

# ENVIRONMENTAL AWARDS

## ENVIRONMENTAL QUALITY INDUSTRIAL AWARD: WARNER ROBINS AIR FORCE BASE

### INTRODUCTION

As the largest industrial complex in Georgia (GA), Robins Air Force Base (Robins) employs approximately 23,000 personnel (6,939 military personnel, 14,952 civil servants, and 1,020 contracting and other individuals) and has a total annual economic impact of \$4.49 billion in the state. Robins is located in central GA on the eastern edge of Warner Robins, approximately 90 miles southeast of Atlanta and 18 miles south of Macon. The installation lies within the lower Ocmulgee River Basin, and runoff drains primarily to Horse and Sandy Run Creeks. The boundaries of the base encompass approximately 6,935 acres with facilities for operation, industrial, administrative, and supply functions. Forested wetland habitats comprise over 2,200 acres. The most prominent physiographic features of the area are the Ocmulgee River, located one to two miles east of the base, Bond Swamp National Wildlife Refuge, located six miles to the north of the base, and Ocmulgee and Oaky Woods Wildlife Management Areas, to the south.

Through its headquarters (HQ) staff, three air logistics complexes, three air base wings and two supply chain wings, the Air Force Sustainment Center (AFSC) provides critical sustainment for the Air Force's most sophisticated weapons systems. Robins operates under the AFSC and is the home of the AF Materiel Command (AFMC) Warner Robins Air Logistics Complex (WR-ALC). WR-ALC makes up an integral part of the USAF war fighting team with a mission to provide worldwide sustainment management support for various aircraft, weapon systems, missiles, remotely piloted vehicles, support equipment, electronic warfare and avionics systems, and all Air Force helicopters in support of HQ AFMC.

Distinct capabilities at Robins include the worldwide management and engineering responsibilities for the following aircraft: F-15 Eagle fighter, C-130 Hercules transport, C-5 Galaxy transport, U-2 Dragon Lady surveillance, E-8 Joint STARS surveillance, all Air Force helicopters, and US Marine Corps helicopters. Robins is also responsible for the repair, overhaul, and modification of all AF special operations aircraft and related systems; logistical support for the C-17 Globemaster III transport aircraft; and tactical missiles, avionics, and electronic systems on most Air Force aircraft. Robins manages a worldwide ground fleet of more than 126,000 vehicles

and supports hosted units, such as HQ Air Force Reserve Command, the 116th Air Control Wing, the 689th Combat Communications Wing, and the Defense Logistics Agency (DLA) Regional Distribution Center.

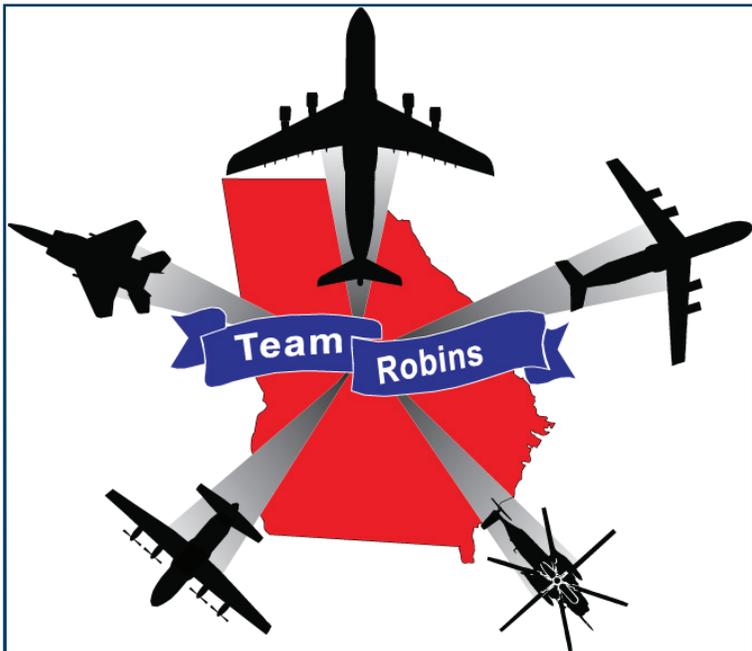


The base has enjoyed unprecedented support from the surrounding communities since its humble beginnings in 1941. Community members perpetually live their motto EDIMGIAFAD (Every Day in Middle Georgia is Armed Forces Appreciation Day). As quoted by Dr. Linda Smyth, EAB Community Co-Chair, "Robins' commitment to actively involving community members and other stakeholders has established mutual trust and fostered goodwill between the installation and the regional community."

Team Robins has created a model program for the Department of Defense (DoD) through commitment to environmental excellence, stewardship of community resources, and sustainability of the warfighter. Robins leads the way with one of the most wide-ranging and proactive installation environmental programs in the nation. Environmental excellence is exemplified by Robins' receipt of eight environmental honors and awards in 2012. Examples include:

- AFMC Environmental Quality Award (Industrial Installations)
- AFMC Sustainability Award for Individual/Team Excellence
- AFMC National Environmental Policy Act (NEPA) Award for Team Excellence
- 20th Consecutive Tree City USA Award
- AF Gen Thomas D. White Award – Environmental Quality (Industrial)

Robins stands strong with partnerships throughout the community to include Middle Georgia Regional Development Center, Robins Regional Chamber of Commerce, and the 21st Century Partnership. Robins, along with the greater community of central GA, make up Team Robins, which is dedicated to protecting the environment while providing affordable combat superiority, readiness, and sustainability to the war fighter. The base has enjoyed unprecedented support from the surrounding communities since its beginnings in 1941. Community members perpetually live their motto EDIMGIAFAD (Every Day in Middle Georgia is Armed Forces Appreciation Day).



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## **BACKGROUND**

The award-winning RAFB Environmental Management Branch of the 78th Civil Engineer Group, Asset Management Division, is responsible for planning, programming, and implementing the installation's environmental protection programs in support of the Air Logistics Complex, the 78th Air Base Wing, and associated mission partners.

The Robins Environmental Team created a focused, leadership-driven environmental management system (EMS) by incorporating the existing environmental

programs into an integrated management system. The EMS effectively meets mission objectives while ensuring compliance with Federal, State, and local environmental laws and regulations. The base has integrated environmental accountability into day-to-day decision making and long-term planning down to the shop level. Employees work together to reduce new environmental risks and to strengthen the lines of communication. All Robins employees are committed to environmental excellence, the stewardship of community resources, and sustainability of base and center operations by implementing the Robins Environmental Policy.

The Robins EMS was established in 1997 as part of DoD's EMS pilot study. Since then, it has grown into the robust structure it is today by embracing the philosophy that EMS is not a program but a system that enhances environmental management and performance. This innovative system integrates existing environmental programs into a single structure under a management system umbrella. This unified structure reduces stovepipes by allowing fluid information exchange across programs, enabling more efficient management of risks to base compliance.

The Robins EMS is characterized by a "Plan-Do-Check-Act" cycle of continuous improvement. During a cycle of EMS, current activities are determined (or identified) and reviewed, and goals are set for future activities. During the first phase of the EMS cycle, the Plan phase, processes that may have a significant impact on the environment are identified. Environmental goals are then developed and prioritized for these processes. In the second phase, Do, the focus is on implementation and operation of the EMS. The key components of this phase include defining roles and responsibilities, training, communication, documentation, operational controls, and emergency preparedness. In the third phase, Check, the progress made toward achieving our environmental goals is assessed. The key components of this phase include monitoring, assessment, corrective actions, and record controls. In the fourth phase, Act, management reviews the EMS to assess its overall effectiveness. Commanders review the progress of installation objectives and then adjust or set new goals to further enhance environmental programs.

EMS conforms to the International Organization for Standardization 14001 environmental standard. It is assessed annually, and its conformance is reaffirmed by senior management with a documented statement of conformance. EMS training is required for everyone at

Robins, which ensures the entire workforce understands not just compliance and conservation, but also pollution prevention. The unique blend of environmental aspects is a challenge for the EMS at Robins, which extends to all personnel. Challenges include the management of the following:

- 2,300 air sources – Title V Major Source
- 14 million gallons fuel storage – 144 ASTs, 25 USTs
- 4,000 tons/year hazardous materials consumed
- 1,300 tons/year hazardous waste generated; 1/3 recycled
- 10 rare/listed plant species; 2,200 acres wetlands
- 26 eligible buildings; 16 archaeology sites
- 1 Superfund site; 79 clean-up areas
- 11,500 tons/year solid waste; 1/2 recycled
- 1.4 million gallons/day water consumed
- 5 National Pollutant Discharge Elimination System (NPDES) Permits; 1 drinking water system with 6 active potable wells

Management; Pollution Prevention; Water Quality; and Storage Tanks.

Robins partners with stakeholders and the community to sustain a world class environmental program. Robins is an active member of the Keep Warner Robins Beautiful Commission (Electronics Recycling, Earth Day Awareness Displays, Christmas Tree Round-Up), the Clean Air Coalition, the Clean Air Campaign (carpooling initiative), and the Clean Cities Coalition (E-85 Station, Waste to Energy).

Meetings, training, and environmental plans are important tools for educating all WR-ALC partners. Working group meetings are held for the Green Procurement Program (GPP) Team, Hazardous Material Management Process Team, Cross Functional Team, and Qualified Recycling Program (QRP) Team, and the following training is provided:

- Newcomers environmental awareness training to ALL Right Start employees
- Program specific training (Air Quality, Hazardous Waste, Hazardous Material, GPP)
- One-time computer-based EMS training for all employees and contractors
- Month-long Earth Day events each spring
- Articles for Robins newspaper, the REV-UP, on multiple topics on a recurring basis
- Quarterly fact sheets on the status of environmental clean-up activities
- Complex-wide working group meetings (Hazardous Material, GPP, Unit Environmental Coordinator, QRP, etc.) to promote cross feed/peer review
- Quarterly community environmental advisory board meetings to keep the public informed of environmental stewardship initiatives



## ROBINS AIR FORCE BASE ENVIRONMENTAL POLICY

**All Robins AFB employees are committed to environmental excellence, the stewardship of community resources, and sustainability of base and center operations by implementing the following:**

**S**et objectives: We will fulfill or exceed our environmental objectives to improve operational readiness.

**O**bey requirements: We will comply with environmental regulations and other requirements while reducing compliance costs and liabilities.

**A**chieve improvements: We will continually improve our programs, processes, and systems.

**R**educe pollution: We will reduce or eliminate the use of hazardous materials and pollutants, purchase environmentally preferable products and services, while encouraging recycling.

S.O.A.R is the Robins AFB Environmental Policy Statement. This policy is posted at facilities across the Installation. Protecting the Environment is Everyone's Job!

To support these challenges and established mission goals, the Environmental Team has developed over 70 environmental plans and associated documents; totaling nearly 10,000 pages. Some of the mission specific impacts associated with these plans include (but not limited to) the following: Air Quality; Asbestos; Community Relations; Environmental Impact Analyses; Green Procurement; Hazardous Materials; Hazardous Waste; Lead-Based Paints and other Toxic Substances; Natural and Cultural Resources; Emergency and Spill Response Plans; Restoration; Oil-Water Separators; Storm Water

Environmental awareness is further accomplished through continual improvement of existing plans. In FY11 and FY12 Robins was successful in updating the Water Conservation Plan (to include Executive Order (EO) 13514 and Water Stewardship Act goals) and the GPP Management Plan (“Buy Green” philosophy); developing 30 Startup, Shutdown, and Malfunction Plans (Title V Air Permit); creating a new Hazardous Material Management Plan (detailed guidance), updating Storm Water Pollution Prevention Plan and the Unit Environmental Coordinator reference/guidance document.

## ACCOMPLISHMENTS

### EMS

Robins has revitalized many of its award-winning environmental programs and plans which are encompassed in its EMS. Activities include monthly installation Environmental, Safety, and Occupational Health Council meetings, monitoring/maintenance of over 3,000 compliance sites, and track over 500,000 hazardous material/waste items in the Hazardous Material Management System.

EMS goals are closely linked to existing executive order, regulatory compliance, and mission requirements. Successful achievement of these goals has not only preserved the environment but also saved dollars while sustaining the mission.

- The goal to reduce solid waste disposal by 40% annually was met and exceeded by reducing disposal by 55.1% in FY11 and by 53.5% in FY12. More than \$1 million in solid waste disposal costs was saved.
- Water consumption was set to be reduced 2% annually or 16% from the baseline year (FY07) through FY15. Robins is ahead of schedule with a reduction in consumption of 24% through FY11, exceeding federal agency goals.
- The goal to eliminate Class II ozone-depleting substances (ODS) by 50% by CY15 has already been met five years in advance! Robins has reduced Class II ODS by 66% through CY11.
- The Robins QRP exceeded its goals and established revenues of \$515K (FY11) and \$974K (FY12) generating return on investments (ROIs) of 87% and 137% respectively.
- In a remarkable effort to meet the AF Pollution Prevention (P2) and Waste Minimization Goal, in CY11 the amount of Toxics Release Inventory releases were reduced 17% compared to the CY06 baseline.
- The Air Force P2 and Waste Minimization target to reduce 7% of hazardous waste by 2015 from baseline average of 2008-2010 was adopted by the Robins EMS. Robins achieved a 9.5% reduction in 2011, four years ahead of schedule to meet the 2015 goal.

### P2

Robins has partnered with the GA Department of Transportation and the GA Clean Air Campaign since 2007 to promote clean commuting options. In November 2012 the 78th Air Base Wing was the recipient of the

PACE Award in the Government Champions/Federal Employer category. This award is given to public sector employers that have developed innovative approaches to reducing traffic and improving air quality while enhancing operations that foster increased use of alternatives to driving alone. In FY11 Robins formed a team to expand commute options for employees and to increase participation in existing commute programs. Between FY11 and FY12 the Robins Transportation Improvement Program (TIP) grew to become the second largest in the Air Force. Participants of this program are members of vanpools or transit riders on the BiRD – the Buses into Robins Daily shuttle – which is a partnership between the Macon-Bibb Transit Authority and Robins. In addition, Robins provides reserved parking spaces for carpoolers and offers compressed work weeks and telework opportunities. These programs eliminate over 2,500 drive-alone commute trips per month and more than 20 Robins employees have been recognized as “Clean Air Commuter Champions”, meaning they have removed 25,000 pounds of pollution from the air by choosing clean commute options. Between FY10 and FY12, Robins carpoolers have reduced the number of vehicle miles traveled by 2 million, which equates to 80 trips around the globe resulting in over \$1.1 million in fuel and maintenance cost savings. In addition to the cost savings realized by participants, carpooling reduces hydrocarbon, nitrogen oxide, and carbon dioxide emissions, smog and greenhouse gas contributors. Active participation by carpoolers and vanpoolers resulted in the prevention of 1,100 tons of pollutants being released into our community’s air, also avoiding the release of 1,300 tons of carbon dioxide emissions into the earth’s atmosphere.



Dennis and Julie Julius catch the BiRD in front of Bldg. 301. The BiRD - Buses into Robins Daily - is a partnership between the Macon-Bibb Transit Authority and RAFB, and serves a workforce of over 22,000 individuals in Houston, Macon, Bibb and surrounding counties. Promoting clean commuting initiatives is a top priority at Robins.

In an effort to reduce emissions from depainting operations, Robins installed new aerospace Flashjet® depainting booth in the Radome Corrosion Control shop. The Flashjet® process accomplishes coating removal by applying intense millisecond duration pulses of light energy from a xenon flashlamp-reflector assembly to the coating surface. A fraction of the light is absorbed and converted to heat, ablating the coating. A carbon dioxide pellet stream is then used to cool the substrate while clearing away coating residues left by the flash. A large particle separator collects 97% of the particles greater than 20 microns. The exhaust then flows through a blower and on to HEPA filters rated at a minimum of 99.97% removal efficiency for particulate material sized 0.3 microns and larger, and finally through an activated charcoal adsorption unit for gaseous or vapor contaminant removal. This innovative technology has decreased the use of methylene chloride solvent based stripper dramatically.

Other waste minimization efforts include:

- Reduction of the number of reportable Emergency Planning and Community Right-to-Know Act (EPCRA) Tier II (Section 312) chemicals by 5 (reported 37 in CY10 and 32 in CY11). This was accomplished through improved inventory management in the main central warehouse, thus eliminating old or expired chemicals.
- The reclamation and selling of over 682,000 pounds of used oil and fuel, resulting in earnings in excess of \$77,000 in CY11 and CY12.

## QRP

In the summer of 2012, Robins fully adopted the new Air Force campaign, “Your Mission Starts Here to Win the War Against Waste”. Everyone plays a part when it comes to recycling materials at Robins. The QRP has three primary sources of income: proceeds generated from the Happy Hour Service Center in Warner Robins, QRP scrap metal operations and sales, and revenue from the DLA Disposition Services.

During FY12, Happy Hour collected 482 tons of cardboard, 429 tons of paper, 11 tons of aluminum, 49 tons of glass and 45 tons of plastics, generating revenue of \$162,823. An overall \$11,000 increase from FY11 contributing to a total cost avoidance of \$163,000 in disposal.

A significant QRP improvement included the grand opening of the new QRP drop-off facility, a 2,700-square foot storage shed converted to a new “one-stop-shop” recycling center. The facility includes segregated areas for glass, aluminum, plastic, paper, cardboard and printer cartridges. In FY12, the new drop-off center added 15% to the program metrics, exceeding 1,000 tons in recyclables for the year! In addition, nearly 900 tons of scrap metal, three tons of used oil, and over 58 tons of batteries were also recycled and sold, generating proceeds exceeding \$381K. The QRP diverted 53% of solid waste from the local landfill, exceeding the Air Force goal by 3%.



The Mission Starts Here! Pictured here at the Grand Opening ceremony of the new Robins AFB Qualified Recycling Program Facility are 78 Air Base Wing Commander, Col Butikofer, 78 Force Support Squadron Director, Alexander Kovras, and 78th Civil Engineer Group Director, Otis Hicks. Robins leadership demonstrate how recycling at Robins AFB just got better!

Another key element that contributes to the success of the QRP is the improved partnership with DLA Disposition Services, accounting for nearly 43% of QRP revenue in FY12. Through due diligence and actively assisting DLA Disposition Services with recycling oversight, the Robins QRP received \$417K of revenue, an increase of \$360K from the previous year! Robins QRP is a two-time winner of the AFMC QRP Award – Best/Most Diverse QRP and is Winning the War Against Waste!

## Water Quality

Robins is bordered by state waterways on three sides. Due to the proximity of the installation to these waterways, the age of the infrastructure, and the dynamic nature of logistic center operations, daily compliance with our storm water permits is a continual challenge. Through a robust water quality program, Robins has continually achieved compliance with four different types of NDPES permits, including wastewater, industrial storm water, municipal separate storm sewer system, and construction storm water. The base has not had a Notice of Violation with respect to storm water or wastewater in eight years.

As sediment is the number one water pollutant in GA, the Environmental Management Team has developed numerous guidance documents, tutorials, and forms to minimize sedimentation, including a standardized template for the state-required Erosion and Sediment Control Plan. This information is provided on a CD to all construction contractors requiring land disturbance permits. Robins also completed a comprehensive Storm Water Pollution Prevention Plan update in 2012 based on the requirements of the new industrial storm water permit in GA. In preparation of the document, the installation invited the regulatory agency for a tour to showcase the storm water management system and water quality program at Robins. Following the meeting, Ms. Frances Carpenter, GA Environmental Protection Division (EPD) Storm Water Unit Manager, commented, "We were impressed by the organization and intent of your storm water program."



The state-of-the-art Groundwater Treatment Plant has received numerous accolades for successful, efficient, and safe operation. The first industrial wastewater treatment facility in Georgia to receive the Platinum Award, it has also received Plant of the Year ten times since 2000, with zero lost time accidents. The plant has removed more than 34,900 pounds of contaminants.

## Community Relations

Being a good steward of the environment and recognizing the importance of public awareness is a daily occurrence at Robins. The Robins Environmental Advisory Board (EAB) is one vehicle for fostering a proactive and sincere partnership between the community, the regulators, and the base. The EAB has continuously been rated as outstanding by both the community and the regulatory agencies. Quarterly meetings and annual tours, which allow the community to view first-hand the incredible accomplishments being made, provide awareness of the environmental program. Briefings are tailored to promote meaningful dialog by simplifying technically complex topics into layman's terms. Fact sheets, summarizing the information disseminated during the EAB, are distributed throughout the Middle GA community, and a public website is used to keep interested stakeholders informed of Robins' successes/achievements.

Robins is also involved in numerous environmental community groups and activities. The Keep Warner Robins Beautiful Youth Advisory Board has recognized the base in a formal letter as an education community leader for mentoring our youth. Robins provides environmental-focused tours installation activities, including the GWTP, the composting facility, and emergency and spill response capabilities. With over 2,230 acres of wetlands, public education has continued through tours of swamps, upland forests, and other natural treasures for over 200 students from surrounding universities.



Our professional forest management efforts continue to pay dividends. The base was awarded Tree City USA Status for the nineteenth consecutive year in 2012! The entire community celebrates Robins' Tree City USA recognition with an Arbor Day Ceremony each spring, held in the base Historic Forest.

Community partnerships are ongoing with efforts to find, contain, and eliminate invasive plant and animal species. Between FY10 and FY12, Robins utilized contract support, the pest management shop, and volunteers from local scout troops and colleges to reduce populations of kudzu, alligator weed, English ivy, Chinese tallow tree, and wisteria. Volunteer trappers were also recruited to assist in our continued efforts to reduce the population size of troublesome feral hogs, capturing approximately 400 of these animals over a two year period.



The entire community celebrates RAFB Tree City USA recognition with an Earth Day/Arbor Day Ceremony each spring, held at the Base Historic Forest. Trees planted in the forest are derived from seeds of trees located on properties once owned by notable Americans such as George Washington and Henry David Thoreau. There are currently 112 trees planted in the Base Historic Forest, most of which were planted as living memorials to deceased or retired members of the Robins Community

Robins currently leads Earth Day outreach efforts that facilitate community involvement with interactive environmental displays, community participation in stream cleanups, nature walks, grocery bag art promoting environmental awareness in local elementary school students, and electronics and paper recycling days. Community members have repeatedly recognized the installation's commitment to sustaining our shared environment with superior accolades. In 2012, Robins was awarded the 18th consecutive Environmental Partnership Award from the Keep Warner Robins Beautiful Commission.



Every year, the Earth Day Grocery Bag Contest generates excitement and competition among students from a local community school. Bags are donated by the Base Commissary, decorated with earth conservation messages by students, judged by the RAFB environmental office, and returned to the Commissary for grocery bagging on Earth Day to spread environmental awareness. Awards are given to the winning artists.