



FY 2016 Secretary of Defense

Environmental Awards

Environmental Quality, Non-Industrial Installation, Little Rock Air Force Base

Introduction

Little Rock Air Force Base (LRAFB) is America's home of C-130 combat airlift. The installation has five Major Command relationships with three wings representing Air Mobility Command, Air Education and Training Command, and the Air National Guard. LRAFB also hosts an airlift group from the Air Force Reserve and a squadron from Air Combat Command. Collectively, LRAFB is known as "Team Little Rock." As the fourth largest employer in Arkansas, the installation's annual economic impact is \$813.6M, with nearly 10,000 direct jobs and 3,500 indirect jobs created. The base proudly supports over 57,000 retirees.

LRAFB provides the Department of Defense (DoD) with mission-ready Airmen and supports the largest C-130 fleet in the world. As a fundamental component of the Air Force's Global Reach capability, the installation's responsibilities range from supplying humanitarian airlift relief to victims of disasters, to airdropping supplies and troops into the heart of contingency operations in hostile areas, as well as training more than 1,800 C-130 aircrew annually from the DoD, U.S. Coast Guard, and 47 allied nations.

LRAFB is a 6,929-acre training installation located approximately 15 miles north of Little

Rock in central Arkansas, The Natural State. It is located near the eastern edge of the Ouachita Mountains above the Mississippi Alluvial Plain and within the Arkansas River valley. More than 2,800 acres are forested woodlands, and approximately 400 acres of forest are managed for commercial timber. There are over 70 acres of wetlands that provide important ecological functions for water purity and habitat for a variety of wildlife species. The base has a diverse collection of plants and animals and provides important stopover habitat for over 125 bird species during spring and fall migrations.

Background

The Environmental Element of the 19th Civil Engineer Squadron (19 CES) is responsible for providing, operating, maintaining, and protecting both the natural and built environments at LRAFB as a sustainable platform for the projection of combat airlift.

The Environmental Element is small but mighty. With only five civilian and four contract positions, the diverse Team utilizes manpower from other organizations to help "Carry the Load." The Element works within Team Little Rock to successfully attack challenges. Strong relationships with the 19 CES Utility Shop and Fire Department (Spill Response),



Award-Winning LRAFB Environmental Team

The Team is responsible for planning and executing installation environmental compliance programs with the goal to ensure progressive improvement of EMS aspects and impacts in all operations, facilities, and daily activities. The Team works together to reduce environmental risks and strengthen lines of communication from the top to the shop.

Bio-Environmental (Monitoring and Sampling), and local and state agencies allow the Team to meet mission objectives while ensuring compliance with local, state, and federal regulations.

Significant environmental aspects and mission challenges identified during the accomplishment period include:

- Construction Site Runoff. With over 150 construction projects on base, Team Little Rock continues to overcome storm water runoff challenges. With a 43% increase in construction projects, 250+ Storm Water Plans reviewed, and numerous site inspections, LRAFB contractors have corrected deficiencies without any enforcement actions levied by local or state agencies.
- Unit Environmental Coordinator (UEC) Continuity. The constant turnover of military personnel, especially assigned UECs, is challenging. The impact is mitigated by maintaining close contact with UECs to ensure they brief their replacements on assigned duties before a permanent change of station. UEC training is required within 60 days of appointment. UECs are directed to attend online training classes to learn key responsibilities. The Air Force's SharePoint site, eDASH, is also utilized to provide UEC continuity and document management. UECs participate in quarterly inspections of temporary hazardous waste storage locations within their respective facilities.
- Construction Site Hazardous Material (HazMat) Management. HazMat monthly usage forms required by construction contractors were not always complete. Consequently, Team Little Rock added a field requiring mandatory explanation as to why no HazMat was used. If an inspection revealed HazMat was used and was not properly identified on the form, non-payment of work was sought. To date, the new procedure has improved Hazmat awareness to 50+ on-site contractors and stopped seven progress reports from payment.
- Protecting Threatened Species and Habitat. Presently, the base supply warehouse roof serves as an alternate nesting site for the Interior Least Tern. A much-needed project to replace the roof was recently awarded, and Team Little Rock is partnering with the United States Fish and Wildlife Service (USFWS) to develop conservation measures to minimize species impact.

Recognizing the importance of pollution prevention and response in protecting resources, Team Little Rock continues to focus on recycling, waste minimization, and conversion to less hazardous substances. The One Plan serves as the Integrated Contingency Plan to ensure LRAFB is adequately prepared to respond to HazMat spills. The Plan combines the Spill Prevention, Control, and Countermeasure Plan, the Facility Response Plan, and the Hazardous Waste Contingency Plan. The One Plan eliminates duplicate emergency response plans, reducing overall costs by \$100K, thus improving economic efficiency for the regulated and regulating communities involved. The Red Plan, an executive summary included in the One Plan, provides a quick-reference for release response with a step-by-step flow chart for notification and reporting.

Accomplishments

Environmental Management System

The Environmental Management System (EMS) brings together existing environmental programs and mission management processes into an integrated network that enables the installation to control the environmental impact of its activities, products, and services. LRAFB leadership actively supports the EMS by participating in the Cross Functional Environmental Quality Subcommittee, which is also attended by a variety of installation shops and departments.

The 2015 EMS External Audit, led by Air Force West Region representatives, found LRAFB EMS in conformance with International Standard Organization 14001 EMS elements and LRAFB regulatory requirements. The Environmental Element led quarterly and annual internal Environmental Compliance Assessment and Management Program (ECAMP) inspections. Shop visits occurred in FY15 to ensure Team Little Rock remained in compliance to enable the continued delivery of combat airlift capability in support of national security objectives. During the 2015 internal ECAMP, the Team completed the Stage I Self Inspection for all shops across the installation. Shops averaged a healthy 94% completion rate.

EMS requires the installation to provide ongoing training. Consequently, five “Lunch & Learn” sessions provided important training on environmental programs for 75 personnel and increased environmental awareness across Team Little Rock. Extensive training on the Management Internal Control Toolset, a computer database that tracks and validates observations and corrective actions, allows for continuous self-assessment. Twelve organizations also learned about the impact of Aqueous Fire Fighting Foam/High Expansion Foam releases and steps LRAFB has taken to help control the release of foam.

Waste Reduction Efforts

Air Quality

The central Arkansas metro area has maintained attainment with the National Ambient Air Quality Standard for ozone. LRAFB supports Metroplan, a consortium of state and local affiliates working to determine transportation needs and funding priorities. The base also supports the local air quality planning coalition by participating in the Ozone Action Days notification program. Other efforts include tracking a monthly average of 1.3 million gallons of fuel, 19 million cubic feet of natural gas, generator run times, and aircraft paint usage. Efforts allowed the base to pass a no-notice state air inspection with no violations of air permit emission limits. Air quality is further improved by various base activities such as an aggressive recycling program whose contributions eliminated 1.4K tons of carbon monoxide, 3K tons of carbon equivalents, and seven tons of greenhouse gases during the accomplishment period.

Solid Waste

LRAFB’s Qualified Recycling Program has developed a multi-faceted effort to support the Win the War Against Waste campaign. Innovation led to diverting over 2,000 tons of municipal solid waste from landfill disposal by collecting and selling recyclable materials. In 2015, this resulted in a cost avoidance of \$315K and generated proceeds of \$191K. LRAFB’s solid waste diversion rate of 54% was third overall in Air Mobility Command, and the base

has achieved a diversion rate 15% higher than the average Air Force installation. Additionally, the construction and demolition debris diversion rate for 2015 was an impressive 62%.

The motto of Reduce, Reuse, or Recycle is exemplified in numerous ways. The Defense Logistics Agency (DLA) Disposition Services (DLADS) donated 65 tons of material from LRAFB saving the base \$13K in disposal fees. LRAFB collected and recycled over 1.4K gallons of antifreeze at the Hazardous Material Office, saving \$6K in disposal fees. Additionally, the LRAFB Integrated Solid Waste Manager coordinated with DLADS, the 19 CES Refuse Contract Officer Representative, and the LRAFB Recycling Center to establish a Consumer Electronics Drop Box. A certified recycler picks up the drop box when the required volume is collected. No money is paid by either party and government-owned electronics are retained by DLADS. The initiative led to recycling over 11 tons of consumer electronics in lieu of costly shipping and disposal as universal waste. These varied approaches led to a bottom-line benefit of paying only \$49 per ton to recycle over 2,000 tons compared to spending \$216 per ton to landfill the same material as solid waste. The result is savings of \$167 per ton, or over \$300K in diversions.

Environmental Compliance

Water Quality

LRAFB's storm water compliance program is robust and healthy. The installation exceeded Clean Water Act (CWA) compliance goals even when challenged by the multi-year \$110M runway project and 152 additional base construction projects. The CWA Section 404 permit for the runway project was accomplished in less than five months, preventing costly project delays and regulatory fines that would have severely impacted the Air Force's largest C-130 mission.

LRAFB's erosion control and natural resources program worked hand-in-hand to establish a 50 foot buffer zone for streams, wetlands, and floodplains which improved water quality and

reduced total suspended solids (TSS) from construction activities by 18%. Projects included a \$100K watershed improvement project involving 2.1 acres which improved the TSS benchmark by 37%; and a \$260K stream mitigation project on 700 linear feet of stream near on the southeast side of the runway. Recently, a separate \$220K project was awarded for 500 additional linear feet of stream with an estimated impact of reducing project TSS by 35%.



Stream Stabilization Project

Workers prepare the finishing touches on the LRAFB project, which stabilizes the stream to reduce total suspended solids impact. Stream enhancements include ripple pools, rock dams, invasive species removal, bank/slope stabilization, revegetation, culvert restructuring, and native tree planting.

Through the robust process of upgrading LRAFB's utility infrastructure, numerous projects have allowed the base to revegetate 46 linear miles of disturbed soil while remaining in compliance with LRAFB storm water management plan requirements.

The Arkansas Department of Environmental Quality (ADEQ) conducted construction storm water and CWA reconnaissance inspections during the accomplishment period. LRAFB was found in compliance with CWA requirements. ADEQ lauded the environmental staff for its display of sound knowledge and an unwavering commitment to the program.

Wastewater system inspections by the city of Jacksonville also resulted in no violations. The 2015 inspection addressed grease traps and mandatory quarterly sampling reports, all of which indicated no overages of permitted limits, and reinforced the 2014 regulator decision to reduce sampling timelines from monthly to quarterly.

Hazardous Materials/Hazardous Waste

During an October 2014 no-notice state inspection of the hazardous waste (HW) program, 53 satellite accumulation points (SAPs) were examined as well as HW shipment records for approximately 23,000lbs of HW per year. No negative issues were found. Every year, over 50 HW training classes are conducted at the installation. More than 1,000 students have been trained during initial and refresher HW courses to maintain the base in strict compliance with SAP requirements.

Efforts to reduce the volume and toxicity of wastes generated has not only cut waste management risk but also exceeded the Air Force goal for reducing the amount of HW shipped offsite by 7% in 2015. The installation averaged an overall reduction of 13% during the accomplishment period and saved \$6K as a result.

Staff consolidated 192 drums of HW into 72-cubic-yard containers, which reduced the disposal weight by over 5,000lbs and saved \$11,840 in disposal costs. In addition, handling 57,645lbs of potentially hazardous waste as



Hazardous Waste Compactor

The Compactor saves LRAFB money and container space. Waste from 7 metal drums can be compacted into 2 HAZPACK boxes. Container plus disposal costs of drums compared to HAZPACK boxes resulted in a cost savings of \$545.

universal waste saved \$25,940 in DLA disposal fees. The hazardous waste stream was reduced by puncturing 1,248 aerosol cans, which cut disposal weights by 416lbs and reduced fees by \$375. Also, the household HW "Free Issue Program" gave away 1,152lbs of household HW, which averted potential illegal disposal and saved approximately \$1.4K in HW disposal fees.

Natural Resources

LRAFB has been named a Tree City USA for 22 consecutive years, the 5th longest in Arkansas. There are approximately 12K trees



Arbor Day Celebration

LRAFB celebrates the 22nd Arbor Day ceremony under the 6th largest Post Oak in Arkansas. Colonel Otter, 19 AW/CV, hosted the ceremony with Adrienne Barnes, Arkansas Forestry Commission, as guest speaker.

in the LRAFB urban forest. Across the installation, trees provide an estimated \$1.2M and \$6.3M each year in air quality services and storm water runoff control, respectively. Last year, LRAFB celebrated Arbor Day under a LRAFB Post Oak, the 6th largest in the state. Approximately 50 local cub scouts and other base volunteers helped mulch under the canopy and were included in the ceremony.

Team Little Rock has strong partnerships with state and federal agencies. LRAFB collaborated with the USFWS to monitor and evaluate the nesting success of the Interior Least Tern twice during the accomplishment period.

LRAFB has implemented an aggressive invasive species control program. The management plan attempts to prevent the introduction and

minimize the spread of invasive species. The installation has experimented with a brush cutter attachment for the major treatment of Wisteria, a fast-growing, tree-killing vine. The initiative allowed for the removal of over 174K wisteria vines on 29 acres of commercial timber, saving 12K trees and reducing the seed source that could threaten nearby forest stands.

Hunting opportunities are also available and are used to manage the base's overabundant deer population. The hunting program directly supports the Bird-Aircraft Strike Hazard program and has a positive impact on LRAFB's ability to reduce airfield deer sightings by 80%.

National Environmental Policy Act

National Environmental Policy Act (NEPA) work performed by 19 CES supported the flying mission by completing an Environmental Assessment (EA) on the \$110M full-depth, full-length repair of the primary 12,000ft runway. This project raised the runway elevations, resized the runway width from 200 to 150ft, reconstructed five taxiways, and modified



Youth Deer Gun Hunts

The hunting program is used to control LRAFB deer populations and introduce youth to the outdoors. Managing the deer population increases overall health and reduces collisions with vehicles and aircraft.

surrounding terrain features to minimize vertical obstructions. Wetland impacts were reduced by including best management practices for storm water runoff control. The assessment also aided designers and planners to determine that quarrying material from the north ridge of the airfield was less cost effective than purchasing the required 1 million cubic yards of necessary aggregate offsite.

Based on an extensive analysis of C-130 training challenges, LRAFB reevaluated the flying mission's use of the slow route system and developed a proposed action to reduce operational inefficiencies and environmental impacts. Collaborating with partners in the 19th Operations Group, an EA was developed to evaluate training requirements for C-130 aircrews, operational and safety requirements, sensitive land uses, and military airspace issues. Success was achieved by adding new segments to two existing slow routes, changing route widths and floors for consistency with other existing slow routes. This resulted in an additional 421 nautical miles of new route segments and elimination of 113 nautical miles of existing segments. The new routes avoid wilderness areas, the Mississippi Flyway, and required consultation with 25 Native American Tribes in five states.

LRAFB completed an Environmental Baseline Survey (EBS) to document the environmental conditions for the potential transfer of approximately 260 acres of non-excess land. The Air Force Community Partnership program was leveraged to share capabilities, resources, and reduce costs, improving education facilities for both military dependents and civilians. The action will lease Air Force property to the Jacksonville North Pulaski School District if it determines beneficial to create an education campus with elementary, middle, and high school facilities in a campus setting. In addition to the EBS, LRAFB has awarded an EA to determine the environmental impacts of this proposed leasing action on Air Force property, supporting a new Jacksonville School District for a joint elementary school.



US Fish and Wildlife Service Talk

The Federal agency joined LRAFB to discuss pollinators with Elementary School and Flightline Academy students. Over 370 students attended the outdoor education event.

Community Relations

Team Little Rock is actively involved in the Keep Jacksonville Beautiful Commission, Arkansas Recycling Coalition, Earth Day, and Arbor Day events. The LRAFB Rocktoberfest Fall Festival Live Green events gathered over 500 attendees.

LRAFB partners routinely with community stakeholders to engender sustained improvement for the installation's natural and built environments. Earth Day was celebrated with two base schools during the accomplishment period. Team Little Rock partnered with Parent-Teacher Associations and 12 state and federal environmental agencies for an outdoor Earth Day event. The special focus was "Pollinators and Endangered Species." 375 students and teachers were educated and the media provided positive coverage of the highly successful event.