



CHIEF OF NAVAL OPERATIONS ENVIRONMENTAL AWARDS

FISCAL YEAR 2009 WINNERS



TUESDAY, 1 JUNE 2010 • 0900 to 1000



Admiral Gary Roughead

Chief of Naval Operations

Admiral Roughead is a 1973 graduate of the United States Naval Academy.

Among his six operational commands, Roughead was the first officer to command both classes of Aegis ships, having commanded USS Barry (DDG 52) and USS Port Royal (CG 73).

As a flag officer, Roughead commanded Cruiser Destroyer Group 2, the George Washington Battle Group; and U.S. 2nd Fleet/NATO Striking Fleet Atlantic and Naval Forces North Fleet East.

Ashore, he served as commandant, United States Naval Academy, the Department of the Navy's chief of legislative affairs, and as deputy commander, U.S. Pacific Command.

Roughead is one of only two officers to have commanded the fleets in the Pacific and Atlantic, commanding the U.S. Pacific Fleet and Joint Task Force 519, as well as U.S. Fleet Forces Command, where he was responsible for ensuring Navy forces were trained, ready, equipped and prepared to operate around the world, where and when needed.

Roughead's awards include the Defense Distinguished Service Medal, Navy Distinguished Service Medal, Defense Superior Service Medal, Legion of Merit, Meritorious Service Medal, Navy Commendation Medal, Navy Achievement Medal, and various unit and service awards.

Roughead became the 29th Chief of Naval Operations September 29, 2007.

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ABOUT THE AWARDS

Natural Resources Conservation – *Small Installation and Individual/Team*

To recognize efforts to promote the conservation of natural resources, including the identification, protection, and restoration of biological resources and habitats; the sound management and use of the land and its resources; and the promotion of the conservation ethic. Environmentally beneficial landscaping is also a factor in this award.

Environmental Quality – *Non-industrial Installation, Individual/Team, and Large Ship*

To recognize efforts to ensure mission accomplishment and protection of human health through implementation of environmental management systems in the areas of environmental planning, waste management, and safe drinking water.

Sustainability – *Industrial Installation*

To recognize efforts to prevent or eliminate pollution at the source, including practices that increase efficiency and sustainability in the use of raw materials, energy, water, or other resources.

Environmental Restoration – *Installation and Individual/Team*

To recognize efforts to protect human health and the environment by cleaning up identified Department of Defense sites in a timely, cost-efficient and responsive manner.

Environmental Excellence in Weapon System Acquisition – *Team*

To recognize efforts to incorporate environmental, safety and occupational health requirements into the weapon system acquisition program's decision-making process.



Commander Fleet Activities Yokosuka | Japan

Natural Resources Conservation, Small Installation



CFAY conducted a butterfly survey at Yokosuka Naval Base with volunteers from the Miura Peninsula Insect Survey Group. By combining efforts with experts from the Insect Survey Group, CFAY was able to identify the habitation of a specific butterfly species. CFAY's efforts contributed to critical research and documentation for the Kanagawa prefecture.



The CFAY Public Works Department Environmental Division routinely receives work request forms for review. As a result of a recently submitted work request form regarding a proposed construction site near more than 50 cherry blossom trees, the trees were relocated away from the construction site and thereby protected from the impacts of construction. Cherry blossom trees are considered a national icon in Japan.

As a leader in environmental protection, Commander Fleet Activities Yokosuka (CFAY) works closely with U.S. and Japanese officials, ensuring fleet, family, community, and mission readiness as they relate to the participation and fulfillment of environmental objectives. CFAY partners with local and prefectural governments to meet or exceed stringent U.S. and Japanese government environmental protection standards. Such standards are supported in CFAY's Integrated Natural Resources Management Plan (INRMP), which includes updated facility inventory lists by facilities. CFAY's INRMP was most recently updated in July of 2009 to include a new Threatened Species List. CFAY continues to meet and exceed all strategically planned natural resource conservation management objectives.

CFAY's accomplishments:

- Designing environmentally beneficial landscapes with Yokosuka Base Middle school students.
- Sponsoring an eelgrass planting and flounder fish releasing event with Yokosuka Elementary School students to restock native species into the marina.
- Enforcing protection of the area's near-threatened butterfly species.
- Working with the base Boy Scouts and Girl Scouts in maintaining nature, hiking, and watchable wildlife areas.
- Enhancing compliance efforts to include routine site visits.
- Involving the community in multiple events, base natural resource activities, and beach cleaning activities.

Naval Air Station Pensacola | Florida

Natural Resources Conservation, Small Installation



Naval Air Station (NAS) Pensacola faced and conquered the biggest challenge to its Natural Resources Program since formal management began in the 1960s. With 2004/2005 Hurricanes Ivan and Dennis making direct hits on the installation and Hurricane Katrina brushing past – all three just 10 months apart – damage to natural resources was nearly catastrophic. After a long and arduous cleanup, NAS Pensacola has proven the resiliency of its ecosystem, its mission, and its people and has officially “*Risen From the Storm.*” As a critical element of base recovery, the Integrated Natural Resources Management Plan (INRMP) stepped up and delivered, taking a major role in getting the installation back on track.

NAS Pensacola’s accomplishments:

- Training areas where tree and site damage posed safety problems were recovered by the removal of 7,000 hazard trees and the pruning of 4,000 trees around mission areas.
- Native vegetation, including the planting of 2,000 new trees and new dune establishments along shorelines, improved the quality of life and provided a buffer for newly constructed training and housing facilities, allowing training in both indoor and outdoor settings to resume.
- At Forrest Sherman Field and the Bruce L. Tanner Forest, 15 acres were planted with Longleaf Pine, 80 acres of aviation clear zones were cleared, and prescribed burning was accomplished on 550 acres of Navy land, immediately improving flight safety and reducing the Bird/Animal Aircraft Strike Hazard (BASH).
- Seven interpretive nature trails, two youth camping areas and a freshwater fishery were restored and reopened to the public.
- Beach cleanups were conducted.
- Eighteen osprey nesting platforms were repaired, the base bluebird nestbox program with the Girl Scouts of America was restored, gopher tortoise surveys were completed for the Candidate Conservation Agreement with INRMP stakeholders, and 40 acres with invasive species were treated.



NAS Pensacola has 10 miles of hiking trails. The Bayou Grande Nature Trail and Family Picnic Center offers the nature enthusiast “the Real Florida” experience. This nature trail was completely restored following destructive damage caused by hurricanes.



Prescribed burning was accomplished on 550 acres by the NAS Pensacola staff. Frequent burning scheduled by the INRMP improves forest health, maintains mission flight buffers and clear zones, and reduces the risk of lost training time due to wildfires. Student Conservation Interns receive on-the-job training by Navy foresters at NAS Pensacola and obtain Wildland Fire Certification Training.



Naval Weapons Station Seal Beach Detachment Fallbrook | California

Natural Resources Conservation, Small Installation



Comprehensive five-year and abbreviated annual surveys for federally listed species, such as the one being conducted above for two endangered birds within the Santa Margarita River, yield invaluable distribution and trend data to track the status of populations as well as provide presence/absence data for mission support project assessments.



Wildland fires, such as this one on Detachment Fallbrook in 2002, are a common and ecologically important feature of the southern California landscape, yet they epitomize the challenges facing land managers in a highly urbanized interface. High rates of ignition from live fire training on neighboring Camp Pendleton and proximity to the community of Fallbrook make controlling fire risks especially critical. Fire management on Detachment Fallbrook includes, among other measures, maintenance of a system of firebreaks to aid suppression efforts and fuels reduction through cattle grazing and controlled burning.

Since the earliest documented management plan in 1987, the Natural Resources Program at Naval Weapons Station Seal Beach Detachment Fallbrook has matured into an outstanding model not only for the Navy, but for other small installations within the Department of Defense (DoD). With a solid budgeting and programming foundation, process improvements that have streamlined mission support and routine contracting, a comprehensive long-term monitoring program that ensures compliance as well as comparable data for trend analyses, an established rapport with regulatory agencies, and outreach that has bolstered both government and private entities, natural resources management at Detachment Fallbrook is able to focus on proactive solutions to resource and mission challenges.

Under the leadership of the new Conservation Program Manager, the Natural Resources Program has advanced significantly. Programming and implementation of Integrated Natural Resources Management Plan projects and Fire Management Plan commitments more than tripled during this period. Funding to support these efforts was doubled. Reinstatement of a vital cattle lease is on track, after years of being stalled by regulatory and bureaucratic obstacles. Innovative solutions have included successful habitat treatments for the otherwise declining endangered Stephens' kangaroo rat, the removal and temporary captive holding of kangaroo rats from within a project demolition site to avoid and minimize incidental take, and valuable chainsaw training in scrubland habitat for DoD firefighters.

Ensuring seamless mission operations in the context of sensitive species and protected natural resources presents a recurring challenge. The Natural Resources Program meets these challenges with a combination of program goals and objectives that incorporate mission drivers, management based on sound science and routine monitoring, integrating natural resource considerations with the Environmental Management System, professional partnerships and collaborations both internal and external to the Detachment, and the streamlining of regulatory and project review processes to include programmatic agreements and the removal of restrictions such as designated critical habitat.

**Mr. John R. Burger of
Pacific Missile Range Facility | Hawaii**
Natural Resources Conservation, Individual/Team



John Burger maintains on-site responsibility for the oversight and implementation of both the Integrated Natural Resource Management Plan (INRMP) and Integrated Cultural Resources Management Plan (ICRMP) of the Pacific Missile Range Facility (PMRF), the world's largest instrumented multi-environment Navy training range. As PMRF's Environmental Coordinator, Mr. Burger has developed unmatched communication channels and positive working relationships with the local community, governmental agency peers, and private organizations committed to the protection of natural resources.

Mr. Burger's accomplishments:

- Continuous refinement of the Laysan Albatross Surrogate Parenting Program through recognizing the natural biology of the species, to minimize Bird/Animal Aircraft Strike Hazard potential with the benefit of also increasing egg hatching success at Kilauea Point National Wildlife Refuge.
- Outreach and coordination with Save our Shearwaters and Kauai Endangered Seabird Recovery Project to provide education and training opportunities at the protected Wedge-tailed Shearwater Colony located within the PMRF beach cottages military recreational complex.
- Lead "Tiger Team" representative for PMRF in the development and completion of the Hawaii Range Complex/PMRF Final EIS/Overseas EIS.
- Leveraging available assets to develop long-term monitoring of threatened and endangered species, especially the Hawaiian monk seal (endangered) and green sea turtle (threatened), allowing the undisturbed, routine presence of these species on Barking Sands beaches, and sharing this information with cognizant, outside agency staff.
- Continuous efforts to maintain control of invasive species, especially the complete destruction of long thorn kiawe (mesquite) and seedbed through cooperative conservation efforts with the Kauai Invasive Species Committee.
- Coordination and support for the necropsy of a humpback whale calf at PMRF with the National Marine Fisheries Services Stranding Coordinator, the State of Hawaii Department of Land and Natural Resources Division of Aquatic Resources, the Hawaii Pacific University Stranding Team, and Kauai Stranding Team volunteers.



Endangered Hawaiian monk seals hauled out on PMRF/Barking Sands. The monk seals are off-limits to people. The area is also a patrolled beach front.



Inquisitive Hawaiian green sea turtle on PMRF's Underwater Range. The Hawaiian green sea turtle is protected under the Endangered Species Act as a threatened species. A Navy diver in background inspecting cable



Environmental Team of Naval Undersea Warfare Center Division Newport | Rhode Island

Natural Resources Conservation, Individual/Team



A diver prepares to enter the water to start the underwater video survey of the Ex-USS Forrestal (CV 59). This video survey was the first comprehensive and quantitative biofouling survey of a Navy vessel ever completed. These data will be useful when decommissioning Navy vessels.

For the past decade, Naval Undersea Warfare Center Division Newport's Environmental Team has provided the Navy and non-Department of Defense customers with a broad spectrum of environmental and natural resource management services. The Team consists of experienced and talented biologists, engineers, physicists and planners who provide services ranging from site selection planning and analysis for conservation purposes to mitigation plan development with at-sea support to minimize impacts to natural resources. The Team also performs marine mammal monitoring, protected marine species observer training, Geographic Information Systems (GIS) mapping for environmental and natural resource management, Endangered Species Act (ESA) Section 7 consultation, marine mammal permitting, and the preparation of 126 NEPA and Executive Order (EO) 12114 documents.

Environmental Team of Naval Undersea Warfare Division Newport's accomplishments:

- The Team successfully completed a survey of fisheries use conflicts on the Southern California Range Complex. The study revealed processes to reduce use conflicts between the Navy and fishermen.
- The Marine Mammal Monitoring on Navy Ranges program (M3R) has documented a significant population of sonar-sensitive Blainville's and Cuvier's beaked whales on active Navy ranges - Atlantic Undersea Test and Evaluation Center (AUTEK) and Southern California Offshore Range (SCORE). M3R has been involved in two separate efforts to investigate the effect of sonar on beaked whales and other marine mammals (the multi-year Behavioral Response Studies and opportunistic study).

These efforts have documented an avoidance reaction in beaked whales to anthropogenic sound. M3R has also been involved with tagging (both satellite tags and DTags) and species verification studies of beaked whales and other species on the AUTEK and SCORE ranges, and with the development of passive acoustic density estimation methods for marine mammals, including the first such methods for beaked whales.

**Ms. Michael F. Wright of
Naval Air Station Oceana | Virginia**
Natural Resources Conservation, Individual/Team



Michael Wright is a Natural Resources Specialist (NRS) who has been designated the base level Natural Resources Manager and Team Leader overseeing Navy properties for three separate Commands and five Navy Operational Support Centers (NOSCs). The bases that she provides support to include, but are not limited to, Naval Air Station Oceana (NASO), NASO Dam Neck Annex (DNA), Naval Auxiliary Landing Field Fentress (NALFF), Naval Support Activity Norfolk Northwest Annex (NSA NWA), and Navy Dare County Bombing Range. She also provides assistance to any U.S. Department of Defense (DoD) facility, primarily in the state of Virginia, related to bird management as part of her duties as a DoD Partners in Flight (PIF) representative. It is standard for a designated base NRS to manage a single Integrated Natural Resources Management Plan (INRMP), which typically identifies up to 18 program areas requiring natural resources management for a single base. Because of Ms. Wright's wide area of responsibility, she manages and implements three separate INRMPs. She has made impressive accomplishments in updating, managing and implementing the Natural Resources program for her immediate area of responsibility and for the Naval Facilities Engineering Command Mid-Atlantic (NAVFAC MIDLANT) region as a whole.

Ms. Wright's accomplishments:

- Organized over 150 volunteers to assist with habitat restoration activities. During three dune restoration events these volunteers planted over 160,000 plants by hand.
- Nominated all three properties with INRMPs for awards related to Urban Forest Management. All three bases were presented Tree City USA awards from the Virginia Department of Forestry in fiscal years 2008 and 2009.
- Revitalized three INRMPs and the budgeting of 66 natural resources projects (an increase of 165% since the previous budgeting cycle).
- First NAVFAC MIDLANT installation manager to receive certification as an Airport Biologist from the U.S. Department of Agriculture in support of mission Bird/Animal Aircraft Strike Hazard (BASH) management.



Ms. Wright assisting on a black bear relocation project.



Ms. Wright helping a Dam Neck Annex Child Development student with planting the ceremonial Arbor Day tree.



Naval Base Coronado | California

Environmental Quality, Non-industrial Installation



Naval Air Station North Island is headquarters for four major military flag officer staffs. Its piers are homeport to two major aircraft carriers, the USS NIMITZ (CVN 68) and the USS RONALD REAGAN (CVN 76). With all ships in port, the population of the station swells to more than 36,000 active duty, reserve, and civilian workers.



This area is currently undergoing a wetland restoration project. It is part of the NBC golf course and lies adjacent to the approach end of runway 29. The restoration will improve aesthetics but more importantly it will reduce the current Bird/Animal Aircraft Strike Hazard (BASH) by removing invasive vegetation and installing anti-perching and anti-nesting devices.

Naval Base Coronado (NBC) consists of seven geographically separate installations including Naval Air Station North Island, Naval Amphibious Base Coronado, Silver Strand Training Complex, Naval Outlying Landing Field Imperial Beach, Remote Training Site Warner Springs, La Posta Mountain Warfare Training Center, and San Clemente Island Range Complex. NBC's primary mission is to provide the highest quality logistical support and quality of life services for the operating forces of the U.S. Navy and for the assigned activities and other commands as needed. NBC provides the right support at the right time, in the right amount, enabling our operating forces to produce the highest level of combat readiness. To support the mission, the NBC environmental program manages some of the most diverse and regulated facilities in the continental United States. The seven NBC installations represent 17,230 hectare (ha) of land and water and are distributed over an area of 875,415 ha in San Diego and Los Angeles Counties in southern California.

NBC's environmental program is comprehensive and multifaceted, focused on compliance, conservation, and recycling, with minimal impact on training operations. Of special significance has been the continued reduction in regulatory violations, 32% reduction in water consumption, 25% reduction in energy consumption, recycling of 4,550 cubic meters (m³) of waste water on San Clemente Island, \$270,000 savings in National Environmental Policy Act costs, and over \$21 million in energy projects awarded or executed in fiscal year 2009. NBC environmental staff members understand that they cannot achieve their program goals without the assistance of the men and women who consider NBC their home base. They work closely with tenant commands, provide training as needed whether in large groups or on an individual basis, provide compliance audits and assist the tenants in finding innovative solutions to complex challenges. The NBC environmental division is committed to assisting operating forces to conduct training in a manner compatible with the environment.

Naval Base San Diego | California

Environmental Quality, Non-industrial Installation



Naval Base San Diego (NBSD) encompasses the NBSD main-site, the Broadway Complex in downtown San Diego, the Mission Gorge Recreation Center, the Naval Facilities Engineering Command (NAVFAC) facilities at Naval Medical Center San Diego, and 16 family housing sites.

NBSD supports 56 ships, and 156 tenant commands. NBSD is also home to Military Sealift Command, Maritime Administration, and U.S. Coast Guard ships, and many other U.S. vessels. In addition, NBSD provides services including housing, security, public works, environmental, supply, and administrative facilities for tenant units.

NBSD has significantly reduced the impact of its operations on the environment. The introduction of new ideas and equipment which reduce waste, capture pollutants, and otherwise mitigate environmental impacts at the base has led to regulatory compliance in all areas.

Naval Base San Diego's accomplishments:

- Established an Environmental Management System program in compliance with ISO 14000 guidelines.
- Retired nine permits saving the Navy \$4,000.
- Performed over 5,500 inspections of base activities.
- Contributed over 10,000 hours annually to base environmental activities.
- Initiated xeriscape projects estimated to save \$115,000 in water and grounds maintenance costs annually.
- Trained 988 Navy personnel, saving approximately \$300,000 in contractor training costs.
- Initiated an electronic waste turn-in event that resulted in the recycling/re-use of \$430,000 in electronic items and appliances and a potential savings of \$10,000 in disposal costs.
- A total of 1,172 volunteers contributed 36,425 hours to the Commanding Officer's "Clean Base – Safe Neighborhood" initiative.



Trash flows down Chollas Creek from city lands. A joint City/NBSD clean-up effort removed 8.5 tons of trash and loose debris from the creek. This effort supports Navy stewardship and joint efforts by keeping San Diego Bay clean.



The Chollas Creek cleanup significantly improved water quality and overall appearance. This cleanup was part of the Commanding Officer's "Clean Base – Safe Neighborhood" initiative.



U.S. Naval Support Activity Bahrain | Bahrain

Environmental Quality, Non-industrial Installation



NSA Bahrain's Commanding Officer with school children celebrating Earth Day during Earth Week. More than 500 volunteers participated in various activities including planting trees, garbage pick up, and an awareness campaign.



NSA Bahrain set up a two-day training session to assist Host Nations in establishing Port State Control (PSC) and surveillance programs of their ports aimed at monitoring the Gulf for illegal discharges, resulting from the Arabian Gulf being declared a special area by Marine Pollution (MARPOL73/78).

U.S. Naval Support Activity (NSA) Bahrain serves as the only permanent frontline shore base in the Southwest Asia area of operations, and is the epicenter of all support operations in the turbulent Middle East. Its primary mission is to provide critical logistical support to U.S. forces operating in the Arabian Gulf region. Despite the continual increase in operational tempo, coupled with Department of Defense budget and manpower constraints, NSA Bahrain's environmental program continued its regional support in this extremely dynamic and vitally important Area of Responsibility.

The base environmental team responded to more than 1,200 service calls supporting 158 U.S. Navy and coalition ships in managing over 320 tons of shipboard hazardous waste offloaded in Bahrain and the United Arab Emirates (UAE). The recycling programs in Bahrain and the UAE diverted over 1,000 tons of otherwise hazardous waste and reduced disposal costs by \$2.5 million over fiscal years 2008 and 2009.

The prompt response to the USS NEW ORLEANS and USS HARTFORD incident was crucial in preventing possible contamination of Host Nation waters and in maintaining the long standing good relations with the surrounding communities.

The development of a practical user friendly Environmental Management System (EMS) was key to the successful implementation of the NSA Bahrain EMS. EMS awareness is fully integrated into the NSA Bahrain personnel orientation.

NSA Bahrain's environmental program continues its unwavering support by adapting to fleet and tenant commands' needs.

Mr. Awni M. Almasri of Naval Facilities Engineering Command Europe Africa Southwest Asia

Environmental Quality, Individual/Team



Compliance with regulations related to hazardous waste (HW) generated at U.S. Naval Support Activity (NSA) Bahrain and Fleet is challenging and costly due to a lack of the proper disposal facilities in the Arabian Gulf Region. All HW had to be shipped to proper disposal facilities in Europe and Canada. Mr. Almasri developed and engaged in an aggressive recycling and in-country HW disposal programs to reduce the volume of waste being disposed of outside the Southwest Asia Area of Operations. Mr. Almasri successfully reduced NSA Bahrain and shipboard HW disposal quantities by more than 50 percent. His effort reduced the annual HW management cost from approximately \$3 million to less than \$1 million per year.

The achievements gained in fiscal years 2008 and 2009 are a testament to the successful management of the NSA Bahrain environmental program. These achievements are remarkable considering the environmental challenges facing the Navy in a potentially hostile region of the Middle East supporting the Global War on Terrorism and Piracy.

The successful implementation of the NSA Bahrain Environmental Management System (EMS) is linked directly to the continual improvement and successful management of the environmental program. EMS awareness training has become a cornerstone of the base's indoctrination training for incoming personnel.



Mr. Almasri briefing the U.S. Navy, U.S. Coast Guard, U.S. Embassy and Host Nation participants in the Oil and Hazardous Substance (OHS) spill response equipment deployment exercise conducted at the Port of Fujairah, United Arab Emirates. This port is used for refueling Navy ships.



Mr. Almasri talking to school children during NSA Bahrain Earth Week. More than 75 passers by visited the environmental booth for information and guidance. Earth Week festivities emphasized that every day is Earth Day – a time to act to protect our planet.



Environmental Program Management Team of U.S. Navy Region Center, Singapore | Singapore

Environmental Quality, Individual/Team



Focusing on opportunities to engage and partner with non-governmental organizations and other groups on environmental issues, NRCS Environmental co-sponsored a Special Cleanup Day at Changi Beach Walk with the Chaplain Office and Singapore National Environment Agency to support the fiscal year 2009 Earth Day theme "Partnering For the Planet." More than 60 people from the base participated in the event.



In fiscal years 2008 and 2009, NRCS assisted in the collection and disposal of over 380,000 pounds of shipboard generated industrial waste. By eliminating the need to retrograde these materials to Japan or the U.S., the programs enhanced personnel safety and minimized spills. Overall, NRCS supported over 123 USS and USNS ships and submarines passing through the region.

U.S. Navy Region Center, Singapore (NRCS) is located on the island nation of the Republic of Singapore. The mission of NRCS is to lead and manage the overall coordination of military services in Singapore. Specifically, NRCS serves as Fleet liaison between the host nation and naval, joint, or coalition military units conducting business in Singapore to support Pacific Command (PACOM) regional engagement and security plans. NRCS provides facilities and overall management in one of the most dynamic theaters and hosts Commander, Task Force 73. In fiscal year 2008, the Environmental Program was expanded to include an additional 79 acres of housing properties when the Air Force departed and transferred management responsibility to the Navy. The NRCS Environmental Team has an important role in maintaining compliance with U.S. environmental guidance and applicable local laws and regulations as well as enhancing the quality of life of the facility population. In fiscal years 2008 and 2009, the team put in a concerted effort and became the first in the Navy to achieve Environmental Management System (EMS) conformity with zero deficiencies. The team was able to fully evaluate all major and minor aspects of processes and established 21 standard operating procedures under the program. With all the checks and balances implemented, NRCS is constantly finding ways to reduce operational impacts.

Environmental Program Management Team of NRCS's accomplishments:

- Effective implementation of environmental compliance programs which received no notice of violations from local regulators,
- Achieved Environmental Management System self certification, and recycled and reused materials at every opportunity
- Offloaded over 380,000 pounds of shipboard generated industrial waste and implemented an effective solid waste qualified recycling program.
- The Environmental Quality Team conducted numerous training sessions and drills which greatly enhanced our response capability. These programs have contributed significantly to the command's Strategic Plan and improved command readiness.

Environmental Quality Team of Naval Air Weapons Station China Lake | California

Environmental Quality, Individual/Team



The Naval Air Weapons Station (NAWS) China Lake is the Navy's largest land holding, encompassing over 445,154 hectare (ha) of land. It is also the Navy's largest Research, Development, Acquisition, Test, & Evaluation (RDAT&E) facility for weapons development and testing. Activities associated with this mission generate a large and diverse energetic wastestream that due to its nature must be treated on-site. Currently, Open Detonation is the primary and preferred method of treating Explosive Hazardous Waste (EHW) at China Lake.

Environmental Quality Team of NAWS China Lake's accomplishments:

- Development of an innovative, science-based approach, designed to withstand public scrutiny, respond to public misconceptions, and quantify potential impacts on human health from Open Burn/Open Detonation (OB/OD) operations.
- Education of regulators in detonation science and weapons functionality which led to the California Environmental Protection Agency approval of the revised Health Risk Assessment. The final hazardous waste permit for treatment of EHW by OB/OD was then approved, leading to increased operational flexibility and improved sustainability of China Lake's OB/OD operations.
- A significant increase (up to four orders of magnitude) in the amount of propellants and explosives that can be treated each year.
- The success of China Lake's approach has paved the way for OB/OD permitting at other Department of Defense installations, and is continuing to contribute to the demilitarization efforts of the Defense Ammunition Center.



An F/A-18 Hornet flies over Naval Air Weapons Station, China Lake, and the surrounding community. China Lake is the Navy's largest single landholding with 85 percent of the Navy's land for research, development, acquisition, test, and evaluation use.



This fireball shows the afterburning reactions of the final hazardous waste permit treatment event. During afterburning the incomplete reaction products produced in the initial detonation react to produce stable nontoxic emissions. Because waste items are not buried but placed directly on the ground, air entrainment is maximized which in turn optimizes this important afterburning reaction.



USS DWIGHT D. EISENHOWER (CVN 69)

Environmental Quality, Large Ship



The USS DWIGHT D. EISENHOWER (CVN 69).



An example of a plastic disk created by IKE's Compressed Melting Unit (CMU), approximately 50 to 60 are made per day. Five of the six aboard IKE are in use daily. One large (30 gallon) trash bag of plastic waste is melted down to form each disk. Bulk hazardous material cubic feet required for storage prior to transfer to a replenishment ship or shore facility is reduced by 90 percent due to the application of this process.

USS DWIGHT D. EISENHOWER (IKE) is assigned to Commander, Carrier Strike Group EIGHT (CCSG), and is home-ported at Naval Station Norfolk, Virginia. IKE is the Flagship of Commander Carrier Strike Group EIGHT (CCSG 8). Subordinate to CCSG 8 are Commander, Carrier Air Wing SEVEN (CVW 7) and Commander, Destroyer Squadron 28 (CDS 28). The crew totals 2,900 personnel. Augmenting the crew are an additional 1,900 personnel from CSSG 8, CVW 7, and CDS 28. The mission of IKE is to provide a wide range of flexible mission capabilities, including maritime security operations, expeditionary power projection, forward Naval presence, crisis response, sea control, deterrence, counter-terrorism, information operations, security cooperation and counter-proliferation.

In addition, IKE has created an environmentally conscious culture onboard. By taking advantage of fleet wide and locally prepared training opportunities, the ship has maintained the highest levels of material readiness to ensure day-to-day operations are environmentally safe. The end result is an environmentally friendly and safe culture which is incorporated into the ships daily routine.

IKE is in full compliance with OPNAVINST 5090.1C Chapter 22 and Appendix K during the past two fiscal years. The ship has experienced only four reportable incidents during the course of fiscal years 2008 and 2009. In all instances the spill contingency plan was executed and teams responded accordingly, ensuring the mitigation of impact to the environment, balanced against the priority to ensure mission accomplishment.

IKE is unrelenting in its dedication to carrying out good environmental practices any way imaginable.

USS FRANK CABLE (AS 40)

Environmental Quality, Large Ship



USS FRANK CABLE (AS 40) is the nation's only commissioned and forward deployed, afloat fleet maintenance activity. The ship's primary mission is to perform complex intermediate level maintenance as well as nuclear and radiological support for submarines and surface ships throughout the Fifth and Seventh Fleet Areas of Responsibility. FRANK CABLE is the largest single naval command and the largest afloat platform on Guam. Sailors understand that the vessel is the pride of the local community and that this respect can only be maintained by dedicated commitment to protecting the island's pristine and natural beauty. Ever mindful of this responsibility, FRANK CABLE was able to meet and exceed all mission requirements and enjoy routine operational success, all while serving as the guardian of the environment.

FRANK CABLE demonstrated significant commitment to the Navy's Environmental and Natural Resources Program during fiscal years 2008 and 2009. Specific achievements during this award period included substantial improvements in hazardous material reuse and just-in-time ordering. As a result, FRANK CABLE dramatically reduced the amount of new orders for hazardous materials, the total amount of hazardous materials stored on board, and the amount of hazardous waste generated.

Additionally, while FRANK CABLE was vigorously and constantly challenged with the primary mission, crewmembers volunteered significant effort and personal time in leading and participating in numerous activities that protected the island from environmental threats. In an act that could have easily been lost in the ocean of tasks and details of an underway evolution, FRANK CABLE's Sailors demonstrated exceptional ingenuity and dedication to environmental protection by manually repairing the oil content monitor sample nozzle to prevent the emergency discharge of untreated bilgewater into the ocean.



FRANK CABLE returns to her homeport in Apra Harbor, Guam, after a deployment. She is the nation's only commissioned and forward deployed afloat fleet maintenance activity and the largest single command on the island of Guam. Her crew is dedicated to protecting Guam's natural beauty and they set the standard in the Pacific Fleet for environmental stewardship.



FRANK CABLE Sailors form a line from the ship to the pier to dispose of food waste and other non-recyclable refuse. The Supply Department stores all waste generated while FRANK CABLE is underway. This practice prevents unnecessary ocean pollution and ensures proper and safe disposal.



Fleet Readiness Center East | North Carolina

Sustainability, Industrial Installation



A TAV-8B Harrier almost ready to rejoin the Fleet. FRC East reduced paint usage by 120,000 pounds during the award period.



FRC East recycled approximately 3.8 million pounds of metal from scrap aircraft parts, stock from manufacturing, and other sources during the performance period. The FRC East Recycle Center baled nearly 736,000 pounds of cardboard (1,700 cubic yards), which would tower nearly one mile high if stacked. Through recycling, FRC East diverted over 60 percent of its solid waste from the landfill.

Fleet Readiness Center East (FRC East) is an industrial aircraft and aircraft components maintenance, manufacture, and repair facility located aboard the Marine Corps Air Station Cherry Point (MCAS CP) in Havelock, North Carolina, a rural community of approximately 22,000 residents. FRC East's mission is to provide aircraft and aircraft component repair services to the Navy and other Department of Defense (DoD) agencies for the fighting men and women of this nation.

FRC East is a large industrial activity with multiple, well controlled waste streams. It has an Air Program that manages the monitoring and recordkeeping requirements for more than 1,000 emission sources. The Hazardous Material (HM) Program provides life cycle management of HM in order to minimize waste and manage cost. The Water Quality Program monitors local streams and reports the results to the State of North Carolina on a monthly basis.

FRC East's Environmental and engineering programs continually look for innovative ways to increase the sustainability of its mission through improved processes and material substitutions. FRC East recently prototyped a new surface pretreatment process that replaced hexavalent chromium alodine with a less toxic trivalent chromium form. This new process is being transferred to the fleet.

FRC East operates a results-oriented environmental program woven into the fabric of the Command's overall Integrated Management System.

FRC East's accomplishments:

- Diverted 5.7 million pounds (60 percent) of recyclable material from the landfill.
- Reduced paint usage by 120,000 pounds (30 percent).
- Reduced varsol usage by 10,000 gallons (50 percent).
- Completed four energy efficient lighting projects.
- Participated in over 25 education, outreach and partnering opportunities.
- Transportation Incentive Program offset 14 million pounds of CO₂.

Fleet Readiness Center Southwest | California

Sustainability, Industrial Installation



Fleet Readiness Center Southwest (FRCSW) is an industrial facility providing aviation maintenance, repair and overhaul support to the U.S. and allied warfighters. In fiscal year 2008, FRCSW provided 277 aircraft to the fleet, including 122 F/A-18, 46 H-60s, 46 H-1, 15 E-2/C-2, 27 EA-6B and 10 AV-8B. To support this effort, FRCSW operates a multitude of industrial processes including electroplating, painting, chemical cleaning and stripping and jet engine testing which utilize hazardous materials and generate hazardous wastes and emissions.

FRCSW's sustainability objectives are based on a holistic approach where financial, environmental and stakeholder benefits are factored into the strategic decision-making process. This approach enhances relationships with regulatory agencies and the public while ensuring that critical industrial processes and operations are maintained to support military readiness.

Fleet Readiness Center Southwest's accomplishments:

- \$7,667,994 Utility Energy Savings Contract (UESC) awarded to address Executive Order (EO) 13423 requirements.
- Mini-max low water steam assist rinse system.
- Low volume water hose retrofits for aircraft washing.
- Demonstration of hexavalent chromium-free primer for aircraft.
- Dolphin non-chemical treatment for cooling tower water.
- Augment two battery powered electric carts with PV recharging systems.
- Bio-media (corn starch) blast bay for aircraft stripping operations.
- Substitute QSOL 300 for Stoddard solvent for solvent cleaning.
- Steam study to establish baseline demand for potential reductions via technology implementation.
- Installed 128 low flow water faucets in ten buildings.
- Greenhouse Gas Inventory completed.



The F/A-18 Hornet is one of many aircraft maintained by FRCSW.



FRCSW Environmental Program Office engineers meet the public at the annual San Diego Earth Day fair in Balboa Park. FRCSW has been attending Earth Day continuously since 2001.



Former Naval Air Facility Adak | Alaska

Environmental Restoration, Installation



Barge arriving in May 2009 with equipment to support the "Main Road" pipeline decommissioning and second OUB-1 field season. Due to its remote location and sparse population, Adak Island is not easily accessible. All equipment and materials necessary for successful execution of projects must be shipped to Adak Island by barge or flown in by air cargo.



Magnetometers (EM – 61) were deployed to complete digital geophysical mapping within OUB-1 remedial action project. Photograph of geophysical team conducting investigation on AOC MM-10F in 2008. This photo illustrates the varied terrain and vegetation commonly found at the OU B-1 project sites.

The Adak environmental restoration team has made significant advancements in executing a very large environmental program, implementing cost savings initiatives through innovative contracting, setting precedence in munitions quality assurance, use of small business, and employing the use of green technologies whenever practicable. The team is a partnership between the BRAC Project Management Office West, the Naval Facilities Engineering Command, Northwest, the Environmental Protection Agency, and Alaska Department of Environmental Conservation. Current and future landowners, including The Aleut Corporation, the State of Alaska, United States Fish and Wildlife Service, and the City of Adak are all program stakeholders. Due to the inherent danger of working with unexploded ordnance and munitions, the Adak team also coordinates closely with the Naval Ordnance Safety and Security Activity and the Department of Defense Explosives Safety Board.

Adak environmental restoration team's accomplishments:

- Fiscal year 2008 - Executed \$22.9 million in contracts (40 separate contract actions with four technical staff members).
- Fiscal year 2009 - Executed \$13.8 million in contracts (33 separate contract actions with four technical staff members).
- Awarded the first Department of Navy stand-alone competitive Firm Fixed Price (FFP) performance-based munitions contract (\$10.3 million).
- Awarded the first Department of Navy FFP performance-based munitions Quality Assurance contract (\$1.4 million).
- Developed a Quality Assurance Project Plan that was subsequently used to develop the Navy template for munitions quality assurance.
- Awarded an unprecedented competitive Firm Fixed Price Indefinite Delivery/Indefinite Quantity for Environmental Long Term Monitoring and Remedy Operations and Maintenance service to an 8(a) contractor in support of small business.
- Pursued technology transfer of green solutions from wind-powered free-product recovery systems for recovery and reuse of petroleum as energy sources.
- Used a mobile water treatment system designed to treat water from the decommissioning of nine miles of petroleum product pipelines. Pipeline cleaning water was treated and reused. The petroleum-water mixture recovered from the pipeline system was also treated, significantly reducing the volume of the waste stream.

Naval Air Facility El Centro | California

Environmental Restoration, Installation



Naval Air Facility El Centro (NAFEC), the Pearl of the Desert, is located in the desert of southeastern California, approximately 18 kilometers (km) north of the U.S.-Mexico border. NAFEC provides facilities, services, and materials for training fleet air squadrons. NAFEC operates one main runway, one auxiliary runway, and one area dedicated to helicopters. Flight squadrons conduct more than 78,000 missions (takeoffs and landings) annually at NAFEC making it the most active training facility west of the Mississippi. Other U.S. service branches and military forces of U.S. allies use NAFEC as well.

NAFEC's accomplishments:

- Site Closure with unrestricted land use at the following sites: Installation Restoration (IR) Site 10, Former Sewage Stabilization Ponds, Munitions Response Site and 8 UST Sites. The NAFEC IR team accelerated cleanup at UST Sites 328 and 331 which resulted in clean closure and unrestricted land use with no delay to Military Construction (MILCON) projects.
- The active remediation of petroleum plume at IR Site 7, a former bulk fuel storage area, was successful in removing free product and reducing the foot print and maximum concentrations of the groundwater plume. The remediation activities have been conducted without disruption or incident to Mission activities or base operation.
- Update of the IR Site 7 Remediation system has resulted in the Environmental Management System's target to reduce energy consumption. The new system, utilizing a variable speed drive, and other system optimization upgrades has resulted in 50 percent less electricity and 26 percent less propane on an average hourly basis.
- A Tablet PC is used for direct upload to a Web Based Performance Monitoring System for improved scheduling, accuracy, quality assurance and compliance. Readings are measured and uploaded daily for real-time web access and analysis. This allows operators to remotely monitor the system and preemptively perform maintenance rather than respond to a system shutdown.



In fiscal years 2008 and 2009, over 78,000 flight operations were carried out without disruption or incident from environmental investigation or cleanup activities. The remedial activity at IR Site 7 has not interfered with training operations by visiting squadrons or the Blue Angels. The IR team has accomplished this by close coordination with all commands that are possibly affected by environmental activities.



A high Resolution Vertical Gradient Magnetic Gradiometer was used for an Airborne survey of the Carrizo Impact Munitions Response Area. This innovative technology provided the most efficient means to gather data. In addition, this technology was used to aid in locating surface and subsurface UXO across 640 acres of remote terrain.



Naval Air Station Brunswick | Maine

Environmental Restoration, Installation



A U.S. Environmental Protection Agency (EPA) and Maine Department of Environmental Protection (MEDEP) sampling team assisted with porewater sampling to help with defining groundwater and surface water interface. The team was challenged by marshy conditions and rain storms. Over 80 porewater points were sampled by the teams in two days to facilitate the Navy in collecting data.



The NEX Service Station removal action included the former location of the fuel pumping island that had petroleum-related soil contamination. An additional area downgradient from the underground storage tanks was also removed along with the three tanks. Over 7,400 tons of soil was removed from the site and transported to a local asphalt batching facility.

Naval Air Station Brunswick (NASB) is a maritime aviation patrol installation that has been challenged to accelerate the Installation Restoration (IR) program since the station went on the Department of Defense (DoD) Base Realignment and Closure (BRAC) list in 2005. Expediting cleanup actions under the NASB IR program promotes property transfer and civilian redevelopment efforts as the base transitions through closure in May 2011. The accelerated pace and expanded scope of cleanup efforts have been possible only through cooperation and collaboration of the NASB team with its regulatory and community stakeholders, including the federal and state regulatory agencies, the local citizen's group, and the local redevelopment authority. Managing the IR program through base closure, while supporting an active military mission presents challenges that have been overcome through open communication, teamwork, and focused problem solving. In many cases, alternate means have been employed to achieve cleanup objectives while promoting teamwork between all stakeholders.

Naval Air Station Brunswick's accomplishments:

- Implementing an accelerated effort of investigation and remediation while using innovative technologies for an immediate total cost savings of over \$775,000 and an estimated long-term cost savings of at least \$3 million.
- Moving rapidly from project development to cleanup completion in order to complete the remediation of the NEX Gas Station within a six-month span at a cost savings of over \$530,000.
- Completing an extensive evaluation followed by the installation and operation of a HiPOx system to treat 1,4-dioxane and solvent-contaminated groundwater with 28 million gallons of treated water being recycled annually.
- Completing the major excavation and restoration of a former landfill site, resulting in the removal and disposal of over 42,000 tons of ash-contaminated soil and debris.

**Alameda Point Environmental Restoration Team of
Base Realignment Closure and Program Management Office
(BRAC PMO) West | California**
Environmental Restoration, Individual/Team



The Alameda Point environmental restoration team had many significant achievements in the field of Environmental Restoration during fiscal years 2008 and 2009, particularly for Installation Restoration (IR) Site 1, a landfill used as the principal disposal area for all waste generated at the former Naval Air Station (NAS) Alameda between 1943 and 1956. The IR Site 1 Restoration Team's major responsibilities were to successfully negotiate and partner with the regulatory agencies on the Navy's preferred remedial alternative, conduct community outreach to mitigate the Alameda community's reservations by effectively demonstrating that the remedy would be protective of both human health and the environment, and to utilize cost-effective and innovative methods to conduct cleanup.

Alameda Point Environmental Restoration Team's accomplishments:

- Partnering with federal, state, and local agencies in selecting the first containment remedy for a radiological contaminated landfill to be transferred out of federal ownership within the State of California.
- Gaining greater Restoration Advisory Board (RAB) members acceptance after many years of opposition.
- Realizing over 80 million dollars in cost savings as a result of garnered community support for the selected remedy, as well as utilization of a competitive fixed price contract.
- Utilizing a SiteWise™ sustainability evaluation to support and negotiate a more sustainable and cost effective remedial alternative for IR Site 1.
- Reduction of 1,780 tons of carbon dioxide emissions, 9,540 metric tons of green house gas emissions, and 7,100 mega-watt hours (MWH) of energy by selection of the alternative.



IR Site 1 consists of 36.8 acres and is located on the northwestern tip of Alameda Point where the Oakland Inner Harbor joins the San Francisco Bay. IR Site 1 includes four buildings, a portion of the former aircraft runways, a former pistol and skeet range, and a former aircraft engine and parts storage area. The proposed future land use throughout IR Site 1 is recreational.



View from IR Site 1 looking west to the San Francisco sky line. The Navy focused on opportunities for reuse of the site, such as open space recreation, planned construction of a bay trail, and wetland restoration. While the community held the position that leaving the landfill in place was unacceptable, execution of the IR Site 1 ROD demonstrates that it is possible to construct a safe and valuable recreational asset on the landfill surface.



Environmental Restoration Team of Naval Base Ventura County | California

Environmental Restoration, Individual/Team



The bucket dredger Vulcan also dredged most of the clean sand used to create the cap for the confined aquatic disposal cell. Here the Vulcan takes advantage of Wharf 5 being vacant for the day. The three-meter-thick cap resulted from computer modeling that determined the cap would isolate the contaminated sediment from the environment for a minimum of 8,000 years.



The armor stone was placed onto the confined aquatic disposal cell cap by using a bull dozer to push it over the side of the barge. Positioning of the barge was done by Global Positioning System (GPS) to ensure that the rock was accurately placed along the centerline of the path all vessels use when exiting the harbor. The old school method of casting a lead line was used to ensure the armor stone achieved a uniform minimum thickness of one meter.

The Naval Base Ventura County (NBVC) and Naval Facilities Engineering Command Southwest (NFECSSW) Remedial Project Manager Team members provide all aspects of Installation Restoration Program (IRP) oversight at NBVC. NBVC is composed of three operating facilities: Point Mugu, Port Hueneme and San Nicolas Island. The NBVC IRP Team expanded during fiscal years 2008 and 2009 to support a particularly complex project: Dredging of the NBVC Port Hueneme harbor using a Confined Aquatic Disposal (CAD) cell for placement of contaminated sediment.

The NBVC Environmental Restoration Team's accomplishments:

- **Fast Track Cleanup** – The Port Hueneme Dredging Project moved at a rate unheard of for a project of its complexity. From initiating the environmental planning process in November 2007, through the engineering design, permitting, agency consultations, public participation, interagency cost share agreements, acquisition, and construction, the project was completed in only 21 months in July 2009. The project finished ahead of schedule and approximately \$1 million under budget.
- **Innovation** – The Port Hueneme Dredging Project used a CAD to isolate 250,000 cubic meters of contaminated sediment under a cap of sand and gravel. The use of the in-harbor CAD and partnering with the Army Corps of Engineers and the Oxnard Harbor District resulted in a \$27 million cost savings for the Navy. Additional benefits included restoration of harbor navigation and addition of sand to a nearby beach.
- **Partnerships** – The Team formed a partnership with the Calleguas Creek Watershed Committee (CCWC) to address regional surface water contamination including the Mugu Lagoon at NBVC. The CCWC was successful in adopting the "Total Maximum Daily Load" program, instead of the Navy Installation Restoration Program, to clean up the entire watershed. This is projected to save the Navy \$34.5 million for the environmental restoration of the Mugu lagoon over the next 30 years.

Vieques Naval Installation Project Management Team of Naval Facilities Engineering Command Atlantic | Virginia

Environmental Restoration, Individual/Team



The former Vieques Naval Installation is a 23,000-acre facility located on Vieques Island off the southeast coast of Puerto Rico. The island, where Spanish is the primary language, has a population of approximately 9,000 residents. From the mid-1940s until 2003, the installation provided support to the Atlantic Fleet and allied forces training that included naval gunfire, air-to-ground bombing, and marine artillery fire.

The transfer of most of the Navy property to several local and federal agencies, including the Municipality of Vieques (MOV) and the Department of Interior (DOI), was completed in 2003. Approximately 15,000 acres of the property transferred to DOI is to be developed by Fish & Wildlife Service into a wildlife refuge. Vieques Island is the only Caribbean Island that maintains a habitat for three species of endangered sea turtles. Initial investigations indicated that up to 9,000 acres of the property may be contaminated by munitions from the historical naval operations.

Vieques Naval Installation Project Management Team's accomplishments:

- To accelerate the development of the wildlife refuge, and provide public access to areas that contain dangerous munitions, the CERCLA Technical team initiated three fast-tracked munitions removal projects. During the performance period these projects have surface cleared over 1,000 acres containing munitions. In addition, over 20,300 munitions items have been destroyed and over nine million pounds of munitions-related scrap metal has been processed.
- To accelerate the beneficial use of the land transferred from the Navy to the Municipality of Vieques, over 11,000 tons of waste from four abandoned waste sites were removed on an accelerated time schedule. Risk assessments are being used to demonstrate that the 16-acre area of the sites can be returned to the MOV for its beneficial use.



Unexploded ordnance that is unsafe to move is detonated in place using explosives. During the performance period, over 20,300 munitions items have been blown in place (BIP). As part of the public outreach program members of the RAB and the media have been allowed to observe the detonations from a safe distance to better understand the cleanup process.



Pictured is a magnetometer mounted to the base of a helicopter. This effective, innovative technology was used to rapidly identify large munitions and target areas hidden in thick vegetation and shallow underwater areas. This was used over a 15,000-acre area.



F/A-18E/F & EA-18G Program Office, PMA265 Green Hornet Team of Program Executive Officer, Tactical Aircraft Programs | Virginia

Environmental Excellence in Weapon System Acquisition, Team



The F/A-18E/F is the second major model upgrade to the F/A-18 aircraft, managed by Naval Air Systems Command (NAVAIR) PMA265. It is a high-performance, twin-engine, mid-wing, multi-mission, tactical aircraft currently in operation at Naval Air Station (NAS) Lemoore and NAS Oceana, with future stand-up at Marine Corps Air Station Cherry Point. The F/A-18E/F's major airframe upgrades and higher thrust engines provide the airframe volume for future system growth, the capability to carry smart weapons with no impact to airframe structural life, enhanced range, enhanced carrier recovery payload, and enhanced survivability to enable the F/A-18 to continue its key strike fighter role against advanced threats.



The F/A-18 E/F. Photo courtesy of the Boeing Company

The F/A-18E/F and EA-18G Program Office, PMA265, under the purview of Program Executive Officer, Tactical Aircraft Programs, consistently maintains a high level of environment, safety, and occupational health (ESOH) compliance demonstrated by winning the past four consecutive Excellence in Weapon Systems Acquisition Team Awards. The PMA265 ESOH Coordinator and the multidisciplinary Green Hornet Team (GHT) manage all ESOH aspects for the F/A-18E/F and EA-18G into PMA265's systems engineering and decision-making processes. As the premiere tactical aircraft of the U.S. Navy, the F/A-18E/F Super Hornet is the focal point of various energy and environmental initiatives. In the Navy's first energy forum held in October 2009, it was reflected that the "Green Hornet" is an important element in accomplishing the five energy goals of the Secretary of the Navy. PMA265 is proactively committed to funding and providing aircraft assets for pursuing readily viable technologies to reduce personnel exposure to jet engine noise (a long-standing Navy and Department of Defense occupational health risk associated with high performance tactical aircraft), community noise exposure from aircraft flight operations, and air emissions.

The PMA265 GHT continues to successfully research and implement alternatives for reducing hazardous materials usage and pollution. The potential carbon footprint reduction of the F/A-18E/F and EA-18G has been forecasted based on forthcoming implementation of viable technologies and biofuels.

The F/A-18E/F is the first U.S. Navy aircraft to demonstrate the use of a biofuel derived from Camelina in a 50/50 blend with JP-5. Flight of the "Green Hornet" took place on Earth Day 2010. Camelina-derived biofuel offers the potential for significant carbon emissions reductions (up to 80%) and the F/A-18 accounts for one-fourth of the Navy's aircraft fuel consumption.

PMA264 Marine Species Mitigation Research Team of Program Executive Officer, Air Anti-Submarine Warfare (ASW), Assault, and Special Mission Programs | Virginia

Environmental Excellence in Weapon System Acquisition, Team



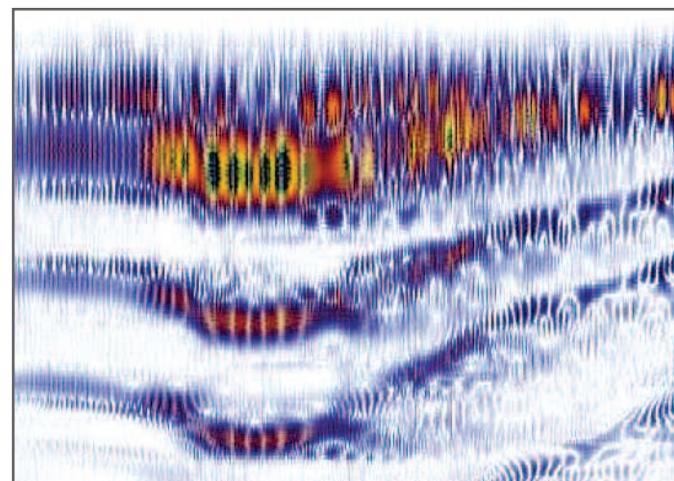
The Marine Species Mitigation (MSM) Research Team was established by the Air ASW Systems Program Office (PMA264). The PMA264 MSM Research Team is working on an acquisition strategy to create a set of sensors, systems, and processes for detecting marine species.

The PMA264 MSM Research Team's accomplishments:

- Development and use of wavelet processing and display techniques for acoustic classification so that the "eye can see" what the "ear can't hear."
- Development of an environmental risk assessment tool called the Marine Mammal Awareness Alert & Response System (MMAARS) for the creation of high credibility risk assessments based on state-of-the-art tools developed by scientists and statisticians from the University of St. Andrews in Scotland.
- Statistical analysis tools for the adjustment of acoustic stimuli and response behavior effect models based on species, ocean region, and culture groups.
- Acoustic receivers optimized for beaked whales to include high bandwidth, deep deployed prototype systems, plus modified shallow water receivers from existing sonobuoy inventories.



This visual spectrum image collected a pod of three Humpback whales. Image data content plus the collection parameters will be used to populate a database for a variety of products to include animal species density and accountability studies.



Wavelet Transform of an orca call. A wavelet is a time-frequency transform that shows many dimensions of additional time-frequency content well beyond the traditional Fourier Transform (FT) process capability.



F-35 Lightning II Environmental, Safety and Occupational Health Team of Program Executive Officer, Joint Strike Fighter Program | Virginia

Environmental Excellence in Weapon System Acquisition, Team



F-35 aircraft 2AA:0001 flies through and over an extensive microphone array at Edwards AFB in order to measure far field noise characteristics. This test provided data to validate a new and more accurate three-dimensional noise model.

The F-35 Lightning II Acquisition Program's ESOH Team incorporates a cross-functional, multidisciplinary membership which applies a systems engineering approach to program-wide Environmental, Safety, and Occupational Health (ESOH) management. The F-35 ESOH Working Group, which constitutes the team, is the F-35 Joint Program Office (JPO) assigned forum for managing program-related ESOH considerations. The team's agenda is influenced by its members and customers. It is reflective of the U.S. Services' and international partners' emerging and long-term sustainment priorities. To that end the contractor team has focused on eliminating risk related to hazardous materials (HM) and developing source data that enables the Team to comply with Federal and Department of Defense (DoD) ESOH regulations and policy and support environmental planning overall. At the heart of a strong environmental management approach is prevention of pollution at the source.

The F-35 Lightning II ESOH Team's accomplishments:

- The team executed the most extensive three-dimensional flyover noise measurement program ever conducted for a military aircraft which resulted in a comprehensive noise footprint and validated a new and more accurate three-dimensional noise model.
- The team executed extensive ground noise measurements providing source data for a new hearing protection calculator which calculates allowed time around the aircraft in various throttle positions with various hearing protection levels.
- The team participated in development of new technologically superior personnel hearing protection equipment to minimize DoD's hearing loss liability.
- The team executed several joint material replacement research and development projects including new non-chrome fuel tank coatings, cadmium reduction technologies, and beryllium reduction technologies in cooperation with other programs and international partners.



FY 2009 Chief of Naval Operations Environmental Awards

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