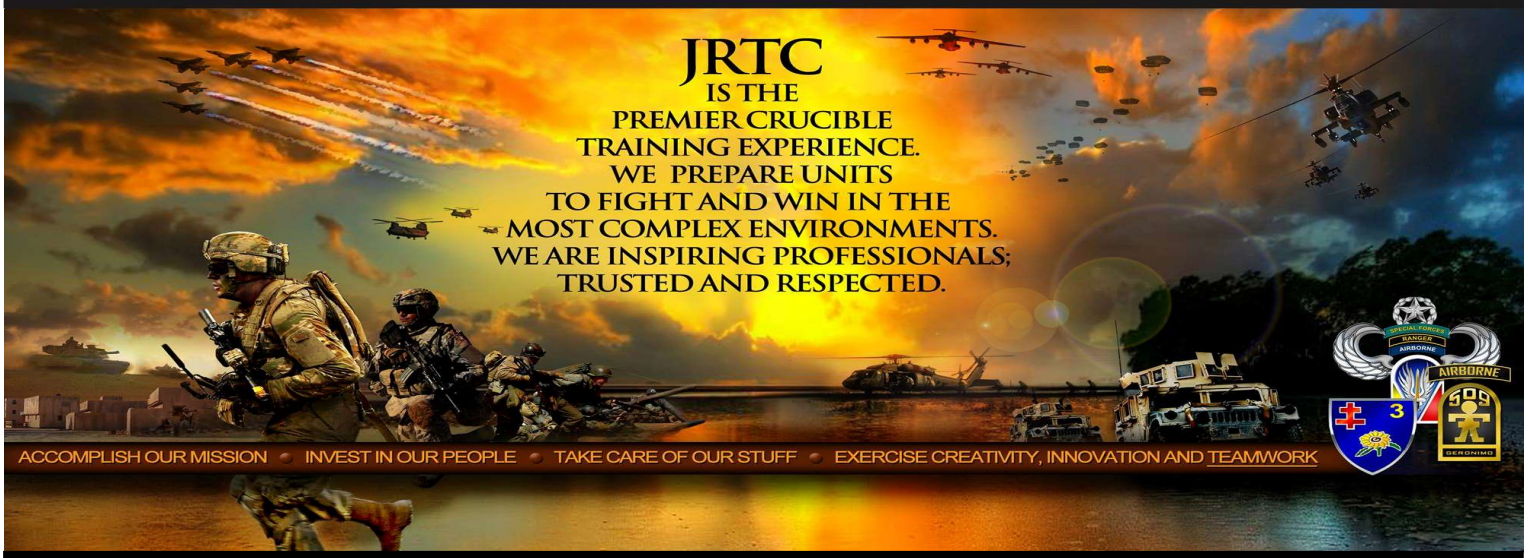
USAG Fort Polk, Louisiana

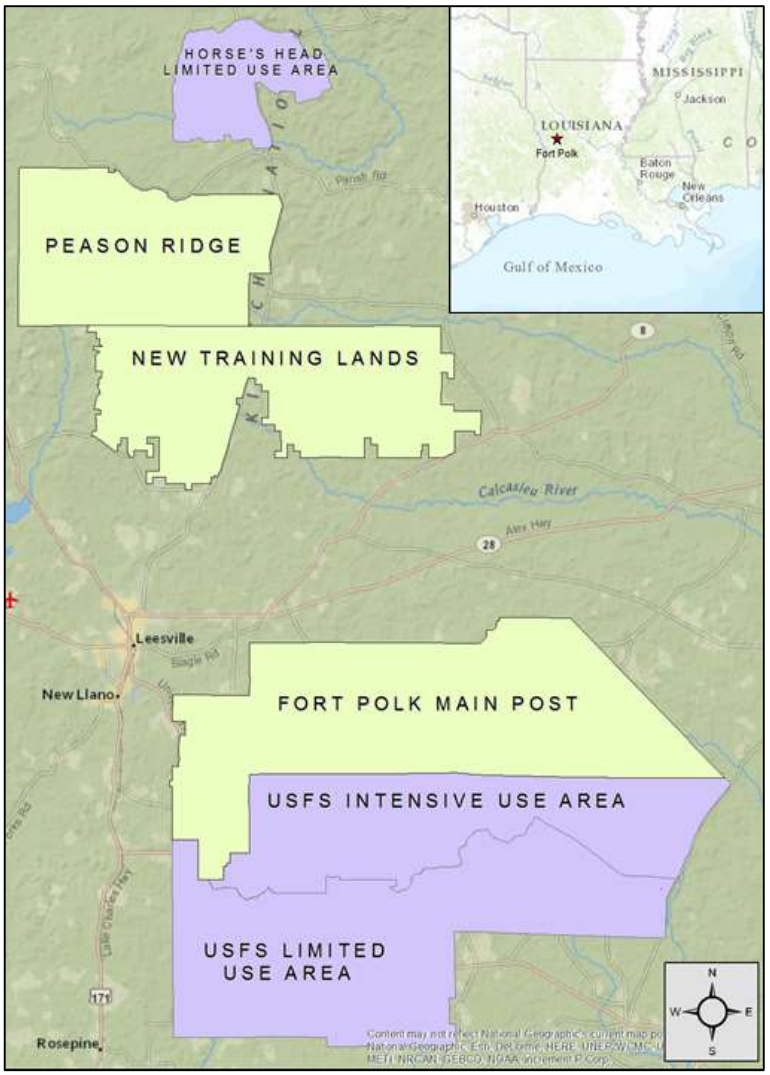


Sustainability, Non-Industrial Installation

INTRODUCTION

Situated in the dense woodlands of west central Louisiana, Fort Polk is the home of the Joint Readiness Training Center (JRTC), the Army's premier combat training center (CTC) and the only CTC that also serves as a power projection platform for deploying combat units. The mission is "to train Soldiers and when ordered, deploy those Soldiers worldwide." Fort Polk is 241,126 acres. The JRTC and Fort Polk is home station for one brigade combat team and four separate, deployable combat battalions, with additional support units and organizations.

Approximately 43,649 soldiers, civilians, and family members live and work at the JRTC and Fort Polk. The daily transient population from CTC rotational training units averages 5,770. Within the five parishes that surround the JRTC and Fort Polk lives a military retiree population of more than 67,000. Altogether, the JRTC and Fort Polk contribute almost $1.5 billion annually to Louisiana's economy. Fort Polk, regional municipalities, and the state of Louisiana are partners in their commitment to sustain the natural environment and improve the quality of life of Soldiers and Family members on and off the installation. Fort Polk is a resource resilient, self-sustaining installation that enables the readiness of its military units.



Program Management | Orientation to Mission | Impact & Outcomes | Technical Merit | Stakeholder Interaction | Transferability

BACKGROUND

Fort Polk's Sustainability Program supports Army missions while conserving natural resources. Fort Polk implements sustainability practices and principles, which enhance training opportunities, ensure long-term availability of training areas, and improve the quality of life for military and civilian personnel and their families. The sustainability program is a partnership between local communities, garrison directorates, military units, and other stakeholders. Our sustainability partnership produces operational cost savings and cost avoidances, reduces energy and water consumption, reduces waste generation, and increases material recycling. Fort Polk's sustainability program ensures compliance with Executive Order 13834 "Efficient Federal Operations" and improves long-range installation mission planning and facility master planning.

SUMMARY OF ACCOMPLISHMENTS

Environmental Management

Environmental management is part of all day-to-day installation and tenant activities. To improve environmental performance, Fort Polk developed the *Environmental Management Performance Review* (EMPR). The EMPR tracks the JRTC and Fort Polk training mission and environmental program changes from year to year. Since 2001, the EMPR has documented the installation's long-term environmental impacts and sustainability trends. The EMPR reports performance metrics for each environmental program media area. The EMPR summarizes annual accomplishments by using tables, graphs, and charts which track the changes from year to year. The EMPR is an environmental resource reference for Fort Polk leaders, planners, and environmental staff who seek to analyze environmental and mission impacts, and identify long-term environmental trends and performance.

The EMPR is a component of the installation's annual management review to senior leadership, and a summary of quarterly management reviews conducted as Environmental Quality Control Committee (EQCC) meetings. Quarterly, EQCC members provide management oversight of the installation's progress on sustainability objectives and projects. The EMPR is an innovative tool for senior leadership to track program progress, identify environmental performance improvement opportunities, effectively manage risks, drive improvements, and enhance Fort Polk's mission accomplishment. The EMPR is available installation-wide on the Fort Polk Intranet.

Master Planning and Green Buildings

Fort Polk's master planning has focused on defining a vision for future installation development that aligns with the Army's sustainability goals. Infrastructure master planning is integral to Fort Polk's sustainability program efforts to develop modern infrastructure and sustain a clean environment that supports the mission while complementing the beauty of the local environment. As part of continual efforts to integrate sustainability practices into master planning, Fort Polk and its stakeholders came together to participate in several master planning workshops, called Area Development Plans (ADPs). The ADPs identified program requirements, analyzed sites, and developed plans that provided flexibility and long-range capacity for seven installation districts.

The JRTC & Fort Polk Fire Station is a U.S. Green Buildings Council silver certified building.

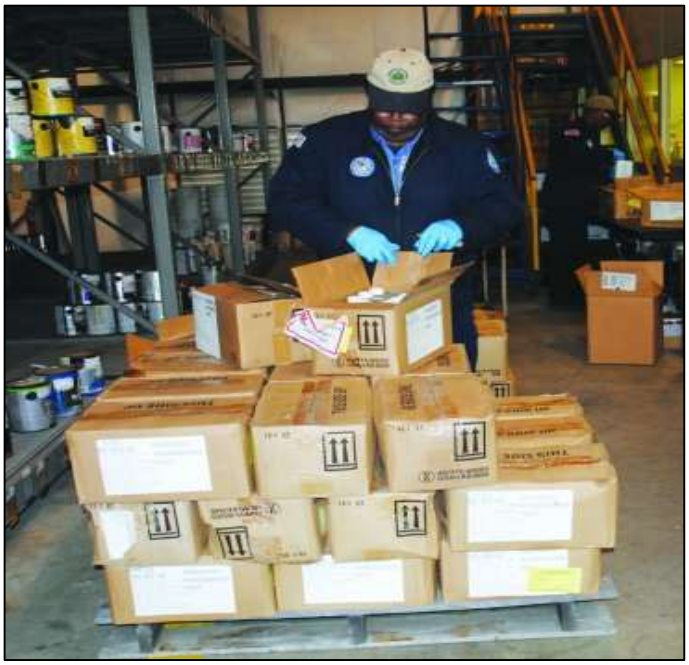
Sustainability development and design plans include eco-friendly best practices. Fort Polk renovated the Bayne-Jones Army Community Hospital (BJACH) medical center with aesthetic designs that reduce heating and cooling costs by 20%. The building's other green features include efficient low-emissivity glass, heat-resistant roofing, floors made from recycled materials and renewable resources, and low-volatile organic compound paint.

Fort Polk has 18 projects registered with the U.S. Green Buildings Council (USGBC), including eight buildings with Gold Certification. All new buildings

constructed are required to meet Leadership in Energy and Environmental Design (LEED) requirements, and Unified Facilities Criteria to ensure that new buildings are energy efficient. Fort Polk's Leadership in Energy and Environmental Design (LEED) certified buildings provide resource efficiencies, improve functional performance, use less water and energy, and reduce greenhouse gas emissions.

Energy and Water Conservation: Fort Polk's energy and water priorities have moved beyond conservation to resilience and efficiency. Fort Polk's Energy and Water programs benefit from advanced technologies to reduce energy and water use, increase the installation's resilience through renewable onsite resources, and reduce greenhouse gas emissions from transportation, facilities, and construction. Focusing on energy resilience, efficiency, awareness, and ethos have resulted in the investment of $13 million in funding for advanced technology projects during FY19/20 to expand upon micro grids, energy storage, electric vehicles, building control integration, and infrastructure improvements.

- In FY19/20 Fort Polk implemented the Utility Monitoring and Controls System (UMCS). This technology enables the Public Works to monitor and record energy consumption and utility equipment performance at 276 facilities throughout the installation from a centralized workstation. The UMCS logs daily, detailed equipment alarms, which enables prompt problem identification and corrective action. The UMCS is a time saving and cost avoidance upgrade. Monitoring efforts provide the tools and energy consumption histories for energy benchmarking, establishing performance baselines to assess and produce viable energy and water conservation projects, and mock-bill utility accounting for tenant awareness.
- In FY20, Fort Polk's energy, planning and life cycle cost analysis identified multiple projects to make the installation more self-sufficient and continue to reduce the installation's utility cost and dependence on conventional sources. These projects include replacing antiquated chillers; boilers, building automation controls, inefficient lights, and recommissioning old facilities that are no longer operating as designed. These improvements equate to approximately $4 million in energy savings annually, and reduce energy use by 267,300 million BTUs.
- During FY19/20, Fort Polk planned for the construction of a micro grid capable of generating 50-Mega Watts of energy, derived from a combination of solar power and locally abundant natural gas.
- In FY19/20, Fort Polk completed construction of a second green sand filtration system and began construction planning for a third and final green sand filtration system. The green sand filters will eliminate brown water and reduce the need for system flushing.
- To conserve water, reduce energy use, and save money, Fort Polk stopped using potable water for wastewater treatment plant operational processes and now use treated wastewater, thus conserving millions of gallons of potable drinking water. Fort Polk is developing a new "Installation Energy and Water Plan" (IEWP) that aligns to the JRTC and Fort Polk 2028 Campaign Plan. The IEWP development is in process with a completion date of November 2020.

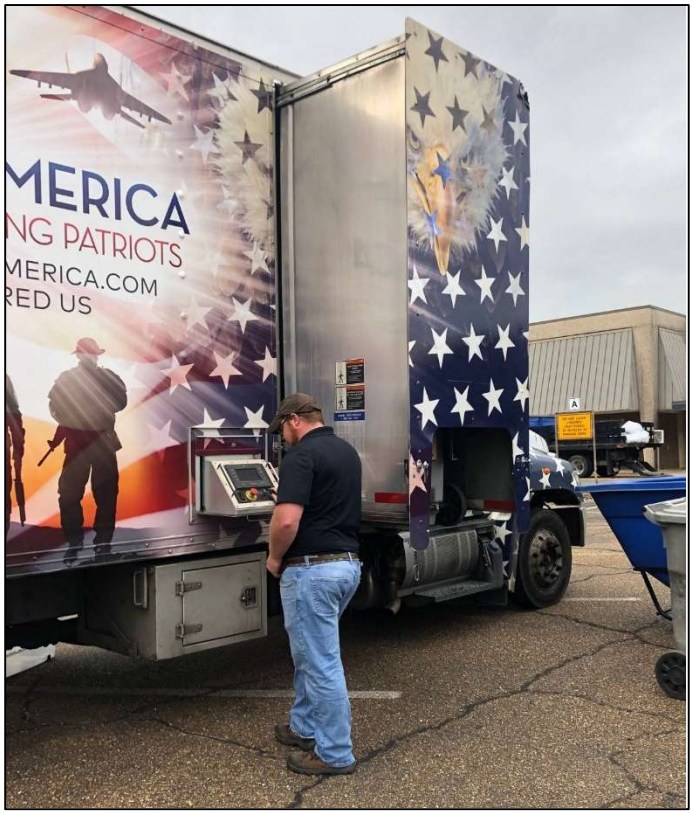


A HAZMART technician accepts materials for redistribution to units in need of supplies.

Recycling and Solid Waste Diversion: Fort Polk has implemented resource-efficient management practices that have increased the quantity of material recycled and waste diverted from landfills.

Fort Polk's recycling and reuse practices adhere to state and federal guidelines. The environmental staff works with installation organizations to increase the quantity of solid waste diverted from landfills through recycling and reuse. The environmental staff train installation personnel to become Recycling Coordinators who then serve as liaisons to the

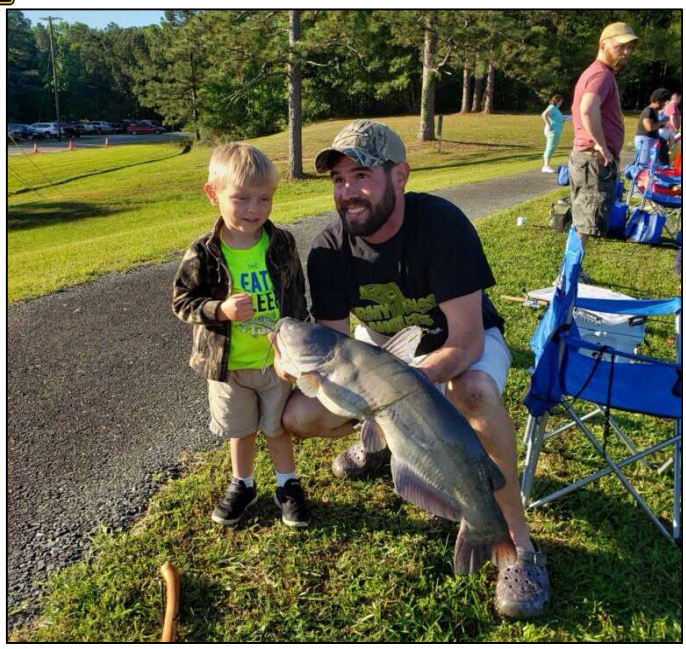
environmental staff on recycling issues. In FY19/20, Fort Polk diverted 15,773.58 tons of waste from disposal in state landfills. Fort Polk created a sustainable use program for disposed green waste. The Christmas Tree Recycling program successfully diverted nearly 3,000 pounds of green waste from entering the landfill. The program staged the trees throughout open-wooded spaces for use as quail habitat and aquatic habitant improvement.



Community Shred Day was a public event hosted in 2020 to provide a safe and effective way to shred and recycle personal documents. Approximately 22 Soldiers, civilians, and family members attended the event where about 1,800 pounds of paper was shredded and recycled. The garrison commander oversees the installation's Qualified Recycling Program.

The Fort Polk Qualified Recycling Program (QRP) sale of recyclables generates funds to pay for the QRP program costs, pollution prevention projects, energy and water conservation projects, installation community events, and the study and development of new recycling and reuse practices. QRP recycling accomplishments for FY19/20 included:

- Invested $83,500 of recycle proceeds back into the installation to sponsor Family and Soldier events. QRP proceeds purchased catfish to stock ponds for the annual Youth Catfish Derby conducted during Operation Earth Friendly, and purchased fireworks for the annual Fourth of July celebration.
- Recycled 2.168 million pounds of recyclable materials, generating a gross revenue of $477,000 in FY19. Recycled 2.248 million pounds of recyclable materials, generating a gross revenue of $406,728.94 in FY20.
- Fort Polk collaborated with Vernon Parish School District, collecting 7,835 pounds of recyclable materials in FY19 from two on-post schools.
- In FY19/20, collaborated with Fort Polk's solid waste contractor to collect cardboard under a Pollution Prevention Partnership, resulting in 837 tons of cardboard recycled.
- In FY19/20, the battery reissue program prevented disposal of 3,885 batteries as universal waste, generating approximately $426,635 in cost avoidance and purchase cost. Rotational military units turn in batteries for disposal after each rotational training exercise. Rotational units receive reissued batteries with a 70% or greater charge.
- Recycled 390,000 pounds of scrap metal from a fuel point demolition in FY19/20, generating a gross revenue of $15,000.
- Recycled approximately 272 gallons of solvent and 4,619 gallons of antifreeze in FY19/20, generating a cost avoidance of $62,556.
- Recycled 48,000 gallons of cooking and motor oil, and 250,000 pounds of non-lead acid batteries, which in saved the installation $224,749 in waste disposal costs.
- In FY19, the installation invested $12,000 in light timers using QRP funds. In FY20, the installation reinvested $50,000 of QRP funds for pollution prevention projects in energy conservation by replacing facilities lighting with energy efficient LED. The LED lights were a huge success; they were brighter and reduced the utility cost to operate. Lighting upgrades coincide with useful life light replacement so there are no additional maintenance costs for the changeover. Implemented recycling practices have reduced life-cycle costs, and increased unit performance and cost avoidance, which supports the installation's training mission and improves Soldier and Family quality of life.



Each year the JRTC & Fort Polk joins the nation in celebrating Earth Day to highlight environmental successes and help people understand how sound environmental sustainability supports military training and the quality of life of Soldiers, Families and Civilians that live on or near and work on Fort Polk. QRP proceeds purchased catfish to stock ponds for the annual Youth Catfish Derby conducted during Operations Earth Friendly in 2019.

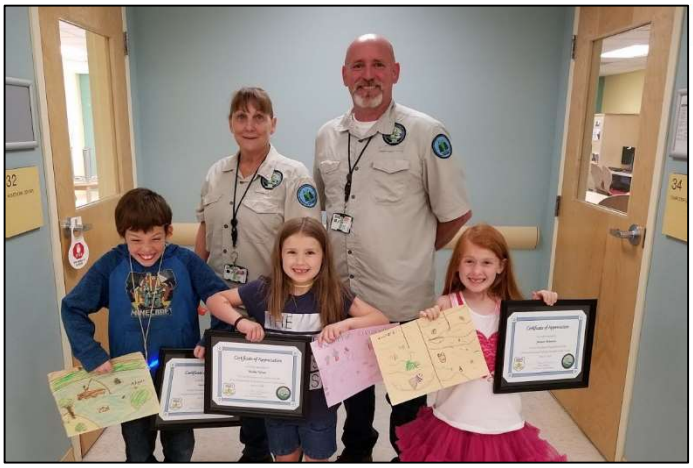
Education, Outreach, and Collaborating

Creative educational techniques reinforce the benefits of adopting sustainable practices. An outreach program focused on military personnel, employees, family members, visitors to the installation, and the community at large fosters awareness and sustainable initiatives. Fort Polk uses different methods of outreach to keep all informed on the benefits and importance of maximum participation in sustainability programs. Distribution of real-time information reaches beyond the installation borders to strengthen community partnerships and leverage community multi-media channels.

Fort Polk engages with local communities. The official JRTC and Fort Polk Facebook page has more than 28,000 followers and is the installation's hub for up-to-date information regarding sustainability initiatives and program outreach. Through continuous awareness development, the installation launched a campaign, entitled, "Recycle This, Not That," which used simple messages to educate targeted audiences on the value of recycling. The campaign also addressed recycling procedures as a strategy to increase installation-wide participation.

The installation is helping to increase sustainability awareness among all that live on, work at, and visit the installation. Fort Polk harnesses a multi-media marketing and educational outreach program that includes Facebook, YouTube videos, mascots, skits, radio and television appearances, and pamphlet distribution to various organizations within and around Fort Polk. Beyond the installation, our environmental outreach program targets regional schools, city and parish governments, and service organizations. Installation leadership participates in the environmental outreach events to bring awareness and encourage Soldiers and the public to be active within the environmental community, as well as good neighbors.

Operation Earth Friendly is an environmental outreach for the installation and local communities. During the week-long event, Fort Polk focuses on Environmental Awareness, highlighting the installation's commitment to environmental stewardship. To meet mission requirements, Fort Polk provides sustainability education through the Environmental Training Program, Facility Managers Program, and the Recycling Champion Program. Fort Polk reduces installation-training costs by offering regulatory-required environmental training to individuals through the in-house environmental school, which covers eight environmental topics. The Environmental Training Program, multimedia training tools include tablets with access to comprehensive modules on topics ranging from sustainability and pollution prevention to recycling lithium batteries and training land conservation. During training, presentations by subject-matter experts round out comprehensive training that focuses on Fort Polk environmental processes.



FY19, the Fort Polk Stormwater Team engages in outreach activities.

Fort Polk's comprehensive *Environmental Outreach Program* (EOP) plan coordinates and identifies all environmental outreach activities. This Garrison Commander supported environmental outreach initiative educates all aspects of the community on their vital role as environmental stewards, guides a community cultural change, and enhances Soldiers' understanding of the environmental considerations inherent in all mission activities. The EOP is also a strategic communication tool used to focus environmental change through consistent messaging and analyzing response-related outcomes. The EOP captures the Measures of Performance (MOP) and Measures of Effectiveness (MOE) used to document the success of each outreach effort. The EOP focuses different specific environmental outreach and education activities on specific aspects of the installation community and the desired outcomes from these engagements.

During FY19/20, EOP activities reached: 8,229 newly assigned military personnel; 117 Fort Polk unit commanders and first sergeants; 196 JRTC rotational observers, coaches, and trainers; 1,501 rotational training unit commanders and senior NCOs; 296 facility managers; 4,282 housing residents; 72 Boy Scouts and Girl Scouts; more than 900 Louisiana Lions Camp participants; 6,788 Vernon and Beauregard Parish school children; 657 Facebook followers; and 1,342 government personnel performing installation mission operations. The EOP fosters stewardship on and off the installation, resolving specific compliance issues, increasing the awareness and support of sustainability efforts, and creating partners in the surrounding communities.

National Environmental Policy Act (NEPA): Understanding the ever-changing global threat, the JRTC and Fort Polk adjusts the training mission environment to replicate conditions a Brigade Combat Team (BCT) could face. The NEPA program works closely with the JRTC and installation staff to evaluate these requirements, with minimal delays to the mission. The team informs proponents of potential impacts, timelines for the NEPA process, and identifies consultation requirements. In FY20, the NEPA team began the development of an Environmental Assessment (EA) for the construction of a new 1,200-acre drop zone. The mid-FY21 EA is on schedule for completion. The NEPA team processed Records of Environmental Consideration (RECs) for all projects on JRTC and Fort Polk. In FY19/20, the team processed more than 700 RECs for infrastructure, construction, demolition, renovation, self-help, and stationing projects. The NEPA program serves as the installations hub for all environmental programs to maintain compliance with regulatory requirements while meeting the requirements for the JRTC and Fort Polk training and readiness missions.

CONCLUSION

Sustaining the military mission at Fort Polk is an interdisciplinary, all-hands effort, and through strong partnerships, implementation of innovative technologies, robust outreach programs, and continued focus on conservation, resilience and efficiency, the installation made significant strides in FY19/20 to reduce environmental impacts, realize cost savings, and improve the resiliency of the installation. The JRTC and Fort Polk finds better ways to protect and sustain the natural resources we manage, and to integrate the enjoyment of those resources into the quality of life for its Soldiers, Civilians, Families, and surrounding communities. Outreach efforts are increasing stakeholder involvement, and creating new environmental stewards across the installation and surrounding communities. The commander's intent is to integrate environmental sustainability considerations into every aspect of mission operations.

The JRTC and Fort Polk uses our long-term *Environmental Performance Management Review* (EMPR) and *Environmental Outreach Program* (EOP) to achieve and demonstrate environmental sustainability success to the Army and the public.