



2018 Secretary of Defense

Environmental Awards

Environmental Quality, Non-Industrial Installation
Eglin AFB

Introduction

Situated along the Emerald Coast and extending into the heart of Florida's panhandle, Eglin Air Force Base (AFB) is home to the 96th Test Wing, which is comprised of 3,065 military, 2,859 civilians, and 2,109 contractors. Encompassing 464,000 acres of land and 123,000 square miles of water test ranges, Eglin is the largest AFB in the free world. The Installation is responsible for the development, acquisition, testing, deployment, and sustainment of all air-delivered conventional weapons. The 96th Test Wing hosts eight wing/wing equivalents and 37 associate units who accomplish their missions through the maintenance of 34 distinct ecosystems providing habitat for 106 rare and endangered plant and animal species. Eglin AFB's total economic impact to the area exceeds \$2.75 billion annually.

Background

Eglin's 96th Civil Engineer Group, Environmental Management Branch preserves a remarkable assemblage of biodiversity, from

the fire-dependent old growth longleaf pine forest to pristine white barrier islands, while providing a proving ground, delivering the world's deadliest weapons to the warfighter. The Branch consists of three separate sections: Environmental Compliance, Natural Resources Management, and Environmental Assets, where Cultural Resources Management and Environmental Analysis reside.

The Environmental Program has continued to maintain a focus on providing mission support through enhancement of technical capabilities and improved program integration. These are the common threads which run through most of the Program's accomplishments for the award period. To manage the environmental impact of its products, processes, and services, 42 federal and contracted professionals maintain an Environmental Management System (EMS) designed to identify the most significant environmental aspects confronting the success of the mission. A strong pollution prevention program addressing the significant environmental aspects is also a key to Eglin AFB's fully conforming EMS. Operating since

the start of the Department of Defense (DoD) EMS pilot study in 1997, the EMS has evolved through continuous improvements to manage over 7,400 environmental aspects, environmental program operational controls, and EMS procedures. Additionally, the EMS empowers customer interaction and usage through multiple web-based management tools and an extensive audit process.

One major key to Eglin AFB's environmental success has been the formation and pursuit of partnerships to enhance programs, better facilitate the military mission, and share lessons learned with other professionals and academia. Some of the more notable partnerships are:

- Member of the Gulf Coastal Plain Ecosystem Partnership – A partnership comprised of 10 state and federal agencies in cooperation with private organizations, addressing regional natural resources issues. The partnership focuses on extending Eglin AFB's ecological boundaries and supports connectivity to the surrounding natural habitats.
- Eglin AFB participated in four semi-annual partnering meetings with the Florida Department of Environmental Protection (FDEP). They dedicate one day every six months for face-to-face meetings with regulators. This meeting enables the Eglin Team to understand regulator intentions and processes as well as provides Eglin AFB a chance to explain mission requirements. This partnering effort creates a formidable team focused on meeting both mission and environmental responsibilities.
- Additional conservation partnerships include: The FDEP, Florida Forest Service, United States Fish and Wildlife Service (USFWS), The National Park Service, The Florida Fish and Wildlife Conservation Commission (FWC), Northwest Florida Water Management District, Nokuse Plantation, The Longleaf Alliance, and the United States Forest Service.

Summary of Accomplishments

Waste Reduction Efforts

Eglin's Environmental Management Team established an objective and target to reduce the number of hazardous materials procured. A cross-functional effort between shop personnel, safety, and bio-environmental, the Team proactively reviewed hazardous material purchases across the Installation. The objective effectively eliminated 99 hazardous materials during the accomplishment period. The result exceeded the target by 24 products and was accomplished two years ahead of schedule.

Eglin removed irrigation from potable water mains, saving an amazing 20 million gallons per year. They also saved an additional 10 million gallons per year from earlier leak detection efforts on 120 miles of water distribution lines.

Past solid waste assessments revealed Eglin was throwing away as many recyclables as it was collecting. The Environmental Management Team established an assessment process to evaluate disposal practices and pass/fail criteria for Base dumpsters. Using this assessment process, the Team successfully doubled its recycling efforts.

Eglin AFB spearheaded the reuse of 9,100 tons of storm debris, cooking oil, tires, and antifreeze, saving \$1.3 million in disposal costs while diverting solid waste from the landfill. They also successfully enabled the reclamation of 33,000 gallons of heating oil used as ballast in old storage tanks, avoiding \$80,000 in disposal costs. The Environmental Management Team facilitated the reuse of all shipping crates and pallets, achieving a total of 1,200 tons of solid waste diverted from landfills, while avoiding \$200,000 in disposal costs.

Additionally, two artificial reefs were created from approximately 2,000 tons of concrete

material. The concrete pieces came from Eglin AFB range targets that outlived their usefulness. The *Concrete to Reefs* initiative is the result of an innovative partnership between the Installation and Okaloosa County. It is a direct result of both the tri-county community partnership initiative and the Air Force community partnership program. The county paid to haul the concrete from the range, avoiding more than \$60,000 in transportation and disposal costs to the Installation, while the county and local community gained two artificial reefs that enhanced local tourism by providing additional SCUBA diving and fishing opportunities.

Finally, Eglin AFB exceeded the DoD non-hazardous solid waste diversion goal of 50%. The Environmental Management Team successfully led Eglin AFB to exceed the goal by nearly 25%. Seventy-four percent of the waste stream was diverted from landfills during the accomplishment period. Overall, Eglin AFB avoided \$9 million in disposal costs through its solid waste diversion efforts.

Environmental Management

Eglin AFB strives to gain continuous improvement through an EMS using an intranet website that constantly updates compliance guidance documents, instructions, checklists, environmental aspect inventory, Geographic Information System mapping, equipment photos, online material issue reporting, compliance assistance hotline, calendar of relevant events, training, material usage reporting, monthly air monitoring input, and record keeping documentation. For all users, it acts as a one-stop-shop for the environmental program that satisfies the myriad of documentation requirements online while saving individual shops time and resources and attempts to eliminate impacts to the mission. This constant improvement ensures Eglin AFB database records contain the most accurate information on a real-time basis and enhances communications through information exchange between organizations and the Environmental Management Team. This process allows the Team to annually analyze its environmental aspects, identifying the most significant environmental issues affecting Eglin AFB and its mission. The Team worked six objectives



Artificial Reefs

The EQ Program was integral in helping Eglin AFB donate more than 2,000 tons of former concrete targets to Okaloosa County for use as material for artificial reefs. Eglin AFB avoided more than \$60,000 in disposal costs for the concrete and the local community gained two artificial reefs to enhance local tourism with more SCUBA diving and fishing opportunities.

and targets during the accomplishment period to drive continuous improvement and enhance the mission.

Eglin AFB's EMS provides the tools to ensure an exemplary compliance record while maintaining over 219 permits and 115 tank registrations with no fines or penalties from 225 site inspections and zero mission interruptions during the accomplishment period. The Environmental Management Team maintains 16 plans to communicate the most current regulatory requirements. As a Clean Air Act major source of air pollution, Eglin AFB operates a comprehensive Title V Air Permit, ensuring air quality controls are in place and compliant. The Installation manages 2,720 active air sources with 100% compliance during annual regulator inspections for 10+ years, ensuring missions proceed unencumbered.

In addition, the Environmental Management Team focuses on ensuring Eglin AFB personnel understand their responsibilities in all environmental arenas. The Team maintains 16 environmental training courses, either computer-based or taught by environmental program managers, and multiple Base instructions while accomplishing community outreach to 6,000 students at local schools. The Team managed more than 200 training sessions for 1,811 Base personnel covering shop level training requirements.

Mission Sustainment

The Environmental Management Team led the completion of significant environmental assessments with no delays, ensuring the long-term success of Eglin AFB testing and training missions. During the accomplishment period, the Air Force consolidated the C-146A training and operational capability at a single location for the bed-down of 169 Air Force personnel originating from the 524th Special Operations Squadron at Cannon AFB, New Mexico and 18 additional C-146A aircraft at Duke Field,

Florida. The consolidation enhances training of Air Force personnel and optimizes operational and facility maintenance costs, achieving a significant reduction in C-146A aircraft maintenance costs for the Air Force. This integration of operations and maintenance missions saves \$35 million in contract maintenance support.

Living Shoreline

Partnering with the Choctawhatchee Basin Alliance, a local non-profit organization, and FDEP, the Eglin AFB developed a sustainable living shoreline along the Choctawhatchee Bay. Oyster shells collected from local restaurants became the foundation for oyster reefs to create the living shoreline, bolstering natural protection of critical historic sites, stabilizing shoreline, protecting the riparian and intertidal environment, creating habitat for aquatic/terrestrial species, and sustaining the mission.



Volunteers in Action

Eglin's volunteer program consistently exceeds expectations. Here, volunteers place oyster shells collected from local restaurants as the foundation for reefs to create a living shoreline.



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Clean Marina

The Environmental Management Team maintained their certification as one of a handful of other facilities in the state of Florida to earn the *Clean Marina* designation, resulting in more pristine marina operations on Base. The Team continued to work with Eglin AFB personnel to adopt FDEP practices and procedures to improve operations, reduce spills, and certify as clean marinas. This proactive approach addressed critical environmental issues such as protecting sensitive habitat, waste management, storm water control, spill prevention, and emergency preparedness. Eglin AFB is one of ten other marinas and boat yards in Florida to receive the *Clean and Resilient* designation.

Gopher Tortoise

Through an active partnership with the USFWS and FWC, Eglin AFB is digging in to protect gopher tortoises, a candidate for listing under

the Endangered Species Act (ESA). This effort involves translocating 6,000 tortoises, at risk due to urban development from South Florida, to high quality habitat on Eglin AFB currently uninhabited by tortoises. With 482 tortoises moved to date and plans to excavate and transport another 5,518, this partnership intends to establish 18 repatriation colonies. The significance of this effort is massive and extends far beyond Eglin AFB boundaries due to the potential presence of gopher tortoises on 23 DoD installations across the southeastern United States. In addition to working collaboratively with regulatory partners and Texas A&M University, this proactive investment has involved a large volunteer labor force to construct 191 acres of enclosures to receive and relocate tortoises. Project productivity recently catapulted forward with team members obtaining state certification needed to excavate tortoises with heavy equipment, reducing capture time from 28 days to one.



Gopher Tortoise Relocation

A gopher tortoise waits to begin exploring its new home deep within Eglin AFB. More than 480 tortoises were released into their 191-acre habitat after being moved from their previous home in South Florida.

Longleaf Pine

Eglin AFB has been recognized as a leader in DoD natural resources conservation. During the accomplishment period, the Installation

hand-planted almost one million longleaf pine seedlings and restored 7,100 acres of degraded forest habitat by removing off-site and invasive vegetation. Because of their herculean efforts, Eglin AFB was awarded the DoD Team achievement award by The Longleaf Alliance. They were recognized for having outstanding fire, forestry, and wildlife conservation programs.

Cultural Resources

Eglin AFB also leads the way toward meeting the DoD goal of completing historic property inventories. Using a robust, statistically validated predictive model for archaeological site location, Eglin AFB has been able to focus survey dollars where they are most effective. Implementation of the predictive model has effectively eliminated 35% of Installation land area from the need for the National Historic

Preservation Act Section 110 inventory survey, for a cost savings of at least \$20 million. Pushing forward with the remaining inventory, Eglin AFB surveyed approximately 13,000 acres, clearing most of that land for mission activities.

NEPA

Eglin AFB ensured zero negative mission impacts through the employment of the innovative online Environmental Impact Analysis system. The System enabled the Environmental Management Team to coordinate with planning, legal, public affairs, bioenvironmental, and safety officials across the Installation in a web-enabled platform, reducing required timelines for interdisciplinary environmental impact analysis by 75%.



Cultural Resources Management

Archaeologists document the foundation of the early twentieth-century Broxson store during limited data recovery at the Broxson Resource Group. The inter-agency coordination on this project resulted in a management plan that allowed corridor improvements to State Road 87 to proceed on schedule. Evacuation routes along the Gulf Coast are few but essential. The widening of State Road 87 will provide viable egress for Gulf Coast residents and the military during emergencies.

In accordance with the National Environmental Policy Act, the Team pointed the way to environmental compliance by evaluating 2,621 Base civil engineer work requests for potential environmental impacts, applying categorical exclusions on 75% of the proposed actions and evaluating 1,137 Requests for Environmental Impact Analysis for the remaining 25% plus test missions, real estate outgrants, and aircraft bed-downs, which are other proposed federal actions requiring documentation on an Air Force Form 813. The Environmental Management Team also completed 97 Environmental Baseline Surveys and associated waivers; expertly managed one Environmental Impact Statement, achieving Record of Decision signature for the Gulf Regional Airspace Strategic Initiative landscape initiative; and completed 10 Environmental Assessments.

Community Relations

Eglin AFB is taking the classroom into the field. eMammal is a Smithsonian Institution program to manage and archive data from camera trap research programs. Partnering with the Okaloosa County School District, the Environmental Management Team helped outfit 25 local schools with camera kits and volunteer teams that deploy camera traps across local public lands and Eglin AFB's reservation. Entering the second year of this effort, 52 adult volunteers have spent over 1,000 hours deploying cameras and gathering images while leading teams of 200 students from local schools. The wildlife images are identified by students and volunteers and uploaded to a school district-specific webpage. The Team also developed science curriculum that teaches students how to develop hypotheses about local wildlife, test them with camera trap data, and better understand the concepts of habitat and ecosystems.

Eglin AFB's volunteer program consistently exceeds expectations. The program recruits more than 230 volunteers annually who devote

more than 5,500 hours to ecosystem assessments, forest restoration projects, prescribed fire, and sea turtle monitoring. Approximately three man-years are saved due to volunteer efforts. Sea turtle volunteers alone contribute over 2,000 hours to surveying for nesting activity, monitoring nests, and nest-sitting to ensure that hatchlings make it to the water safely. Volunteers pitched in to remove more than 60 tons of municipal solid waste, waste metals, and tires from the Eglin AFB reservation and beaches during the accomplishment period.



Tree Planting

More than 230 volunteers devoted over 5,500 hours to Eglin AFB programs, helping the EQ program remain a leader in natural resources conservation. During the accomplishment period alone, approximately three man-years were saved due to volunteer efforts.