

FY 2009 Secretary of Defense Environmental Awards

# Fort Stewart and Hunter Army Airfield

Environmental Quality, Non-Industrial Installation

## INTRODUCTION

Fort Stewart/Hunter Army Airfield (FS/HAAF) is well known as the home of the 3rd Infantry Division (ID) and serves as the U.S. Army's premier power projection platform on the Eastern Seaboard. FS/HAAF is located near Savannah, Ga., and comprises more than 284,000 acres of residential, garrison and training/maneuver area. Its mission is to train and rapidly deploy military forces worldwide. With the availability of year-round training support, access to a major port and an airfield makes FS/HAAF a prime East Coast training location for the Army, as demonstrated by several 3rd ID and National Guard Brigade training/deployment operations. FS/HAAF has a population of approximately 24,465 military tenants, including 5,817 3rd ID personnel. Army Family members and civilian employees make up the other 36,519 tenants on the installation, bringing the total population to approximately 60,984. FS/HAAF is also a leading mobilization station for Army units preparing for tours in Operation Iraqi Freedom as well as two-week National Guard annual training.

*On this page: Soldiers out of Fort Stewart, Ga. prepare to conduct a patrol in Arab Jabour, southern Baghdad, Iraq. (U.S Army photo by Spc. Olanrewaju Akinwunmi)*

## JUDGING CRITERIA



Program  
Management



Orientation  
to Mission



Technical  
Merit



Transferability



Stakeholder  
Interaction

**SUSTAINING THE ENVIRONMENT FOR A SECURE FUTURE**

## BACKGROUND

FS/HAAF is a recognized leader in global citizenship and sustainability values and is constantly striving to improve environmental quality of the installation and surrounding areas. The installation's sustainability efforts were a major contributor to FS/HAAF winning the Army Communities of Excellence Award for 2004, 2005, 2006 and 2009. In addition, FS/HAAF was recently awarded the 2009 Military Conservation Partner Award for partnering effectively with other environmental organizations to continuously improve environmental practices. These honors, among many more, were bestowed upon the installation for superb performance in using its resources to sustain the mission, increasing the productivity of its workforce and enhancing the FS/HAAF community quality of life.



*Lower Ogeechee River Conservation Corridor encompasses 13,500 acres along the Ogeechee adjacent to the installation offering biodiversity and a buffer for the installation.*

FS/HAAF is committed to supporting mission readiness and execution while enabling the well-being of approximately 61,000 Soldiers, Family members and civilians, improving infrastructure and preserving the environment. The installation complied with the requirements of Executive Order (E.O.) 13148 and the International Organization for Standardization (ISO) 14001 in September 2005. This was a significant accomplishment, and it launched the installation's efforts to focus on sustainability and improve the environmental conditions at FS/HAAF.

The Directorate of Public Works (DPW) Environmental Division is committed to supporting the Army's mission of enhancing the installation's power projection platforms in support of national security objectives while overseeing all environmental activities for the installation and providing

“FS/HAAF has demonstrated that by educating and involving every Soldier and civilian, a facility can reduce its environmental impact to a level that allows its mission to be sustained for the long term. This is the future of environmental protection, moving from preventing harm to operating in harmony with the natural environment.”

- Thomas Easterly, Indiana Department of Environmental Management

information and education to Soldiers and civilians on how their operations affect the environment as a whole. The division's staff is comprised of engineers, environmental protection specialists, biologists, archeologists, historians, foresters and contractors supporting the installation's mission, quality of life for Soldiers and their Families, and overall environmental quality. The division is comprised of three branches: Fish and Wildlife Branch, Forestry Branch, and Prevention and Compliance Branch. The Prevention and Compliance Branch oversees 16 different programs: Sustainability, Pollution Prevention, Air Quality, Borrow Pit Management, Cultural Resource Management, Toxic Substances/Hazardous Materials/Hazardous Waste Management, Emergency Planning and Spill Response, Remediation, Solid Waste Management/Recycling, Storage Tank Management, Noise Management, Stormwater Management, Water Quality, Wastewater Quality and Wetlands Management. The branch also coordinates the installation's National Environmental Policy Act (NEPA) requirements for the Environmental Division. Collectively, these programs all support the FS/HAAF training mission.

## PROGRAM SUMMARY

FS/HAAF has an award-winning environmental program geared toward meeting the installation's environmental challenges in a way that supports Soldier readiness. The mission of the Environmental Division is to support military training by achieving and exceeding environmental, natural and cultural resources stewardship and legal standards.



**Environmental Division Mission Goals/Objectives:**

- Recognize changing environmental, natural and cultural resources standards and military training needs.
- Place environmental, natural and cultural resources management within an appropriate context which satisfies the training mission of the installation.

FS/HAAF is home to a number of threatened and endangered wildlife species. These animals include the American bald eagle (Federally protected), Red-Cockaded Woodpecker (RCW) (endangered), Eastern Indigo Snake (threatened), Wood Stork (endangered), Frosted Flatwoods Salamander (threatened) and Shortnose Sturgeon (endangered). The goal of the Fish and Wildlife Branch is to support the military mission by conserving, protecting, restoring and sustaining biological diversity and the ecosystem viability upon which fish and wildlife depend. This includes enhancing the quality of life for Soldiers, their Families and civilians through quality fisheries, game management and the conservation of threatened and endangered species.



*A Fort Stewart biologist applies colored celluloid leg bands to a Red-Cockaded Woodpecker, one of the many protected species living within the boundaries of Fort Stewart.*

Fort Stewart’s Forestry Program is one of the largest in the Department of Defense. Fort Stewart is also home to the largest remaining acreage of longleaf pine-wiregrass ecosystem in Georgia. Notable accomplishments achieved include reforestation, endangered species habitat improvement and commercial forestry. The success of Fort Stewart’s forestry management can be measured by the installation’s immensely valuable timber resources and excellent training environment.



The Prevention and Compliance Branch oversees operational and administrative compliance of the numerous FS/HAAF state permitted facilities and vast wetland and cultural resources, while promoting pollution prevention and sustainability.

The DPW Air Program manages activities on post affecting air quality, such as painting, fueling, burning, engine testing, generator usage and heating and cooling. Managing these activities keeps the facility in compliance with federal, state and local environmental regulations. The Borrow Pit Program provides Fort Stewart with support to conserve resources and an on-site source of suitable soils for use as fill material. The Cultural Resource Management Program protects significant historic properties while maintaining the largest possible area for training. The Resource Conservation and Recovery Act (RCRA)/HAZMAT Program provides training on the proper handling and management of regulated materials to minimize the waste, while carefully monitoring how hazardous waste is managed. The Restoration Program identifies, investigates and cleans up hazardous substances, pollutants and contaminants on the installation. The Recycling Program manages solid waste, landfill compliance, the processing station, all recycling on the installation, the Solid Waste Annual Reporting System and pollution prevention. The Environmental Division’s Noise Program monitors noise levels associated with various training maneuvers and has developed a Noise Complaint Management Plan to ensure that all noise complaints are correctly documented and addressed. The Water Program works to continually monitor the drinking water for contaminants; sampling is performed at various locations throughout the installation on a daily basis to ensure that the water is safe to drink. FS/HAAF contains a great deal of wetland areas – wetlands constitute roughly one third of the installation. The Wetlands Program reviews proposed construction projects, as well as timber harvests and training operations, and looks for the optimal site for such actions to minimize wetland impact.

All of these programs enable FS/HAAF to maximize training activities while maintaining environmental quality on the installation. Undergirding all these programs and the installation strategic plan is a Sustainability Management System (SMS) that provides an environmental management framework and policies for preventing pollution, conserving natural resources, improving environmental stewardship, and complying with federal, state and local regulations.

## ACCOMPLISHMENTS

### SMS Implementation

FS/HAAF is committed to simultaneously optimizing performance of the mission, the well-being of Soldiers, Family members and surrounding communities, and minimizing the impact on the environment. To achieve this goal, FS/HAAF has established, implemented and maintained an effective SMS. An SMS is an Environmental Management System which balances environment with mission and well-being to support the military's long-term ability to train and deploy combat-ready Soldiers.

The FS/HAAF Environmental Division works closely with the command to ensure environmental quality and sustainability issues are integrated into the installation's strategic planning process. Specifically, Quality Management Boards (QMB) have been established to embody the installation's mission objectives. The Environmental Division is involved in each of the five QMBs, which include Training Support; Power Projection and Readiness; Well Being; Safety and Security; and Optimizing Resources. The QMBs meet to review metrics and determine success in meeting the mission objectives and identifying projects/processes that would improve success. The installation's SMS has met ISO 14001 Environmental Management Systems and remained continuously conformant with the standard since 2005. Although the SMS is integrated installation-wide, it is administratively managed with three staff members that actively work to implement and promote the sustainability policy and requirements.

The Environmental Division's Fish and Wildlife Branch plays a critical role in the success of the installation's sustainability. For instance, the Fish and Wildlife Branch is responsible for conservation and recovery efforts associated with many threatened and endangered species, such as the federally endangered RCW. Since 1994, the Fish and Wildlife Branch has seen a steady increase in the RCW population on Fort Stewart. Currently, there are 315 potential breeding groups (PBG), and FS/HAAF is expected to reach their recovery goal of 350 PBGs in 2012. Through full implementation of the SMS and its land management focus, threatened and endangered species management has had much success. The installation's RCW management has



excelled to the extent that FS/HAAF contributes more than 30 birds per year to expand the effort of growing RCW populations in other areas such as the Talladega National Forest, the Avon Park Air Force Range and the Disney Wilderness Preserve. As a result, training restrictions have been significantly reduced. Once recovery is reached, training restrictions will be eliminated.



The Division's Forestry Branch maintains a proactive prescribed burning program which is renowned by national fire experts. Controlled burning is a managed burn which uses low-intensity fire to improve and enhance training lands, clear underbrush to reduce wildfire hazards, improve wildlife habitat and accomplish predetermined, well-defined management objectives. Extensive preparation and work goes into each planned burn. FS/HAAF's Forestry Branch began a controlled burn season on 5 November 2009. The Forestry Branch spent months developing burn prescriptions for each area that would be burned. These planned burns involve



*An ignition device dropped from helicopter starts the prescribed burn that is ecologically favorable for fire-dependent plant and animal species living on FS/HAAF.*

burning between 500 and 2,500 acres per day and can occur on any day during the burn season. Typically, FS/HAAF burns between 100,000 and 120,000 acres annually, primarily to improve and maintain the landscape for military training.

The installation also burns to reduce hazardous fuel, improve endangered species habitat, regenerate longleaf pine, control brownspot needle blight and suppress undesirable hardwoods. Thinning, burning and removing midstory hardwoods has increased visibility and maneuverability in the forest and greatly improved the landscape's suitability for mechanized maneuver training. Since FY 2000, Directorate of Plans, Training, Mobilization and Security (DPTMS) records indicate that military units training on FS/HAAF have not lost a single day of training due to wildfires or wildfire suppression.

## Waste Reduction Efforts

Recently, FS/HAAF began to elevate its conservation efforts in the area of water usage. FS/HAAF initiated a number of conservation measures (e.g., installation of low flow water fixtures, leak detection surveys and system upgrades that included replacement of leaking water and steam lines, restrictions on outdoor water use) that resulted in a 9 percent reduction in water intensity over a two year period. In an effort to further conserve as much water as possible the installation and the city of Hinesville are partnering on an initiative to install “purple pipe” on FS/HAAF that will help achieve the goals of the Coastal Georgia’s Water and Wastewater Permitting Plan for Managing Salt Water Intrusion while continuing to meet the goal of E.O. 13514 (2 percent annual reduction from an FY 2007 baseline or a total of 26 percent reduction by FY 2020). Reuse water piping is purple in color to differentiate it from regular drinkable supplies, which are typically blue. Purple pipe is currently being installed to distribute reuse water from a Hinesville wastewater treatment plant to the golf course and Central Energy Plant to eliminate use of drinkable water for irrigation and industrial purposes. FS/HAAF’s Taylor’s Creek Golf Course uses about 121,000 gallons of drinkable water per day for irrigation. By taking advantage of reuse water treated to a very high standard, the installation will save a considerable amount of drinkable water, and because they will be substituting reuse water, the golf course will be allowed to consistently irrigate throughout the year, even during times of severe drought. This will permit groundskeepers to constantly maintain a beautiful landscape for Soldiers, their Family members and civilians alike



to enjoy on a daily basis while providing the city with a reuse customer for its wastewater treatment plant and closing the loop on the “water cycle.” The Central Energy Plant uses about 742,000 gallons of drinkable water per day for industrial purposes. Considering this water is constantly being circulated through pipes to heat and cool the installation’s industrial areas, this is an ideal facility to connect to a purple pipe distribution system, where drinkable water use is eliminated in favor of reuse water. In partnering with the city of Hinesville, the city constructed a reuse facility to reduce the demand on the existing wastewater treatment plant. This reuse facility will reduce FS/HAAF’s demand on the Upper Floridan Aquifer by another 860,000 gallons per day. This objective of water conservation will ensure growth potential for the installation and surrounding areas.

**“By integrating environmental quality and sustainability into the Installation’s Strategic planning process, FS/HAAF has implemented projects that have reduced its waste generation.”**

**- William Dzeda, National Guard Bureau, Environmental Programs, Sustainability Branch, Water Program Manager**

## Environmental Compliance Assessment and Management Program

The Environmental Division assisted the Directorate of Logistics (DOL) with their Lean Six Sigma project establishing practices and procedures reducing the amount of hazardous waste generated by DOL Maintenance. The end result was a 73 percent reduction in hazardous waste and a 51 percent reduction in volatile organic compounds (VOC) generated by DOL Maintenance. The project evaluated hazardous waste management procedures and product substitutions to achieve these results. Water-dispersed (WD) Chemical Agent Resistant Coating (CARC) paint replaced solvent-dispersed CARC, thereby reducing VOCs; WD CARC does not contain methyl ethyl ketone and other harmful constituents, which allows for the management of dried paint and masking material as a non-hazardous waste. Used blast media is collected separately and returned to the supplier for recycling. The overall cost savings resulting from this



*In 2009, FS/HAAF drilled a Lower Floridan well to reduce water usage from the Upper Floridan Aquifer helping to alleviate some of the regional stress of saltwater intrusion.*

project is \$60,000 annually. This may seem like a small amount, but savings of this nature only means enhancement to the mission and its Soldiers.

### Effective Use of Funds

With command emphasis placed on solid waste management through incorporation of the SMS and the QMB metrics, goals were initiated resulting in a robust and very successful installation Qualified Recycling Program (QRP). The non-putrescible landfill is expected to remain viable through 2049. During the award period, FS/HAAF's municipal solid waste diversion rate increased from 27.23 percent in FY 2007 to exceeding the Department of the Army's Measure of Merit (MoM) in FY 2009 with a 40.71 percent diversion due to the QRP. Similarly, the installation's construction and demolition (C&D) diversion has exceeded the MoM since FY 2007, when its rate was at 98.78 percent, and has remained high, with an FY 2009 diversion of 91.05 percent. With a total of 96,506 tons being diverted, FS/HAAF's overall diversion rate for FY 2009 was 83 percent. In FY 2009, FS/HAAF generated approximately \$868,774 in revenues and \$10,234,504 in cost avoidance, equating to a total FY 2009 Recycling Program value of approximately \$11,103,278. FS/HAAF diverted 40.21 percent and 89.16 percent of its municipal solid waste and C&D, respectively, for a total FY 2009 diversion rate of 83 percent, thereby expanding the useful life of the landfill. Due to the installation's success and proactive efforts, the FS/HAAF QRP provided advice and assistance to the city of Savannah in the development of their recycling program. In August 2009, a House Arms Services Committee delegation after touring the recycling facilities, praised FS/HAAF as one of the best operations they had seen.

### Community Relations

FS/HAAF predicates sustainability on the primacy of the military mission and the belief that effective training can occur while protecting the environment and being good neighbors to the local community. The military community recognizes effective training, environmental stewardship and community well-being as mutually compatible and necessary for the maintenance of a quality military training. To attain long-term sustainability, FS/HAAF prepares for current and future impacts to the installation. FS/HAAF was most recently commended during the



August 2009 Installation Management Command Organizational Inspection Program for their SMS integration and the Environmental Division's exceptional effort in developing strong partnerships with the local communities. It was noted that these efforts by FS/HAAF have an obvious effect on the communities' sense of environmental stewardship. The success of the Environmental Program hinges on the involvement of many stakeholders in and around FS/HAAF. Hundreds of Environmental Compliance Officer courses and Recycling Compliance Officer training courses have been taught during the past two years, with approximately \$20,000 awarded to military units for excellence in establishing and maintaining their unit recycling program. Each quarterly Environmental Quality Control Committee briefing recognizes two military units' recycling programs with a \$1,000 incentive award.



*The Garrison Commander presents the quarterly recycling incentive award.*

FS/HAAF's robust and comprehensive community relations program reaches out not only to its Army community but also to its neighboring communities. Events, tours, presentations and classes are continually hosted on-post and off-post in support of the installation. During the past two years, a concerted media and community relations effort has produced more than 100 articles and has sponsored or participated in approximately 150 events, reaching more than 15,000 people. Efforts have expanded to include segments on local news stations, installation newscasts, commercials, outside publications, Facebook and Twitter. Work is being done to improve the individual program pages within the FS/HAAF Internet and Intranet Web sites. FS/HAAF staff have briefed sustainability efforts at such open forums as the Georgia Environmental Conference and the Georgia Water Professionals Conference and have participated in community meetings to assist in developing Wildfire Management Plans, Comprehensive Water and Wastewater Plans and a Coastal Georgia Supplement to the State's



Stormwater Management Plan. In September 2009, the FS/HAAF Stormwater Program Manager was invited to serve on the 25-member Technical Board for implementation of the Coastal Stormwater Supplement for the Southeastern portion of the state. Through such partnership and participation afforded to the local communities, surveys have shown that the public trusts the installation to care for public lands in a sustainable and sensitive manner that will not harm the public health or the environment.



### National Environmental Policy Act

The division is committed to supporting the Army's customers by actively engaging installation staff while providing sound stewardship of installation resources and the environment. Environmental coordination is continuously ongoing with DPW Master Planning Division and the DPTMS's Training Division to assist in determining optimal siting alternatives for garrison and range control projects at early proposal stages. During these early planning initiatives, the Environmental Division begins preparing NEPA documentation to meet internally set suspense dates prior to a proposed action's contract award, often enabling early execution. The office consolidates environmental responses from subject matter experts after their completion of the internal project review and coordinates those responses with project proponents and their customers to ensure they are aware of the proposed action's environmental requirements. By proactively commenting on every project, proponents and designers are continuously reminded of the need to protect and sustain our environment and incorporate required local, state and federal regulations into design, construction and implementation of those projects. This process allows the Environmental Division program managers to better prepare for U.S. Fish and Wildlife Service coordination, account for the submission of Erosion Sedimentation and Pollution Control Plans and National Pollutant Discharge Elimination System permitting and coordinate with the Army Corps of Engineers Wetland Regulatory to successfully complete 404 permitting and associated mitigation. The process also helps to complete cultural resource coordination, explain when wet utility permitting is necessary, coordinate with the Georgia



Environmental Protection Division for any air quality notifications and notify the Forestry Branch when to remove merchantable timber from project sites.

Once coordination is complete, this information is also incorporated into the proposed action's NEPA document. Each Record of Environmental Consideration and Environmental Assessment explains project-specific environmental compliance regulations and documents alternatives analyses conducted during early planning of a proposed action. Because of the success of the division's coordination process, its NEPA documents have become much more legally defensible, are easier for the public to understand and have been praised by regulatory officials for their completeness. The installation's high degree of pre-coordination helps eliminate challenges. By using this methodology, FS/HAAF's Environmental Division is fully integrated in every aspect of the installation's decision making process for each proposed action and has efficiently prioritized its workload to support all projects IAW the MCA FYDEP, the Installation Planning Board, and the various QMB rankings.

### CONCLUSION

FS/HAAF is at the forefront of integrating their SMS into an already well-established and robust environmental program. FS/HAAF has won the Army Community of Excellence Award for three consecutive years 2004-2006 and again this past year in 2009; FS/HAAF is the only installation to have won this honor four times. The installation bases environmental resources management on the importance of the military mission and the belief that effective training can occur while protecting the environment and being considerate of the local community. The level of quality outreach and communication, in combination with the program management employed by the FS/HAAF Environmental Division, has fostered strong partnerships with the community and emphasized FS/HAAF's continuing dedication to environmental quality and superior stewardship. Through their environmental initiatives and programs, FS/HAAF is demonstrating the Army is a valuable asset in sustaining the environment in Georgia and other areas of the United States.