FY 2010 Undersea Warfare Training Range
Environmental Planning Team Narrative

FY 2010 CNO Environmental Awards Nomination

Introduction

USFF submits this nomination for the CNO Environmental Planning Team Award for the Navy team that prepared the Undersea Warfare Training Range (USWTR) Environmental Impact Statement (EIS)/Oversea Environmental Impact Statement (OEIS), herein referred to as the USWTR Environmental Planning Team or the Team. This program was established to ensure the Fleet had access to vital training areas at sea to practice and perfect war fighting skills against modern, quiet submarines in littoral waters. USWTR was also integrated into the Tactical Training Theater Assessment and Planning (TAP) Program, the Navy's range sustainment program. USFF established the Team to ensure that current and future training requirements remain in full compliance with all environmental laws and regulations. The Team faced and overcame significant challenges in achieving this goal, including the extensive operational and geographic scope of the combined effort, the limited science regarding environmental effects of unique military training activities to support the regulatory process, such as the use of active sonar systems and their potential effects to marine species, legal obstacles, time constraints, achieving the necessary operational flexibility, and public perception.

The Team was composed of Navy and contractor personnel with expertise in naval operations, exercise planning, legal, marine biology, acoustics, environmental compliance, Geographic Information Systems (GIS), ecology, public involvement, and program management. This vast array of expertise was required due to the complexity of the analyses to be completed. These included ensuring compliance processes were followed under the Marine Mammal Protection Act (MMPA), National Environmental Policy Act (NEPA), Coastal Zone Management Act (CZMA), Endangered Species Act (ESA), collection and interpretation of best available science, creation of methodologies to predict environmental effects, and compilation of all information into a scientifically accurate and readable study.

The USWTR Environmental Planning Team knew how important the topic of active sonar was with the public, news media, and environmental activist groups. Team members recognized the strong views of potentially negative impacts from active sonar that the environmental community holds, and how they would likely oppose the sonar analysis and methodology based more on ideology and emotion rather than proven science and national security considerations.

Background

The Navy has been conducting Anti-Submarine Warfare (ASW) training for over 80 years. That training has been and will remain critical to combating subsurface threats to the United States. However, in recent years the environmentalists have become increasingly concerned about the potential effects active sonar can have on marine species, particularly marine mammals. Although the science on marine mammal sensitivity to active sonar is limited, environmental groups remain convinced such operations are harmful to marine life. As a result, the Navy sought to conduct an analysis to scientifically determine what the environmental impacts were from construction of the USWTR training range and the associated active sonar training. The Navy seeks the balance between environmental protection and national security. This dedicated Team worked countless hours under tight deadlines to complete this project and did an

outstanding job. The Team employed the consensus building approach to deal with difficult issues that were encountered which served the Team well as individual experiences and expertise were brought to bear on developing the pros and cons of each alternative action.

Organization and Staffing

USFF is responsible for manning, equipping, and training all CONUS based naval units to conduct combat operations at and from the sea. USFF oversees all unit level, intermediate, and advanced training for Carrier Strike Groups, Expeditionary Strike Groups and independent deployers. USFF initiated this project to meet a critical training deficiency in conducting ASW in littoral waters. USFF environmental planning responsibilities are executed within the N4 Operational Readiness Directorate. The USFF Environmental Readiness Division maintains strong collaborative relationships with many other USFF divisions as well as other commands to address all required at-sea training requirements and environmental planning efforts. The USWTR Environmental Planning Team was led by USFF program manager Jene Nissen. Nissen, a retired Navy Commander and surface warfare officer, ensured the program stayed on schedule despite several challenging obstacles. Primary Team members and significant contributors are listed in Table 1.

Mr. Nissen successfully led a diverse, interdisciplinary team in the completion of the Undersea Warfare Training Range (USWTR) Final Environmental Impact Statement (FEIS) in support of one of the most visible, environmentally complex, and legally contentious efforts in the Navy. This document provides a long-term environmental compliance solution for littoral waters sonar training for USFF units. This analysis was able to address all non-governmental organization (NGO) and public comments that had been received during the course of the USWTR program, which began in the mid-1990s.

The Team led the way to rapidly design and execute highly complex analytical approaches in coordination with Navy modelers, NMFS scientists, and OPNAV environmental policy makers. This ensured that newly developed NMFS criteria were properly incorporated and the resulting modeling effort was completed in a timely manner. During this process, the Team incorporated cutting-edge acoustic analysis based on latest science, and made significant contributions to the development, with NMFS, of new marine mammal behavioral effects acoustic modeling criteria that went well beyond the scope of this objective, and which are now being utilized for other Navy sonar compliance analyses.

The Team remained focused, accountable, and engaged via weekly team meetings/phone calls appropriately attended and documented ensuring information exchange and task completion. A smaller, core group of individuals was identified for periodic tiger team meetings focused on document/product revisions. Mr. Nissen periodically briefed the chain of command including CUSFF Nathman, Roughead, and Greenert, DASN(E) Schregardus and ASN(I&E) Penn to gain approval for key project milestones and various document releases to the public. Presentations were also made to Senate Armed Services Committee (SASC) and House Armed Services Committee (HASC) staffers, NC government and regulatory officials, FL government and regulatory officials, VA regulatory officials and numerous scientists, media, and NGO.

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Challenges and Unusual Circumstances

REGULATORY REQUIREMENTS: Navy training with active sonar in U.S. waters and on the high seas is subject to various U.S. environmental laws and executive orders. Legal requirements, depending on the location of the activity, include NEPA, Executive Order 12114, MMPA, ESA, Magnusson-Stevens Act (regarding essential fish habitat), and CZMA. These requirements, coupled with the Navy's need to train with Mid-Frequency Active Sonar (MFAS) present a significant compliance challenge.

HEIGHTENED LEGAL RISK: Over previous years, Navy defended itself against four separate lawsuits challenging the Navy's use of MFAS seeking to impose additional training restrictions that would significantly and adversely impact military readiness. The recently completed Atlantic Fleet Active Sonar Training, (AFAST) EIS/OEIS had analyzed the use of sonar in anti-submarine and mine warfare training. The USWTR effort continued this previous work, and also analyzed and sought compliance for the construction and operation of the only dedicated shallow water sonar training range on the east coast. The possibility remains high that environmental groups may challenge the adequacy of the environmental planning, permitting, and consultation processes that Navy will be completing. Environmental compliance for all military readiness activities remain a high priority for the Navy for the foreseeable future.

TIMELINE CONSTRAINTS: The team had to meet SECNAV mandated timelines while dealing with routine late delivery of key regulator generated documents. Navy projects are funded by Congress and require a lengthy lead time to secure adequate funding. This required consideration to ensure key milestones were met in order to ensure USWTR program funds were not lost and the program itself jeopardized. This risk to the USWTR program was significant, and the Team's tireless efforts ensured deadlines were met allowing for construction of this critical enhancement to ASW training to proceed.

OPERATIONAL NECESSITY IN RELATION TO SENSITIVE ENVIRONMENTAL CONCERNS: The biological and operational importance of the water space analyzed by the USWTR team was significant, and this analysis was driven by the unique geography, oceanographic, and climatological characteristics, and the variety of species associated with the range location. Particularly, the proximity to right whale critical habitat, migration patterns, and habitat features that indicate potential for high concentrations of marine mammals which were considered to be more sensitive to sonar (e.g., beaked whales) were analyzed in relation to the operational importance to Navy training.

STATE OF THE SCIENCE: The body of knowledge regarding impacts of noise is still evolving. Throughout the USWTR EIS development process, NMFS criteria constantly changed in an attempt to more realistically model how Navy sonar affected marine mammal behavior. In addition, this has led to the need for Navy and NMFS to remain flexible in responding to emerging changes to the science as new data is obtained.

TEAM MEMBER RETENTION: Due to the longevity of the program (13 years), there was a significant turnover of key personnel. Few members present at the publication of the Notice of Intent (NOI) were still involved at the publication of the Record of Decision (ROD). This

created extreme challenges in preparing a complete and comprehensive analysis, ensuring incorporation of the best and latest science, and maintaining technical quality.

PUBLIC PERCEPTION: Marine mammal strandings are regularly linked to Navy active sonar in media and NGO press releases, often with little or no evidence of any causal relationship. Although these stories are frequently inaccurate, they have created a public perception that Navy sonar has been responsible for a long list of sonar stranding events. Public and media interest in this case was significant. Navy received over 1,800 public comments as well as approximately 40,000 petition style comments following the issuance of first and second versions of the Draft EIS. Comments from the environmental community were very strident and emotional. The team understood the need to address concerns professionally, and did so using best available science to aid the public's understanding of the analysis.

Environmental Planning Summary

To support meeting all temporal and analytical objectives, the USWTR Environmental Planning Team developed detailed and coordinated POA&Ms to ensure all milestones were satisfied. These key steps included initiating ESA consultation in Dec 2004 and submitting a final revised Biological Evaluation in March 2008, issuing the initial NOI on 13 May 1996 and an updated NOI on 21 September 2007, and releasing the Draft EIS/OEIS to the public and announcing this release in the Federal Register 12 September 2008. Lastly, the unique team relationship allowed for close coordination among USFF, OPNAV, ASN, and NMFS staffs to complete the USWTR EIS on 12 June 2009, the NMFS Biological Opinion on 28 July 2009, and the ASN (I&E) ROD on 31 July 2009. This detailed team approach, always conscious of competing interests and timelines, has allowed this project to stay on track, protected fiscal resources, and allowed USFF to meet its emerging training requirements.

Understanding the complex legal, environmental, and social sensitivities associated with USWTR, the Team orchestrated a very successful strategy centered on openness and transparency by outlining why the Navy was doing the study, its commitment to protecting marine mammals and the environment, and keeping the public informed of new scientific discoveries. Most importantly, USFF made the point that national security and environmental protection are not mutually exclusive. The Team explained that both of these missions could be achieved with continued research and proper mitigating steps.

The Navy developed its action alternatives to both meet the operational training requirements of the Atlantic Fleet and minimize potential environmental effects. The environmental effect of most concern is exposure of marine mammals to underwater sound. Since the Navy requires active sonar use to meet its mission and training requirements, and because of the need for specific bathymetric requirements for USWTR, potential marine mammal exposures could not be lessened by reducing use of sound sources or moving the range further off shore. Therefore, the USWTR action alternatives were developed in an effort to identify areas that met the training need and balanced that against the potential environmental effects.

Two components were needed to develop the action alternatives. First, the following operational training requirements were utilized to ensure that all alternatives developed met the operational

requirements associated with littoral ASW training: realistic training environmental requirements, year-round opportunities, proximity to homeports, coordinated sea and air space, training area size, water depth, proximity to support facilities, acoustic environment, and target availability. The second component utilized was to analyze the key environmental impact concerns, such as species present and the estimated level of sound exposures. Marine mammals and the manner in which sound travels can vary by location and season; therefore, the seasonal and spatial data were combined and modeled to provide a comparison of the potential for sound exposures to marine mammals at the alternative sites.

Most Outstanding Program Features

Unique to this type of project, an extensive effort was made to incorporate the analysis of biological significance into the operational planning for ASW training within the geographic requirements constraints. In the past, naval war fighters have focused only on meeting their operational training requirements to maintain the Fleet's combat readiness. As a direct result of this initiative, protection of the sea life is now an integral part of the planning process.

Accomplishments

- As a direct result of the USWTR Environmental Planning Team's work, the USWTR FEIS and associated marine species regulatory permits have provided total environmental legal coverage for construction of the USWTR Range.
- The Team was able to meet all SECNAV "non-negotiable" completion milestones and still produce the highest quality product even while having to overcome NMFS marine mammal effects criteria as well as other compliance documentation delays which typically resulted in very short review times.
- Successfully completed USWTR consultation with NMFS. Interfaced with NMFS, and oversaw preparation of detailed, comprehensive responses which resulted in NMFS proposed regulations that: 1) adhere to OPNAV mitigation 'red-line" objectives, 2) "economize" Fleet after action reporting, and 3) creatively address environmental concerns over critically endangered and other sensitive marine species. These consultations involved controversial and high visibility issues, such as exposure of marine mammals to training activities near the North Atlantic right whale critical habitat. Extensive coordination with NMFS was required to ensure protection of protected species and preservation of Navy training capabilities.
- Members of this team spearheaded the successful completion of marine resource assessments, sonar modeling efforts, and defense of the Navy's follow on comprehensive long-term at-sea monitoring program which has been designed to address science/data gaps related to impacts associated with Navy sonar use, and address long-term ESA/MMPA permit requirements.
- Based on a track record of successful performance, Mr. Nissen and key members of his team have become widely recognized as a leaders in their respective fields, have garnered the highest respect throughout the Navy, and are constantly called upon to serve as spokespersons to DASN(E), ASN(E,I&E), the media, government agencies, and the public regarding Fleet sonar training and environmental issues.
- The Team's Natural Resource experts proactively addressed emerging fish habitat issues that have Navy-wide implications and which immediately threatened the Fleet's ability to: 1)

conduct training in critical east coast at-sea locations, and 2) construct USWTR off the coast of Florida. They consulted with regulatory authorities to identify their concerns, and negotiated a strategy to prevent any impacts to the USWTR program. USFF has subsequently implemented this strategy across multiple resource and planning arenas to focus limited resources where they are needed the most (e.g., designing fish habitat and marine mammal surveys for specific Navy training locations, justifying funding of data collection proposals, proposing policy for when/where to conduct quantitative vs. qualitative analyses). The USWTR seafloor mapping data collection effort is a notable example of the implementation of this strategy, resulting in the acquisition of key data, not only for USWTR, but also for future consultations. Development of the strategy during the consultation and regulatory processes supported the creation of an efficient, transferable mechanism for completing all range complex EFH requirements in a timely and productive manner. This groundbreaking work required extensive coordination with OPNAV and ASN environmental leadership, and has set the standard for Navy responses to all such issues in the future.

- Operational team members took the lead to vastly improve the accuracy and defensibility of the alternative development and training requirements for USWTR to: 1) improve description of the site selection process for the proposed USWTR sites and justification for the preferred alternative, 2) develop concise description and quantification of operations, and 3) show how these requirements and supporting environmental analysis were critical to Navy's future training needs.
- The USWTR program initiated and developed the extensive at-sea monitoring program for the East Coast to gain a better understanding of the potential effects from Navy training activities and the effectiveness of Navy mitigation measures. This program is the foundation for meeting all east coast regulatory required at-sea monitoring. It has also been used as the template for other regulatory required Navy monitoring programs. Due to the magnitude of the USFF monitoring effort, the team has secured funding through the POM process to carry out the monitoring program requirements. The team is managing a 10-year contract to conduct the required monitoring.

Most Outstanding Accomplishments

1. The USWTR Environmental Planning Team, in conjunction with the AFAST EIS Team, employed a highly innovative and resourceful technique that has become the foundation for the Navy's effects model. The teams, composed of representatives from the Navy Undersea Warfare Center, USFF, NMFS, and Commander, Navy Installations Command, created an unprecedented marine mammal modeling program that allows for temporal and geographic effects modeling. The importance of this model cannot be understated as it underscores the Navy's significant efforts to coexist with marine sea life while mitigating impacts.
2. The Team was a diverse, interdisciplinary group intent on completing the USWTR Final EIS despite the challenges of an environmentally complex, legally contentious project with high visibility. The EIS and subsequent ROD provides a long-term environmental compliance solution for shallow water sonar training along the east coast. This analysis was able to address all NGO and public comments received during prior EIS attempts.

Collaboration - The Team collaborated to rapidly design and execute highly complex analytical approaches in coordination with Navy modelers, NMFS scientists and OPNAV environmental

policy makers. This approach ensured newly developed NMFS criteria were properly incorporated and the resulting remodeling effort was completed. During this process, the Team incorporated cutting-edge acoustic analysis using the latest science while developing new marine mammal behavioral effects acoustic modeling criteria beyond what was required. As a result, this analysis is being used in other Navy sonar compliance documentation.

Initiative - By taking the initiative to develop and implement an intricate process to address both regulatory uncertainties and evolving operational parameters, the Team completed this effort in accordance with SECNAV mandated schedules even while: 1) overcoming a four-month delay in NMFS delivery of marine mammal effects criteria which were required to meet crucial modeling milestones, 2) gathering and assessing emergent data that allowed ASN(E,I&E) leadership to adopt a range location alternative which is considered far superior to the site previously proposed, 3) making all necessary and extensive revisions to the Draft EIS/OEIS which supported selection of the new preferred range site, and 4) updating accompanying consultation documents on a compressed schedule and meeting all NMFS requirements.

Dialogue - The Team brokered an unprecedented agreement with NMFS to permit construction of USWTR in advance of authorizations for training, which could not occur until the range was built. As a result, the USWTR ROD was signed on time to avoid loss of programmed funds, and allowed NAVAIR to move ahead with construction after an 11-year project standstill.

Table 1: U.S. Fleet Forces Command Environmental Planning Team

Name	Title/Position/Organization	Discipline
Jene Nissen	Project Manager, USFF	Naval Ops/Acoustics
CDR Tim Jennings	Environmental Legal Counsel, USFF	Legal
Dave Smith	Operations Support, USFF	Operations /Training Support
Tommy Moore	Operations Support, USFF	Operations /Training Support
Dave MacDuffee	Natural Resources, USFF	Biologist
Hank Eacho	Environmental OPS Branch Head, USFF	Biologist
Kelly Knight	NEPA Branch Head, NAVFACLANT	NEPA
Lesley Leonard	NTR NAVFACLANT	Environmental Scientist
Julie Ripley	Public Affairs Office, USFF	Public Affairs
James Mansky	Project Manager, AECOM	Contract Support
Victor Frakenthaler	Project Lead, AECOM	Contract Support
Anu Kumar	Technical Reviewer, NAVFACLANT	Bioacoustics Specialist
Carter Waterson	Technical Reviewer, NAVFACLANT	Marine Biologist/Bottom Mapping
Jim Finneran	Technical Reviewer, SSC San Diego	Research Scientist
Dorian Houser	Technical Reviewer, SSC San Diego	Research Scientist
Keith Jenkins	Technical Reviewer, SSC San Diego	Bioacoustics Specialist
Bernice Snyder	NEPA Technical Lead, NAVFAC HQ	Environmental Scientist
Barbara Howe	NEPA Technical Lead, NAVFAC SE	Environmental Scientist
Amberly Hall	Environmental Legal Counsel, NAVFACLANT	Legal
Dave Shepherd	Environmental Legal Counsel, NAVFACLANT	Legal
Bruce Macomber	Program Manager, NAVAIR	Program Management
John Visneuski	Technical Program Manager, NUWC Newport	Program Management
Ed Dunn	Technical Program Manager, NUWC Newport	Program Management
Larry Rothstein	System Engineer, NUWC Newport	Engineering
Phil Denolfo	Ocean Engineer, NUWC Newport	Engineering
Steve Jette	System Engineer, NUWC Newport	Electrical Engineer
Tom Fetherston	Modeling Dept Lead, NUWC Newport	Marine Resources Specialist
Bert Neales	Lead Modeler, NUWC Newport	Mathematics