

**REPORT ON THE  
VALUE AND EFFECTIVENESS OF ALTERNATIVE ARRANGEMENTS FOR THE U.S. NAVY'S  
SOUTHERN CALIFORNIA OPERATING AREA COMPOSITE TRAINING UNIT EXERCISES  
(COMPTUEXS) AND JOINT TASK FORCE TRAINING EXERCISES (JTFEXS) THAT OCCURRED  
BETWEEN JANUARY 10, 2008, AND JANUARY 23, 2009**

**March 20, 2009**

**I. INTRODUCTION**

**A. Statement of Purpose**

On January 10, 2008, the Department of the Navy (Navy) sought Council on Environmental Quality (CEQ) approval of alternative arrangements pursuant to 40 C.F.R. § 1506.11 for implementing the procedural provisions of the National Environmental Policy Act (NEPA), §§ 42 U.S.C. §§ 4321 *et seq.* for five COMPTUEXS and four JTFEXs scheduled to occur between January 10, 2008, and January 23, 2009, in the Southern California (SOCAL) Operating Area. The Navy's request was based upon a U.S. Federal District Court preliminary determination of non-compliance with NEPA and an order imposing certain training restrictions on the Navy's use of mid-frequency active (MFA) sonar which presented an unreasonable risk that the Navy would not be able to certify Strike Groups for deployment to high threat areas overseas. On January 11, 2008, the Navy reaffirmed its request. The CEQ regulations implementing the procedural provisions of NEPA provide that where emergency circumstances make it necessary for an agency to take an action without observing the normal procedures set forth in those regulations, the federal agency taking the action should consult with CEQ about alternative arrangements for compliance with NEPA.

On January 15, 2008, CEQ approved the alternative arrangements pursuant to 40 C.F.R. § 1506.11 for implementing the procedural provisions of NEPA. The Secretary of the Navy (Secretary) immediately accepted the alternative arrangements, documenting his acceptance in a decision memorandum. See *Decision Memorandum Accepting Alternative Arrangements for the U.S. Navy's Southern California Operating Area Composite Training Unit Exercises (COMPTUEXS) and Joint Task Force Exercises (JTFEXs) Scheduled to Occur between Today and January 2009*, 73 Fed. Reg. 4189, January 24, 2008).

The Secretary's decision memorandum provides, "After the conclusion of the alternative arrangements, and no later than March 23, 2009, the Navy will provide a report to CEQ on the use of the alternative arrangements that reviews the value and effectiveness of those arrangements." Notice of this report's completion is to be placed in the *Federal Register* and five newspapers in Southern California and posted on the public internet website established for the SOCAL Range Complex Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS). Accordingly, this report has been prepared pursuant to the Secretary's decision memorandum.

## **B. Background**

The Navy has been training in the area now defined as the SOCAL Range Complex for over 70 years. The land, air, and sea space of the SOCAL Range Complex has provided and continues to provide a safe and realistic training and testing environment for naval forces charged with defense of the nation. The Navy homeports one-third of the U.S. Pacific Fleet including over 70 surface combatant ships, amphibious ships, and submarines; and several aviation squadrons in Southern California. The U.S. Marine Corps bases I Marine Expeditionary Force (I MEF) at Marine Corps Base Camp Pendleton and Marine Corps Air Station Miramar, both in San Diego County, California. These forces, from which is drawn the Marine component of Expeditionary Strike Groups (ESGs), train in the SOCAL Range Complex. The Naval Special Warfare Command, which includes two naval special warfare groups, at Naval Amphibious Base Coronado, also trains special forces on the SOCAL Range Complex.

The habitat and species in the SOCAL Range Complex have been monitored and studied over the last 40 years, and the Navy has extensively used MFA sonar in the area over the same period. There have been no documented incidents of harm, injury, or death to marine mammals resulting from exposure to MFA sonar in the SOCAL Range Complex. There have also been no stranding incidents or population-level effects attributable to MFA sonar in the SOCAL Range Complex. No systematic declines in the stocks of marine mammals have occurred and the stocks of many species, such as humpback whales, blue whales, harbor seals, and common dolphins, are stable or improving. The Eastern North Pacific gray whale stock increased and the species was delisted, but is currently experiencing habitat changes due to sea ice melting patterns, and undersized gray whales have been reported in the media lately. Strandings of small cetaceans and California sea lions are common, usually attributed to fishery interaction, disease, or harmful algal blooms. There have also been several individual beaked whale strandings, usually attributed to disease or fishery interaction.

### **1. Training and Certification Requirements Summary**

The existence of a well-equipped and well-trained Navy has long been regarded as vital to the Nation's security. Accordingly, Congress has directed the Navy "shall be organized, trained, and equipped primarily for prompt and sustained combat incident to operations at sea," and that it is "responsible for the preparation of naval forces necessary for the effective prosecution of war." 10 U.S.C. § 5062(a). Congress has further directed that "[t]he Navy shall develop aircraft, weapons, tactics, technique, organization, and equipment of naval combat and service elements." 10 U.S.C. § 5062(d). In fulfillment of its mission, the Navy deploys forces in Strike Groups that include either an aircraft carrier (with an air wing) or amphibious assault ships (with a Marine Expeditionary Unit) accompanied by three to five other surface combatant ships. Each ship trains separately before a Strike Group is organized, but it must also complete integrated training as part of the Strike Group to enable the Strike Group's thousands of Sailors and Marines to function effectively as a single combat force.

The nine exercises scheduled by the Navy for the time period from January 2008 through January 2009 were COMPTUEXs and JTFEXs designed to train Strike Groups in the integrated use of a broad range of air, surface, and subsurface warfare skills requiring close coordination of all Strike Group assets. The exercises attempt to replicate, with live opposition forces, the real-

world conditions that Strike Groups face while performing actual military missions and defending the fleet.

The Navy conducts training exercises the way it would have to fight in actual combat. Integration of the efforts of thousands of personnel to make the exercises a meaningful simulation of real-world military situations is exceptionally complex. The exercises are conducted under austere, hostile conditions that stress every aspect of strike group performance through complex battle problems and advanced, unscripted war games. The exercises hone the skills needed to examine and prioritize every potential threat, balance competing demands of specific warfare commanders, and apportion limited assets to counter threats, while executing military missions and maintaining force protection. Such exercises are often the only opportunity Sailors and Marines have to train in an environment that replicates to the greatest extent possible the real-world military situations they may confront.

Navy's Pacific Fleet conducts COMPTUEX and JTFEX exercises in the SOCAL Range Complex. The SOCAL Range Complex is the only complex on the U.S. West Coast that currently contains all the land, air, and at-sea bases (including an instrumented range on the ocean floor and amphibious landing areas) necessary to train air, sea, and undersea forces simultaneously in an integrated manner.

Anti-submarine-warfare (ASW) training, including the use of MFA sonar, is a critical aspect of exercises such as COMPTUEXs and JTFEXs. The Navy continuously deploys Strike Groups to high-threat areas in the western Pacific and Middle East where the Nation's potential adversaries operate modern diesel-electric submarines that incorporate technological advances that make them extremely quiet and difficult to detect. A diesel-electric submarine operating on battery power is nearly undetectable to U.S. and allied naval forces using passive sonar alone. MFA sonar is, therefore, a Strike Group's *only* effective means to detect and track such submarines before they close within weapons range, and such timely detection therefore is essential to U.S. Navy ship survivability.<sup>1</sup>

The art of detecting, tracking, targeting, and destroying advanced submarines is extraordinarily complex, requiring a highly developed set of skills and robust training to integrate the efforts of the strike group. The complexities of the undersea environment -- water density, temperature, salinity, currents, above-surface weather conditions, and sea floor bathymetry -- all significantly affect propagation of sound. The development and honing of these skills requires intensive real-world sonar training to master the art and processes of identifying submarines in the complex subsurface environment. Moreover, proficiency in MFA-sonar operations is highly perishable. Repeated training, therefore, is required to achieve and maintain combat proficiency and effectiveness. That training must also facilitate the development of the skills needed to coordinate the anti-submarine efforts of Strike Group assets and overcome additional complexities that arise from simultaneous use of MFA sonar by multiple ships (including mutual interference). To that end, training in real-world conditions designed to replicate real-world scenarios with a live, subsurface adversary whose tactics will

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<sup>1</sup> The Navy's Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) sonar is also an effective system utilizing active sonar. It was developed and is deployed separately from Strike Groups because of physical limits on its mobility and the limited number of available units.

exploit the ocean's ever-changing complexity is essential. This training occurs as an important element of the coordinated efforts of a carrier or amphibious assault ship, its escort ships, and other assets to conduct simultaneously offensive and defensive air, sea, undersea, and amphibious operations in simulated warfare conditions where resources are limited and time is of the essence. The infinite combinations of these conditions cannot be replicated by simulation.

Furthermore, the Navy must be able to train in undersea environments that replicate those in which the Navy will be expected to engage an adversary. This demands that the Navy train its Strike Groups using MFA sonar in the littorals and in areas of complex bathymetry, such as that provided in the SOCAL Range Complex. A reduction in the Navy's ability to train realistically and effectively unacceptably risks the training of naval forces for deployment to high-threat areas overseas.

## 2. Procedural Summary

**a. NEPA Status:** NEPA requires the Navy to undertake an assessment of the environmental effects of its proposed actions prior to making decisions. In late 2006, the Navy began engaging the public in accordance with NEPA through the EIS process for all training, including COMPTUEXs and JTFEXs, conducted in the SOCAL Range Complex and in support of obtaining permitting under the Marine Mammal Protection Act (MMPA), 16 U.S.C. §§1361 *et seq.* The Notice of Intent for this EIS was published in the *Federal Register* on December 21, 2006 (71 Fed. Reg. 76639). The Notice of Availability of the Final EIS was published in the *Federal Register* on December 5, 2008 (73 Fed. Reg. 74171). Notices in newspapers published in California also announced the release and summarized the results of the Final EIS. The Final EIS/OEIS addressed all oral and written comments, including those addressing the Navy's use of MFA sonar in the SOCAL Operating Area, received during the Draft EIS public and agency comment periods. The Final EIS/OEIS was mailed to all individuals, agencies, and organizations that requested a copy of the final document. The Final EIS/OEIS is publicly available on the Navy's website at <http://www.socalrangecomplexeis.com/>.

Between January 2008 and January 2009, the Navy conducted nine exercises in the SOCAL Operating Area which prepared Strike Groups for deployment to the western Pacific and Middle East. The use of MFA sonar to detect submarines was an essential element of these exercises, which train the thousands of military personnel who comprise a Strike Group to operate as an integrated unit in simultaneous air, surface, and undersea warfare. These nine exercises were the last of the 14 the Navy analyzed in an Environmental Assessment (EA) for the time period from January 2007 through January 2009 as the Navy completed the EIS/OEIS for the SOCAL Range Complex.

**b. MMPA Status:** On January 23, 2007, prior to the first exercise in the series and after conferring with the Secretary of Commerce, the Deputy Secretary of Defense issued a two-year National Defense Exemption (NDE) under the MMPA (16 U.S.C. § 1371(f)). The NDE provided for protection of marine mammals in the absence of a MMPA Letter of Authorization by including 29 specific measures to minimize potential impacts on marine mammals. These 29 mitigation measures were developed in coordination with the National Marine Fisheries Service (NMFS), the agency with primary responsibility for administering the MMPA. The NDE allowed time for the Navy to execute a plan coordinated with the Department of Commerce to

obtain a Letter of Authorization in accordance with the legal and regulatory requirements under the MMPA. The plan called for the Navy to submit and obtain an incidental take authorization for activities analyzed in the SOCAL EIS/OEIS before the NDE expired on January 23, 2009. NMFS completed the rulemaking process and issued the first annual Letter of Authorization on January 22, 2009 (74 Fed. Reg. 7590). The likely effects of MFA sonar training on threatened and endangered marine mammals during the 14 exercises were further analyzed in consultation with NMFS under section 7 of the Endangered Species Act (ESA), 16 U.S.C. §§ 1531 *et seq.*

**c. ESA Status:** In February of 2007, the Navy concluded consultation with NMFS in accordance with the ESA. NMFS issued a Biological Opinion for the fourteen exercises to be conducted from January 2007 through January 2009. On January 14, 2009, NMFS issued a programmatic Biological Opinion for the Navy's training exercises in the SOCAL Range Complex and for the NMFS' Permits Division's proposal to issue regulations to authorize the Navy to "take" marine mammals incidental to the conduct of training exercises in the SOCAL Range Complex for the period from January 2009 to January 2014. NMFS also issued the first annual Biological Opinion on the Permit Division's MMPA Letter of Authorization for Navy's training activities in the SOCAL Range Complex for the period from January 2009 to January 2010. On February 2, 2009, a Navy ship struck and killed an endangered fin whale. Navy promptly provided notice of the event to NMFS. It is presently unclear as to whether the ship strike occurred as the result of an activity covered by the Biological Opinion. However, in response to NMFS' request, the Navy reinitiated consultation.

**d. Underlying NEPA Litigation:** In March 2007, a coalition of environmental groups led by the Natural Resources Defense Council (NRDC) filed suit in the U.S. District Court for the Central District of California seeking to enjoin the Navy's use of MFA sonar in the remaining exercises on several bases, including violation of the procedural requirements of NEPA. Based in part on its finding that NRDC would likely prevail with its NEPA claim, the District Court issued a preliminary injunction enjoining the Navy from all MFA sonar use during the planned exercises. On appeal, the U.S. Court of Appeals for the Ninth Circuit remanded the case, directing the District Court to narrow its injunction so as to provide mitigating conditions under which the Navy may conduct its training exercises.

On January 3, 2008, the District Court issued a modified preliminary injunction, which directed 6 mitigation measures in addition to the 29 measures previously adopted by the Navy pursuant to NDE. After review, the Chief of Naval Operations determined that two of the measures—the requirement that Navy vessels cease MFA sonar transmission when marine mammals close within 2200 yards of a sonar source, and the requirement that MFA sonar transmissions be reduced by six decibels (a reduction in power of 75%) whenever the Navy detects significant surface ducting (whether or not marine mammals are present)—would pose the most unacceptable risk to naval training, the timely deployment of Strike Groups, and national security.

The District Court's reliance on NEPA when issuing its injunction prompted emergency action by the Executive pursuant to statutory and regulatory powers. CEQ exercised its authority under 40 C.F.R. § 1506.11 to authorize alternative arrangements for NEPA compliance in emergency circumstances. In this case, CEQ concluded that emergency circumstances existed

warranting alternative arrangements for compliance with NEPA through enhanced public participation, research, and mitigation measures until the Navy's ongoing preparation of the SOCAL Range Complex EIS/OEIS was completed. On January 15, 2008, the Navy issued its decision memorandum accepting CEQ's alternative arrangements, including the requirement that the Navy submit this report. Concurrently, the President issued an exemption from the Coastal Zone Management Act based on the challenge filed by the California Coastal Commission seeking twelve conditions on the conduct of training exercises in Southern California.

#### **e. The SOCAL Range Complex EIS/OEIS**

As discussed above, prior to seeking approval of alternative arrangements for compliance with the procedural requirements of NEPA from CEQ, the Navy had begun evaluating the environmental impact of MFA sonar training exercises through the development of an EIS/OEIS for the SOCAL Range Complex. The NEPA process for this EIS culminated with the signing of a Record of Decision (ROD) on January 22, 2009 (74 Fed. Reg. 5650).

In support of the EIS/OEIS, the Navy prepared a detailed Public Involvement Plan to ensure effective public and stakeholder communications and outreach during the NEPA process. The plan included provisions for communicating with media, elected officials, regulatory and government agencies, entities, native groups, and communities throughout Southern California. The Navy ensured that its Plan of Action and Milestones (POAM) for compliance with NEPA and associated environmental compliance laws and regulations captured the timing requirements of the alternative arrangements.

The Navy met all of the dates and milestones in the POAM including:

- Publication of a Notice of Intent (NOI) to prepare the EIS/OEIS on December 21, 2006, in the *Federal Register* (71 Fed. Reg. 76639). Notification of public scoping was made through local media outlets, as well as through distribution of letters to Federal, State, and local agencies and officials, interested groups and non-governmental organizations (NGOs), and individuals. Three public scoping meetings were held in San Pedro, Oceanside, and Coronado, California, during the period January 29-31, 2007.
- Publication of the Notice of Availability for the Draft EIS/OEIS in the *Federal Register* by the United States Environmental Protection Agency (USEPA) on April 4, 2008 (73 Fed. Reg. 18527). The Draft EIS/OEIS was made publicly available at <http://www.socalrangecomplexeis.com/> for a public comment period of 45 days. Notice of the availability was also published in three California newspapers [San Diego Union Tribune, North County Times (San Diego), and The Press-Telegram (Long Beach)].
- Publication of a Notice of Public Hearing in the *Federal Register* on April 4, 2008 (73 Fed. Reg. 18522). Notice of the public hearings was also published in three California newspapers [San Diego Union Tribune, North County Times (San Diego), and The Press-Telegram (Long Beach)] at least 15 days before the release of the Draft EIS/OEIS. Public hearings were conducted in Oceanside, Coronado, and Long Beach, between April 29 and

May 1, 2008. A total of 46 individuals, agencies, and organizations submitted 284 comments on the Draft EIS/OEIS.

- Publication of the Notice of Availability for the Final EIS/OEIS in the *Federal Register* by the USEPA on December 5, 2008 (73 Fed. Reg. 74171). Notices in newspapers published in California also announced the release and summarized the results of the Final EIS/OEIS. The Final EIS/OEIS addressed all oral and written comments received during the Draft EIS/OEIS public and agency comment periods. The Final EIS/OEIS was mailed to all individuals, agencies, and organizations that requested a copy of the final document. The Final EIS/OEIS was made publicly available at <http://www.socalrangecomplexeis.com/>.
- The Assistant Secretary of the Navy for Installations and Environment signed the ROD on January 22, 2009 and a notice of its availability was published in the *Federal Register* on January 30, 2009 (74 Fed. Reg. 5650).

Key regulatory agency actions and milestones related to environmental compliance documentation under the MMPA and ESA included:

- Publication of a NMFS Notice of Receipt of an application for a Letter of Authorization under the MMPA in the *Federal Register* on April 17, 2008 (73 Fed. Reg. 20918).
- Publication of a NMFS MMPA Proposed Rule in the *Federal Register* on October 14, 2008 (73 Fed. Reg. 60836).
- Issuance of an MMPA Final Rule, which was signed by NMFS on January 14, 2009, and the subsequent publication of the MMPA Final Rule in the *Federal Register* on January 21, 2009 (74 Fed. Reg. 3882).
- Issuance of an ESA Programmatic Biological Opinion, which was signed by NMFS on January 14, 2009.
- Issuance of the first annual MMPA Letter of Authorization and ESA Annual Biological Opinion and Incidental Take Statement, both of which were signed by NMFS on January 22, 2009.
- Filing of a Coastal Consistency Determination by the Navy with the California Coastal Commission on August 22, 2008 pursuant to the federal consistency procedural requirements of the Coastal Zone Management Act (CZMA), 16 U.S.C. §§ 1451 *et seq.*

## **II. The Alternative Arrangements**

The alternative arrangements also identified public participation requirements that the Navy met. These included many of those actions captured in the POAM described above:

## **A. SOCAL Range Complex EIS/OEIS -- Public Participation Milestones and Status**

- Release of the Draft EIS/OEIS for public review in April 2008 with a public comment period of 45 days.
- Publication of the Notice of Availability (which included an announcement of the locations of the public hearings) as 18 display advertisements in 3 California newspapers [San Diego Union Tribune, North County Times (San Diego), and The Press-Telegram (Long Beach)] at least 15 days before the release of the Draft EIS/OEIS.
- Mailing letters to Federal, State, and local agencies as well as postcards being mailed to all individuals/organizations that attended the EIS/OEIS scoping meetings and who submitted comments or requested copies of the draft EIS/OEIS. These postcards announced the availability of the draft EIS/OEIS and provided information on how and where to obtain copies of the draft EIS/OEIS.
- Public hearings held in Oceanside, California on April 29, 2008, Coronado, California on April 30, 2008, and Long Beach, California on May 1, 2008.
- Made available the Draft EIS/OEIS and the Final EIS/OEIS on the EIS/OEIS website and at four libraries: San Diego Central Library, Coronado Public Library, and San Pedro Regional Branch Library prior to the publication of the respective Notices of Availability in the *Federal Register*.
- Preparation and distribution of twelve fact sheets at the public hearings that addressed the following topics: the proposed action (including use of MFA sonar during the exercises); NEPA and community involvement; San Clemente Island; commercial and recreational interests around San Clemente Island; public access and safety around San Clemente Island; major events; threatened and endangered species on San Clemente Island; above and beyond compliance; cultural resources on San Clemente Island; fire management on San Clemente Island; and conservation programs on San Clemente Island. In addition, two brochures were distributed on the Navy conservation programs on San Clemente Island and Commercial Fishing and Recreational Interests around San Clemente Island.
- On April 4, 2008, the Navy distributed the Draft EIS/OEIS to Federal, State, and local elected and tribal officials and government and tribal agencies, other entities, and citizens. The entities on the list included those known to have an interest in the ocean, ocean resources, or use of sonar and its effects on marine animals.
- Prior to the scheduled public hearings, the Navy offered elected officials and agencies the opportunity to participate in briefings on the content and conclusions of the draft EIS/OEIS. A news release was issued on April 3, 2008 and two media briefings were conducted to inform the public of the impending release of the Draft EIS/OEIS.



## **B. Alternative Arrangements -- Participation Milestones and Status**

- Navy provided notice of the approved alternative arrangements in the *Federal Register* on January 24, 2008 (73 Fed. Reg. 4189) and in the following five newspapers: (1) Los Angeles Times; (2) Sacramento Bee; (3) San Diego Union-Tribune; (4) North County Times (San Diego County); and (5) Daily Breeze (San Pedro, California). Copies of these notices are posted on the SOCAL Range Complex EIS/OEIS internet website at <http://www.socalrangecomplexeis.com/>.
- Concurrent with the *Federal Register* notice of the alternative arrangements, the Navy mailed notices to the parties identified in the Navy's January 10, 2008 request to CEQ and a list of 29 entities, including marine environment-related nongovernmental associations, industry groups, and research institutions.
- Copies of all Notices were posted on the EIS/OEIS internet website and provided to CEQ.
- The Navy provided CEQ with After Action Reports (AARs) for each exercise to which the alternative arrangements applied.

## **C. Mitigation Measures**

During exercises in SOCAL Range Complex, the Navy complied with the mitigation measures identified in the alternative arrangements, including the 29 measures established by the January 23, 2007, MMPA NDE as follows:

- The Navy ensured that watchstanders and lookouts included at a minimum: (1) three non-dedicated watchstanders on all surface ships required to look out for marine mammals during all exercises; and (2) two lookouts on all surface ships required to look out for marine mammals during all exercises. Furthermore, all sightings of marine mammals by all watchstanders and all lookouts were reported directly to the Combat Information Center (CIC) or via the appropriate watch stations for submission to the CIC. The CIC disseminated the sighting information to all platforms in the area with a recommendation for appropriate action (e.g., power down sonar; surface or subsurface vessels to avoid area or increase distance from mammals; aerial platforms to increase vigilance). Similarly, all aerial platforms monitored the area for marine mammals during their assigned missions and reported marine mammal presence and confirmed sightings to Aircraft Control Unit for submission to the CIC, and the CIC disseminated the sighting information to all platforms in the area to ensure they were aware of the presence of marine mammals so they could take steps to increase vigilance or execute mitigation measures applicable to these exercises (e.g., power down sonar; surface or subsurface vessels to avoid area or increase distance from mammals; aerial platforms to increase vigilance).
- The Navy used MFA sonar during COMPTUEX and JTFEX training in the SOCAL Range Complex within [Operating Area] W-291 and the Submarine Antisubmarine Warfare Range (SOAR). As required by the alternative arrangements, the training exercises in SOAR

occurred at least 5 nautical miles (nm) away from the western shoreline of San Clemente Island.

- The Navy complied with the requirement to use meters rather than yards to describe the safety zone set forth in NDE, and the safety zone used in the SOCAL Range Complex was 1,000 meters.

#### **D. Scientific Research**

The alternative arrangements addressed several areas of research: 1) population surveys; 2) enhancement of passive hydrophones on the instrumented range to detect and track marine mammals on those portions of the range where the passive hydrophones are in place; 3) evaluation of a proposal to expand the range areas monitored by passive hydrophones; and 4) evaluation of current research regarding infrared (IR) technology.

1. NMFS, in consultation with Navy, determined that additional population surveys beyond those already scheduled in 2009 and 2010 were not required for the SOCAL Range Complex. The Navy's efforts are focused on completing these previously scheduled surveys and on completing analysis of data that has been collected. Analysis of the historical data will be completed by July 2009, and analysis of the data collected during the ongoing studies will be completed within 12 months of data collection. The formal Navy response to this action item was submitted to CEQ June 27, 2008.
2. The Navy has been working on a program that will enhance its ability to use passive hydrophones at Southern California Offshore Range (SCORE) to detect and track marine mammals. On April 7, 2008, the Navy submitted the implementation plan to expand the technical capability of existing hydrophones to detect marine mammals. This program includes the development of computer algorithms that review recordings of hydrophones and identify sounds considered indicative of Cuvier's and Blainesville's beaked whales echolocations and communication. The tool was implemented in advance of the April 15, 2009, deadline. The tool is based on data already obtained by the range sensors, and does not require additional hardware upgrades. In addition, the Navy has developed a second prototype classifier and is planning hardware and software implementation at SCORE in April 2009.
3. The Navy evaluated a proposal to extend the range areas monitored by passive hydrophones. This will be an extension to the existing deep water ASW training range that is currently instrumented with over 80 hydrophones. The proposed action will install up to a total of 500 hydrophones in 2 separate shallow water areas. One area is immediately to the west of the existing deep water range, in the vicinity of Tanner Bank. The second area is located between the deep water range and San Clemente Island. Upon completion of the required analysis and regulatory actions, the Undersea Warfare Training Range (USWTR) program will commence work on the west coast shallow water range extension. Acquisition of range hardware is expected to occur in FY11, with installation activities on the proposed range occurring in or after FY12.

4. The Office of Naval Research (ONR) is pursuing a long-range science and technology (S&T) program to evaluate new concepts for IR detection that may ultimately lead to an operationally viable technique. The focus of the effort is on comparatively small, low-power systems that might be deployable on small, robot aircraft (Unmanned Aerial Vehicles or UAVs) as well as operating in a ship-based mode. ONR advertised this opportunity in the form of a Broad Agency Announcement (BAA) in March 2009. ONR plans to support this effort for at least several years, with the potential for sustained support, though the future and breadth of this program will depend upon the outcome of early efforts.

### III. ASSESSMENT OF VALUE AND EFFECTIVENESS

**A. Training Benefits:** The application of the alternative arrangements enabled nine Strike Groups to train using MFA sonar in the SOCAL Range Complex, resulting in all nine Strike Groups being certified for world-wide deployment in support of potential combat operations.

**B. Timeline:** The alternative arrangements enabled the Navy to come into full compliance with NEPA procedural requirements and other environmental laws. Accordingly, all Strike Groups training on the SOCAL Range Complex between February 2007 through January 2009 were able to be certified for deployment. The Navy completed the EIS/OEIS, the MMPA formal rulemaking process, and the consultation under the ESA without interruption of training schedules. The mitigation measures and adaptive management component identified in the alternative arrangements also assisted NMFS during the independent formal MMPA rulemaking process.

**C. Mitigation Measures:** The mitigation measures identified in the alternative arrangements resemble closely those identified in the NDE. The NDE, the alternative arrangements, and ESA Biological Opinions issued by NMFS each require the Navy to prepare and submit After Action Reports (AARs) to NMFS within 120 calendar days of the completion of a major exercise. These AARs provide for an evaluation of required mitigation measures, which are generally the NDE mitigation measures. The AARs conclude that anti-submarine warfare proceeds slowly and requires careful development of a tactical frame of reference over time as data are integrated from a number of sources and sensors. Once MFA sonar is turned off for a period of time, turning it back on later does not usually allow a Commander to simply continue from the last frame of reference. Thus, lost MFA sonar time not only equates to lost exercise time but should be considered in the fuller context of its overall impact on the tempo and development of a tactical picture shared among exercise participants as they trained toward the goal of improving ASW skills in general.

The mitigation measures identified in the alternative arrangements and NDE served as a baseline from which the Navy developed its application for Letter of Authorization that NMFS relied upon in formulating its proposed and final rules under MMPA. Additionally, the Biological Opinion prepared under the ESA reflects these same baseline mitigation measures.

Of note, on January 22, 2009, to ensure its continued environmental stewardship, the Navy required that the same NDE protective measures be employed worldwide during all MFAS use

for training and testing. However, where applicable, the Navy will apply the more restrictive protective measures developed through environmental impact statements, regulatory processes or imposed by court order.

**D. Research Measures:** The research measures significantly assisted the Navy in establishing and refining research priorities and timelines. Specifically, the research measures enabled in-depth collaborative review both between NMFS and Navy, and among multiple Navy organizations regarding ongoing and planned marine mammal surveys, instrumented range expansion and improvement, and detection technologies development. Direct products from the alternative arrangements included an aggressive plan to complete data analysis of completed and currently scheduled marine mammal surveys, the marine mammal monitoring on ranges (M3R) development plan, plans to upgrade and expand hydrophone capacity on SCORE, the development of beaked whale classifiers, and an implementation plan for an existing infrared detection technology. The alternative arrangements also resulted in a Navy solicitation to all U.S. federal agencies for assistance in developing new Infrared Detection Technologies.

**E. Public Outreach:** Many of the public outreach tasks identified in the Navy's Public Involvement Plan, which was prepared as part of the NEPA process for the SOCAL Range Complex EIS/OEIS, were the same or very similar to those as identified by CEQ under the alternative arrangements and set forth in the SECNAV Decision Memorandum. One exception was the requirement to publish display advertisements concerning the alternative arrangements in five newspapers in Southern California and the mailing of postcards to interested parties. Although the expenditure associated with the mailing of postcards was minimal, the Navy expended approximately \$105,000 in newspaper publication costs. The advertisements in the Los Angeles Times accounted for approximately two-thirds of the total expenditures. Responses specifically referencing the newspaper advertisements was limited to only two inquiries. The Navy is unable to quantify the numbers of responses directly related to postcards and whether newspaper advertising alerted more members of the public to the availability of the draft EIS/OEIS and alternative arrangements.

**F. Effectiveness in Meeting Deadline for Completing SOCAL Range Complex EIS/OEIS:** The alternative arrangements maintained the NDE baseline of mitigation measures which Navy and NMFS carried forward for the NEPA and Executive Order 12114 analyses in the SOCAL Range Complex EIS/OEIS, the Hawaii Range EIS/OEIS and the Atlantic Fleet Active Sonar Training EIS/OEIS.

The alternative arrangements use of NDE mitigation measures were of great assistance for Navy's relationship with NMFS in several regards. The mitigation measures provided Navy and NMFS a baseline set of mitigation measures that Navy could employ during major exercises and study in after action reports. NMFS then reviewed these after action reports and used them when preparing proposed rules for Navy's Hawaii Range Complex, SOCAL Range Complex and the Atlantic Fleet Active Sonar Training EIS/OEIS. These mitigation measures and reports provided NMFS the material needed to prepare the necessary analysis required by the MMPA including least practicable adverse impact analysis of mitigation measures and the necessary consideration of personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity. Accordingly, NMFS and Navy coordinated on additional practicable

and effective mitigation measures which included a careful balancing of the likely benefit of any particular measure to the marine mammals with the likely effect of that measure on personnel safety, practicality of implementation, and impact on the military readiness activity. Likewise, NMFS carried this analysis forward into its ESA consultation for the ESA programmatic Biological Opinion and incidental take statement issued on the Navy's proposal to conduct training and NMFS' Permit Division's proposal to issue regulations under the MMPA.

The alternative arrangements were also critical when the Navy and NMFS developed monitoring plans for the range complexes because the alternative arrangements resulted in the baseline which monitoring plans are analyzing. Based on the information contained in the after action reports, Navy and NMFS were able to identify information they realized was necessary for future analysis of the effectiveness of the mitigation measures and assisted in identifying information Navy and NMFS need to assess sonar's effects on marine mammals. Similarly, the alternative arrangement introduced for public review the adaptive management component. NMFS and Navy then integrated adaptive management into MMPA final rules and ESA Biological Opinions.

**G. Articulating the Importance of Training:** The development of the alternative arrangements provided the groundwork for helping the Navy articulate the importance of effective training. This proved critical in subsequent litigation.

#### **IV. CONCLUSION**

The alternative arrangements provided Navy an invaluable tool as it coordinated and continues working with NMFS and the public in gaining a better scientific understanding of sonar's effects on marine mammals while Navy trains naval forces for deployment overseas. While the Navy has not identified any strandings as a result of sonar's use during training activities, the long term monitoring plans and continued coordination with NMFS and the scientific community should increase the Navy's understanding of sonar's effects during training activities. Through adaptive management and the legal/regulatory processes, the Navy will continue to work with NMFS to evaluate available science to develop mitigation measures that safely protect marine mammals from adverse effects of MFA sonar while ensuring that naval forces are trained for deployments overseas.