



Pacific Missile Range Facility 2011 CNO Environmental Awards Natural Resource Management Individual/Team

The Navy's Pacific Missile Range Facility (PMRF) at Barking Sands, Kauai, uses a multi-faceted team approach to implement its Integrated Natural Resources Management Plan (INRMP) from the eyes of the patrolling security forces to the thoughts and direction of the Commanding Officer. Without any natural resources staff on base, the installation relied upon the efforts on-site of the Range Complex Sustainment Support team who worked in close coordination with remotely located experts at Naval Facilities Engineering Command Hawaii and Pacific (NAVFAC HI, NAVFAC PAC). Oversight and support by the Commander Navy Region Hawaii (CNRH) Environmental Counsel provided guidance and command awareness from a legal perspective.

PMRF as a beach-front to mountain-top installation in the middle of the Pacific hosts a myriad of species that are protected by the Endangered Species and Migratory Bird Treaty Acts. To maintain the Navy's compliance with these statutes, considerable attention must be paid to flora and fauna. With the support of the US Department of Agriculture Animal and Plant Health Inspection Service (USDA APHIS) Wildlife Service and the diligence of the base's Physical Security and support contractor, Manu Kai, data collection and response capabilities exist to provide appropriate protection of these national treasures. The Public Works Office swiftly implemented physical improvements necessary to achieve compliance and improve stewardship. Under the guidance of the Public Affairs Office, community members joined in and the national media learned of the installation's commitment to protection of Hawaii's environment.

BACKGROUND & POSITION DESCRIPTIONS

NAVFAC PAC: Angela Anders, Biologist, provided technical expertise and support in the preparation of the revised PMRF INRMP, a Biological Assessments associated with the Aegis Ashore defensive missile development program, the Laysan

Albatross Management Plan to Reduce Bird Air Strike Hazard (BASH) potential at PMRF, the development and funding of a study on the potential impact of antennas, power lines, and towers at PMRF to contributing to the fallout of Endangered Species Act (ESA) listed nocturnal fledging migratory seabirds, and the preparation of a base-wild Biological Assessment under Section 7 of the ESA for ongoing and future training and testing activities .

NAVFAC HI: Aaron Hebshi and Cory Campora, Biologists, shepherded the development and finalization of the PMRF INRMP, coordinated the funding and development of a feral goat mitigation plan for Makaha Ridge that is in the current phase of implementation, provided liaison between PMRF and the US Fish and Wildlife Service (FWS), provided technical support on a variety of projects, provided additional funding for the conversion of PMRF lighting fixture to "dark sky" standards, and initiated mentoring for the procurement of positions at PMRF to support natural resources stewardship and INRMP implementation.

CNRH: Rebecca Hommon, Region Environmental Counsel, was involved in the review and oversight of many of the projects initiated at PMRF to insure the focus on compliance and innovation was aligned with the Navy's mission and legal obligations and authority. Her perspective, guidance and editing talent was a valuable asset in the preparation of documents necessary to communicate with the regulating community while insuring adherence to Navy guidelines and policies.

NAVFAC HI Public Works Team at PMRF: Public Works Officer (PWO) Lieutenant Commander (LCDR) Donald George and subsequently by his rotation replacement, PWO LCDR John Baise, implemented critical lighting improvements that resulted in a dramatic reduction in the fallout of ESA-listed



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nocturnal fledging migratory seabirds in contrast to prior years.

Commander, US Pacific Fleet (COMPACFLT): As support contractors to COMPACFLT, PMRF Range Complex Sustainment Support contractors, John Burger and Dennis Rowley, acted as Environmental Coordinators for both the range and installation, developing and managing the INRMP and natural resource management programs at PMRF during the award period.

Some of the initiatives implemented included the following:

- Green Lights Initiative to test the efficacy of green lights in preventing fallout of light-sensitive fledging seabirds
- Identification and specifications for changing lighting/fixtures to create “dark sky” conditions to minimize the potential for light distraction of nocturnal fledging migratory seabirds
- Training volunteers to support banding at the wedge-tailed shearwater colony in our recreation Beach Cottages area
- Ensuring National Environmental Policy Act (NEPA) compliance for testing and training programs
- Overseeing the construction and dedication of the Mana Native Gardens project at the entrance to PMRF on Earth Day, 2010
- Initiating beach cleanup programs to include Native Hawaiian children from a local Charter School

PMRF Public Affairs Office (PAO): Tom “Scoop” Clements and Mass Communications Petty Officer First Class (MC1) Jay Pugh coordinated and supported the outreach and development of natural (and cultural) resource programs to include the Mana Native Gardens with the Ke Kula Niihau O Kekaha Hawaiian Language Charter School and the National Tropical Botanical Garden. MC1 Pugh provided the

organization and leadership on Earth Day in 2011 for sailors from the base to help with the maintenance of the National Tropical Botanical Garden (NTBG) facility in Lawai, Kauai, HI. Teaming with Burger and Rowley, base tours to observe and understand the rich natural and cultural resources on PMRF have become routine with a variety of school, civic, military, agency and non-governmental organization (NGO) groups. The POA provides professional products to media outlets that have been picked up nationally.

PMRF Security Teams: Chief Warrant Officer (CWO3) Dexter Carr, Ensign (ENS) Billy Newell, Chief Master at Arms (MAC) Kevin Clemmo, MAC Christopher R. Gregg, Master at Arms, Petty Officer 1st Class, (MA1) Jerry S. Pickryl, Manu Kai Security Lead Bobby Ragasa, and all of the enlisted, contractor and government security patrols have been instrumental in providing natural resources field support to monitor haul-outs of endangered Hawaiian monk seals and basking of threatened green sea turtles (including rescue of disoriented turtles in the vicinity of Nohili ditch outfall). Teams provided leadership and cooperation in the development of protective lighting to prevent seabird fallout while still meeting Force Protection illumination requirements, and monitoring the integrity and security of off-limits areas to avoid disturbance of recovering and protected resources.

USDA APHIS Wildlife Service: Field technicians, Peter Silva and Jason Shimauchi administered both the Bird Air Strike Hazard (BASH) program under the PMRF USFWS Depredation Permit, with focus on the Laysan Albatross management plan, as well as, control of feral pigs and predation control in the two MBTA-protected colonies of wedge-tailed shearwaters as required under the PMRF INRMP. In coordination with PMRF Security teams, the Wildlife Service technicians have been invaluable in monitoring and documenting observations of conditions, haul-outs, basking, and other resource-related issues, and securing public areas where



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threatened and endangered (T&E) species may appear on the beach.

AWARDS & SERVICES

PMRF's John R. Burger was recognized by both CNO and SECNAV for excellence and achievement in the Natural Resources Conservation/ Individual category in 2009, while performing as a NAVFAC HI employee on PMRF managing NEPA, Natural and Cultural resource programs. PMRF received the Cultural Resources Management Installation Award from CNO in 2008 and shared the Team award with other NAVFAC echelons HI and PAC that same year.

It is in the areas of outreach and service that PMRF has most recently succeeded in developing constructive relationships "outside the gate" and in the various communities, physical, as well as, regulatory and volunteer. One specific example of this success culminated in the Earth Day 2010 dedication of the *Mana Native Gardens* – a collective effort and partnership involving PMRF Environmental, Public Works and Grounds Maintenance teams, the NTB, Kauai Westside Watershed Council and Ke Kula Niihau O Kekaha (KKNOK) charter school for perpetuation of the Hawaiian language dialect of Niihau. These Gardens reflect the four major habitats, or "biomes" of geology and vegetation found on the Mana Plain prior to Westernization. Including Dry Forest, Wetlands, Rocky Foothills and Sand Dunes, each of these living displays are populated with specific, native plants of significance to the Hawaiian culture. The School has taken on responsibility for the maintenance of the displays, and integrated the plant types, values, and ecology into their science curriculum. They enthusiastically embrace the responsibility to maintain the cultural and ecological history of this area.



Volunteers at Mana Native Gardens during Earth Day 2010

On the following Earth Day, 2011, MC1 Jay Pugh organized and supervised PMRF sailor-volunteers (*pictured above*) who helped do much of the heavy-lifting needed at the NTB facility in Lawai on the south-central shore of Kauai. PMRF's sailors and officers provide community outreach in disciplines outside "Natural Resources", including Habitat for Humanity, local school projects and Senior Citizens programs. It is note that they are especially popular dance partners when invited to local senior citizen functions.



PMRF sailors helping to clean up a community facility

However, their environmental "esprit-de-corps" is also evidenced with the early-morning beach debris cleanups performed on PMRF during the award



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period. The most recent event garnered national and international media attention when a PMRF sailor discovered “a bottle with a message” that had been released as a 6th grade graduation activity by an elementary school in Japan 6 years earlier. That event has inspired the KKNOK students communicating with the Japanese school students via graphics, since neither are both fluent in English, Japanese or Hawaiian. This sharing discovered another school on the Big Island that had discovered a bottle with a message from the same Japanese school in a previous beach cleanup – and now we have facilitated an international educational exchange. The students’ first work will be to try and determine how the bottles got from Japan to Hawaii.

PMRF employees – civilian and contractor – volunteer and support various agency programs on Kauai including the Hawaiian Islands Humpback Whale National Marine Sanctuary annual “Ocean Count” as both volunteers and Site Leaders, while PMRF coordinates and hosts the western-most observation point around the island, at “Nohili Outfall”. PMRF volunteers are trained to support the Pacific Islands Marine Mammal Stranding Response Network affiliate on Kauai, and maintain communications and reporting of routine and frequent sightings of the endangered Hawaiian monk seal on PMRF beachfront to the Network for record keeping, identification and tracking. Wildlife Services and the PMRF Physical Security teams insure that proper barricades and signage are provided in those areas where the public has access, under the recreational day pass program, to ensure both basking turtles and hauled-out Hawaiian monk seals are not disturbed.

ACCOMPLISHMENTS

The single most outstanding accomplishment of the PMRF natural resources team has been the building of internal working relationships and mutual trust within the Navy family. Like a biological family, there are differences that need to be understood and respected between the members. In the military this is most evident in the mission requirements within various components of the team. Public outreach, image, and communication is the purview of the public affairs team, Physical Security/force protection are the mandate for the three distinct teams of Physical Security on PMRF, sustainability and environmental stewardship/compliance falls on the environmental professionals at the installation and Region, and finally environmental counsel from a qualified legal professional and overall support by the Command are required to complete the program. All the parties need to understand and respect the other’s specific responsibilities. To our collective credit, this cooperation, respect and support has achieved a milestone in our conservation efforts.

Outside the gate, the PMRF team has developed working relationships with the State of Hawaii Department of Land and Natural Resources, NOAA and USFWS, and a variety of volunteer organizations with focus on terrestrial and marine resources, the County of Kauai and the neighboring communities. While funding shortfalls impact all of the Services, leveraging resources outside the “natural resources program” provided stewardship opportunities otherwise unavailable. Examples that document successes during the award period are presented in the following paragraphs.

Feral Goat Eradication at Makaha Ridge: NAVFAC environmental teams have recognized feral goat eradication at the Makaha Ridge facility as a priority to allow native plant re-vegetation of the severely



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eroded topography that will protect Navy radar and telemetry assets and reduce disturbance to the nesting of the endangered state bird, the Nene, or “Hawaiian Goose” (*Branta sandvicensis*). The teamwork necessary to bring this to the final design and execution phase of a fencing project and re-planting with appropriate native vegetation took over two years, and involved inputs from NAVFAC PAC and NAVFAC HI Subject Matter Experts (SMEs), coordination with the Kauai Department of Land and Natural Resources/Division of Forestry and Wildlife, USFWS, The Nature Conservancy, A&E firms for the studies, PMRF Public Works and the local base operating support contractor for design, and the NTBG staff for restoration guidance. When completed, this will be a natural resources stewardship/restoration effort of significant value to the Navy’s physical assets as well as the biota.

The Laysan Albatross Surrogate Parenting Program: This program evolved over several years, with refinements each year to improve the BASH program through risk-reduction based on recognizing the biology of the species. The essential human component of the program is the dedicated effort of our two USDA APHIS Wildlife Service field techs who capture and relocate adults and support the egg translocations from PMRF to the USFWS Kilauea Lighthouse National Wildlife Refuge (KLNWR) and surrounding private/protected properties. At the Lighthouse and environs, both NAVFAC HI and NAVFAC PAC professional wildlife biologists and contracted/permitted



USDA APHIS Wildlife Service’s Field Technicians Peter Silva and Jason Shimauchi

Laysan Albatross scientists under contract insure the effective implementation of the surrogate parent program: placement of PMRF eggs under KLNWR birds without eggs or viable eggs.

Eradication of Long Thorn Kiawe (LTK) (Prosopis Juliflora): PMRF worked with the Kauai Invasive Species Committee (KISC) and a NAVFAC PAC field biologist starting in 2005 to develop a unique approach to LTK eradication. In order for this effort to be successful (regrowth from the seed bed being the issue), KISC would come back on regular intervals to destroy seedlings before becoming too large and resistive to herbicides. This practice continued smoothly until 2010, with funding and support from NAVFAC PAC. Increasing Force Protection mandates, and the ability of the KISC team to be able to routinely access the back-beach areas of PMRF to continue spray applications on regrowth from the LTK seedbed became an issue. After negotiation and teamwork between the parties, it was possible to arrive at a procedure for access that would comply with the FP and PMRF Instructions.

Protection of Nocturnal-Fledging Seabirds: The island of Kauai, on which PMRF is located, has the



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largest population of ground-nesting seabirds in the Main Hawaiian Islands. Both Migratory Bird Treaty Act (MBTA) and ESA-protected species of shearwaters nest on Kauai, as well as, petrels. Because these birds leave the nest – or fledge – for the first time at night, they have no practice flights. Their navigation systems utilize moon and starlight, and the presence of unshielded and intense coastal lighting along their flyways results in confusion and disorientation. Similar to moths around a light, they circle the area until becoming exhausted or striking an object. Once on the ground, they are unable to fly because of their anatomy (legs for swimming, mounted to far back on the body), and become targets for predators including both feral animals and domestic pets. Education and teamwork efforts both on-base and with the external community on Kauai directly involved in the conservation effort was critical. PMRF's environmental professionals and Physical Security team work together to provide continued support for the on-island conservation program.



A volunteer banding an endangered shearwater

This includes coordination and oversight/access for staff from the Kauai Endangered Seabird Recovery Project, Save our Shearwaters, the State Division of Forestry and Wildlife, and the Kauai Seabird Habitat Conservation Plan Office to obtain shearwater

banding training at PMRF's wedge-tailed shearwaters colony.

Lighting improvements were coordinated with energy conservation initiatives in 2011, involving support from NAVFAC HI's wildlife biologists, Aaron Hebshi and Cory Campora, to provide additional funding and coordination with the NAVFAC HI Public Works team to convert from conventional lamps to LEDs, using full-cutoff fixtures to prevent viewing of the light source from above. This resulted in a "dark sky" combined with energy savings. Solar powered fixtures are also full-cutoff design and horizontally mounted. Where high-wattage fixtures mounted above the horizontal are required to be on continuously for safety or security, they are equipped with "green" lamps. At the time of preparation of this award, fallout of Newell's shearwaters during the 2011 season has dropped dramatically over the same period last year.

INTER-AGENCY COOPERATIVE CONSERVATION

Nesting Green Turtles: During the award period, and for the first time in at least a decade, the green turtle, (aka green sea turtle; *Chelonia mydas*) nested successfully, twice in the summer of 2010 and once in the summer of 2011. Communicating with the NOAA and USFWS staffs on Oahu and working directly with the DLNR/Aquatic Biologist, PMRF's Physical Security team, wildlife services technicians, and range staff insured protection and daily monitoring of the sites. From nesting to hatching, there were no disturbances. Following what appeared to be the completion of each hatching cycle, the DLNR Aquatic Biologist and PMRF environmental staff excavated each nest to recover shells for shipment to the NOAA lab on Oahu and DNA analysis.



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The DLNR Aquatic Biologist is pictured above with members of the PMRF staff

The “Return of Ding:” In the spring of 2009, a large female green turtle was discovered at the outfall of Nohili Ditch on PMRF. She had severe anterior damage to her shell from a small powerboat prop. Within 3 days, she was rescued by PMRF, turned over to the State DLNR Aquatic Biologist, was crated and overnight-air expressed to Honolulu where she was taken the next day to the NOAA lab for emergency surgery: cleaning the wound, inserting drainage, suturing the shell using a tool to bore holes in the shell and closing with stainless steel wire, silicon sealant, and a fiberglass patch over the top. She was released the following day at Kaneohe Beach Park on the eastern side of the island of Oahu.

Though officially known as UAI, for the last three letters of “Kauai,” we christened her “Ding” because of her fiberglass patch, as it is called in surfboard repair. Within 2 months, she was spotted by Physical Security’s beach patrol, again at the Nohili Ditch outfall; the patch easily visible. She has been frequently spotted by our patrols and wildlife services, once providing a “photo op.” on the beach while a disoriented green turtle was being rescued

from behind the limestone bench and returned to the outfall by our Physical Security staff.

Marine Life Conservation: PMRF aircrews routinely report whale and marine mammal sightings, providing type, quantity, and direction information to Range Safety. Naval vessels in and around the range are afforded more accurate data on mammal activities thereby reducing incursions. PMRF continues coordinating with USDA/APHIS/WS field technicians and Physical Security for logging sightings, including haul-outs of the endangered Hawaiian monk seals and green turtles basking on PMRF beaches, and communicates these observations to the NOAA/DLNR team monitoring these species.

PMRF active duty and civilian/contractor personnel volunteer to participate in NGO beach cleanup programs including World Ocean's Day and International Coastal Cleanup, as well as for routine beach sweeps, and PMRF has become a protected de-facto marine “sanctuary” through the control of beach access and our Physical Security team’s efforts to monitor the shoreline.