

Secretary of Defense Environmental Award Category
Natural Resources Conservation – Individual
Award Period: FY04 – FY05 (1 Oct 03 – 30 Sep 05)

BACKGROUND

Nominee: Diane C. Drigot, Ph.D., GS-12 Senior Natural Resources Management Specialist,
Environmental Compliance and Protection Department
U.S. Marine Corps, Marine Corps Base Hawaii, MCBH Kaneohe Bay, Hawaii

Position Description:

Dr. Drigot represents MCBH as senior technical and regulatory authority in matters related to natural resources management, such as endangered and invasive species, wetland and seabird habitat management, development and implementation of MCBH's \$8M Integrated Natural Resources Management Plan (INRMP). She is based in the Environmental Compliance and Protection Department comprised of a USMC Lieutenant Colonel, as director, and 30 military and civilian environmental professionals. She leads a conservation team within ECPD, whose key team members include a GS-11 natural resources manager, a GS-9 wildlife technician/conservation law enforcement officer, a GS-11 archaeologist/cultural resources manager, a GS-11 environmental protection specialists, and a geographer providing geographic information systems (GIS) services. She works closely with other ECPD team leaders, staff from other MCBH departments, military operators, contractors, cooperating agencies, and the public.

MCBH is a busy military installation, encompassing 25,000 military and civilian personnel, family members, civilian employees, and 10,000 military retirees using base service facilities. MCBH comprises 4,500 acres within five parcels on the island of O'ahu and a 12-acre parcel on Moloka'i. MCBH hosts 7 endangered species (waterbirds and marine mammals), threatened sea turtles, 50 species of protected migratory birds, 16 species of native fish, 11 miles of scenic shoreline, some of the last remaining coastal wetlands, barrier dunes, and relatively intact offshore coral reef ecosystems left on the urban island of O'ahu. In a remote island state with 25% of US listed endangered species, stiff land/water access competition, and strong environmental advocates, Dr. Drigot must lead the conservation team to implement MCBH's INRMP in such manner as to conserve natural resources, support quality of life and "no net loss" in training options.

Over the past two fiscal years, Dr. Drigot has focused her time and energy on rigorous implementation of INRMP management actions, timely and regular review of plan elements with regulators and stakeholders, and programming any required INRMP updates by the regulatory deadline of November 2006. Dr. Drigot is primary author of MCBH's first edition INRMP (2001), written as a combined plan and environmental assessment document. While implementing the plan, she has developed and systematically applied a tracking system for measuring plan implementation progress, to include the following criteria: presence/absence of violations; extent to which critical "must fund" INRMP projects are executed; responsiveness to stakeholder feedback; ensuring adequate numbers and quality of professional personnel perform required INRMP actions; documenting INRMP prescribed management actions as they are completed as a measure of execution status; adapting to emergent management needs as priorities or environmental conditions change; and ensuring the plan is implemented on time and within budget.

AWARDS AND SERVICES

- For 23 years, Dr. Drigot's vision, leadership, energy, and enthusiasm have significantly contributed to MCBH's reputation as exemplary environmental stewards. Seventeen out of MCBH's 25 national environmental awards received in the Department of Defense (DoD)'s interservice competitions resulted from nominations authored by her. The most recent MCBH nomination she authored resulted in MCBH winning the Secretary of the Navy FY03 Small Installation Natural Resources Conservation Award (the 10th such award received by MCBH during Dr. Drigot's tenure).

- Dr. Drigot's numerous, most recent individual commendations are the cumulative result of her sustained career of excellence in public service, enhancing the image of government public servants and reflecting positively on the US Marine Corps and Marine Corps Base Hawaii. Nine of the 27 personal commendations Dr. Drigot has received were awarded during the FY04-FY05 time frame, from local, state, national, civic, environmental, and community groups:
 - The Kane'ohe Neighborhood Board named her "2003 Citizen of the Year" (Dec 03)
 - The Hawai'i State Senate recognized her "exemplary community service" in "conservation of natural and wildlife resources at MCH" and for working "to improve the relationship between the military and the community" (Dec 03)
 - Partnership for Public Service recognized her as a finalist out of 500 federal nominees for a Service to America Medal, honoring the nation's top public servants (CY04)
 - Honolulu City Council recognized her "tireless efforts to restore MCBH's natural resources habitat, educate more than 50,000 Marines and thousands of Hawai'i school children while "demonstrating that conservation can work well with strategic interests of the military." (CY04)
 - Hawai'i State House of Representatives honored her for adding "Conservation and Community" to the Marine Corps motto of "Courage, Honor, and Commitment." (CY04)
 - Hawai'i Audubon Society's "2004 Conservation Award" cited her as "one whose actions have resulted in significant conservation achievement" and "for energetic and innovative leadership...at MCBH...resulting in vital habitat restoration for native birds."
 - O'ahu Association of Hawaiian Civic Clubs presented her with the Helen C. Kane Mahalo Award for "services rendered to the Club, Council...and Hawaiian community at large." (2004)
 - MCBH nominated her for the "professional" category award in the Federal Employee of the Year (2004) competition.
 - U.S. Congressman Ed Case (Hawai'i, 2nd District) issued a National Press Release (CY04) citing his pride in announcing Dr. Drigot's finalist status in the 2004 Service to America Medals competition, writing "For many years, many of us throughout the community have come to know Dr. Drigot as an innovative and tireless-steward of Hawaii's natural resources, particularly at Marine Corps Base Hawaii....She has an incredible record of accomplishments in a job that requires her to ensure the Corps' activities comply with environmental protection laws, Dr. Drigot is an environmentalist who has changed the environment in Hawaii, and military environmental protection practices across the country."

INRMP Implementation Recognition - The U.S. Fish and Wildlife Service recognized Dr. Drigot's key role in achieving recognition for MCBH as a finalist in their 2004 Military Installation of the Year Conservation Award competition, citing that MCBH "completed, funded, and implemented

its INRMP on time, including timely review and submission to the Service for Section 7 (Endangered Species Act) consultation and National Environmental Policy Act (NEPA) compliance.” Dr. Drigot was specifically recognized in a June 2005 letter to MCBH from the Field Supervisor, Pacific Islands Fish and Wildlife Office concerning initiative in “providing the Service with annual updates on INRMP implementation” and for “thoughtful and creative approaches that have been built into INRMP project planning and execution at MCBH (that) have been excellent and have resulted in tangible benefits to Federal trust resources.”

Military Operator and Trainer Recognition -

- Dr. Drigot received a cash award and Certificate of Recognition in August 2005 from the Program Manager, Advanced Amphibious Assault, Woodbridge, VA, for helping expedite interagency consultations and reviews of the Environmental Assessment on a compressed time frame for a scheduled test of next-generation Amphibious Assault Vehicles prototype (*i.e.*, the Expeditionary Fighting Vehicle, EFV) in sensitive MCBH marine waters. He stated: “Dr. Drigot’s professionalism, diligence, and devotion to duty reflect great credit upon her, and are in keeping with the highest traditions of the US Marine Corps and the Department of the Navy;”
- She regularly conducts invited presentations and VIP tours for military audiences at all ranks on MCBH’s natural resources program and INRMP implementation progress. For example, staff of the Naval Civil Engineer Corps Officers School (CECOS) regularly request Dr. Drigot to present at their Environmental Protection Course seminars for CECOS students from Navy installations in the Hawaii/Pacific region, to include guided field trips to sites of MCBH’s INRMP program successes. Her recent November 2004 training session presentation was commended in a follow-on letter of appreciation from the Commanding General of CECOS (Feb 05).

ACCOMPLISHMENTS

Inclusive, Participatory, Cost-Savings, Partnering Approach to INRMP Implementation-

Dr. Drigot’s approach to INRMP implementation shows remarkable ability to forge successful, sustainable partnerships, among war fighters, regulators, and the public. Benefits include cost savings, improved training options, technology transfer, and community capacity building through cooperative civic projects that build social trust. Perhaps her most enduring contribution is in the area of controlling invasive species—federally recognized as a cause of economic and environmental harm (EO13112), especially in Hawaii, a state with 25% of the nation’s endangered species, significantly imperiled by habitats being over-run by invasive species. Many of Dr. Drigot’s commendations received in FY04-FY05 have roots in her sustained 23+ years of success in this area—by using innovative methods, multiple partners, substantial funds, and volunteers, resulting in improved endangered species habitat and military training options, public support, and positive regulator recognition. For example:

- For 23 years strong, she initiates an annual, sustainable, low-budget approach to invasive pickleweed control in MCBH wetlands, primarily Nu’upia Ponds Wildlife Management Area, home to 10% of the statewide endangered Hawaiian stilt population and to 50 species of migratory shorebirds and seabirds. Before the stilt’s nesting season each year, pickleweed is removed from the mudflats by Marines driving their 26-ton amphibious assault tracked vehicles (AAVs), much like a farmer plowing fields, to open up the grounds for nesting to begin. Over this time frame, annual count totals for stilt found there have almost tripled (60 in the 1980s to 160

now). Dr. Drigot worked in a USMC/USFWS partnership to create a national "Saving a Few Good Species" poster about this symbiotic endangered species/military training relationship and helped MCBH host a community-based ceremonial "unveiling" of the new poster in January 2004 at Nu'upia Ponds, with local community dignitaries, AAV operators, US FWS, USMC, and State cooperators as guests of honor in attendance and favorable press received.

- By 2004, another 20-year initiative of hers came to fruition in the complete removal of 25 acres of mangrove from MCBH wetlands with combined volunteer and contractor help. (Mangrove is an introduced, pest plant in Hawaii that is choking Hawaii's remaining wetlands). She annually secures scores of volunteers and after 20 years, a total of \$2.5M worth of mechanical removal contract help and before/after monitoring support. She distributes brochures and displays crediting volunteer efforts. She has forged a partnership with Sierra Club Hawaii Chapter who has "adopted" MCBH wetlands and provides regular bi-monthly mangrove weeding service projects as a regular part of their outing program schedule, attracting military as well as civilian participants. Every five years since 1983, Sierra Club High School Hiker's "Ecology Camps" are hosted on MCBH, including service projects and environmental education tours, coordinated by Dr. Drigot with the Base Command. This unique MCBH/Sierra Club partnership has been lauded in the Sierra Club Hawaii Chapter newsletter (CY03) and National Magazine (CY05).

- Dr. Drigot and a co-author/contractor documented cumulative habitat improvements resulting from both pickleweed and mangrove weed clearing in MCBH wetlands in a presentation and paper published by the International Union for Conservation of Nature (IUCN) (CY02)

- Hawaii's Department of Land and Natural Resources invited her to write a Case Study of Military Contributions to controlling invasive species, which is included in their CY03 Aquatic Invasive Species Management Plan now posted on their internet website.

- In 2004, Dr. Drigot teamed with Navy contractors, Marines, engineers, regulators, fire and safety personnel to implement a \$350K emergent INRMP project to reduce enhanced brushfire risk in a field of invasive grasses below a colony of 2,500 tree-nesting red-footed boobies at MCBH's Ulupa'u Crater Head Wildlife Management Area within the impact area of an active weapons firing range. Due to increased pace of war-fighter training use, a prolonged drought causing the predominant invasive grass cover to become dry and flammable, and a concomitant new regulation prohibiting firefighting crews in impact areas, something different had to be tried to save the birds and reduce the after-fire erosive effects on the steep Crater cliffs surrounded by pristine ocean. Dr. Drigot met with military trainers, contractors, and all concerned to collaboratively devise an innovation that would work. She took the ideas that emerged from those meetings to planners, developed project proposal documents on a fast track, and secured USMC funds to implement the project in a compressed time frame of two months that usually takes a year. Thus, \$350K were secured to install: (a) gravel-anchored geotextile matting around the perimeter of bird habitat tree clusters, to repress weed growth, hold down the soil, and create a secondary "fire break;" and (b) remote-controlled, solar-powered water cannons at 4 strategic locations near nesting trees to "wet down" the area in case of fire. To date, the matting project is complete and has already repelled advances of an Aug '05 brushfire. The water cannons should be fully tested and operational by January 2006. Together, these projects provide defense in depth against fire risk and landscape degradation, while sustaining booby bird habitat and weapons training. Army resources managers

have expressed interest in the potential transferability of these innovative fire-suppression techniques to their Ranges.

- In a related effort to reduce erosive after-effects of these range fires, Dr. Drigot secured funds for completion of \$350K FY04/05 funds for phased erosion studies and follow-on project designs for \$1.2M-worth of erosion control projects to be constructed in the FY06/08 timeframe. As a result, Ulupa'u Crater's use as a training platform will be extended and erosion mitigated.

Progress cited above to sustain the weapons range and bird habitat is even more remarkable considering that the environment affected is highly corrosive, and within an impact area containing wildlife habitat, invasive species, live firing, and unexploded ordnance. The Navy Resident-Officer-in-Charge-of -Construction project manager who worked closely with Dr. Drigot during project implementation amidst these difficult circumstances said "her tireless public involvement has resulted in improved community awareness and support for our ongoing ROICC construction efforts."

Initiation of a Collaborative, Community Approach to Wetland/Watershed Restoration

- In 2005, MCBH is realizing a vision created through Dr. Drigot's leadership and earlier investments to include: watershed education workshops, a watershed manual posted on DoD's denix and Hawai'i community-based websites, installation of native plant garden demonstration projects along MCBH stream corridors (involving 1,000 military and civilian volunteers), and completion of concept and detailed designs for two wetland/watershed restoration projects using the latest BMPS to reduce flooding, better manage stormwater runoff, and restore wetland habitat in MCBH drainages. These initiatives comprise an ecosystem-based "watershed approach" to clean water compliance favored by the US Environmental Protection Agency (EPA), encouraged in DoD and USMC directives, and promoted by Hawaii government agencies and citizen groups.

• Thus, in 2005, based on the vision planted and nourished as described above, MCBH is now in the act of constructing over \$1.1M worth of wetland/watershed restoration projects. In addition to overseeing concept and detailed designs for these projects, Dr. Drigot saved an estimated \$200K in planning costs by authoring two project Environmental Assessments, handling all interagency consultations, and Army Corps permit applications required. When construction is completed, one of these projects will replace a dysfunctional weed choked drainage ditch that floods an adjacent combat vehicle compound with a constructed wetland, lined with native plants, to capture surface stormwater runoff more efficiently. The other project will replace 3 acres of weed-choked "fill" land along the central, straightened stormdrain corridor on MCBH's Mokapu peninsula with a meandering terraced, native plant lined, "pocket" wetland off this central stormdrain corridor to better contain floodwaters, restore historic habitat for native avian and aquatic life, enhance scenery and a Hawaiian "sense of place." It was Dr. Drigot's personal vision and drive that moved these projects to fruition. They replace an earlier more expensive, conventional flood control approach that would have "hardened" the streambanks and further degraded the stream corridor's wildlife, water quality, scenic, and potential recreational values. Her initiatives were recognized in their earliest stages by US EPA and cited among 30 national watershed success stories posted on their national www.cleanwater.gov website.

COMMUNITY SERVICE WORK AND PROFESSIONAL ORGANIZATIONAL AFFILIATIONS

- Dr. Drigot's numerous FY04-FY05 commendations and project accomplishments cited above are the cumulative result of a sustained career-long track record of excellence in public service, built before and beyond her work within the US Marine Corps family.
- Her M.S. and Ph.D. in Natural Resources Management at University of Michigan were focused on mechanisms for developing public involvement and evaluative feedback in natural resource policy, planning, and management. On her own time, she shares results of her professional experiences and program successes at invited presentations to the community, to agency colleagues, through publications and university affiliations. Recent examples:
 - In 2004, Dr. Drigot was appointed affiliate graduate faculty member at University of Hawai'i (UH) where she mentors future natural resources managers from Hawai'i, Asia, and the Pacific. In 2004, she mentored a successful Master's degree candidate who conducted her thesis on evaluating lessons learned from MCBH's successful installation of native plant vegetation strips around golf course pond/wetlands as a stormwater Best Management Practice.
 - Also in 2004, she was appointed Department of Defense's technical representative to the 2004-created Hawai'i - Pacific Cooperative Ecosystem Studies Unit, based at UH, with a dozen federal university and research partner institutions spanning Hawaii and the Pacific.
 - Her dedicated willingness to regularly work on weekend volunteer weeding projects with military and community volunteers to enhance wetland wildlife habitat or native plant gardens is appreciated by the community and the participants. In one recent thank you letter, the words of a lawyer who participated from a major Honolulu utility company are revealing. He said, "*Your passion for your work really shines through and your sharing of how our small effort fits into the bigger picture gave us all a greater appreciation and sense of value of the work.*"
 - Her invited presentation and paper to an internationally-attended Asia-Pacific Center for Security Studies Conference (Nov 02) is still read by students in Center classes.
 - Her invited presentation at a water conference hosted at the Army War College (2000) is published in conference proceedings and posted on their website.
 - She regularly presents to university classes and community groups interested in resource management, public involvement, and land use history at MCBH. For example, her 2004 presentation to the Kailua Historical Society on "Many Faces of Mokapu" shared highlights of Mokapu's rich natural and human history from oral histories recorded of former residents and early military stewards of the area, in the early 20th century. Since then, she continues to repeat the presentation on popular demand for other groups such as the Honolulu Garden Club and the Kane'ohe Yacht Club.
 - In 2005, she attended an invitation-only White House Conference on Cooperative Conservation to share success stories of collaborative community involvement in invasive weed and seabird colony management at MCBH.
 - In 2005, she was interviewed about invasive species impacts on military readiness for a joint DoD and National Wildlife Federation (NWF) publication to raise public awareness of the problem, now posted on NWF's internet website. She was also interviewed by The Nature Conservancy staff to recommend relevant updates to a Military Conservation Handbook distributed to all natural resources managers at over 400 DoD installations throughout the United States.