



2024 Secretary of Defense

Environmental Awards

Sustainability, Industrial Installation
Robins Air Force Base

Introduction

Robins Air Force Base (AFB) is Georgia's largest single-site industrial complex, employing a workforce of approximately 24,000 civilians, contractors, and military members. The installation is home to the 78th Air Base Wing, supports a wide range of aircraft, engines, missiles, software, avionics, accessories components, and is one of three U.S. Air Force Air Logistic Complexes (ALCs) known as the Warner-Robins ALC. Robins AFB is east of the City of Warner Robins and west of the Ocmulgee River in Houston County, Georgia. The Warner-Robins ALC is responsible for the management and repair of the C-130 Hercules, F-15 Eagle, C-17 Globemaster III, C-5 Galaxy, C-5M Super Galaxy, Boeing F-15E

Strike Eagle, RQ-4A Global Hawk, and Sirosky HH-60G Pave Hawk aircraft.

The installation is situated on 6,935 acres, with 2,200 acres of protected wetlands and 350 to 400 acres of upland forest, including hardwoods and planted pines. Species of on the installation include 400 plants, 39 mammals, 110 birds, 60 fish, 34 reptiles, 26 amphibians, and 411 insects. The species of most concern is the Ocmulgee Skullcap, a rare herbaceous perennial plant. Additionally, 58 archaeological sites, including 16 that are eligible for listing on the National Register of Historic Places, are on Robins AFB. The installation is currently in consultation with the State Historic Preservation Office on improvements to support the continued use of Building 125, utilized by the 402nd Aircraft

Maintenance Group for C-5 work, while maintaining its historic qualities.

Background

Robins AFB employees are committed to environmental excellence, the stewardship of community resources, and the sustainability of installation-wide operations. Within the 78th Air Base Wing's Civil Engineer (CE) Group, the Environmental Management Branch is responsible for ensuring compliance with federal, state, and local environmental laws and the stewardship of natural and cultural resources. Through effective compliance measures, pollution prevention strategies, and a robust Qualified Recycling Program (QRP), the Environmental Management Branch effectively manages a depot-level Hazardous Materials and Hazardous Waste Program, Clean Air Act Title V Major Source Air Quality Program, Water Quality Program, and Natural and Cultural Resources Program. The Water Quality Program manages three National Pollution Discharge Elimination System permits. The Natural and Cultural Resources Program works with several state-listed rare plant species, National Register of Historic Places-eligible archaeology sites, and coordination with 13 affiliated Native American Tribes. Ensuring environmental compliance, protecting natural and cultural resources, and maximizing pollution prevention and sustainment efforts are the main goals for the Environmental Management Branch as they collaborate with mission partners to sustain mission readiness and maintain the complex balance between mission accomplishment and safeguarding human health and the environment.

Accomplishments

Minimizing Air Emissions

Robins AFB Air Quality Program Manager (AQ PM) worked with Warner-Robins ALC Aircraft Maintenance Group to expeditiously amend the Base's Title V Air Permit for Building 137 to utilize chemical de-paint functionality on F-15 airframes. The building

previously used outdated mechanical de-paint (robotic and hand sanding) methods that had become inoperable and unable to be repaired due to age and lack of available support. The quick work by the AQ PM and support contractors led to minimal downtime in the de-painting processes and minimal work stoppage in support of the F-15 program depot maintenance machine. Transitioning from mechanical de-paint to chemical de-paint increases aircraft throughput and lowered particulate matter emissions.

The AQ PM worked with Warner-Robins ALC Commodity Maintenance Group to bring robotic laser de-paint equipment online for use on off-aircraft parts. Robotic laser de-paint provides an alternative to mechanical sanding and chemical de-paint, leading to lower particulate matter and volatile organic carbon emissions. Robotic laser de-paint also increases worker safety by removing workers from the mechanical and chemical de-paint process. The robotic laser de-paint equipment complied with the Base's Title V Air Permit and obtained a successful inspection rate during the state regulatory inspection in January 2023.

Energy Efficient/Renewable Energy

The AQ PM and support contractors successfully managed the triennial non-emergency generator performance testing for 13 pieces of equipment in February 2023. Robins AFB's agreement with the local electric service provider provides \$750,000 per year in energy cost credits as part of the Interruptible Service Standby Generator Program. Per Clean Air Act requirements, Robins AFB non-emergency generators maintain compliance with federal and state environmental regulations through periodic performance testing to ensure pollution control devices are working correctly. The AQ PM coordinated personnel across multiple organizations (Power Production, support contractors, testing contractors, and facility managers) for seven days of testing at various

locations at Robins AFB. All 13 tests demonstrated successful emissions reductions in carbon monoxide concentrations greater than 70 percent from the generator exhaust stream. Failure to maintain compliance with Clean Air Act requirements would prevent the operation of the generators and cause forfeiture of up to \$750,000 per year in energy cost credits.

Improving Water Resource Management

The Water Quality Program Manager with the support of Robins AFB Environmental Management Branch, and multiple base organizations' volunteers undertook the significant initiative of hosting four waterways cleanup events, targeting the environmental restoration of Scout Lake, Luna Lake, and multiple base weirs. The collective effort of volunteers and Robins AFB Environmental Management personnel culminated in the removal of over 1,000 gallons of solid waste from the water. This event not only contributed to the immediate improvement of the visual and ecological aspects of the water bodies, but also served as a crucial step in fostering a sustainable and healthy aquatic ecosystem.

The Water Quality Program manages three National Pollutant Discharge Elimination System Permits and two Stormwater Permits. These permits cover 10 outfalls, 4 wastewater treatment plants and drinking water. The proactive implementation of stormwater inspections, complemented by annual sampling for the municipal separate storm sewer system and quarterly outfalls sampling, has proven to be a pivotal strategy in risk mitigation for environmental enforcement penalties. This approach demonstrates a commitment to environmental stewardship and yielded tangible results by averting potential fines, that on average, could have exceeded more than \$400,000 per day. This initiative serves as an example of how systematic environmental monitoring and

preventive measures can contribute to both fiscal prudence and ecological well-being.



Effective Weir Monitoring Program

Robins AFB resides near the Ocmulgee River, a natural resource that is vital to the installation and surrounding communities.

Solid Waste and Greenhouse Emissions

A dual-focused initiative aimed at reducing greenhouse gas emissions and minimizing solid waste was employed to address sustainability. Over 5,600 tons of materials were recycled, generating \$510,000 in proceeds for the QRP. This initiative diverted a considerable volume of waste from landfills and contributed to the circular economy by monetizing recycled materials. Collaboration with Atlanta Recycling Solutions and Full Circle Electronics during five QRP-hosted events resulted in over 19,000 pounds of recycled electronics. These events prevented electronics items from ending up in landfills, contributed to the reduction of hazardous waste components, and fostered a greener approach to waste management while underscoring Robins AFB's commitment to environmental responsibility and sustainability.

Sustainability and Green Procurement

Embracing sustainability and green procurement practices is not merely a choice but an imperative; recent initiatives underscore the unwavering commitment to sustainability and energy efficiency. Thanks to strategic funding from Resilient Energy Savings Resource Vault (RESRV), CE Cyber, and Americans for Fair Electronic Commerce

Transactions, several transformative projects have been initiated to enhance energy controls within the Supervisory Control and Data Acquisition (SCADA) system. Notably, critical projects are underway to transition two natural gas boilers at the central plant to electric, a move that aligns with the goal to reduce carbon emissions and foster a more sustainable energy infrastructure.

The Robins AFB SCADA system secured \$2M in funding to address control system cyber deficiencies. Recognized as "execution ready" and accorded top priority by the CE Installation Resource Advisor, this project not only fortifies the cyber resilience but also exemplifies the commitment to securing critical infrastructure in an environmentally conscious manner.

Further emphasizing the dedication to sustainability, two chillers were approved for Emergent Requirement Request funding through the Air Force Civil Engineer Center and subsequently awarded in September. This strategic move not only enhances the operational efficiency but also demonstrates a proactive approach to addressing emergent needs while adhering to green procurement principles.

The momentum towards a greener future continues with the receipt of a \$2M AFFECT Grant Award from the Federal Energy Management Program. This grant is allocated for the installation of a new 1.9-megawatt, 3.9-megawatt per hour Battery Energy Storage System at the Avionics Complex. This transformative energy storage solution aligns with sustainability goals and enhances the installation's resilience and ability to manage energy resources effectively.

The Office of Economic Adjustment has recognized Robins AFB's commitment to sustainability, awarding a total of \$2.9M in RESRV funding, which is designated for the installation of new chiller(s) at Buildings 158 and 228, enhancing Robins AFB energy

efficiency and its reducing environmental footprint.

These initiatives collectively underscore the steadfast commitment to sustainable practices, green procurement, and a resilient energy future. By integrating environmentally conscious solutions into the infrastructure, Robins AFB not only contributes to global sustainability goals but also position itself as a leader in responsible and efficient resource management.

Reducing Fossil Fuel Demand and Use



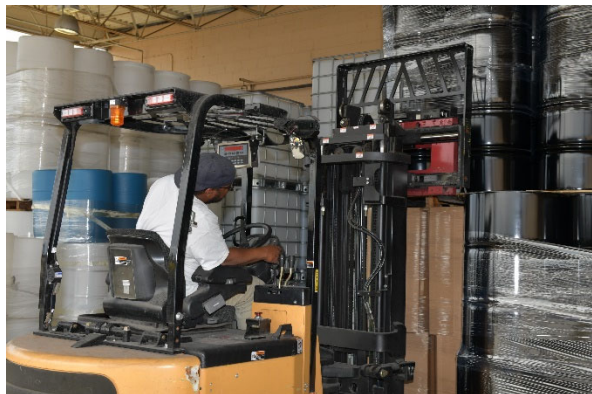
Tanks/Fuel Management

The Robins AFB Tanks Program Manager maintains compliance of the complex fuel inventory and associated plans.

Efforts to reduce fossil fuel demand at Robins AFB have been paramount, with a strategic focus on optimizing material disposition processes and minimizing travel within the base. The initiative to maximize material pick-up for disposition aligns with environmental sustainability goals and contributes significantly to the reduction of carbon emissions associated with transportation. Streamlining the movement of materials from the base to the Treatment, Storage, and Disposal Facility (TSDF) has not only enhanced operational efficiency but also actively mitigated the environmental impact of logistical activities.

Central to this endeavor has been the meticulous management of TSDF operations inventory. Through a comprehensive assessment of inventory needs, successful measures to curtail the purchase of disposition containers was achieved. This reduction in

container procurement not only signifies a commitment to waste reduction but also translates into fewer freights delivering drums to Robins AFB. This reduction in inbound freight not only minimizes the environmental footprint associated with transportation but also contributes to a more streamlined and sustainable supply chain.



Hazardous Waste Operations

Robins AFB, as a large quantity generator of hazardous waste, processes approximately 1,500 tons of hazardous waste annually.

The multifaceted approach to reducing fossil fuel demand encompasses a thoughtful analysis of transportation logistics and the material disposition process. The overarching goal is not merely efficiency but a conscientious effort to align operational practices with eco-friendly principles. The initiative showcases a commitment to sustainability that extends beyond theoretical objectives, actively translating into tangible reductions in fuel consumption and associated greenhouse gas emissions.

The concerted efforts to maximize material pick-up efficiency, minimize base travel, and manage TSD Operations inventory have yielded substantial benefits in reducing the demand for fossil fuels. This strategic approach not only aligns with global environmental goals but positions Robins AFB as a leader in sustainable practices, demonstrating that responsible material management is a key contributor to a greener and more resilient future.

Natural Resources Conservation

Robins AFB met the Tree City USA requirements for the 30th consecutive year and utilized the Green Infrastructure Plan to promote native and drought resistant tree species. The Natural Resources Conservation Program converted 10 acres of turf grass to pollinator habitat using native wildflowers and grasses. The HOPE Gardens were recognized as a way station for the proposed endangered monarch butterfly. Major projects were reviewed and monitored to ensure that wetlands were not degraded, invasive species were not promoted, mature trees and snags were retained when feasible and impacts to wildlife were minimized.

Vegetation was controlled by removing invasive species and hardwood under-story within long-leaf pine forest. Lake assessments were completed to determine fish population, water quality analysis, weed identification, water clarity/quality, and recommendations. The team surveyed plants to determine population estimates of federally listed, state listed, and rare vascular plants species within Mix Hardwood Bluff, Grady Freshwater Meadow, and wetlands associated with Sandy Run Creek at Robins AFB. The installation restored native vegetation and established protected riparian buffers at least 25-feet in width along stream banks to control erosion and prevent sedimentation of water bodies.

The Robins AFB hunting program regulations were reviewed and updated to promote safety and improve the quality of the program. Hunting map kiosks and visual aids were installed to promote hunter safety and improve the outdoors experience. A dirt access road was rebuilt and has allowed greater access to hunting areas along with providing easy accessibility to base natural areas

National Environmental Policy Act

The Robins AFB National Environmental Policy Act (NEPA) Program continues to leverage existing technology and in-house expertise, aiming for both immediate impact

and long-term benefits. The program applied a gated Air Force (AF) Form 813 process using Microsoft Teams Planner, which improved transparency, accountability, and ease of use. The NEPA Program expanded Microsoft Teams Planner use to maintain benefits with a tailored view of other areas, including real property. Transparency, consistency, and ease of training for new NEPA Program Managers, proponents, and other key offices in CE continues to be improved through the development of the Robins AFB NEPA continuity book. The program maintained and further developed expertise for in-house environmental Assessment (EA) execution, with the NEPA Program Manager writing and managing the EA for C-130 campus development, saving approximately \$35,000 that would otherwise have been needed to contract out EA preparation. The NEPA Program also exercised expertise for in-house Environmental Baseline Survey (EBS) execution, with the NEPA Program Manager writing three Phase I EBSs supporting Georgia Air National Guard facility transfers, avoiding expected delays, and saving over \$8,000.

The NEPA Program provided training for proponents and environmental subject matter experts (SMEs). Real Property proponent training covered roles and responsibilities, triggers for EBS requirements, EBS waiver applicability, EBS types, EBS development process, and AF Forms 813 that included an example with an EBS waiver. Environmental SMEs training for NEPA documents, including EAs and external projects, were reviewed at the stakeholder level. Warner Robins ALC NEPA Proponent training proactively identifies NEPA requirements and enhances the AF Form 813 Art of the Possible gated process.

Coordination and Partnerships

The Natural Resources Conservation Program worked with the U.S. Department of Agriculture to assist with the Bird Aircraft

Strike Hazzard program and nuisance wildlife control. Robins AFB managed feral swine and migratory bird species, under the authority of U.S. Fish and Wildlife permit, through nest reduction, trapping, banding, and relocation. In addition, the installation forged a partnership with the Amphibian and Reptile Conservancy, U.S. Fish and Wildlife, Georgia Department of Natural Resource, Georgia Master Gardner Association, University of Georgia's extension office, Macon Museum of Art and Science, North American Bat Monitoring Program, and Texas A&M University.

The Water Quality Program supported Robins AFB by teaching the next generation of environmental engineers and scientist. The 78th CE Group volunteered to train and provide career development for eight young career scientists and engineers and two Palace Acquire interns. Participants gained insight, experience, and tools to apply in the decision-making process, such as Art of the Possible, for solving real world scientific and environmental engineering problems at Robins AFB.

The QRP program partnered with two organizations, Joint Base Charleston and the 165th Airlift Wing Savannah/Hilton Head, to deform and bid their brass. The partnership resulted in more than 42,000 pounds recycled with proceeds totaling over \$33,000 earned for the Robins AFB QRP.

Community Relations

Robins AFB has consistently continued sound environmental stewardship through community relationships and educational awareness. The Environmental Management Branch has partnered with Keep Warner Robins Beautiful for 27 years to promote environmental awareness and sustainment beyond the installation's boundary. The Robins AFB Environmental Management Branch has hosted multiple Earth Day clean-up events across the installation and beyond in the City of Warner Robins. The Scout Lake

clean-up event resulted in the collection of more than two tons of trash and promoted conservation and environmental consciousness.



Installation-wide Cleanup Events

The Environmental Branch conducts several installation-wide cleanup projects in conjunction with the city of Warner Robins.

The Environmental Management Branch championed a Great American Cleanup event and partnered with Keep Warner Robins Beautiful to rehabilitate the 19th century Bryant Family Cemetery. Volunteers removed debris, carefully cleaned gravesites, and trimmed shrubbery. Robins AFB utilized social media, such as Facebook, installation marquee signs, and Splash page to maximize public outreach to over 24,000 employees and ensured its populace and the local community were aware of environmental activities in FY22 and FY23. As a result of these efforts, the Robins AFB Environmental Management Branch received the 2022 Keep Warner Robins Beautiful Community Partnership Award.

The Robins AFB Restoration Program Managers conducted quarterly Environmental Advisory Board meetings to provide local community updates on restoration progress at

Robins AFB. Attendees included local officials, federal and state regulators, installation environmental and legal representatives, interested community members, and restoration contractors.

The Natural Resource Conservation Program provided educational outreach events during the month of April to celebrate Earth Day. The events included arts/craft, gardening, and representation including native wildlife species. This reached more than 300 people in the community. Public education about wildlife conservation and hunting and fishing regulations were provided to government employees and the public through newspaper articles, brochures, and hunter orientation classes. The Natural Resources Conservation team developed public service announcements regarding the interactions with feral swine, alligators, snakes, and black bears on Robins AFB. These announcements were published in many social media outlets and newspapers.

The Water Quality Program personnel created a Clean Water Blue Education Campaign in collaboration with the Public Affairs Office and the various shops with the 78th CE Group. They created the article “78th CE Keeps water clean for drinking and the environment.” It improved the public perception of the Base’s drinking water supply and environmental stewardship and introduced and highlighted the amazing team of water professionals at Robins AFB.

The NEPA Program supported public/inter-agency and inter-governmental involvement opportunities for EAs and incorporation of comments as applicable; the Mission Transformation resulted in zero impacts to number of jobs. The NEPA Program coordinated with the City of Warner Robins to renew easements, supporting continued services to entities including a middle school and wastewater treatment plant, including utility modifications while addressing potential liability and environmental concerns.