This area of the central coast of California is the Western Gate, in which we are the gate keepers to [e]nsure that the deceased souls of our people are able to enter the spirit world. All of the activity may interrupt their journey to the after life.

If further correspondence is received from any tribes before the hearing on this staff recommendation, the Commission will address them in a separate addendum to this report. Four other tribes responded indicating that they were not requesting formal consultation at this time.

The Commission agrees with the concerns expressed by these tribes regarding the expansive nature of tribal cultural resources, including submerged lands and marine resources, including marine species, and agrees that the Navy should do all it can to address the potential impacts on this broader range of tribal cultural resources, beyond the limited scope of resources considered in their CD and DEIS. The Commission

addresses concerns related to marine resources in Section IV.D above and has concluded that the proposed project would not be consistent with the marine resources policies of the CCMP. Though the focus of the policy wording in Section 30244 is on archaeological resources identified by the SHPO, since adoption of its Tribal Consultation Policy in 2018, the Commission has consistently recognized the importance of protecting archaeological resources broadly defined as tribal cultural resources, including sites, features, places, cultural landscapes[75], sacred places, and objects with cultural value to California Native American Tribes, including those that are included or determined to be eligible for inclusion in the California Register of Historical Resources and those included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). Tribal cultural resources may also include historical resources described in Public Resources Code Section 21084.1, a unique archaeological resource as defined in Public Resources Code Section 21083.2(g),[76] or a "nonunique archaeological resource" as defined in Public Resources Code Section 21083.2(h).[77]

The Commission encourages the Navy to continue consulting on potential impacts to cultural resources (including more broadly than just for submerged resources identified, such as shipwrecks) with any Tribe that expresses interest. Based on the information currently available, however, the Commission agrees with the Navy that the proposed project is consistent with the cultural resource policy of the Coastal Act. The Navy is implementing reasonable mitigation measures for activities carried out offshore of California, including measures to avoid impacts to known cultural resources. For these reasons, the Commission concludes that the proposed project is consistent with Coastal Act Section 30244.

F. COMMERCIAL AND RECREATIONAL FISHING / ACCESS AND RECREATION

Section 30210 of the Coastal Act states:

> In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

[75] A cultural landscape is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
[76] As defined in that section, "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.
[77] As used in this section, "nonunique archaeological resource" means an archaeological artifact, object, or site which does not meet the criteria in subdivision (g).

Section 30212 (a) of the Coastal Act states:

> a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, ….

Section 30220 of the Coastal Act states:

> Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30234.5 states:

> The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.

Concerning fishing, the Navy's consistency determination notes that training and testing activities have been conducted in this area for decades, and that measures will continue to be undertaken to prevent interruption of commercial and recreational fishing activities. To minimize potential military/civilian interactions, the Navy publishes scheduled operation times and locations on publicly accessible Navy websites, and through U.S. Coast Guard issued Notices to Mariners, up to six months in advance. In addition, if the Navy discovers nonparticipants present in an exclusion zone, the Navy will halt or delay (and reschedule, if necessary) all potentially hazardous activity until the nonparticipants have exited the exclusion zone. The Navy further states:

> The Action Proponents may also temporarily establish an exclusion zone for the duration of a specific activity (e.g., an activity involving the detonation of explosives) to prevent non-participating vessels and aircraft from entering an unsafe area. Establishment of an exclusion zone would temporarily limit commercial and recreational fishing in that specific area; however, other areas in the HCTT Study Area would remain open to commercial and recreational fishing (U.S. Department of the Navy, [2015]). The Action Proponents do not exclude fishing activities from occurring in areas of the HCTT Study Area that are not being used during military readiness activities.
>
> Military readiness activities that are new for the 2024 HCTT Draft EIS/OEIS, such as the modernization and sustainment of ranges and amphibious landings in the NOCAL Range Complex are similar in nature to the activities that have been historically conducted in the Study Area. These activities would have minimal anticipated effects on commercial and recreational fishing because inaccessibility to areas of co-use for military readiness activities would be temporary and of short duration, lasting until an activity concludes. In addition, the Action Proponents have implemented standard operating procedures to improve communications between the military and fishers, both recreational and commercial, and reduce the number of instances when fishers must leave a temporarily closed area. Other areas not in use or temporarily restricted would remain accessible and available for use.

The Commission agrees with the Navy that impacts would be minimal, noting that the Navy has historically conducted numerous military testing and training activities throughout the California area of the proposed HCTT program without apparent significant conflicts with commercial and recreational fishing.

The proposed project also may result in changed access to ocean waters for recreation. As has historically been the case, Navy testing and training activities necessitate clearance of non-military boats and personnel (including both commercial and non-commercial activities) from their action areas for safety purposes. However, to minimize disruptions, the Navy currently conducts several public notification procedures prior to test and training events, including publishing Notice to Mariners for, among other things, sport boats bringing recreational fishermen, divers, or tourists to the waters surrounding the Channel Islands or other offshore areas. Additionally, it is worth noting that many of the proposed training and testing activities would occur relatively far offshore, where the frequency and concentration of recreational activities are generally less.

The Commission concurs with the Navy's findings that proposed clearances in the California area of the proposed HCTT program are necessary both for military security and public safety needs. In addition, given the relatively short duration and small size of any affected area at a given time and the availability of many alternate nearby locations for public access and recreation, the Commission also concurs with the Navy's finding that the proposed project will not affect existing public access opportunities on the Channel Islands or the mainland. The Commission therefore concludes that the proposed training and testing activities would be consistent with the commercial and recreational fishing policies (Section 30234.5), and public access and recreation policies (Sections 30210, 30212, and 30220) of the Coastal Act.