SECRETARY OF DEFENSE ENVIRONMENTAL AWARDS 2019

FLORIDA ARMY NATIONAL GUARD
NATURAL RESOURCES CONSERVATION, LARGE INSTALLATION

Camp Blanding Joint Training Center, the Florida Army National Guard's (FLARNG) premier training site, has long been recognized for its exceptional natural resources conservation program. Across 73,000 acres supporting intense training, the installation's natural resources conservation (NRC) staff have fostered pristine habitats and remarkable biodiversity, propagating populations of rare and endangered species to ensure that the FLARNG mission is never impeded by environmental conflicts. The FLARNG's commitment to stewardship has been validated and rewarded in a ground-breaking fashion, as the installation became the first military post to accomplish a Candidate Conservation Agreement with Assurances **at the habitat level**. Signed in FY17 and fully implemented this year, Camp Blanding's (CBJTC) agreement will have extraordinary benefits for military training and NRC activities. In short, the Candidate Conservation Agreement with Assurances (CCAA) waives NRC compliance and consulting processes for all threatened and endangered (T&E) species **that may be listed in the future** on both the federal and state levels based on the current habitat and land management practices in place on the post. The waiver for the State of Florida is a critical accomplishment, as Camp Blanding is state land, and therefore subject to state regulations as well. While the installation will continue to meet all regulatory requirements for species that were listed as endangered prior to March 2017, it is now exempt from any future species mitigation requirements while the CCAA remains in force. At present, around 95% of the monitoring requirements and objectives delineated in the CCAA are already included in the post's current Integrated Natural Resources Management Plan; the few new CCAA management requirements will be adopted into that plan as it is updated in 2019. **The FLARNG's training operations are thus entirely insulated from any changes in species status.**

Establishing this CCAA is a game-changing accomplishment, protecting one of the most critical training resources in the region; CBJTC specializes in light infantry training and serves as a logistical base for emergency management in the state. The CCAA does not waive compliance processes for the five federally listed and eleven state listed imperiled species previously identified on the installation—but it effectively applies to the ***470 Federal candidate and other at-risk species*** that occur in the Southeast region. As climate change continues to impact habitats and thus species populations everywhere, the protection afforded by this agreement is enormous, shielding the FLARNG from the impacts of species change due to non-military causes. In implementing this agreement, the US Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC) have confirmed the effectiveness of the NRC program's ecosystem-level management strategies and unequivocally endorsed them as a pathway to restabilizing these declining and at-risk species.

The CCAA is the most significant milestone for the installation NRC program. Given the number of species encompassed by the agreement, it was clear to the FLARNG, FWC, and USFWS that a more novel solution than species-by-species consultation would be required. Even for the proposed and candidate species known to be on CBJTC at present, individual CCAA would be inefficient and onerous. The innovation with this CCAA is one that could galvanize T&E management throughout the nation, promoting landscape, ecosystem-level management that benefits *all* species

associated with a particular area. With this CCAA, the training site's NRC activities are comprehensively integrated from the perspective of land management--with a military use component built into the land use design--rather than attempting to individually (and redundantly) protect one species at a time. Remarkably, this is not the only major new program innovation for CBJTC over the past two years. The training site has launched a new pilot project that supports the forestry program in lieu of timber harvesting that could impact endangered red cockaded woodpeckers (RCW). CBJTC's forests contain an extensive understory of palmettos, the berries of which are sought after by pharmaceutical companies. Working with state NRC offices to ensure that local wildlife would not be adversely impacted, the installation established a palmetto berry harvest that generated revenue streams of approximately $480,000, far in excess of what timber harvesting could generate and from a resource that naturally renews each year. CBJTC also continues its multi-year research partnership with the Longleaf Alliance to restore longleaf pine stands on post; a research study on the broader effects of integrated herbicide and fire management on pine ecosystems is also ongoing, with comparative test plots established on 300 acres. In addition, CBJTC has partnered with the FWC's Wildlife Research Institute, Virginia Tech's Department of Fish and Wildlife Conservation, and the Joseph W. Jones Ecological Research Center to conduct a multiyear study investigating how the installation's silviculture and prescribed fire programs are impacting the wildlife on post, thus identifying the "winners and losers" of the post's two largest habitat management/manipulation programs to inform future strategies.

CBJTC's CCAA agreement combines with its Integrated Natural Resources Management Plan (INRMP), Integrated Wildland Fire Management Plan, and Forest Resource Management Plan to guide the training site's NRC activities. The CCAA annual progress reporting requirements were used beginning this year as a tool to more fully mesh the goals and objectives embedded within these plans. The CCAA reporting has become the vehicle by which all NRC plans are reviewed and updated each year; this approach exceeds the basic requirements of the CCAA and enhances integration of all NRC program elements to achieve mutual goals. The INRMP was last updated in 2015 and is fully implemented.

NRC activities on post are managed by a talented team of environmental specialists, biologists, foresters, a GIS analyst, a conservation manager , and the installation environmental manager, with support from the compliance side of the environmental staff as needed. The program staff is further bolstered by support from trainers and Command, Integrated Training Area Management, interagency partners, USFWS, and FWC. NRC staff participate in regular monthly staff meetings with all directorates and monthly briefings with installation Command to ensure that all NRC activities and mission priorities remain aligned.

The installation has achieved excellent relationships with USFWS and FWC, reflected by the trust demonstrated in the CCAA. FWC maintains an office on post, which further promotes

The Gopher Tortoise is one of the many at-risk species being investigated by the US Fish and Wildlife Service for inclusion in the federal list of imperiled species; the state of Florida has already listed the tortoise. Camp Blanding prevents military impacts to gopher tortoises by relocating them away from high-use areas. This history of proactively deconflicting tortoises and military training was cited by state and federal wildlife regulators when conceiving the CCAA. (Pictured: Installation Biologist Cynthia Balboni.)

NRC compliance and coordination between agencies. NRC staff also participate in specialized interagency working groups, such as the Gopher Tortoise Advisory Group, which assists in communicating FLARNG needs across agency boundaries. The collaboration on gopher tortoises, for instance, has allowed CBJTC to establish a relocation site on Army Compatible Use Buffer (ACUB) property adjacent to the installation for tortoises impacted by construction or military training activities; final permitting requirements for this project are currently being completed.

Interagency collaboration has not only allowed CBJTC to achieve ground-breaking accomplishments like the CCAA, but also to expand its funding resources. FWC provides the training site with between $80,000 and $100,000 in materials each year to armor road crossings along the streams where the endemic Black Creek crayfish is found. The joint program protects aquatic species and promotes training and recreational access to remote sites while also preserving roads and infrastructure from damage from hurricanes and flood events. Partnership with the Longleaf Alliance provides the installation with $15,000 a year for pine restoration projects. The installation's in-house prescribed fire program saves between $100,000 and $150,000 each year in lieu of outside contracting, and CBJTC regularly partners with University of Florida (UF) to complete surveys at low cost. One of the greatest revenue impacts, of course, is the implementation of palmetto berry harvesting. As timber harvestable acres on post decline, this resource will replace and outpace the revenue that forestry once generated, helping to sustain the environmental programs on post with a resource that requires no special restoration investment.

The installation's CCAA represents confirmation that the NRC program's holistic land management approaches are working to promote and propagate T&E species through enhancement of habitat. Thus, the CCAA, which is designed to achieve conservation at the habitat scale and promotion of at-risk species populations, is truly a codification of CBJTC's NRC practices as a model for all other agencies and landowners in the region to follow.

The CCAA incorporates all of CBJTC's six articulated habitats and encompasses not only present land use, but also the proposed development for military training, to include ranges, firing points, and drop zones, effectively clearing all these land uses present and future. The agreement also encompasses adjacent ACUB lands that the FLARNG actively manages for land stewardship. A comprehensive management protocol was defined for each habitat area, including monitoring practices to validate management techniques; the NRC program included additional monitoring beyond the minimum required by USFWS, to include vegetation density and height, aquatic species, stream and water quality testing, gopher tortoise monitoring, and more. Any species known to use any of the CBJTC's six habitat types is thus covered by the CCAA and requires no further conservation mitigation or consultation with regard to training activities. Because the agreement approaches conservation from the habitat level, any newly present or newly listed species will already be effectively under monitoring. The document is also adaptable in the event that CBJTC needs to adjust acreages included or mission needs evolve significantly--*but the training site is now protected by this agreement for at least the next 15 years, with a continuation clause for renewal.* USFWS explicitly codified its confidence that CBJTC's land management approach is likely to remove or preclude the need to list any of the covered species as threatened or endangered.

This confidence, of course, is entirely warranted. The case of RCW on the training site is a prime example of a species in recovery as a direct result of the NRC program's efforts. The training site has far exceeded its goal of 25 RCW clusters; monitoring identified a two-cluster increase from 2016 to 2017, and another 2-3 cluster increase this year. The training site now has

nearly 40 active family clusters, and nestlings are banded and tracked, confirming strong survival rates; a FY17 survey located 52 of 61 banded juveniles. The NRC program continues to establish artificial cavities to support the growing population of birds. The foundation of the recovery, however, is restoration of longleaf pine habitat through prescribed fire, selective thinning, invasive species eradication, and new plantings. Because of these efforts, even prior to the CCAA, CBJTC had very few training restrictions associated with the RCW. Due to the NRC program's close working relationship with Camp Blanding's Directorate of Plans, Operations, Training, and Security (DPOTS), the installation has experienced no loss in training capacity due to the RCW and has resolved all conflicts between trainers and the endangered bird without impact to either. Indeed, seven identified RCW clusters are on or in close proximity to active ranges, but there are no training restrictions on those ranges, leaving them free to operate year round.

The installation has been successful in managing for gopher tortoises as well, which are aggressively protected by state law. Tortoise burrows are identified yearly with surveys, and these are marked so that they will not be disturbed during annual training. The NRC program also deconflicts tortoises and training by moving tortoises on firing points to more suitable burrowing areas. This summer, the installation completed an agreement with FWC granting a permit for relocation of tortoises to ACUB property when construction conflicts arise. Should gopher tortoises become a federally listed species, there will be no impact to CBJTC because of the CCAA.

The declining black creek crayfish is found only in the clear streams of Camp Blanding and its immediate surrounding lands. One of the many species covered by the installation's CCAA, the crayfish is surveyed yearly as part of ongoing surface water quality monitoring. This monitoring is also used to assess stream and wetland health as part of Camp Blanding's requirements under the CCAA.

Pine habitats and gopher tortoises, along with many other flora and fauna on CBJTC, thrive when fire is introduced to the ecosystem, and CBJTC operates a robust in-house prescribed fire program. The objectives of this program are integrated into both the INRMP and the CCAA, which calls for fire manag ement on approximately 6000 acres each year. In FY17, the installation treated over 5300 acres with fire; this year, conditions allowed for treatment of 15,651acres. Prescribed fire maintains healthy habitat for wildlife--and for soldiers, preserving accessibility and controlling for invasive and woody plant encroachment that threatens training areas. The installation regularly hosts Firefighter Training events in coordination with other military branches, US Forest Service, Florida Forest Service, USFWS, and other local agencies. The Southern Area Engine Academy is presented several times each year, providing students with hands-on training over a 6-day course; more than 100 participants are trained each year. Wildland fire training for federal employees is offered for week-long field events three times per year with assistance from the Prescribed Fire Training Center.

CBJTC is home to the Black Creek crayfish, a state-listed imperiled aquatic species known only to exist on post and its immediate vicinity. As part of conservation of the crayfish and the installation's roads and infrastructure, the NRC program has been working with FWC to armor roadways and water crossings, a task that is particularly important with the incidence of major storms and hurricanes. Washouts of roads, culverts, and bridges create high levels of sedimentation and turbidity in CBJTC's streams, and crayfish rely upon clear, highly oxygenated water. FWC has been supplying the installation with railroad rock, granite material that will not impact water pH; NRC staff have been

applying the material to water crossings where off-road training and recreation occurs. In FY17, over 8200 tons of the material was provided to treat 55 stream crossings; in FY18, FWC provided 2968 tons to treat an additional 12 locations. The armoring has greatly improved these areas throughout the training site--water moves over the surface but does not displace the stone material, even under hurricane conditions. The success of these projects have led CBJTC to revamp armoring practices, opting to replace culverts with roads reinforced with railroad rock. The installation is working now with FWC to complete the FLARNG's portions of a nationwide bat survey along dedicated transects. NRC staff and FWC staff conducted cooperative surveys this summer, sharing equipment, and kicked off the statewide survey effort by inviting the neighboring state park staff to participate.

Effective military training and civilian hunting often requires the use of unpaved trails that cross watercourses. Camp Blanding receives 100% funding from Florida's state wildlife agency to support projects to armor sensitive creek crossings on unpaved trails throughout the installation. This collaborative project reduces erosion and negative water quality impacts to aquatic imperiled species from vehicles during water crossings by military trainers or civilian hunters.

CBJTC is heavily forested, and longleaf pine habitat has long been a priority. These are the trees that support RCW and other key species, so virtually all new tree plantings on post continue to be longleaf pine, while slash pine is targeted for reduction to more natural levels. The installation has its own longleaf pine nursery to support restoration and uses pine seed collected from the post's trees to do so. As pine stands mature and RCW clusters begin to appear on their own throughout the installation, however, timber harvesting has necessarily declined. Thinning still occurs to promote forest health, but the 150 acres annually clearcut has decreased over the past two years--as have the typical timber receipts that support NRC and forestry projects.

In this shortfall, the NRC program identified a true windfall: palmetto berries. A pilot program over the past year introduced harvesting of palmetto berries for sale to pharmaceutical manufacturers in conjunction with a honeybee propagation project. Honeybees were encouraged in these areas to pollinate the palmettos and thus generate more berries. The NRC program completed bear and other wildlife studies to ensure that the harvest would not adversely impact those species that use the berries for a food source. In consultation with FWC, the installation was able to document animal reliance on the berries and codify standards for collection volume. CBJTC was bid 80 cents per pound of berries collected, and 600,000 pounds were harvested in this first year of the program in two passes through the palmetto stands. The honeybee program was a convenient benefit to palmetto propagation; CBJTC is paid a fee to host beehives from a commercial California apiary. The bees are sent to CBJTC in the pollination season to avoid picking up pesticides that would otherwise be passed to honey and beeswax.

Without question, the habitat-level CCAA is the greatest benefit the NRC program has recently rendered the FLARNG training mission. The importance of this agreement really cannot be overstated: *it shields training and operations from any impediment or interruption associated with T&E species.* Because the NRC program delineated potential future development on the training site to serve military needs, these potentialities are all expressly cleared by the document in the

event that the FLARNG chooses to proceed with them. The CCAA is a prime example of how military and NRC goals are not only compatible, but in fact mutually reinforcing. The same measures that the installation had implemented to ensure pristine training land quality created pristine habitat--and it is precisely these measures that USFWS and FWC in turn sought to codify as a gold standard for landscape-level management. The integration of the CCAA reporting with the INRMP has enhanced the FLARNG's relationships with all its regulatory stakeholders and helps to ensure that training and habitat objectives remain in perfect alignment.

Aside from this agreement, the installation's newly completed agreement with FWC to establish gopher tortoise relocation on ACUB property is another move that preserves mission readiness. Whereas gopher tortoise presence was once a considerable impediment to construction projects on post, this arrangement has deconflicted the two, while also saving the FLARNG thousands every year in avoided relocation permitting fees. Private mitigation banks will no longer be required for tortoise relocation, and the use of ACUB property promotes the goal of propagating the species' presence beyond CBJTC. The installation ACUB is an ongoing effort, one that is built around protecting habitat, creating more continuous quality habitat, and preventing encroachment upon the training mission. At present, the ACUB encompasses more than 25,000 acres and provides the FLARNG with around $9.6 million in wetlands mitigation credits.

In terms of value, the habitat-level CCAA is virtually unmatched as an NRC strategy, and this is an approach that other state Guards and military installations should be encouraged to follow. Negotiating protections on a species-by-species basis is inefficient and costly; by focusing on habitats and all their associated wildlife, CBJTC has set a model for others to follow. As the first to successfully write a complete habitat-level CCAA, the NRC program has quite literally established the template for such projects elsewhere. NRC staff have communicated their processes and lessons learned to the ARNG Conservation Committee.

Within the local conservation community, NRC staff are well embedded, serving on state working groups for gopher tortoise, prescribed fire, silviculture, and, recently, the striped newt, a candidate species. The installation is a key participant in the military consortium for RCW translocation.

Internally, the integration of NRC objectives into the activities of facilities management, engineering, DPOTS, ITAM, and DPW help to ensure that the CBJTC's environmental goals are kept at the forefront of operations. The FLARNG relies heavily on CBJTC and has long recognized the benefits of excellent training land quality and the compatibility of conservation with the mission. Internal databases, GIS, and Sharepoint help to capture and operationalize the tremendous amounts of data generated on post each year. The combined tools of the INRMP and CCAA report help to maintain program continuity and consistency as well.

CBJTC is committed to being an engaged and trustworthy partner to its community, and a core element of this is reflected in its investments in local education. At the higher levels, the training site provides research opportunities and internships for UF students and faculty, but its community engagement on NRC activities begins with elementary students. The installation hosts between 150 and 200 grade school students each year for field trips and presentations, and NRC staff also work directly with three area schools to conduct "teach-the-teacher" events. As CBJTC sees it, teachers are the force multiplier for environmental awareness. Local educators are invited to visit the training site and learn more about the environmental resources available to supplement their curricula. Over the course of three or four days, and in collaboration with Florida Forest Service,

the teachers are invited to participate in a land management course culminating in a field trip to the post. Teachers can earn a continuing education credit for this course, but it has the additional benefit of familiarizing them with the resources available through the FLARNG. This year, the installation began an additional education outreach program for special needs high schoolers. These students are invited on post to tour the natural history museum and learn about fire management and construction. An installation Youth Challenge Academy provides NRC education opportunities for at-risk youth, through three Ecosystem Field Day events held each year. Student s rotate through hands-on stations in water conservation, fire management, wildlife, and forestry; each station presents the students with examples of career paths possible in environmental management. Through all these outreach opportunities, CBJTC and its NRC program is helping to create a generation who understands and appreciate the role of the FLARNG as environmental and community steward.

CBJTC provides its community with important recreational opportunities as well, with a popular hunting and fishing program that serves the public and FLARNG soldiers and their families. The hunting program is administered by FWC and encompasses around 50,000 acres of the training site. While deer hunting has always been popular, the NRC program this year began promoting feral pig hunting as an alternative. Several pilot hunts were held following the regular hunting season exclusively for feral pigs, with great success. The post is now planning additional feral pig nighttime hunts for summer to establish greater control of the pest population, all with concurrence from FWC. The new hunting opportunity has helped to engage with the public beyond the typical game hunting seasons. The NRC program consistently encourages visitors to make use of the excellent hiking and recreational activities on post, including segments of the popular Florida Trail, one of eleven National Scenic Trails in the nation. In every respect, outreach is embedded within CBJTC's INRMP and its organizational philosophy.

Signage such as this is one of the many tools Camp Blanding Environmental Division has devised to improve natural resource issue communication with customers, trainers, maintenance staff, and civilian user groups. Effective communication has reduced human conflicts with sensitive natural resources and contributed to the positive overall status of the installation's biodiversity.