

FY 2011 Secretary of Defense ENVIRONMENTAL AWARDS

Eglin Air Force Base, Environmental Management Division / Environmental Quality, Non-Industrial

INTRODUCTION

Situated along the Emerald Coast and extending into the heart of Florida's panhandle, Eglin Air Force Base is home to the Air Armament Center (AAC). Encompassing 464,000 acres of land and 130,000 square miles of water ranges, the installation is responsible for the development, acquisition, testing, deployment and sustainment of all air-delivered conventional weapons. The AAC and its 47 associate units accomplish this mission while coexisting with 106 rare and endangered plant and animal species found in 34 distinct ecosystems. More than 227,000 acres of Eglin's reservation are open for recreation to 11,000 military personnel, 9,500 civilian employees, 57,000 family members and retirees, and the general public. During this award period, Eglin underwent an unprecedented amount of growth as a result of the 2005 Base Realignment and Closure (BRAC), adding more than 2 million square feet to the base's footprint. Eglin's environmental professionals were instrumental in the successful completion of \$1.2 billion in Base Realignment And Closure (BRAC) construction adding the Joint Strike Fighter Integrated Training Center and the US Army 7th Special Forces Group. Eglin's total economic impact to the area exceeds \$2.7 billion.



DOD's first F-35 Lightning II joint strike fighter soars past the 33rd Fighter Wing flightline with two F-16 Fighting Falcon chase aircraft before landing at its new home at Eglin Air Force Base, Fla (U.S. Air Force photo/Staff Sgt. Joely Santiago)

BACKGROUND

Eglin's Environmental Management Division preserves and enhances a remarkable assemblage of biodiversity, from the fire-dependant old growth long leaf pine forest to pristine white barrier islands – all while supporting the mission. The division consists of four separate sections: Environmental Compliance, Natural Resource Management, Cultural Resource Management and the Installation Restoration Program. Eglin manages the environmental impacts of its products, processes, and services through its Environmental Management System (EMS). In place since 1997, our EMS identifies 6,700 aspects confronting the success of the mission, has a strong pollution prevention focus, is used to manage operational controls and EMS structural procedures, and empowers customer interaction and usage through multiple web-based management tools and an extensive audit process.

The EMS provides a comprehensive tool to easily implement environmental programs, increase regulatory compliance, and improve health and safety practices. This management system also ensures compliance with all applicable requirements, including: National Pollutant Discharge Elimination System (NPDES) Industrial Storm Water Permit, NPDES Municipal Storm Water Permit, Title V Air Operating Permit, Joint Coastal Permit-Beach Restoration, Florida Department of Environmental Protection (FDEP) Recycling Center Certification, Integrated Natural Resource Management Plan (INRMP), Open Burn/Open Detonation (OB/OD) and Hazardous and Solid Waste Amendment (HSWA) Permit, Spill Prevention Plan, Solid Waste Management Plan, and the Cultural Resources Management Plan. During a period of incredible growth, Eglin hosted 50 external inspections with visits to 365 sites, more than doubling the number of sites inspected in the previous two years. In addition, the number of required storm water permits rose from 21 in FY08-09, to 45 in FY10-11. In spite of the extensive oversight Eglin has maintained an outstanding compliance record.

The principles of ecosystem management and biodiversity conservation serve as the foundation of the Eglin INRMP. A "living" plan that can be rapidly modified to meet changing military missions and environmental conditions, the INRMP provides strategic interdisciplinary guidance focused on mission training and support to ensure continued access to the land, natural resources and airspace required to accomplish the Air Force mission, while ensuring these resources are maintained in a healthy condition.

Eglin actively seeks partnerships with regulators, special interest groups, academia, and other environmental professionals to improve the environment while furthering the mission. We are members of the Okaloosa County's Green Team Awareness Taskforce, the Gulf Coastal Plains Ecosystem Partnership, the Prescribed Fire Training Center, Wild Turkey Federation, and the Choctawhatchee Audubon Society. We also partner with our communities in efforts such as the Joint Land Use Study and Growth Management Study to ensure we minimize encroachment.

PROGRAM SUMMARY

Eglin's award-winning environmental program is committed to proactive and responsive environmental management to ensure continued access to our air, land, and water ranges. Important aspects include: cleaning up environmental damage from past activities, meeting present compliance responsibilities, minimizing future environmental impacts through planning, managing natural and cultural resources, and integrating pollution prevention in base-wide activities. Eglin's excellence has been recognized with the following awards:

- 2011 Secretary of Defense Natural Resources Conservation Award, Large Installation
- 2011 Secretary of Defense Cultural Resources Management Award, Team
- 2010 Secretary of Defense Natural Resources Conservation Award, Individual
- 2010 US Environmental Protection Agency Clean Air Excellence Award
- 2010 National Military Fish & Wildlife Association Model Programs/Model Projects Award
- 2009 American Fisheries Society President's Conservation Award

The EMS Environmental Aspects Inventory database, one of the largest in the Air Force, is used to prioritize 6,700 mission critical and environmental interactions. Our state-of-the-art Document Control System and Aspect Scoring Process facilitate development and completion of EMS objectives and targets. The cornerstone of our EMS, they have been adopted by Edwards, Robins, and Arnold AFBs. One of our most recent objectives was to "Make the Qualified Recycling Program (QRP) self-sustaining through higher revenues from increased participation and/or the reduction of expenses." We met the target six months ahead of schedule, eliminated the need for appropriated funds, and the QRP is now self-sustaining.

ACCOMPLISHMENTS

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

Eglin's EMS boasts a "Full Conformance" rating. Air Force Materiel Command inspectors awarded our EMS its highest rating after an external audit in 2010 found zero discrepancies. The interactive, web-based tools and resources the EMS makes available to its customers provide a one-stop-shop for environmental program aspects, such as:

- Compliance guidelines
- Instructions and checklists
- Geospatial mapping
- Material issue and use reporting
- Training
- Air monitoring inputs
- Record documentation
- Environmental aspect inventory

The EMS satisfies a myriad of regulations, minimizes redundant data and labor requirements, provides outstanding data fidelity and quality, and is instrumental in reducing negative regulatory and internal audit findings by 48%.

Key EMS successes include:

- Shredding 50,000 practice bombs and recycling more than 1 million lbs. of associated metal to ensure sites located off active ranges are safe for reuse
- Providing real-time information on range use restriction and closures through an online Public Access Map to the more than 16,000 visitors who annually use Eglin's recreational areas
- Accelerating National Environmental Policy Act (NEPA) procedural actions by implementing customer process improvements to achieve a 100% improvement in proponent compliance
- Diverting 11,000 tons of non-hazardous municipal solid waste from local landfills and saving Eglin \$2M each year in disposal costs
- Achieving key milestones in the Okaloosa Darter Recovery Plan, leading to the down-listing of the darter from an endangered to threatened species increasing the darter population from 1,500 to 900,000
- Implementing a proactive prescribed burn plan to support training and maintain sensitive eco-systems. These actions kept 15 wild fires, set by an arsonist on Eglin's reservation, within established boundaries, ultimately saving 20 homes and averting closure of a major interstate

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

Committed to continuous NEPA process improvement, Eglin has reduced the size of its NEPA documents by more than 50 percent and has centralized compliance directives in all its analysis to one section making it easy for the customer to find. Rather than taking months, it now takes Eglin only weeks to produce its NEPA documents and proponent compliance has skyrocketed. Eglin's creative techniques enabled the division to evaluate almost 4,000 Base Civil Engineer Work Requests, 1,700 Requests for Environmental Impact Analysis and complete 71 Environmental Baseline Surveys and Waivers while simultaneously managing two Environmental Impact Statements and completing over 20 Environmental Assessments.

Eglin established and led a large interdisciplinary team of subject matter experts to produce and complete a Final Environmental Impact Statement (FEIS) for its housing privatization effort. The team consisted of members from Headquarters Air Force, two AF installations, two Major Commands, and multiple local, state and federal regulatory agencies. Persistent efforts to engage local communities, special interest groups and regulators went well beyond the basic requirements of NEPA. Multiple outreach events, including town hall meetings and public hearings, were used to hear and discuss community concerns and share information on potential environmental impacts. These efforts facilitated completion of the FEIS, clearing the way to launch a \$150M housing privatization project to build up to 1,477 new housing units on Eglin AFB and Hurlburt Field and greatly improve the quality of life for our military families.

MILITARY MUNITIONS RESPONSE PROGRAM (MMRP)

Eglin conducted the largest MMRP cleanup project in DoD history to recover 7 million pounds of debris, including over 54,000 munitions from legacy burial pits that were recycled. In order to identify and address stakeholder concerns, Eglin, in cooperation with FDEP and the US Army Corps of Engineers, formed a Legacy Working Group with 12 other stakeholder organizations, and completed innovative investigation, cleanup and disposal processes to clear 1,150 acres for re-use. Work was completed four years ahead of schedule and saved more than \$19M.

The team also conducted a 2,500 acre bay range survey, the first Air Force water range investigation for munitions of concern. Using state-of-the-art technology, Explosive Ordnance Disposal SCUBA teams surveyed more than 50 miles of underwater transects to identify over 500 anomalies. This effort was used to create munitions, explosive standard procedures for Air Force water range surveys and cleanups. The collected data was shared with the National Oceanic Atmospheric Administration, saving the agency six months work and \$500,000.

WASTE REDUCTION AND ENERGY EFFORTS

A self-sustaining facility, the Eglin Recycling Center reduces the installation refuse contract by over \$30,000 per year in cost avoidance, employs 9 full-time personnel, services 400 facilities with over 1,000 collection points, and was recognized as the "Best in AFMC for FY2011". On base recycling efforts divert 6,500 tons of waste each year.

Eglin aggressively reclaims, reuses, recycles, donates, and composts over 11,000 tons of nonhazardous municipal wastes avoiding \$3M per year in landfill disposal costs. With solid waste diversion at 66%, Eglin currently exceeds Executive Order mandated diversion rates of 50% per year by 2016. A self-sustaining facility, it achieves \$30,000 per year in cost avoidance through on-base recycling efforts that divert 6,500 tons of waste a year. Eglin uses the EMS to track revenues, expenses, and other information from 1999-present, provide real-time reports, and identify recyclable materials - cutting information research by 90%. AFMC and the Air Force Center for Engineering and the Environment (AFCEE) use Eglin's diversion tracking and waste characterization studies as benchmarks for other installations.



In an effort to clean up former munitions burial sites, explosive experts have recovered more than 7 million pounds of buried munitions on base ranges under the Military Munitions Response Program. The. (U.S. Air Force photo/Scott Moorman.)

A \$5.5M, newly patented “High Concentration Anaerobic Bioreactor” is being tested at Eglin. If successful, the bioreactor will be used to consume up to 70 tons of waste per day, and generate more than 100,000 MMBTU of biogas and 8,000 cubic yards of marketable compost annually. The test project will be used to reduce Eglin’s energy purchases.

NATURAL RESOURCES MANAGEMENT

Recognized as a “National Recovery Champion” by the US Fish and Wildlife Service, Eglin completed key milestones in the Okaloosa Darter Recovery Plan, boosting the darter population from 1,500 to more than 900,000. Eglin’s erosion control program successfully rehabilitated 497 acres of highly eroded borrow pits, unpaved stream crossings, and 2,000 miles of clay roads by changing road paving techniques. As a result, soil infiltration of darter streams was reduced from 60,000 tons to 1,000 tons -- the primary reason for the Darter’s recovery! In 2011, the US Department of the Interior reclassified the darter, a delicate fish found almost exclusively on Eglin AFB, from an endangered to threatened species. This was the first time a vertebrate species was down-listed on DoD lands.

Nearly 5M barrels of oil impacted the Gulf of Mexico when the Deepwater Horizon disaster occurred, threatening Eglin’s 20 miles of gulf and 50 miles of Choctawhatchee Bay shorelines with catastrophic environmental impacts. Eglin provided the Okaloosa County and the US Coast Guard its ‘Waterways Spill Response Plan’ and tailored it to prevent oil from contaminating the Choctawhatchee Bay shorelines. Eglin’s biologists rescued more than 2,200 sea turtle eggs from lethal oil exposure, transporting them to Cape Canaveral for hatching and release. Eglin also served as the official “cleanup test bed” for Florida to determine the best equipment and methods for cleaning polluted shorelines, and trained hundreds of BP Shoreline Cleanup Team members on where and how to operate without impacting Eglin’s threatened and endangered species.

In response to a 44% increase in range use, Eglin developed and implemented an automated range access management protocol and Public Access Map identifying areas with restricted public access in real time. The map significantly increased the safety of all military and 16,000 plus recreational range users, facilitated productivity as mission scope and complexity increased, allows mission and recreational activities to coexist without conflict, and eliminates the need to close 75,000 acres of land to recreational users.

Eglin’s prescribed fire program is nationally recognized and home to the annual Prescribed Fire Combustion-Atmospheric Dynamics Research Experiments (RxCADRE). Rx CADRE is the only collaborative prescribed burn effort in the United States where wild land fire professionals from 25 different organizations can bring new technologies and practices to a controlled environment and share the results. In addition to continually utilizing information and techniques derived from the experiments, Eglin also conducts research to improve its wild land fire management. When an arsonist set 15 wildfires on Eglin, burning more than 6,000 acres, Eglin’s response plan ensured the fire remained within a prescribed boundary and averted shutting down Interstate 10 and the sure loss of more than 20 civilian homes adjacent to the wildfire.



96th Civil Engineer Group biologists, carefully remove sea turtle eggs from their nest on one of Eglin Air Force Base’s beaches. The eggs were transported to the east coast so the turtles could be released without the threat of encountering oil from the spill in the Gulf of Mexico. (U.S. Air Force photo/Samuel King Jr.)



Members of Team Eglin’s Waterways Spill Response Team position 18 inch boom during a recent exercise. The team is comprised of personnel from all over the base and responds to spills that affect both Eglin and the four counties around the reservation. (U.S. Air Force photo/ Samuel King Jr.)

AIR QUALITY

Eglin won the 2010 EPA Excellence Award for outstanding innovative efforts to help make progress in achieving cleaner air, the first DoD facility to receive the award. For the past 12 years, Eglin has maintained 100% compliance with air program requirements and passed all FDEP inspections with no violations. Eglin's unique air emission's tracking system and Air Source Compliance Assistance Program underlies our success. Eglin's 236 shops that have potential impacts on air quality use the web-based tool to consistently maintain compliance. The Compliance Assistance Program produces guidance policies and web-based training for Eglin's 64 Air Source Managers and the EMS calculates significant environmental aspects for air quality issues. Eglin's proactive approach to air quality management has decreased pollutant emissions from the 2006 baseline by 50%.

COMMUNITY OUTREACH

Eglin's Environmental Division team actively participates in outreach events such as Earth Day, Energy Expo, America Recycles Day, and the Eglin AFB Air Show to educate the public about how Eglin's environmental programs and partnership help sustain the mission. The base also has an extensive community environmental outreach program that:

- Sponsors field trips for national and local environmental groups, universities and area schools
- Runs a volunteer program with nearly 600 recruits donating more than 14,000 hours to environmental projects
- Sent 10 local high school students to conduct environmental research and take courses on endangered species management through a partnership with New York's East Harlem Young Women's Leadership School

Eglin formed a Community Noise Committee with 14 local governments to address community noise complaints and reduce encroachment. The installation regularly holds hunting and fishing events for youths and disabled groups, and has hosted 17 combat wounded veterans from the "Wounded Warriors" organization. The Environmental Team also hosts "Marsville", an annual educational experience with local elementary schools, parents, civic volunteers and the ROTC to solve air quality problems and other environmental concerns.



Many native plants and animal species depend on Eglin's fire-dependent long-leaf pine ecosystem, 11 of which are federally protected. Endangered species such as the red-cockaded woodpecker, depend on fire that is typically caused by either lightning strikes or Eglin's resident fire managers to survive (U.S. Air Force Photo by Staff Sgt. Mike Meares)



Eglin offers scenic kayak trips on Earth Day showing off the unique wild and plant life. The reservation has 27,000 acres including 55 lakes, 186 miles of streams and 60 miles of shoreline open to the public. (U.S. Air Force photo/ Samuel King Jr.)