

Fort Bragg, Natural Resources Team

Natural Resources Conservation, Team

INTRODUCTION & BACKGROUND

Fort Bragg encompasses approximately 161,000 acres within the Sandhills Region of North Carolina. The natural vegetation of the Sandhills Region is characterized by plant communities associated with the globally imperiled longleaf pine/wiregrass ecosystem; this ecosystem supports some of the greatest species diversity in temperate North America.

The Natural Resources Team (NRT) at Fort Bragg is dedicated to maintaining an exemplary natural resources management program to ensure military lands support present and future training requirements while preserving, improving and enhancing ecosystem integrity. The NRT is comprised of Jackie Britcher, Endangered Species Branch Chief; Bill Edwards, Range Control Branch Chief; Rod Fleming, Senior Wildlife Biologist; Dave Heins, Environmental Division Chief; Erich Hoffman, Senior Wildlife Biologist; Mike Lynch, Director of Plans, Training and Mobilization; Glen Prillaman, Master Planning Division Chief; Alan Schultz, Wildlife Branch Chief; Joe Stancar, Forestry Branch Chief; and Paul Wirt, Environmental Branch Chief.

On this page: Soldiers assigned to the 82nd Airborne Division's Company C, 2nd Battalion, 504th Parachute Infantry Regiment, 1st Brigade Combat Team proceed over a dirt berm under the cover of smoke at a training range during an air-assault, live-fire exercise on Fort Bragg, N.C. (U.S. Army photo by Spc. Benjamin Watson)

JUDGING CRITERIA

-  Program Management
-  Orientation to Mission
-  Technical Merit
-  Transferability
-  Stakeholder Interaction

POSITION DESCRIPTION

Ms. Britcher is responsible for rare and endangered species programs at Fort Bragg and for implementing the Endangered Species Management Component and the Integrated Natural Resources Management Plan (INRMP). Mr. Edwards maintains, schedules and uses Fort Bragg's training areas and ranges. Mr. Fleming and Mr. Hoffman manage execution of the installation's INRMP and assure compliance with federal regulations. Mr. Heins ensures units and the garrison are in compliance with federal and state environmental laws. Mr. Lynch is responsible for planning and executing all garrison and tenant training and mobilization activities. Mr. Prillaman plans all military construction at Fort Bragg and coordinates with regional planners to ensure compatibility between on-post and off-post development. Mr. Schultz manages fish and game resources, and hunting, fishing and law enforcement operations. Mr. Stancar plans and executes Fort Bragg's forest management program in accordance with the INRMP and Mr. Wirt is responsible for execution of the Sustainability Program.

AWARDS AND SERVICES

The NRT won two Secretary of the Army Sustainability Awards in 2008, one for the team and one individually for Mr. Paul Wirt, and the Secretary of the Army Environmental Award for Environmental Restoration in 2008. Fort Bragg was also runner-up in the 2007 Secretary of the Army Environmental Award for Natural Resources Conservation, Team. Fort Bragg's Endangered Species Branch, and Ms. Britcher individually, were both presented with U.S. Fish and Wildlife Service (USFWS) Red-Cockaded Woodpecker (RCW) Recovery Program Awards for outstanding accomplishments contributing to the successful recovery of the federally-listed RCW. Fort Bragg hosts one of the safest and most recognized hunting, fishing and wildlife law enforcement programs within the Department of Defense (DoD).

ACCOMPLISHMENTS

Overall Natural Resources Conservation Management

Fort Bragg implements a progressive environmental management system in which sustainability is the

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“I was very impressed with the pioneering work Fort Bragg has conducted for the RCW. Fort Bragg has developed recovery practices that have been adopted by other military installations as well as other agencies that manage RCW habitat. In addition to the very high profile RCW management program, Ft. Bragg has a very diverse and rich natural resource management program that includes timber management, prescribed burning and outdoor education programs. All of this is done under an umbrella of cooperation and coordination with their partners. This legacy will last for many years.”

- Laura Henze, National Sikes Act Coordinator, USFWS

garrison's primary strategic goal, as illustrated by its triple bottom line ethos that focuses on mission, environment and community plus economic benefits. The installation INRMP was written in 2001 and is currently being revised to cover Fort Bragg from 2010 – 2014. The INRMP revision has a goal of 100 percent implementation, and concurrence from USFWS and North Carolina Department of Environment and Natural Resources is expected June 2010.



The NRT implements innovative techniques to streamline natural resource management, such as its RCW Nest Check and Banding System. Nest check, observation and banding data are collected to analyze the health, structure and size of the RCW population at Fort Bragg. Once a labor-intensive and time-consuming process, in 2007 the NRT designed and adopted a more efficient computer program which limits transcription and banding errors, increases on-site accessibility and expedites the data entry. The program saves the NRT an estimated 500 job hours and \$15,000 annually. Recognizing the advantages of the RCW Nest Check and Banding System, Natural Resources



professionals for Fort Benning, Ga., have developed a similar program using Fort Bragg's template.

Fort Bragg's Habitat Management Working Group (HMWG) exemplifies a unique, cross-functional natural resources management approach which maintains considerations for the installation's environmental and training needs while increasing efficiency by using shared resources. The HMWG consists of primary internal stakeholders from the NRT, Directorate of Public Works (DPW) Environmental Division, Integrated Training Area Management (ITAM) Division, USFWS and U.S. Army Corps of Engineers Savannah District Forest Resources Office. The group focuses on large-scale restoration and ecosystem maintenance by identifying habitat management areas (HMA) on regional and watershed levels and prioritizes HMAs based on endangered species habitat and critical demographic links or gaps.

Since 1967, the NRT has maintained consistent and intensive fish and wildlife monitoring programs to provide baseline and long-term trend information which will support investigations and predictions for climate change. Data from various partnership studies and historical monitoring programs, such as the Army Land-Condition Trend Analysis, also provide a valuable basis for wildlife and habitat relationship change analysis.

Mission Enhancement

With operational readiness exercises ranging from the platoon- to division-level, Fort Bragg supports the highest concentration of combat troops anywhere in the world. More than 2.3 million personnel were trained at Fort Bragg in FY 2009 alone. However, a 1990 USFWS Jeopardy Biological Opinion regarding the status of the installation's RCW population restricted training on 9,600 acres of critical maneuver lands due to their proximity to RCW clusters.

Fort Bragg has successfully recovered RCW to the extent the installation was allowed to remove these training restrictions on 3,100 acres – approximately 50 percent of the installation's RCW clusters. This marks not only a critical expansion of viable training land, but also a significant increase in the variety, intensity and duration of military training activities.



The NRT also manages Red Imported Fire Ants (RIFA) to the benefit of the Soldier. Fire ants are an invasive insect species at Fort Bragg that can colonize open disturbed habitats, such as training ranges and drop zones, at the level of hundreds of ant colonies per acre. Soldiers training in these areas often receive multiple painful stings, and susceptible Soldiers could experience anaphylactic shock due to RIFA. NRT is investigating treating approximately 5,579 acres on Fort Bragg using aerial pesticide applications to control RIFA.

Land Use Management

Ecosystem management and biodiversity conservation at Fort Bragg are implemented at the natural community scale, which provides protection for the majority of species and promotes expansion and recovery across the landscape.

The North Carolina Heritage Program recommended registering 14 of Fort Bragg's proposed natural areas, and one special management area, which are maintained under

integrated management schemes. Integrated management schemes include allowing prescribed burns to spread into adjacent wetlands, avoiding further fragmentation by new roads or trails and implementing revegetation measures. Fort Bragg also requires all projects, except ground disturbance activities associated with military training, submit erosion and sedimentation control plans and storm water management plans to the Water Management Branch for approval.

Fort Bragg recently created an Arbor Board, through which it developed a new initiative to foster native species and implement tree mitigation techniques for future environmental impacts due to training activities and construction. The NRT has identified numerous strategically located areas throughout the main post which it is leaving unmown to allow



The Red-Cockaded Woodpecker is a federally-listed nonmigratory bird native to the longleaf pine forests of the southeastern United States.

to return to a natural state. These areas will be repopulated with native trees, vegetation and wildflowers indigenous to the southeastern U.S. in accordance with the NRT's native species planters guide for landscape plans. Allowing these unmown green spaces to flourish conserves valuable green space connectivity and reduces DPW ground maintenance and labor costs.

Forest Management

The longleaf pine ecosystem was once the most common forest across the southeast, but only about 3 percent of the once 90 million acres of old-growth, fire-maintained ecosystem exists today. Fort Bragg contains 81,200 contiguous acres of longleaf pines, one of the largest remaining blocks of this forest type in the country.

Prescribed fire is the most significant ecological tool Fort Bragg uses to enhance the regional longleaf pine ecosystem and improve RCW habitat. Since October 2007, Fort Bragg has thinned 1,818 acres of pine, conducted 117,433 acres of prescribed fire and mechanically removed 769 acres of hardwood midstory. Fort Bragg conducts more controlled burns than any other land owner in North Carolina. The NRT is a major stakeholder in the North Carolina Prescribed Fire Council, and the installation helped set up and implement a prescribed fire program at Fort Rucker, Ala.



The NRT also instituted a strict replacement program for longleaf pines that are cut down due to construction activities. Replacement requirements are dependent upon the acreage of the project, the size of the trees taken down and whether or not impacts occurred in sensitive or RCW-designated forests. Since 2007, 1,151 new trees have been planted to offset native ones lost due to project impacts, and that number is expected to triple in the next three years.

Fort Bragg is also home to scattered old-growth pine trees, and forest remnants which represent high-quality examples of the rare and historic ecosystem in the region. The NRT surveyed these trees across the installation, documenting their locations using a global positioning system so planners, military trainers, natural resource management organizations and the DPW can conserve these unique trees.

Fish and Wildlife

In 2006, owing to the success of its RCW recovery program, Fort Bragg surpassed its goal of 350 potential breeding groups (PBG), making it the first DoD installation to reach RCW recovery. The installation currently has the second largest RCW population in the world and the largest population on any DoD land. Fort Bragg's robust RCW population continues to thrive, as demonstrated by the emergence of three new pioneered groups, four new recruitment clusters and 10 budded groups since 2007. Additionally, more than 500 new trees bearing a start or cavity initiated by a RCW have appeared since 2006. The installation's 2009 RCW population reflects a 4 percent increase in PBGs (estimated 389) from last year's data, which was collected while all clusters were still protected and full training restrictions were still in place.



There are 23 vegetative communities present at Fort Bragg, an illustration of the strong diversity of flora and fauna on the installation. The installation contains 56 plant taxa listed as rare in North Carolina, 67 plant taxa that occur on the state watch list, three federally endangered plants and 16 federal plant species of concern. More than 1,200 floral species have been documented, along with 50 species of fish, 51 reptiles, 44 amphibian species, 41 mammals and almost 200 resident and migratory bird species. Fort Bragg contains populations of



Fort Bragg's longleaf pine ecosystem is dependent upon a cyclic fire regimen, and controlled burns are conducted on one to three year cycles to keep hardwood regeneration to a minimum, thereby preserving Red-Cockaded Woodpecker habitat.

four federally listed species in addition to RCW: Saint Francis' Satyr Butterfly, rough-leaf loosestrife, Michaux's sumac and American Chaffseed. The NRT is leading research and recovery efforts for the Saint Francis' Satyr Butterfly through development of population management objectives and a viable monitoring program with North Carolina State University researchers.

The NRT monitors population trends and analyzes habitat preferences for migratory birds and many resident land bird species whose numbers are declining. Fort Bragg participated in the formation and implementation of DoD's Partners in Flight (PIF) program to maximize avian conservation across the services on DoD lands and water. Such programs benefit RCW, Bachman's Sparrow, the bald eagle and the 18 other special-status species which exist on the installation. As a contribution to PIF and other programs, Fort Bragg supports Monitoring of Avian Productivity and Survivorship, and ecological management across the installation provides habitat features such as food sources and cover for native resident and migratory bird species and other faunal and floral species.



Other Natural Resources

Fort Bragg seeks to promote public access through its outreach programs and recreational opportunities, including the first Audubon International-certified Army golf course and the All-American Trail project. A registered North Carolina Birding Trail, the All-American trail is an 18-mile long nature trail that runs adjacent to several active RCW clusters, providing interpretive signs and a swamp boardwalk. The Audubon Society has also recognized Fort Bragg as an Important Bird Area for the third consecutive year because of the integrity of the installation's bird habitat due to its effective ecosystem management program. The All-American Trail was also recently incorporated into the North Carolina Birding Trail Guidebook.



Camping is also provided at morale, welfare and recreation-established campgrounds, and Fort Bragg offers a full line of affordable equipment rental for use both on and off the installation. Boy Scout group camping, including programs with NRT participation, is provided regularly across various locations on the installation.

Fort Bragg attracts more than 5,000 fishers and hunters annually, and the installation makes many provisions for its disabled fishers and hunters. Volunteer partners provided a hydraulic elevated hunting blind available for disabled hunters, and the installation's disabled ground blind system and Wounded Warrior mentored hunts are continually expanding. The NRT regularly provides disabled and elderly hunter support such as finding hunting mentors, ensuring independent hunters return safely each day, and assisting however needed with game tracking, animal recovery and meat processing.

Fort Bragg has a long history of adaptive management and state-of-the-art scientific research through university and agency partnership projects. One of the latest of these cooperative efforts includes creating detailed habitat modeling projects to expand forest inventories into predictive habitat models and application of those models in adaptive burning experiments and demonstration aimed to maximum conservation for diverse floral and faunal needs.



Fort Bragg manages and restores wetlands to enhance habitat for migratory birds, butterflies and many rare or endangered flora and fauna to include rough-leaf loosestrife.

Hunting and fishing opportunities are extensive on the installation. Native game fish are regularly managed and stocked, and eastern wild turkeys were successfully reintroduced and are effectively managed across the installation. The NRT provides special recreational opportunities for novices and youth, deployed Soldier Families and Wounded Warriors to learn to hunt and fish.

In 2007, Fort Bragg NRT staff also conducted research and presented an abstract on native pollination of the Sandhill Pyxie Moss at the Association for Southeastern Biologists.

Invasive Species Control and Pest Management

Thirty-nine non-native invasive plants have been identified on Fort Bragg. The NRT uses three approaches to invasive species control: a species-specific approach for early-stage infestation, an approach to target invasives on training and range land and a site-specific approach in high-priority areas with rare plants and/or RCW clusters in coordination with North Carolina Division of Parks and Recreation and North Carolina Wildlife Resources Commission. These targeted management techniques limit the amount of pesticides and insecticides used on the installation. Fort Bragg also embraces the use of Integrated Pest Management practices in facilities where children are present which use cultural, mechanical or physical pest control techniques over chemical controls.

Invasive species control efforts at Fort Bragg are complementary to efforts made by the North Carolina Sandhills Weeds Management Area (NCSWMA), a collaborative partnership of local and national organizations including the USFWS, Natural Resources Conservation Service and the Sandhills Ecological Institute, which targets invasive species on a regional scale. The NCSWMA builds on invasive species management strategies developed by Fort Bragg, such as species identification and early detection/rapid response control efforts. Fort Bragg and the NCSWMA reduced the populations of 13 highly invasive species in the region last year alone.

Conservation Education

The effectiveness and viability of Fort Bragg's natural resources management and RCW programs are also contingent upon the team's proactive approach to environmental education and outreach. The NRT teaches a monthly class to incoming civilian and military personnel on ecosystem conservation including RCW recovery efforts and compliance-related issues. Since October 2007, the team has trained nearly 1,200 Soldiers. With the assistance of Oak Ridge Institute for Science and Education, Fort Bragg's NRT also



extends internship opportunities to North Carolina college students to educate future generations regarding ecological concepts, habitat restoration and protection, and surveying and monitoring of RCW and other endangered and rare species.

The NRT typically hosts or participates in about 40 annual endangered species events including education programs for Boy Scouts, installation and local elementary schools and universities. Other outreach activities include NRT staff guest-speaking at media events, community festivals, field days with state and nonprofit agencies and state Wildlife Commission events.

Fort Bragg offers extensive hunting and outdoor safety training. The NRT maintain certifications as state hunter safety instructors, sponsoring state hunter safety classes and mandatory installation hunter safety training. Special pre-hunt safety briefings are provided for every youth, novice or special hunter. Gun handling, boating and other outdoor safety briefings and event booths are provided regularly throughout the year to military units and civic and conservation groups.



Fort Bragg promotes public access to the installation by providing a number of recreational opportunities, such as bird-watching, on its 18-mile All-American Trail, a registered North Carolina Birding Trail.



Community Relations

Fort Bragg's NRT ardently shares its innovative programs and management techniques with other installations. Lessons learned are also presented at meetings such as the annual U.S. Army/USFWS RCW Coordination Meeting, during



which Fort Bragg hosts guided field trips, RCW group tours and educational presentations on its recovery program. Fort Bragg's RCW recovery efforts led to the development of regional and national programs such as the Army Compatible Use Buffer program, and the NRT was asked to evaluate potential RCW translocation efforts for the Military Ocean Terminal at Sunny Point, N.C.



Fort Bragg is actively engaged in the North Carolina Sandhills Conservation Partnership, formed in 2000 to facilitate collaboration between the USFWS, U.S. Army Environmental Command, North Carolina Division of Forest Resources, The Nature Conservancy, the Sandhills Ecological Institute and others for the purpose of conserving the longleaf pine ecosystem and recovering the RCW population in the North Carolina Sandhills. NRT staff also sit on the RCW Strategy Working Group, Resource Management Working Group and Reserve Design Working Group.

Fort Bragg also supports the Southern Range Translocation Cooperative, a partnership dedicated to facilitating RCW translocation among U.S. Army installations located in North Carolina, South Carolina, Florida, Georgia, Alabama and Mississippi.

Environmental Enhancement

Fort Bragg partners with the surrounding military community including Fort Stewart, Fort Gordon, Fort Jackson, Fort Polk, Fort Benning, Sunny Point, Camp Lejeune and Camp Blanding to transfer knowledge benefiting RCW population levels on the regional scale. The incredible diversity of biological species associated with the longleaf pine forest on the installation affords the public the opportunity to interact with aspects of nature at Fort Bragg that are rare, threatened or exist nowhere else in the world.

To encourage involvement and interaction with the surrounding community, the NRT regularly participates in local activities and outreach events such as the city of Fayetteville's Clark Park Spring Nature Fair, Harnett County's Second Annual Environmental Field Day, Fort Bragg's Children's Fest and Scotland County's Environmental Awareness Field Day.



Natural Resources Compliance Program

The NRT ensures Fort Bragg's Natural Resources Conservation Program is adequately funded through public and private sources to meet its management and conservation goals. Funding for the updated INRMP will come primarily from revenues generated from the sale of hunting and fishing permits, forest product sales, environmental funds, operations and maintenance funds and training funds designated for implementation of the ITAM program.

Fort Bragg also initiated the formation of sanctioned volunteer conservation groups to accomplish outreach, Soldier and Family support and ground conservation projects at great savings to the government. The NRT created the Fort Bragg Quail Unlimited Chapter and the Fort Bragg Quality Deer Management Branch, and the installation receives volunteer support from large organizations such as the Boy Scouts, Bragg Bass Masters and Ducks Unlimited. The NRT uses volunteers to provide labor for habitat enhancement projects at an annual cost savings of about \$65,000. The All-American Trail was also created and funded through partnerships with local governments, regional land planning entities, other agencies and volunteers.



CONCLUSION

The accomplishments of the NRT at Fort Bragg go far beyond the successful recovery of RCW and the reinstatement of 3,100 acres of previously restricted training land. Fort Bragg is a haven for rare and endangered flora and fauna illustrated by the presence of the Saint Francis' Satyr Butterfly and largest contiguous block of longleaf pine forest in the country. The strength of Fort Bragg's natural resources management program is further illustrated through the adoption of its conservation programs by other agencies. This strength comes from Fort Bragg's focus on regional ecosystem management and its partnerships which led to long-term balance between the military mission, environmental stewardship and the community.