2020 Secretary of Defense Environmental Awards
Natural Resources Conservation, Small Installation Award

Each year since 1962, the Secretary of Defense (SecDef) has honored installations, teams, and individuals for outstanding achievements in Department of Defense (DoD) environmental programs. These accomplishments include outstanding conservation activities, innovative environmental practices, and partnerships that improve quality of life and promote efficiencies without compromising DoD's mission success. The 2020 Secretary of Defense Environmental Awards cycle encompasses an achievement period from October 1, 2017, through September 30, 2019 (Fiscal Year (FY) 2018-2019). A diverse panel of 54 judges with relevant expertise representing Federal and state agencies, academia, and the private sector evaluated all nominees to select one winner for each of the nine categories. These nine categories cover six subject areas including natural resources conservation, environmental quality, sustainability, environmental restoration, cultural resources management, and environmental excellence in weapon system acquisition.

About the Natural Resources Conservation, Small Installation Award

The Natural Resources Conservation, Small Installation award recognizes efforts to promote the conservation of natural resources, including the identification, protection, and restoration of biological resources and habitats; the sound long-term management and use of the land and its resources; support of the military readiness mission; and the promotion of a conservation ethic. Protecting sensitive plant and animal species on our installations and other DoD lands, particularly those listed as either threatened or endangered under the Endangered Species Act, ensures the preservation of these valuable environmental assets for current and future generations, and assures the availability of these resources to sustain military readiness. Small installations have 10,000 acres or less and can include leased, military owned, or administered outlying ranges or training practice areas. The 2020 winner of the Natural Resources Conservation, Small Installation award is *Fort Custer Training Center, Michigan Army National Guard*.

About Fort Custer Training Center, Michigan Army National Guard

Fort Custer Training Center (FCTC) is located in southwestern Michigan less than 20 miles east of Kalamazoo. The installation was originally built in 1917 as Camp Custer for military training during World War I. In 1940, Camp Custer was designated Fort Custer and became a permanent military training base. During World War II, more than 300,000 troops trained at Fort Custer. In 1968, the Michigan Department of Military and Veterans Affairs assumed control of FCTC. The installation encompasses 7,500 acres and its personnel enhance and protect lands that support small arms, bivouac, and land navigation training, as well as specialized convoy reaction and improvised explosive device training. FCTC supports valuable, globally rare natural communities that require holistic, landscape level management. The installation has become a national leader in the development and implementation of a climate preparedness plan and continues to expand its sustainable energy resources, validate the efficacy of its prescribed fire regime, innovate in forestry practices, and foster a robust network of interagency partners to support region-wide conservation while protecting the Michigan Army National Guard's mission.

Fort Custer supports several high-quality prairie fens. These rare ecosystems harbor high levels of biodiversity and numerous rare species. In 2019, monitoring to evaluate the effectiveness of stewardship activities was implemented by Michigan Natural Features Inventory and Michigan Aerospace Corporation. The monitoring platform includes using drones and machine learning to automate the detection of invasive species.

Major Accomplishments in FY 2018-2019

- FCTC was the first installation to implement its own customized climate adaptation plan into its Integrated Natural Resource Management Plan and operations. The installation began implementing its climate adaptation plan in FY 2018 after representing the Army in the DoD Climate Change Preparedness Pilot in 2013. Natural Resources Conservation (NRC) staff belong to the Michigan Climate Coalition, which coordinates management goals with other public land stewards, and they joined the Northern Institute of Applied Climate Science and the Great Lakes Integrated Science Assessment to process climate data, update management goals, and translate data into accessible materials for the broader military and civilian communities.

Environmental staff and contractors conduct a prescribed burn in an area planted with native prairie species. The controlled burn was done to push back woody invasive species and to stimulate growth in the native prairie plants. Prairie plantings in the cantonment area help to reduce the need to mow, thereby reducing carbon emissions and mitigating a changing climate.

- The installation's NRC staff partnered with researchers to determine the best fire application regimes to control for invasive species, promote native species growth, and support wildlife. This helped FCTC fill the data gap between prescribed fire management and validated species outcomes. For example, FCTC personnel conduct prescribed burns in partnership with the Kalamazoo Nature Center, which limits FCTC's costs and staffing requirements. In FY 2018, FCTC executed a prescribed fire on an 800-acre prairie fen area during warmer, drier conditions than usual. By tracking the data, staff demonstrated that these conditions were ideal for achieving the desired habitat effects; the fire reduced invasive shrubbery by 60%, and native species, such as orchids, began thriving.

FCTC's 240 acre convoy reaction course provided a win-win for military training and ecological restoration. The clear-cut provided a new and crucial training course for soldiers deploying to the Middle East, and staff are restoring the area to native and climate resilient tallgrass prairie. FCTC regularly burns the range to maintain the prairie.

- FCTC adopted a Restoration Forestry concept to support natural communities and integrate climate projections into forestry and timber harvesting. Traditional timber harvesting targets segments of forest for clearing, and involves skidders, heavy vehicles that pull cut trees out of a forest, and tree dragging. These traditional methods often create conditions conducive to invasive plants and erosion. FCTC is in the process of implementing a more selective harvesting protocol where they remove selected trees with a mechanized harvester, which functions like an excavator with a saw, uprooting and cutting a tree to length in place to minimize landscape disturbance. FCTC's climate adaptation plan allowed staff to identify a 110-acre parcel of commercial timber that could be clear-cut and restored as prairie habitat.
- FCTC is finalizing a biological evaluation to reintroduce the Federally endangered Mitchell's satyr butterfly on its training ranges. The butterfly would pose no restrictions to training and would benefit from FCTC's pristine prairie habitat. The installation also launched a new monitoring project for state-listed threatened prairie voles using traditional live trapping methods, as well as remote motion-sensor cameras. This hybrid program is evaluating the efficacy of remote cameras as a primary monitoring method, which could not only indicate species presence, but also generate more robust data on population density and habitat use.